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Table of Contents

Contrastive Rhetoric and Teaching of ESL Writing

Su Jiangli[1]

[1] School of Foreign Languages, Shanxi University, China. Address: No.92 Wucheng Road, Taiyuan, Shanxi Province, China, 030006. Email: sujiangli@sxu.edu.cn. Telephone:15903435839

Abstract

By reviewing the evolution of contrastive rhetoric, and the development of ESL writing teaching, this thesis presents the close relationship between the two and the positive influence of contrastive rhetoric on the teaching of ESL writing. This thesis also explores the new directions of contrastive rhetoric studies from two aspects: expansion and postmodernist influence and discusses the implications for ESL writing.

Keywords: Contrastive Rhetoric, ESL Writing, Culture, Thought Pattern, Postmodernism, Intercultural Communication

I. Introduction

Contrastive rhetoric as a research field came into existence with Robert Kaplan's 1966 study, in which Kaplan made the pronouncement that "each language and each culture has a paragraph order unique to itself, and that part of the learning of a particular language is the mastery of its logical system" (Kaplan, 1966:14). His study had provided insights into problems ESL students encountered while adjusting to English rhetoric by referring to rhetoric strategies of their first language and began to influence ESL writing teaching immediately. With the growing of contrastive rhetoric, its position of shaping writing class has been enhanced but also seriously challenged. However, as a living and breathing research field, contrastive rhetoric is adjusting itself all along to tackle challenges and criticism by means of expanding itself to encompass new dynamics brought by postmodernists and globalization. This thesis will present the impact of contrastive rhetoric on the teaching of ESL writing from the inception of the study to its maturity as a research field. And it concludes that contrastive rhetoric cannot blossom on its own without ESL writing providing it with meaningful research topics.

II. The introduction of contrastive rhetoric and its impact on the teaching of ESL writing

In 1966, Robert Kaplan published his seminal paper "Cultural Thought Patterns in Intercultural Education," which marked the birth of contrastive rhetoric. Influenced by the weak version of the Sapir-Whorf hypothesis that "language influences thought," Kaplan put forward his idea based on three main assumptions: Speech and writing are cultural phenomena; Each language has a set of writing conventions unique to it; Linguistic and rhetorical conventions of a first language interfere with writing in a second language. After analyzing more than 600 essays, Kaplan identified general rhetorical patterns used in academic writing for five different cultural

groups. In contrast to the western linear development of ideas, he found that Semitic style prefers co-ordinate structures; the Oriental opts for circular progression; the Romanic tends to ramble, and the Russian sounds weighty with lengthy sentences and lexical redundancy. This ground-breaking research has been considered as the first major study that attempted to analyze how first language culture manifests in a second language or foreign language writing. Kaplan argued that ESL students' writing, especially their paragraph organization, exhibited the students' L1 cultural thought patterns.

Valuable in establishing contrastive rhetoric as a new field of inquiry, it also created widespread influence on the teaching of ESL and EFL writing. The diagrams of rhetorical patterns Kaplan proposed was widely printed and dominating the thinking, learning, teaching, and writing of teachers and students. For some time, many ESL and EFL writing books and teachers' handbooks printed the diagrams, and it seemed that Kaplan had established the standard for teaching writing. According to Ann Raimes:

> It has led to compensatory exercises that offer training in recognizing and using topic sentences, examples, and illustrations. These exercises often stress imitation of paragraph or essay form using writing from an outline, paragraph completion, identification of topic and support, and scrambled paragraphs to reorder. (1991:409)

Thus, Kaplan's pioneering study shed new light on ESL and EFL writing. But many more questions were raised by his study and needed to be answered.

III. The development of contrastive rhetoric and the changing faces of the teaching of ESL writing

Actually, the evolution of contrastive rhetoric is comparable to making an adjustment to meet the challenges and be responsive to criticism, which conversely mobilized contrastive rhetoric to acquire new dynamics constantly. The practitioners continuously enrich the field by modifying, refining and redefining contrastive rhetoric and its influence.

3.1. The growth of contrastive rhetoric
After the initial success, contrastive rhetoric experienced a period of stagflation in the 1970s. The development of text linguistics or discourse analysis didn't give contrastive rhetoric the supposed more scientific base because text linguists then viewed texts simply as units larger than sentences, or as a sequence of sentences. "This focus yielded atomized, disparate bits of information that seemed either to be incapable of explaining differences in larger segments of discourse or almost to trivialize the differences." (Leki, 1991:125) Therefore, patterns generalized in this period were not broad enough to lead to pedagogic effects.

The 1980s, however, witnessed the flourish of contrastive rhetoric as a research field. Progresses achieved in discourse analysis and text linguistics aroused renewed interests in contrastive rhetoric. In the early 1980s, Kaplan and Connor organized five annual colloquia at the international TESOL Conference which attracted active researchers of the field such as John Hinds, Bill Eggington, Shirley Ostler, Bill Grabe, Nils Enkvist, Lars Evensen, Sauli Takala, and Alan Purves. (Connor, 2008) John Hinds, an American linguist of East Asian languages who specialized in Japanese also made a major contribution to the growth of the field. Inspired by Kaplan's work, Hinds began to study original, non-learner texts in their own languages. He provided several fruitful studies in contrastive rhetoric, focusing on the four-part ritual discourse structure in Japanese. He published extensively on Japanese rhetoric in 1976, 1980, 1983, 1984, 1987 and 1990 respectively. Alan Purves and his colleagues worked for the International Association for Evaluation of Educational Achievement Study of Written Composition embarked on their study in 1980. They collected and analyzed the high school exit essays of 20,000 12-, 14- and 18- year-old students in 14 countries. They created a large database to support their findings and provide for other scholars' research needs. "In 1984, the Annual Review of Applied Linguistics devoted an entire issue to contrastive rhetoric"(Leki, 1991:126). In 1987, Robert Kaplan and Ulla Conner co-edited W*riting across Languages: Analysis of L2 Text*. This book has been regarded as the "first-ever edited volume of empirical and text analytic contrastive rhetoric studies" (Connor, 2008:299). And Purves' thought-provoking publications also sparked interest in contrastive rhetoric research, especially his 1987 book, *Writing across Languages: Issues in Contrastive Rhetoric*.

Since the 1990s, among contrastive rhetoric researchers, there has been an increasing interest in "cognitive and social variables of writing in addition to the linguistic variables (Connor, 1996:18). This shift has led to expanded concept of contrastive rhetoric and moved it away from focusing on the effects of transfer from L1 to L2 writing towards an interdisciplinary area of cross-language and cross-culture study thanks to the theories and methods of such related fields as applied linguistics, composition and rhetoric studies, anthropology, translation studies and discourse analysis (Connor, 2002). According to Connor, some internal and external forces caused this shift. The internal forces came from criticism which called on contrastive rhetoric to move forward and take advantage of progress made in the analysis of discursive features as well as processes and contexts of writing. The external forces derived from new developments in discourse analysis and changing focuses on first language composition research.

3.2. The changing faces of the teaching of ESL writing

Silva divided ESL writing instruction into four stages: the controlled approach, the current-traditional rhetoric approach, the process approach, and the social approach. For Silava, each stage had a clear focus. The first stage was dominated by the controlled or guided approach which was influenced by structural linguistics and behaviorist psychology. This approach regarded learning to write as an excise of habit formation. Students were trained to practice sentence patterns and vocabulary by means of writing. The second stage concentrated on current-traditional rhetoric approach under the influence of Kaplan's landmark work. It regarded learning to write as identifying and internalizing organizational patterns. The major approach in the third stage of ESL writing teaching was the process approach. This approach put a premium on developing efficient and effective writing strategies. And the social approach in the fourth stage reckoned that learning to write was part of becoming socialized to the discourse community—finding out what is expected and trying to be accepted by the community. These four major approaches of writing instruction are grounded in four research fields related to writing practice. They are contrastive rhetoric, cognition, communication and social constructionist theory (Silva, 1990).

Raimes also classified L2 writing instruction into four stages with distinctive focuses. According to Raimes, the first stage focused on form. When the audio-lingual method was the dominant mode of instruction, the writing was given a marginalized role of reinforcing oral patterns of language. Thus, writing practice took the form of sentence drills—filling in the blanks, replacing words or parts of the sentences, changing the forms, and completing the sentences. "The content was supplied. The writing reinforced or tested the accurate application of grammatical rules" (1991:409). Aimes believed the second stage moved its eyes on writers. "Influenced by L1 writing research on the composing process, teachers and researchers reacted against a form-dominated approach by developing an interest in what L2 writers actually do as they write"(ibid). And Raimes thought this attention to the writer as active learner and creator of text led to a process approach. To Raimes the third stage marked a shift of attention from the process of writers to content and the expectations of the educational institutions. During this period, "an ESL course might be attached to a content course in the adjunct model or language courses might be grouped with courses in other disciplines" (Raimes, 1991:411). Learners were taught to use the language to think as well as to shape the content. And in the fourth stage, readers became the focus. Writing practice was regarded as "socialization into the academic community—not as humanistic therapy" (qtd. Raimes, 1991:412).

Even if Siva and Raimes used a different way to trace the changing faces of ESL writing teaching, their affinity is clear, and the influence of contrastive rhetoric research can also be tracked down.

3.3. Contrastive rhetoric and teaching of ESL writing

Connor has reviewed the studies of contrastive rhetoric during the past 30 plus years and identified four domains of its investigation. These areas include: text linguistics, the analysis of writing as a cultural and educational activity, classroom based studies of writing, and contrastive genre-specific studies. And Connor specified the purpose of each area of investigation. Contrastive text linguistic studies aim at examining, comparing and contrasting how texts are formed and interpreted in different languages and cultures using methods of written discourse analysis. Studies of writing as cultural and educational activity mainly attempts to investigate literacy

development on L1 language and culture and examine effects on the development of L2 literacy. Classroom-based contrastive studies tend to examine cross-cultural patterns in process writing, collaborative revisions, and student-teacher conferences. Genre-specific investigations are largely applied to academic and professional writing (Connor, 2002:498).

Placing the four domains of the contrastive rhetoric investigation against the backdrop of the four stages of ESL writing teaching, the influence of contrastive rhetoric studies on ESL writing teaching and practice is always felt, and the significance cannot be ignored.

Three is no doubt that the "concern for rhetorical form was the impetus for Kaplan's influential 1966 article that introduced the concept of contrastive rhetoric" (Raimes, 1991:409) when the controlled approach or focusing on the form according to Raimes dominated the first stage of writing instruction. The large amount of contrastive rhetoric researches have generated heat and light in ESL writing teaching and pushed it to move its eyes from form to process.

It seemed that process approach practitioners and proponents would turn their backs on contrastive rhetoric when they maintained that " contrastive rhetoric research examined the product only, detaching it from and ignoring both the contrastive rhetorical context from which the L2 writer emerge and the processes these writers may have gone through to produce a text" (Leki, 1991:123). And they also argued that contrastive rhetoric studies' focus on product resulted in the prescriptive nature of writing instruction. In English this is the standard, if you want to write well, you have to follow this standard and imitate our patterns. But giving up on contrastive rhetoric also drove process approach to the dead alley of hedging to give a direct response concerning the L2 writing problems students met. Apparently to argue that L2 writing problems were those of any developing writer or were the usual difficulties of inexperienced writers simply doesn't hold water. In addition, proponents of process approach couldn't justify their practice if they discarded the revealing findings of contrastive rhetoric researches that writing strategies do transfer across languages and ESL students might employ strategies acquired for specific L1 writing context to their L2 writing (Leki, 1991). Could writers grasp the idea of the organization while it is downplayed or totally omitted from instruction? So, it seems that contrastive rhetoric became a missed link in the stage of ESL writing teaching when process approach was the king.

Raimes' third stage is content-based which means it mainly concerns the content and tasks L2 students can expect to encounter in their academic careers. And Raimes contended that "the research studies that inform this approach include analysis of the rhetorical organization of technical writing" (1991:411). Connor regarded it as genre-specific investigations.

When the focus of ESL writing instruction was shifted to readers, most scholars believe social constructionism contributed to this change. Social constructionist writing teaching invested the idea that writing constitutes a mode of communication in an academic or discourse community into ESL writing practice. In practice, this social approach or reader-based approach combines an emphasis on form with process approach. Raimes said, "this indicated a return to a form-dominated approach, the difference being that now rhetorical forms, rather than grammatical forms, are presented as paradigms" (1991:412). Research in classroom-based studies conducted by Allaei and Connor, Hull, Nelson, and Carson examined cross-cultural discourse patterns in process writing, collaborative revisions, and student-teacher conferences. These researches found that cultural misunderstandings appear in many classroom situations, such as conversation, collaborative groups, peer revision, and teacher-student interactions. These findings also contributed to the cultural awareness within a writing discourse community. Besides Hinds highlighted reader versus writer responsibility in successful communication. He categorized the rhetoric forms of various cultures according to the workload the readers were required to undertake to make inferences to interpret the writers' intentions. He distinguished reader-responsible rhetoric and reader-response rhetoric. He classified Japanese as using reader-responsible rhetoric; English as using writer-responsible rhetoric and Chinese as being in transition from a reader to a writer responsible rhetoric. Hinds' classification illuminated the social approach writing instruction by means of observing rhetoric patterns to ensure communication can be accomplished.

Therefore, on the one hand, contrastive rhetoric studies provide ESL writing teaching with momentum to improve itself, but on the other hand ESL writing also enriches contrastive rhetoric studies while it is making adjustments to tackle criticism from ESL practitioners. Considering the four stages of ESL writing teaching, contrastive rhetoric at least benefits ESL writing in four aspects. Firstly, "contrastive rhetoric studies will help avoid stereotypes based on failing to recognize that preferences in writing styles are culturally informed" (Leki, 1991:137). Secondly, ESL students acquire the awareness that the way they construct written ideas in their own language is different from the way idea should be constructed in English. And they should try to express themselves in line with the English patterns, a customary way of expressing ideas in English, which doesn't necessarily means the "otherness" of their own culture. Thirdly, "students who are having trouble writing in English and who are made aware of cultural differences in rhetoric view themselves not as suffering from individual inadequacies," (ibid 138) and this meta-cognitive awareness is an important insight for inexperienced writers to develop. Last but not least, contrastive rhetoric studies will foster ESL writers' reader awareness thus facilitate successful communication within the discourse community and maybe beyond the community.

IV. New directions of contrastive rhetoric and its implications for the teaching of ESL writing

4.1. New directions of contrastive rhetoric

Since its emergence, contrastive rhetoric has encountered numerous criticisms for its reductionism or over-generalization, determinism, prescriptive nature, and ethnocentrism. But contrastive rhetoric researchers never put up passive defensive walls to hedge against criticism; they take active measures to expand their research scopes to correct its defects instead.

When Kaplan put forward his idea that his ESL students' writings looked puzzled to readers of native English speakers because of the influence of their own cultural thought patterns, it was innovative for three reasons. First, at that time few ESL instructors concerned themselves with writing styles; Second, the focus of both linguistic and language teaching was on the sentence level rather than discourse level; third, people did not believe writing could be taught (Connor, 2008). Thanks to his continuous quest and to efforts of all other researchers, forty years later, contrastive rhetoric can still generate innovative ideas. Kaplan's own writing in 2002 and 2005 are clear examples of how contrastive rhetoric is still moving forward (ibid).

And the new directions of contrastive rhetoric can be discussed from two perspectives: expansion and postmodernist influence.

Kaplan's 2005 article presented his model of concerns in contrastive rhetoric and called on researches to cope with the complexities of second language writing. Connor acknowledged the dynamic nature of discourse and culture and voiced the need to study how writing in given cultures is tied to the intellectual history and social structures of these cultures. She pointed out:

> Changing definitions of written discourse analysis—from text-based to context sensitive –and of culture—from static to dynamic—contribute to the changing focus of intercultural rhetoric research, a new turn that better reflects the dynamic nature of the area of study (2004:302).

John Hinds' study in text linguistic area, Purves and Carson's examination of cultural, cognitive and social aspects of writing broadened the horizons of contrastive rhetoric. Besides, classroom-based contrastive studies, genre-specific investigations of academic and professional writing in different languages and cultures also expanded the researches of contrastive rhetoric.

Thus, Connor is justified to declare contrastive rhetoric has always been multidimensional in its research and use one chapter to discuss the expansion of contrastive rhetoric in light of new understanding in discourse analysis, cultural studies and intercultural communication in the new book, Contrastive Rhetoric: Reaching to Intercultural Rhetoric (Connor, 2008:300-302). Connor even proposed a name change from contrastive rhetoric to intercultural rhetoric.

Contrastive rhetoric like any other studies is itself a process. While the 1980s represented a golden era in contrastive rhetoric research, as of the 1990s, contrastive rhetoric was dominated by expansion and trying to answer the challenges of postmodernists by way of adopting postmodernist perspectives. Connor mapped the umbrella concept of intercultural rhetoric using three postmodern maps. Connor depicted intercultural rhetoric from three dimensions: the text in context theory, the intertwining of large and small cultures in discourse, and interaction and accommodation in intercultural communication (2008:306-307).

According to Connor, writing is a socially constructed activity and process. The studying of writing should not be limited to texts but take the discursive and social practice environments into consideration. So it's important to consider the multimodality of text when studies of the production and consumption of texts across languages and cultures are conducted. As to the intertwining of small and large cultures, Connor raised her concern about the need to understand other interacting social and educational influences that could be overlapping with national cultural norms and bear on the writing process and products. This concern is the development of Atkinson's models to define cultures suitable for contrastive rhetoric research. For accommodation, Connor was inspired by Speech Accommodation Theory and Communication Accommodation Theory. Connor conducted an ethnographic study about a Finnish fish dealer who adjusted his style of fax writing to the level of his interlocutors and argued that SAT and CAT was a valid tool to understand written communication given the background of globalization and the widespread of the Internet which slanted the written communication towards oral type.

4.2. The implications for the teaching of ESL writing

Raimes said, in her 1991 article, that "writing instruction is less clearly defined now in 1991 than it was in 1966…. Now teachers have to consider a variety of approaches their underlying assumptions, and the practices that each philosophy generates (1991:412). Almost twenty years have elapsed when Raimes made the observation. Postmodernism has become a prevailing force in almost all academic research fields, and globalization is a fact of life which threatens to change the nature of written communication in a lot of areas especially business, and media communication. Thus, the new directions of contrastive rhetoric will provide for the demands of teachers to generate new and meaningful approaches. It will guide ESL writing instructions to the right track.

V. Conclusion

ESL writing has been the major research area of contrastive rhetoric and accompanying it to get through all the ups and downs of its development. Through expansion and adjustments made to tackle the criticism of postmodernists and meet the challenges that emerged with globalization, contrastive rhetoric finds new directions. But it is impossible for contrastive rhetoric to blossom on its own; ESL writing will serve as an anchor to generate new and meaningful topics for contrastive rhetoric studies continuously.

References

Kaplan, R. (1966). Cultural thought patterns in inter-cultural education. In 2001, Tony Silva and Paul kei Matsuda (Ed.), *Landmark Essays on ESL Writing* (PP11-27). NJ: Lawrence Erlbaum Associates, Inc.

Rameis, Ann. (1991). Out of woods: emerging traditions in teaching of writing, TESOL Quarterly, Vol.2, No. 3, PP407-430.

Leki, Ilona. (1991). Twenty-five years of contrastive rhetoric: text analysis and writing process, *TESOL Quarterly*, Vol. 25, No. 1, PP123-143.

Connor, Ulla, Ed Nagelhout and W. Rozycki (2008). *Contrastive Rhetoric: Reaching to Intercultural Rhetoric*. Ed. New York: Benjamins Press.

Connor, Ulla. (1996). *Cross-Cultural Aspects of Second-Language Writing*. New York: Cambridge University Press.

Connor, Ulla. (2002). New directions in contrastive rhetoric, *TESOL Quarterly*, Vol. 36, No. 4, PP 493-510.

Silva, T. (1990). Second language composition instruction: developments, issues, and directions in ESL. In B. Kroll (Ed.), Second Language Writing Research: Insights for the Classroom (PP11-17). New York: Cambridge University Press.

Connor, Ulla. (2004). Intercultural rhetoric research: beyond texts, Journal of English for Academic Purposes, Vol.3, Issue 4, PP291-304.

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Effects of Instructional Scaffolding Strategy on Senior Secondary Biology Students' Academic Achievement and Retention in Taraba State, Nigeria

Fatima Mohammed Joda[1]

[1] Department of Environmental and Life Sciences Education, Modibbo Adama University of Technology, Yola, Adamawa State. Email: fatijoda@mautech.edu.ng

Abstract

The study determined the effect of instructional scaffolding strategy on senior secondary school Biology Students' academic achievement and retention of concepts. Two research questions and two hypotheses were formulated for the study. Quasi-experimental research design involving pre-test, the post-test control group was employed. The population of the study was all the senior secondary two (SSII) students in Jalingo education zone. Random sampling technique was used to select four intact classes with 240 students as the samples size for the study. A 50 item Biology scaffolding Achievement Test (BSAT) was the instrument used for data collection, and the same instrument tagged Biology scaffolding Retention Test (BSRT) but arranged differently in numbering and response option. Kuder Richardson's formula 20 (KR-20) was used in estimating the reliabilities for the BSAT and BSRT, and the reliability of 0.87 and 0.85 for BSAT and BSRT respectively were obtained. The experimental group was taught Genetics and Evolution through instructional scaffolding strategy while the control group was taught the same topics through lecture method. The treatment lasted for four weeks. The retention test was administered two weeks after the administration of the post-test. The mean and standard deviation was used to answer the research questions, and analysis of covariance (ANCOVA) was used to test the two hypotheses. The findings show that the students taught with instructional scaffolding strategy have a significantly higher academic achievement than those taught with lecture method. Equally, those taught through instructional scaffolding retained Biology concept more than those taught through lecture method. It was recommended that the teaching of Biology should be scaffolded for better understanding. Curriculum planners should adopt instructional scaffolding as an adequate teaching strategy for the teaching Biology.

Keywords: Instructional Scaffolding Strategy, Lecture Method, Biology Students' Academic Achievement and Retention.

Introduction

Biology as a science subject occupies a central position in the science curriculum (FRN, 2014). This is because Biology is a life science subject concerned with the study of living organisms with regards to their structure, function, growth, evolution, distribution, identification and taxonomy. Umaru (2011) explains that the study of Biology enables man to understand the diversity of life forms, conservation and sustainable use of natural resources. The benefits of Biology for the development of any nation are too numerous to mention, and this is

because Biology plays a key role in industrialization and other sectors of the economy. It also serves as a pre-requisite subject for most science and related professions like Biochemistry, Pharmacy, Medicine, Nursing, Environmental sciences amongst others. In addition, the basic knowledge and skills acquired from the subject can be of tremendous help to man and the society (Umoru & Onoja, 2017). The impact of Biology on the life of living organisms is wide; all ensuring that the required standard of living for both plants and animals are maintained (Uqwadu & Joda, 2015). There is no doubt about the immense contribution of Biology to the economic growth and development of a nation. However, research studies (Umaru, 2011, Joda & Mohammed, 2017, Joda, 2018) have shown that there is a persistent low achievement in SSCE and NECO Biology examinations annually. This low achievement in Biology could be attributed to poor instructional delivery approaches adopted by teachers, students' attitudinal problems, teachers' laxity towards teaching, concentration on few topics for examination purpose and students inability to recall previously learnt materials (Umoru & Onoja, 2017). The West African Examination Council (WAEC) chief Examiner's Report (2016) points out that among the factors that cause low achievement of students in Biology; poor instructional delivery approach to teaching by teachers is the most prominent factor.

In pursuance of the objectives, content, and context of Biology, curriculum developers had recommended some teaching approaches which are learned-centered for the effective teaching and learning of the subject so as to bring the expected desired learning outcomes. The recommended approaches include; inquiry, concept mapping, Laboratory techniques and discovery teaching/ learning amongst others. Despite the recommendation for the use of these approaches by curriculum developers in teaching Biology, students achievement in the subject is still not encouraging (Ugwuadu & Joda, 2015).

The persistent low achievement of students in Biology specifically in Genetics and Evolution concepts at senior secondary certificate examination raises doubt about the effectiveness of current teaching approaches in use by Biology teachers. More so the two topics are perceived as difficult topics by secondary school Biology students (Abubakar, 2013; Ugwuadu & Joda, 2015). Exposing learners to the understanding of basic concepts in Biology and achieving desirable outcomes requires the use of creative, innovative and interactive teaching approaches such as instructional scaffolding that may arouse the interest of the learners and demystify difficult concepts in core subjects like Biology. In addition, it is counter-productive to present ideas to learners without fully engaging them in the learning process.

Instructional scaffolding is the teaching strategy that emphasizes the teaching of new skills by engaging students collaboratively in tasks that would be too difficult for them to complete on their own. The teaching strategy emphasizes on the role of teachers and other more skillful persons in supporting the learner's development and providing support structures to get to that next stage or level (Nonye & Nwosu, 2011). The teaching strategy originated from Lev Vygotsky socio-culture theory and his concept of Zone of Proximal Development (ZPD). His socio-cultural theory spelt out that social interaction plays an important role in the development of cognitive. In his view, the learner does not learn in isolation, rather learning is strongly influenced by social interactions, which take place in meaningful contexts. The Zone of Proximal Development (ZPD) is that area between what a learner can do independently (mastery level) and what can be accomplished with the assistance of a competent adult or peer (Instructional level). It is believed that any learner could be taught any concept effectively using instructional scaffolding techniques by applying the scaffolding at the ZPD.

Instructional scaffolding as a teaching strategy depends heavily on the ideas that learners come to any educational setting with a great deal of pre-existing knowledge, some of which may be incorrect. It is the process of building on what a learner already knows that makes scaffolding an effective instructional technique. According to Olson and Prath (2000) and Casem (2013) that in instructional scaffolding, a more knowledgeable other provides scaffolds to facilitate the learner's development. These can be in the form of support which may include resources, a compelling task, templates, and guides, guidance on the development of cognitive and social skills. The scaffolds facilitate a student ability to build on prior knowledge and internalize new information. The activities provided in scaffolding instruction are just beyond the level of what the learner can do alone. An important aspect of scaffolding is that the scaffolds are temporary. Ibritam, Udofia, and Onweh (2015) asserted

that as the learners' abilities increases, the scaffolding provided by the more knowledgeable person is progressively withdrawn. Finally, the learner is able to complete the task or master the concept independently.

Lecture method is a common method teacher employed in the teaching of Biology. It is referred to as talk and chalk or textbook method (Gbamanja in Joda, 2018). In the course of employing the method, the teacher dominates the teaching with little participation on the part of the learners. Here the teacher is seen as the repository of all knowledge while the students are passive recipients of knowledge transmitted by the teacher in the process of learning. The method has the advantage of covering a wider area within a short time but it is not learned-centred, and students do not gain mastery of concepts.

Odediran as cited in Joda (2017) asserted that the lecture method could be an effective and successful method in science teaching if the teacher does the following in his lecture process; repeats and emphasizes main points, encourage questions from students, relate content to previous and subsequent topics, stresses ideas, avoids racing through the lecture process and prepares adequately for each lesson delivery. In support of the above Joda (2018) also pointed out that an effective lecture method. In science, teaching requires extensive research, preparation, and effective delivery skills to maintain learners' retention of concepts.

Udogu in Neji and Joda (2016) stated that academic achievement is the attainment of set objectives measure from the score obtained through a test. If a learner accomplished a task successfully and attained the specific goal for a particular learning experience, he/she is said to have achieved. Retention of scientific concepts are products of teaching strategies that take into cognizance the learner-readiness which include current knowledge, stage of cognitive development and mode of intellectual functioning. Coffey in Joda and Mohammed (2017) argues that anything which aids learning should improve retention and anything that leads to confusion or interference among learned concept decreases the speed and efficiency of learning and accelerates forgetting. Thus the success of science teaching and learning is dependent on the learner's ability to achieve and recall prescribed concepts meaningfully.

Casem (2013) studied the effects of scaffolding strategy on students' performance in Mathematics. The study revealed that the students taught mathematics concepts through scaffolding performed better than those taught through lecture method. Equally, Olatubosun (2013) investigated the effects of using scaffolding strategy on the academic achievement of students in integrated science in Junior secondary school (JSS). Results showed that students exposed to scaffolding strategy performed significantly better than their counterparts who were exposed to the traditional method. Akani (2015) conducted research on the effects of instructional scaffolding on the achievement of senior secondary students in Chemistry. The result obtained revealed that there is a significant difference in the mean score of students exposed to instructional scaffolding strategy and conventional method of instruction.

Ibritam, Udofia, and Onweh (2015) conducted a study to determine the difference in students' achievement in Block-laying and concreting using Scaffolding and Demonstration instructional methods in technical colleges. The result showed that there is no significant difference in the mean achievement scores of the students taught using scaffolding instructional strategy and those taught using instructional demonstration method. Uduafemhe (2015) undertook a study to determine the comparative effects of scaffolding and collaborative instructional approach on secondary school students' psychomotor achievement in Basic Electronics. Findings revealed that instructional scaffolding and collaborative instructional approaches are effective in improving students' achievement in Basic Electronics. However, the collaborative instructional approach was more effective then instructional scaffolding strategy. Adamu (2017) studies the effects of Analogy and scaffolding instructional strategies on senior secondary school Physics students' academic achievement. The two experimental groups were taught using Analogy and Scaffolding instructional strategies while the control group was taught using the lecture method. The finding of the study showed that there is a significant effect of treatment on students' academic achievement.

Statement of the Problem

There has been the continuous poor academic achievement of students in science subjects generally and Biology in particular. Chief examiner's report on senior secondary school students' academic achievement has consistently revealed poor achievement in Biology in senior secondary school certificate examination conducted by the West African Examination Council (WAEC) from 2002-2018 in Nigeria. The instructional strategy adopted by Biology teachers, inadequate laboratory and Biology instructional materials, large class size among others contribute to students poor academic achievement in Biology (WAEC, 2018; Osuafor & Okonkwo, 2013; Joda & Mohammed, 2017; Joda, 2018). Therefore there is the need to explore other ways of presenting Biology concepts to the students to enhance meaningful learning, academic achievement, and retention of concepts. This calls for the use of learned-centered strategies such as instructional scaffolding, Guided inquiry, Problem-solving, Cooperative Instructional strategy. This study will, therefore, determine the effect of instructional scaffolding strategy on Biology students' academic achievement and retention of concepts.

Research Question

The following research questions were formulated to guide the investigation.
1. What is the effect of instructional scaffolding and lecture method on Biology students' academic achievement?
2. What is the effect of instructional scaffolding and lecture method on Biology students' retention of concepts?

Hypotheses

The following null hypotheses which were tested at an alpha level of 0.05 guided the study.
Ho$_1$: There is no significant main effect of instructional scaffolding and lecture method on students' academic achievement in Biology.
Ho$_2$: There is no significant effect of instructional scaffolding and lecture method on Biology students' retention of concepts.

Methodology

A quasi-experimental research design involving pre-test, the post-test control group was employed. The population of the study comprised of the entire senior secondary school students (SSII) in Jalingo education zone. Random sampling techniques were used to select four intact classes with 240 Biology students as the research sample. Two of the intact classes formed the experimental group with 121 students, and two of the classes formed the control group with 119 students. A 50 item Biology scaffolding Achievement Test (BSAT) was adopted from WAEC past question papers 2002-2017 used as instrument for data collection and the same instrument was used for Biology Scaffolding Retention Test (BSRT) but the items in the later was arranged differently in serial numbering and response options with one correct answer (key) and four distractors. The instruments were subjected to face and content validity by experts. The reliability coefficient was determined by testing 50 students from a school (GSS Bali) outside the main study area. Kuder Richardson's formula 20 (KR-20) was used in estimating the reliabilities for Biology scaffolding Achievement Test (BSAT), and Biology scaffolding Retention Test (BSRT) and the reliability coefficient of 0.87 and 0.85 for BSAT and BSRT respectively were obtained. The experimental group was taught Genetic and Evolution through the instructional scaffolding strategy, and the control group was taught the same topics through lecture method. The treatment lasted for four weeks. Two weeks after the administration of the post-test, a retention test was administered. The research questions were analyzed using mean and standard deviation while the hypotheses were analyzed using Analysis of Covariance (ANCOVA)

Results

The data collected were analyzed using means and standard deviation for the research questions and Analysis of Covariance (ANCOVA) to test the hypotheses at 0.05 significant level.

Research Questions

1. What is the effect of instructional scaffolding and lecture method on Biology students' academic achievement?
2. What is the effect of instructional scaffolding and lecture method on Biology students' retention of concepts?

Table 1. Mean and Standard Deviation for Achievement and Retention Test based on treatment

Variable group	N	Pre-test $\overline{X}$	SD	Post-test $\overline{X}$	SD	Retention $\overline{X}$	SD	Ach.	Gain Ret gain
Experimental	121	19.25	6.97	37.67	16.80	36.14	18.29	19.25	1.55
Control	119	14.11	3.63	26.56	19.29	22.94	20.02	12.45	4.02

Table 1 shows that the experimental group taught using Instructional scaffolding strategy had a higher mean achievement score of 37.67, and also a higher retention score of 36.14 while the control group taught with the lecture method had the least mean achievement score of 26.56 and mean retention score of 22.94. This implies that the subject in the experimental group achieved higher and also had higher retention of Biology concepts than those in the control group.

Hypotheses testing

Ho$_1$: There is no significant main effect of instructional scaffolding and lecture method on Biology students' academic achievement.

Table 2: Summary of Analysis of Covariance of treatment on Biology students academic achievement.

Source of Variation	sum of square	DF	mean square	F	sig level	partial Eta Square
Corrected Model	59325.414	2	29662.707	556.811	.000*	.825
Intercept	292335.333	1	29235.333	548.788	.000*	.698
Pretest	2283.748	1	2283.748	42.869	.000*	.153
Treatment	55796.641	1	55796.641	1047.381	.000*	.815
Error	12625.586	237	53.273			
Corrected	321566.000	240				
Total	71951.000	239				

R-square = .825 (adjusted R=.823) F=critical = 3.86 * p<.05

The calculated F-ratio 1047.381 was found to be far greater than the critical F-ratio of 3.86 needed to reject the null hypothesis at 0.05 alpha level and with 1 and 237 degrees of freedom. This implies that there is a significant effect of Biology students' academic achievement when taught through instructional scaffolding strategy and lecture method.

Ho$_2$: There is no significant effect of instructional scaffolding and lecture method on Biology students' retention of concepts.

Table 3: Summary of ANCOVA of Treatment on Biology students' retention of concepts

Source of Variation	sum of square	DF	mean square	F	sig level	partial Eta Square
Corrected Model	76244.066	2	38122.033	758.096	.000*	.865
Intercept	27339.517	1	27339.517	543.675	.000*	.696
Pretest	1266.716	1	1266.716	25.190	.000*	.096
Treatment	73849.918	1	73849.899	1468.581	.000*	.816
Error	11917.918	237	50.287			
Corrected	300458.000	240				
Total	88161.983	239				

R-square = .825 (adjusted R=.864) F=critical = 3.86 * p<.05

The result in table 3 shows that the F-calculated was 1468.581 while the F-critical was 3.86. Due to the significant value of the F-Calculated, the null hypothesis was rejected. The implication of this result is that there is a significant difference between the retention scores of Biology students taught through instructional scaffolding and those taught through lecture method.

Biology students taught through instructional scaffolding strategy have a significantly higher academic achievement and retention of concepts than those taught with lecture method.

Discussion

The findings of the research questions imply that the subject in the experimental group achieved and retent higher Biology concepts than those in the control group 37.67 and 36.4 respectively. While the subjects in the control group had the least achievement and retention of Biology concepts of 26.56 and 22.94 respectively. Also, the findings show that Biology students taught with instructional scaffolding strategy had a significantly higher achievement and retention of Biology concepts than those taught through lecture method. This result is in line with the findings of Case (2013); Olatubosun (2013); Akani (2015); Uduafemhe (2015) and Adamu (2017) who asserted that instructional scaffolding strategy was significantly better than lecture method in enhancing cognitive achievement. The findings of this study are at variance with that of Ibritam, Udofia, and Onweh (2015) who found out that there is no significant difference in the mean achievement scores of students taught through instructional scaffolding strategy and other methods of teaching.

Recommendations

The following recommendations were made:
1. The teaching of Biology should be scaffolding for better understanding, academic achievement, and retention of concepts.
2. Curriculum planners should adopt instructional scaffolding strategy as an adequate teaching strategy for teaching Biology which should be emphasized in students textbooks and teachers guide.
3. There should be organized workshops, seminars and conferences for teachers on the importance of using instructional scaffolding strategy and as innovation in teaching Biology.

References

Abubakar, M. (2013). *Problems of teaching Biology*. Unpublished M.Ed. Seminar Paper Presentation. Department of Science Education. Modibbo Adama University of Technology Yola, Adamawa State, Nigeria.

Adamu, J. (2017). *Effects of analogy and scaffolding instructional strategies on senior secondary school physics students' academic achievement in Adamawa State, Nigeria*. Unpublished M. Tech research thesis. Modibbo Adama University of Technology Yola, Adamawa State.

Akani, O. (2015). Impact of instructional scaffolding on students achievement in Chemistry in Secondary School in Ebonyi State, Nigeria. *International Journal of Education, Learning and Development*, 3(7), 74-83.

Casem, R. Q. (2013). Scaffolding Instructional Strategy in teaching Mathematics: Its effects on students' Performance and altitude. *Comprehensive Journal of Education Research,* 1(1), 9-19

Federal Republic of Nigeria (2013). National Policy on Education. Abuja: NERDE Press.

Ibritam, K. S; Udofia, N. & Onweh, V. Z. (2015). Assessing the potency of scaffolding and Demonstration instructional methods on student's achievement in Technical Colleges in Akwa Ibom State. *Advances in Research*, 3(1), 92- 101.

Joda, F. M. & Mohamed, A. A. (2017). Effect of Guided Inquiry teaching method on senior secondary school Biology students Academic Achievement and Retention in Yola Education Zone, Adamawa State, Nigeria. *Multidisciplinary Journal of Science, Technology and Vocational Education, 5(1), 89-96*

Joda, F. M. (2018). Effect of concept mapping teaching approach on senior secondary school Biology students Achievement in Biology in Adamawa State, Nigeria. *Jigawa Journal of Multi-disciplinary Studies* (JJMS), 1(1), 140-147.

Neji, H. A. & Joda, F. M. (2016). Effective Utilization of Environmental resources on chemistry learning outcomes of secondary school students in Cross River State, Nigeria. *Education for Today,* 12(1), 65-70.

Nonye, A. & Nwosu, B. O. (2011). Effects of Instructional Scaffolding on the achievement of male and female students in Financial Accounting in Secondary Schools in Abakaliki Urban of Ebonyi State, Nigeria. *Current Research Journal of Social Sciences*, 3(2), 66-70.

Olatubosun, E. O. (2015). Effects of scaffolding strategy on learners' academic achievement in integrated science at the Junior Secondary School level. *European Scientific Journal*, 9(19), 149-155.

Olson, J & Prath, T. (2000). *The Instructional cycle: Teaching children and adolescents with special needs.* Practical Hall Inc. New Jersey.

Osuafor, A & Okonkwo, I. (2013). Influence of family background on the academic achievement of secondary school Biology students in Anambra State. *African Research Review. An International Multidisciplinary Journal,* 7(3), 156-167

Uduafemhe, M.E. (2015). Comparative effects of scaffolding and collaborative instructional approaches on secondary school students psychomotor achievement in Basic Electronics in North-central Nigeria. *International Organization of Scientific Research.* 5(6), 23-31.

Ugwuadu, O. R & Joda, F. M. (2015). Reality of teaching Biology in Secondary Schools in Adamawa State, Nigeria. *Educational Forum A Journal of Institute of Education, Ahmadu Bello University Zaria,* 24(1), 59-75.

Umaru, A. A. (2011). Effects of Biology practical activities on students process skill acquisition in Minna, Niger State Nigeria. *Journal of Science, Technology and Mathematics Education*, 7(2), 118-126

Umoru, E. S. & Onoja, A. I. (2017). Comparative effects of two instructional approaches on Biology students academic achievement in Evolution; Implication for curriculum review. *Journal of Curriculum Organization of Nigeria* (CON), 1(12), 85-97

West African Examination Council (2016). Chief Examiner's report. Abuja; WAEC.

West African Examination Council (2018). Chief Examiner's report. Abuja; WAEC.

The Effect of The use of Gadget on Psychosocial, Socio- Emotional, Self-Reliance, Responsibility, and Students Learning Results in Elementary School

Iskandar Agung[1], Ferdi Widiputera[2*], Widodo[3]

[1,2,3] Center for Policy Research on Education and Culture, Research and Development Agency, the Ministry of Education and Culture, the Republic of Indonesia
[*] Maastricht University, the Netherlands

Corresponding authors: safrusal.1958@gmail.com; ferdi.widiputera@maastrichtuniversity.nl; widowida2@gmail.com

Abstract
This study aims to determine the impact of using gadgets on psychosocial, socio-emotional development, self-reliance, responsibility, and student learning outcomes. The focus of this study is elementary school students in urban areas with samples taken from six schools, three each in East Jakarta and South Jakarta in the Indonesian capital city, DKI Jakarta. The results showed that the use of gadgets had a significant influence on psychosocial, socio-emotional, self-reliance, responsibility development, then this variable became mediation which had a significant influence on student learning outcomes. Although it can have a positive or negative impact, it is difficult to limit the use of this gadget to students. For this reason, it is recommended that teachers be able to develop and utilize the use of gadgets in teaching and learning activities to students, encourage creativity, critical thinking, collaborative learning, and encourage problem solving learning. Every element in the school (headmaster, class teacher, guidance and counseling teacher, and others) must intensively explain to students about the impact of using positive or negative gadgets. Schools also need to work with parents to pay more attention to and control the use of gadgets by their children at home.

Keywords: Gadget, Psychosocial, Socio-Emotional, Self-Reliance, Responsibility, Student Learning Results

Introducing

The advancement of digital technology, one of them gadgets, has become part of the daily lives of all walks of life. Various positive or negative things can be easily accessed through the gadget. On the positive side, the use of gadgets is very helpful and makes it easy to carry out various activities, for example in terms of building communication, seeking and exchanging information, obtaining various types of entertainment, conducting financial transactions / buying and selling, ease of using transportation services with on-line applications, and others. From the negative side, in the gadget there are various kinds of content that contains the spread of false news, violence, crime, murder, to pornography.

Dependence on gadgets also knows no age, not only among adults, but also children. Especially for children, the use of gadgets is more intended to obtain entertainment, such as playing games and watching videos on youtube. Based on a survey by Asian Parent Insight through the Mobile Device Usage Among Young Kids (2014), it was stated, that the majority of parents allow children to use smartphones / tablets not only for education, but also entertainment, the introduction of technology from an early age, and to keep children children stay calm. Similarly, Zaenudin (2017) argues, one of the reasons for the widespread use of technological devices in children is because parents make the devices they provide as caregivers for their children. Use of gadgets to look after their children. With the help of gadgets, parents can detect the location of the child's presence, thus providing psychological calm.

From the field it was found that the gadget was used by all levels of the child's age, starting from the age of 0-18 years. Various cases also show the phenomenon of the negative impact of the use of gadgets by children. One negative effect is low motor development and low creativity, where children tend to spend time in cyberspace. Children cannot theorize, cannot think critically, even difficult to solve problems (Jakarta Newspaper, 2018). Jessica (2018) concluded that there were 10 bad effects of gadgets on children, namely: addiction, stunted self development, risk of obesity, reduced rest periods and decreased school performance, psychiatric illness, aggression, senility, lack of social skills, radiation threats, and explanation of the effects of unsustainable gadgets.

On this basis this paper aims to determine the effect of using gadgets on children, especially elementary school students. Paper will examine the relationship of the influence of gadget usage (UGD) on psychosocial development (PSO), socio-emotional (EMS), self-reliance (SELF), and responsibility (RESP) of children, as well as its impact on student learning outcomes (SRL). Explicitly, UGD gadget is an exogenous variable that gives effect to PSO, EMS, SELF, RESP, and SRL as endogenous variables. Furthermore PSO, EMS, SELF, and RESP are exogenous variables that have an influence on SRL as endogenous variables. Reasons for variable selection, will be described in the next paragraph.

Literature Review

Elementary School Age

There are still differences regarding the understanding of children, especially in terms of age. The United Nations Convention on the Rights of the Child defines a child as a person under the age of 18, unless specified by the laws of the country concerned (https://id.wikipedia.org/wiki/ Konvensi_Hak -Hak_Anak). But in Indonesia alone the law provides a different understanding of children. In Law No. 4/1979 concerning Child Welfare, children are people who have not reached the age of 21 years and have never been married, while in Law No. 23/2002 concerning Child Protection, the definition of child refers to someone who is not 18 (eighteen) years old, including a child who is still in the womb. In the Civil Code Article 330 says, children are everyone who is not yet 21 years old and is not married. According to Article 45 of the Criminal Code, a child is a person whose age has not reached 16 (sixteen) years. In Law No. 39/1999 concerning Human Rights is affirmed, children are every human being under the age of 18 (eighteen) and unmarried, including children who are still in the womb.

What does school-age children mean? At what age did a child start school and receive formal education from a teacher at school? Within this scope the school becomes a place of learning and children internalize the value of science and other values after the family. Schools become educational institutions are very important in shaping the personality and determining the quality of children in the future. Untario (2004) argues, the main characteristic of school age is that they display individual differences in many aspects and fields, including differences in intelligence, cognitive and language abilities, personality development and physical development.

School age was marked by the start of children entering elementary school, where children for the first time received formal education. Suryabrata (2008) mentions as an intellectual period or period of harmony for

children to attend school. However, Suryabrata did not say at what age the child is mature to enter elementary school, because maturity is not only determined by age, but by several factors that can influence it. According to Nasution (1993), the primary school age range is between six and twelve years. In the implementation of the 6-year compulsory education program by the Indonesian government starting in 1984, it was stated that children aged 7 - 12 years were required to do primary school education, and continued with a 9-year compulsory education program starting in 1994.

Development of digital technology (Gadgets)

The development of information and communication technology has resulted in the life of the world community that is getting closer, no longer limited by space and time. Globalization has resulted in increasingly open inter-nation life characterized by competitive situations in fighting for limited resources. Only countries that have quality human resources can take advantage of competitive situations to improve the welfare of their people (see: Ohmae, 1999; Spich, 1995; Albrow, 1996; Waters, 1995; Al-Rodhan, Agung, 2017).

In line with the development of information and communication technology, the use of gadget technology is increasingly being used by all levels of society in the form of tablets, cellphones, smartphones, and net books that are connected to the internet network. The invasion of digital technology is difficult to stem, and has created a new atmosphere that covers various aspects of life. Currently, the use of digital technology is developing in various aspects of work (government, private), such as: public services, business services in the fields of transportation, travel, food and beverages, health services, online commerce (e-commerce), and so on. In the field of government, the use of digital technology has been developed to facilitate the provision of services to the public, such as filling in annual taxes, making passports, storing data and information, and so on.

Challenges of 21st Century learning

Including in the field of education, inevitably must adjust to the development of global life and the use of information and communication technology. The challenge of 21st century education is to produce quality human resources who master science and technology; reading reading - writing - counting, creative, critical thinking, being able to communicate with various parties, and conveying thoughts / ideas, able to collaborate in solving increasingly complex problems; and having national insight (NIE, 205; ISTE, 2005; Pearlman, 2006; Agung, 2011).

Agung (2017) argues that current and future learning requires teachers to have various abilities, ranging from developing independent and complete learning plans, communicating interestingly - pleasantly - effectively in delivering learning material, to utilizing digital technology in learning . The latter is also meaningful, that students are also required to be able to use digital technology in learning, in the form of laptops / notebooks and gadgets. This can encourage active students to make digital technology a source of learning, develop creative and innovative attitudes, communicate thoughts and ideas actively, develop collaborative learning through problem solving approaches, build analytical and reflective thinking, and so on. All of this will shape the competency of students who master, utilize, and develop science and technology that will be the capacity and readiness to face the challenges of global competition.

Impact of Using Gadgets

A gadget is a small electronic device that has a special function. Gadgets always appear with more advanced technology that makes users easier, more comfortable, and more practical. As an activity, it is certain that the use of gadgets in students will have a positive or negative impact. Positive impact will be obtained if students can use gadgets positively, such as making it a source of knowledge and learning, developing programs, developing creativity, communicating innovative thoughts / ideas, and so on. Conversely, it tends to have a negative impact if the time and use of gadgets is not controlled just for playing games, entertainment, chatting with peers, and so on.

Various studies show the positive and negative effects of using gadgets in children's lives. Ayuningtyas and Adullah (2016) showed the positive impact of internet use (one of them through gadgets) by elementary school students in South Korea. In this country students are very active in finding correct, or valid information. Demonstrations or scientific illustrations can be searched like on google or youtube. Students usually seek information about social phenomena by being watched by the teacher. Demonstrations or scientific illustrations can be searched like on google or youtube. Students usually seek information about social phenomena by being watched by the teacher. One of the negative effects was expressed by Jessica (2018) above. The impact concerns various aspects, both child psychology, sociology, self-reliance, responsibility, and even health. This paper feels the need to conduct a study of the effect of using gadgets on children, especially elementary school students. The assumption is that the use of gadgets that are less monitored tends to have a negative impact on children and children's learning achievements. In this paper the influence of the use of gadgets will be focused on psychosocial, social-emotional aspects, self - reliance, responsibility, and learning achievement.

Psychosocial development

Sherif and Sherif (1993) argued, psychosocial is a science that studies the experiences and behavior of individual humans in relation to social stimulation situations. Myers (1990) argues, social psychology is knowledge about how people think, influence, and relate to other people. Baron and Byrne (2006) argue, social psychology is a field of science that seeks understanding of the origin and causes of thoughts and behavior of individuals in social situations. From various opinions expressed by social science and psychology experts it can be concluded that psychosocial is a branch of social science that seeks to understand individual behavior in a social context.

Psychosocial person increases with age. Erikson (1993) divides one's psychosocial development into eight stages. Human personality develops in a predetermined order, built on each of the previous stages. During each stage, individuals solve psychosocial crises that can get positive or negative results to develop trust. Failure to complete a stage can resolve the reduced ability to complete the next stage. In the opinion of Erikson (1993), children of primary school age (6-12 years) are categorized in the fourth stage, namely industry vs. inferiority. The industry builds when children are encouraged to take the initiative, so they begin to feel diligent (competent) and confident in achieving goals. But if this initiative is not encouraged and limited by parents or teachers, then children tend to foster inferiority and doubt their own abilities.

Various studies show that the use of gadgets tends to influence the psychosocial development of individuals. Trinika (2015) found that there was an influence of the use of gadgets on psychosocial development of the feet. The same was found also by Swatika (2016), Chusna (2017), and Sapardi (2018) regarding the relationship of the influence of the use of gadgets to psychosocial development of children. Witarsa et al (2018) showed that gadgets not only affect the mindset or behavior of adults, but also affect the behavior of children, especially elementary school students, in social interactions. Dependence on gadgets in children is caused by the length of time in using gadgets. Playing gadgets with a long duration and done every day, can make children develop towards anti-social.

Socio-emotional development

Emotional is related to feelings or thoughts, while social relates to society. In simple terms, it can be said that socio-emotional development is a process of growing a person to achieve maturity of feelings and thoughts in dealing with the community environment (Chaplin, 2008; Goleman, 2003).

Children's socio-emotional development is very important, because it relates to the child's ability to adjust to his social environment, especially in relation to peers. Hurlock (1980) argues, there are four criteria for social adjustment that must be owned by a child, namely: the child's real appearance can meet the expectations of the group and become members who are accepted in groups, adjust to various groups in their environment, show other people's pleasant attitudes in social participation, and satisfaction with the roles played in groups.

Socio-emotional development leads to two things, namely: the ability to adjust or isolate from their peers. According to Hurlock, there are two types of isolation (1980), namely (1) voluntary isolation is withdrawal from groups because they are less interested in participating in group activities; (2) intentional isolation because it is rejected by the group and its presence is not needed.

Various phenomena show, the use of gadgets by children brings their own pleasure so forgetting their association with their peers. Children are absorbed in using gadgets, less concerned with the social environment, and angry when disturbed. The Novitasari and Khotimah study (2016) shows that the use of gadgets has an impact on children's social interactions. Wahyuni (2018) concluded, the use of gadgets in children will affect the ability of social interaction and appear to be less concerned with the surrounding environment. Desiningrum et al (2017) and Suhana (2017) shows that the use of gadgets contributes effectively to socio-emotional intelligence variables.

Self – reliance

Self-reliance can be interpreted as an effort on your own abilities (https://www.merriam-webster.com/dictionary/Self-reliance). Self-reliance is to free yourself from the bonding and dependence of others. Steinberg (2002) argues, self-reliance is the ability to do and take into account actions taken by someone, and to build supportive relationships with others. Shaffer (2002) argues, self-reliance as the ability to make decisions and make himself a source of self- emotional strength so as not to depend on others. According to Parker (2006), self-reliance is the ability to manage all that is owned, manage time, walk and think independently, accompanied by the ability to take risks and solve problems, do not need the approval of others when going or doing something new, does not require detailed and ongoing agreement on how to achieve the final product. From this opinion it can be concluded, that self reliance is the ability to act on its own account and to be RESPonsible for the action, the ability to make decisions and manage his own life without excessive dependence on parents, and the ability to maintain supportive relationships with others.

Steinberg (2002) distinguishes self-reliance into three types, namely: emotional independence, behavioral independence, and value independence. Emotional independence is an aspect that relates to changes in relationships with someone, especially parents, where children develop feelings of individuation and try to break away from childish ties and dependence on parents. Independence acts in relation to the ability to change opinions and suggestions from other people in the right conditions, choose decisions to be made based on their own judgment and reach their own conclusions or final decisions in behaving. The independence of values is related to moral views, issues recognizing politics, ideology, and religion.

The condition of independence (emotions, behavior, and values) is influenced by various aspects, both from the family environment, friends, society, and the use of gadgets. Just look, in today's life where a child is faced with the life of a busy parent, it requires more independent attitudes and behavior. Supported by the development of the online business-based world, it requires children to use gadgets effectively to go to school, order food, deliver goods, and so on. Sari and Mitsalia (2016) found that there was a positive influence between the use of gadgets and the social personality of pre-school children. The gadget conditions children's self reliance, such as: ordering food on-line, chatting with study friends, memorizing the Qur'an, knowing English vocabulary, entertainment facilities, understanding foreign language messages in gadgets, and sharpening children's intelligence. From field observations obtained, children in urban areas are now used to using gadgets for their on-line transportation services from home to school and vice versa, to the location of tutoring, to friends' homes, and others.

Responsibility

The definition of responsibility is expressed in various versions by experts. From a legal point of view, responsibility is more interpreted as a result of the consequences of one's freedom of action related to ethics or morals (Hamzah, 2005). Other experts argue, responsibility is human awareness of the obligation to realize its role, or responsibility as a person's behavior in reacting to the environment (Soemardjan, 1964; Spraedly, 1989).

Adiwiyoto (2001) defines responsibility as making appropriate and effective decisions. It should be related to normal social boundaries and expectations that are usually given to improve human relations, safety, success, and their own welfare. Effective means a response that allows children to achieve goals whose end result is stronger self-esteem, for example if they will learn the group must get permission and account for their behavior to parents.

The Responsibility of the child will be formed along with its growth and development. In school- age children, given their primary role as students, of course the main responsibility is to undergo and pursue education seriously. According to Adiwiyoto (2001), a student who has responsible characteristics can be shown through several things, such as routine learning, respecting rules at school, doing assignments from the teacher at school or at home, being able to concentrate, and so on. Outside the context of education, in everyday life children also have other responsibilities, such as caring for personal belongings, disposing of garbage into the trash, sweeping and being involved in cleaning the house, and so on.

How does the use of the device affect the realization of children's responsibilities? The results of Prabowo's (2016) study show that children's responsibilities tend to be low, such as: not tidying up beds, rejecting jobs ordered by parents, and ignoring religious activities. Even Young and Rodgers (1998) found that the use of gadgets can lead to children's addiction, so they often lie to support their addiction. When becoming an addict, children often fail to complete their duties and obligations. Declining learning achievements will be said by lies, not caused by gadget addiction.

Research methods

Population and Sampel

This paper is part of the implementation of research in January 2019 for elementary students in two urban areas (East Jakarta and South Jakarta) in the capital city of DKI Jakarta. The study was carried out for two weeks in two municipal regions, with each of the three primary schools (two public schools and one private school) determined as "good" as a sample, and from each school 20 students of class VI were obtained as samples through a purposive random technique. The purposive criteria aimed at students are ownership of gadgets in the form of tablets, cellphones, smartphones, and netbooks connected to the internet, while random refers to everyone who meets these criteria. It is possible that the number of students who own and use gadgets in class VI is more than 20 people, but the study only took 20 people as samples with equal opportunities for each person. Determination of student samples is carried out by the class teacher. The total sample of students is 120 people.

Type and Analysis Data

Primary data in this study were obtained from distributing questionnaires to student samples, supported by the results of interviews with principals, teachers, and parents of students belonging to the school committee organization. Especially the questionnaire, before the trial was conducted to determine the level of validity and reliability using product moment test from Pearson and Cronbach Alpha with the help of the SPSS 24.0 version program. The minimum validity criteria for the validity test is = 0.361, and the reliability test is $\geq$ 0.6 (Soegiyono, 2010). From the results of the tests obtained, that most items of statements or questions in the study proved to be valid and reliable, so that they met the requirements to be applied.

Analysis used Structural Equation Modeling (SEM) using Lisrel 8.80 program. SEM can be done, because the number of samples meets the minimum requirements of 100 respondents (Kusnendi, 2009; Haryono, 2013).

Theoretical model

Theoretical model: The effect of the use of gadget on psychosocial, socio emotional, self reliance, responsibility, and students learning results in elementary school
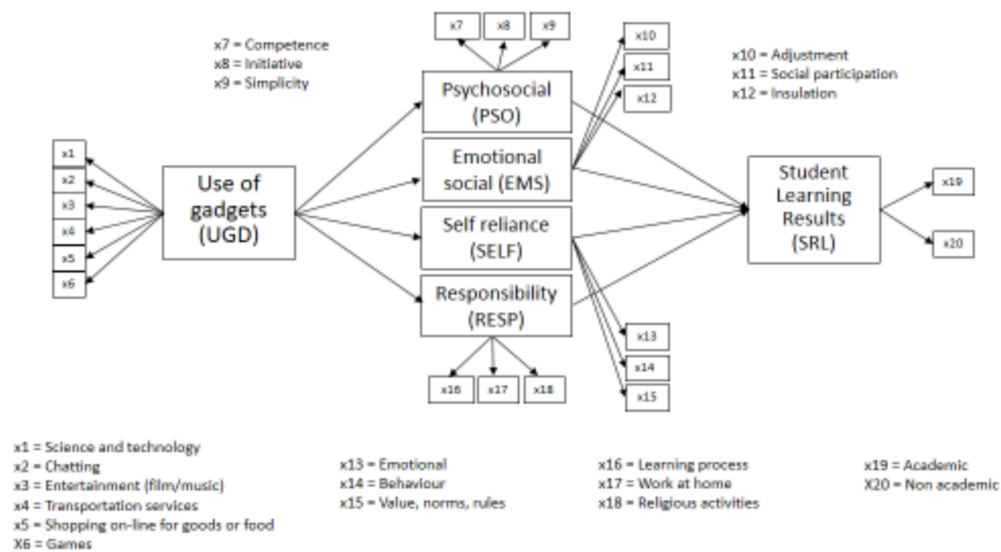
Hypothesis

- The use of gadgets (UGD) has an influence on the psychosocial development of students (PSO) The use of gadgets (UGD) has an influence on the socio-emotional development of students (EMS)
- The use of gadgets (UGD) has an influence on the self-reliance (SELF) of elementary school students
- The use of gadgets (UGD) has an influence on student responsibility (RESP)
- Psychosocial development (PSO) has an influence on student learning outcomes (SRL) Socio-emotional development (ESM) has an influence on student learning outcomes (SRL) Self reliance (SELF) has an influence on student learning outcomes (SRL)
- Responsibility (RESP) has an influence on Student learning outcomes (SRL)

Findings

Respondents description

Based on the results of questionnaires obtained answers as much as 63.33% of male students and 36.37% of female students. The age of respondents is between 11-13 years old, with the highest number being 12 years old. Most of the work of parents (57.5%) is recorded in the formal sector, as government employees, military and police, and some (42.5%) in the non-formal sector ranging from entrepreneurs (large and medium), shop vendors and on the market, workers in private companies, up to politicians). Most of the students (72.50%) said they came from families with fathers - working mothers, while 27.50 percent of students said only one (father or mother) worked for a family's daily living.

The majority of student respondents are births in the capital city of DKI Jakarta, and only a small percentage say they are born outside this area. Among them are due to following parents as civil servants, soldiers, or police who frequently move assignments from one area to another (between provinces or between regencies / municipalities). Even so, almost all of the respondents answered that they did not use the language of the ethnic group of parents, but Indonesian in communicating in their daily family environment and with peers.

The income level of parents, even though most students say they don't know, but from the answers to ownership of other items (for example: self-owned homes, private cars, motorbikes, air conditioning, TV, refrigerators,

laptops / notebooks, etc.) seem categorized capable family. As many as 48.33% of the student respondents stated that they had a shuttle from home to and from school to carry out the learning process, by subscribing every month to someone who provides shuttle services, use of on-line transportation services, or others. As many as 53.33 percent of students said they had activities outside the home after school, to take part in tutoring, traditional dance studios, sports clubs, and so on.

Confirmatory factors analysis (CFA) results

Validity Test Results

Latan (2012) suggests that Confirmatory Factor Analysis (CFA) is conducted to test the dimensionality of a construct or variable. CFA needs to be implemented as a test of validity and reliability to determine whether indicator variables really form the latent variables studied (Haryono, 2013). Validity test is done to find out whether the question items meet the standardization value of the factor. If the value of the standard loading factor is greater than 0.5, the question item is valid (Ghozali, 2011). Table 2 shows that all items in the statement or indicator in this study are valid, because they have a loading value which is greater than 0.5.

Table 2. Validity CFA Results

Variable	Indicator	loading factor	Conclusion
Use of Gadgets (UGD)	X1	0.77	Valid
	X2	0.72	Valid
	X3	0.61	Valid
	X4	0.71	Valid
	X5	0.71	Valid
	X6	0.70	Valid
Psychosocial (PSO)	X7	0.84	Valid
	X8	0.78	Valid
	X9	0.79	Valid
Socio-Emotional (EMS)	X10	0.82	Valid
	X11	0.83	Valid
	X12	0.73	Valid
Self Reliance (SELF)	X13	0.71	Valid
	X14	0.74	Valid
	X15	0.68	Valid
Responsibility (RESP)	X16	0.68	Valid
	X17	0.70	Valid
	X18	0.68	Valid
Student Learning Results (SRL)	X19	0.71	Valid
	X20	0.72	Valid

Goodness of Fit (GOF) Test

Structural model analysis in SEM begins with testing the suitability of the overall model which is seen based on the Goodness-of-Fit Index (GFI) indicator of LISREL output (Hair et al, 2006). Overall, a summary of the critical values from the model compatibility test can be shown in table 3.

Table 3. GOF Test Results

Size Degree of Match	Value	Acceptable level of compatibility	Conclusion
Goodness of Fit Indices (GFI)	0.95	GFI $\geq$ 0,9	Good Fit
Root Mean Square Error of Approximation (RMSEA)	0.016	RMSEA $\leq$ 0,08 (good fit)	Good Fit
Normed Fit Index (NFI)	0.93	NFI > 0,90	Good Fit
Adjusted GFI (AGFI)	0.96	AGFI $\geq$ 0,90	Good Fit
Comparative Fit Index (CFI)	0.96	CFI > 0,90	Good Fit
Incremental Fit Index (IFI)	0.96	IFI > 0,90	Good Fit
Relative Fit Index (RFI)	0.92	RFI > 0,90	Good Fit

The model match test results show that RMSEA is smaller than 0.08; therefore, it is said to be a good fit model. In addition, the results of testing CFI, IFI, NFI, RFI, GFI, and AGFI meet the suitability of the model in which each value is greater than 0.90 showing data good fit.

Structural Model Results

Data processing results can be seen in the structural equation modeling (SEM) as follows.

STANDARDIZED SOLUTION

Chi-Square=407.28, df=157, P-value=0.00000, RMSEA=0.016

T-VALUE

Chi-Square=407.28, df=157, P-value=0.00000, RMSEA=0.016
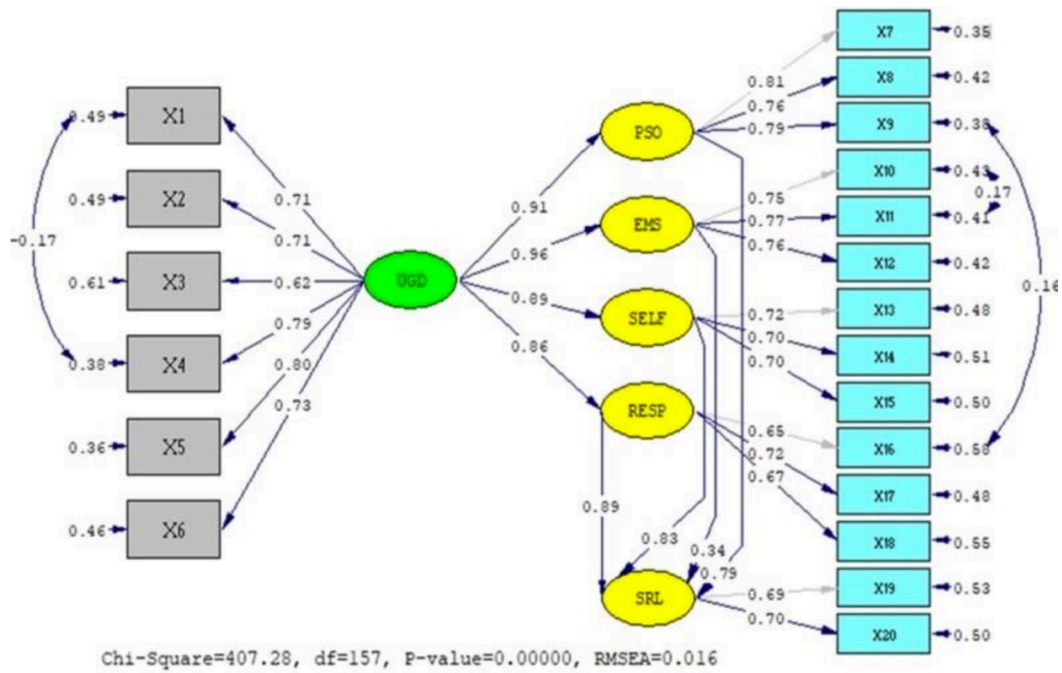
Hypothesis tests are conducted by examining at the critical value (CR) at a 95% confidence level or a 5% error. The CR value received is 1.96 (Hair, et.al, 2006). Table 4 shows eight hypotheses are accepted by obtaining a value of t which is greater than 1.96.

Table 4. Hypothesis Test Results

No	Hypothesis	Loading	T-Value	Kesimpulan
1	Used of Gadget (UGD) toward Psychosocial (PS0)	0.91	9.60	Hypothesis accepted
2	Used of Gadget (UGD) toward Socio-Emotional (EMS)	0.96	9.13	Hypothesis accepted
3	Used of Gadget (UGD) toward Self-Reliance (SELF)	0.89	10.11	Hypothesis accepted
4	Used of Gadget (UGD) toward Responsibility (RESP)	0.86	7.03	Hypothesis accepted
5	Psychosocial (PSO) toward Student Learning Results (SRL)	0.79	4.01	Hypothesis accepted
6	Socio-Emotional (EMS) toward Student Learning Results (SRL)	0.34	3.27	Hypothesis accepted
7	Self-Reliance (SELF) toward Student Learning Results (SRL)	0.83	2.94	Hypothesis accepted
8	Responsibility (RESP) toward Student Learning Results (SRL)	0.89	3.65	Hypothesis accepted

In table 4 shows that the highest coefficient value of the impact of using gadgets on students is directed at socio-emotional variables (0.96), followed by psychosocial variables (0.91), self- reliance (0.89), and responsibility (0.86). This situation shows that the use of gadgets has the greatest impact on children's social emotions, in the form of ignorance with the surrounding environment, being disturbed and tends to be angry to feel disturbed, not giving a positive response to an activity, and others.
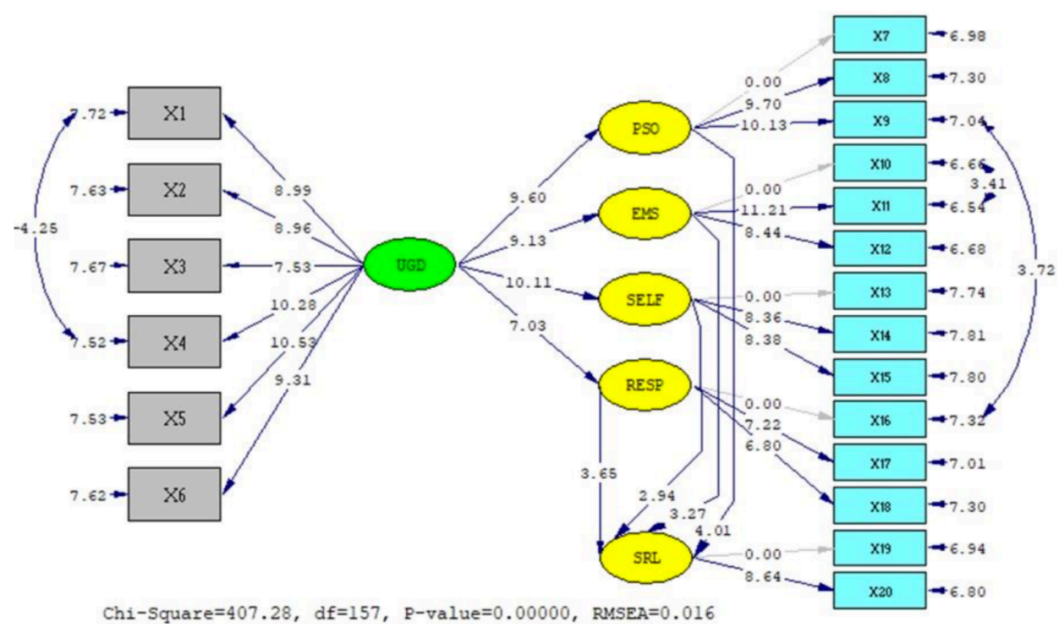
Psychosocial (PSO), socio-emotional (EMS), self-reliance (SELF), and responsibility (RESP) variables have a significant influence on student learning results (SRL). The variable that gives the highest coefficient value to the student learning results (SRL) is the responsibility variable (RESP) of 0.89, followed by self-reliance (SELF) 0.83, psychosocial (PSO) 0.79, and socio-emotional (EMS) 0.34. Implicit, the use of gadgets in students who are responsible and self-dependence, in the sense of being able to direct students' initiative and creativity on positive matters, has the highest influence on student learning results (SRL). On the other hand, although the use of gadgets has a high influence on socio-emotional, but students are quite able to suppress emotionally in carrying out their learning outcomes.

Discussion

Use of Gadget

The use of gadgets as exogenous variables has at least six indicators. From the results of the data processing, it was found that the highest contribution of the indicator of the use of gadgets by students was for on-line goods and / or food-beverage expenditure with a value of 0.80; followed by ordering transportation services (0.79); games (0.73); become a source of science and technology (0.71); chat with peers or others (0.71); and to look for film / music entertainment (0.62).

The results show that the use of gadgets by students is more focused on consumption and lifestyle needs, such as shopping for goods (clothing, bags, jackets, jewelry, etc.), food and beverage, and even new forms of game software. Some students have not used it to support educational needs, such as making learning resources, finding references, buying books, enriching scientific insights, and others. Though studies conducted by a number of parties show, that gadgets can be effective learning media and have a significant influence on student learning outcomes (Rosalia, 2017; Susanti, 2018; Nurmalasari and Wulandari, 2018).

Use of gadgets toward socio-emotional development (0,96)

The use of gadgets has a significant influence on the socio-emotional of students, especially in socializing with the environment in family, social, and peer relationships. Socialization can be interpreted as a person's learning process towards the values, norms and rules of his social environment (see: Horton and Hunt, 1999; Berger and

Luckmann, 1966; Soekanto, 2002; Koentjaraningrat, 2009; Spraedly, 1989). Or socialization is a mental and behavioral process that encourages a person to learn to understand his social environment, and then make reference to the manifestation of behavior. In this study the contribution of values in the indicators of socio-emotional development did not show significant differences between indicators of social participation (0.77), adjustment (0.76), and insulation (0.76).

Gadget influences encourage self-adjustment and social participation in the environment. A student tends to establish a good and harmonious relationship with his/her friend. Gadgets can be used well by students for their socio-emotional development according to the maturity level to connect with other people. It can be concluded that social emotional development in students has the ability to manage positive emotions in socializing or in holding social interactions. Wolfinger, Raymod, and Rosenstone (1980) argue that empathetic socio-emotional development, affiliation of two-way communication or cooperation, resolution of conflict resolution, and the development of positive habits of manners, politeness, and responsibility.

Conversely, the influence of the use of gadgets can be negative towards the socio-emotional development of students, one of which is the inability to control themselves and tend to be temperamental. The use of gadgets keeps children from the surrounding environment, is less able to participate and manage interactions with others, and tends to isolate themselves from association with their peers. Students isolate themselves, and become less restrained and tend to behave aggressively if they feel disturbed, in the form of physical attacks (nonverbal) or words (verbal), such as anger, swearing, hitting, pinching, kicking, and others.

Use of gadgets toward psychosocial development

The use of gadgets has a significant influence on psychosocial students. In this psychosocial variable, the contribution of indicators used in this study is less revealing a difference in scores, namely competence of 0.81, simplicity of 0.79, and initiative 0.76.

Various opinions were expressed by experts regarding the notion of competence. Robbins (2004) argues, competence is a person's ability or capacity of intellectual abilities and physical abilities. From this conception it is clear that competence is the harmony between intellectual and physical development. In the context of psychosocial development, Erickson (1993) divides individual psychosocial development based on age categories into eight stages, namely: stages of trust vs. mistrust (age 0 - 11/2 years), autonomy vs. shame (11/2 - 3 years), initiative vs . guilt (3-5 years), industry vs. inferiority (5-12 years), identity vs. role confusion (12-18 years), intimacy vs. isolation (18-40 years), generativity vs. stagnation (40-65 years), ego integrity vs. despair (over 65 years).

Psychosocial development of categorized elementary students in stage four: industry vs. inferior. According to Erickson (1993), in this stage the child has begun to do logical thinking and has entered school age, and faces the demands in himself and from the outside which is increasingly widespread. Conflict at this stage is feeling as someone who is capable vs. feeling inferior. If the ability to face environmental demands is respected, it will develop a passion for productivity (industry), if on the contrary there will be feelings of inferiority. From this study the use of gadgets can shape the psychosocial development of students towards industry competency or inferiority.

At this stage a child will also compare himself with peers. Shaffer (2005) says, at this age stage peer relationships are very important for school children, where they also begin to care about their appearance and position compared to their peers. Peer groups will get greater meaning and will be the main source of children's self-esteem. The use of gadgets influences the psychosocial development of children, so it is necessary to avoid psychosocial development of children which leads to simplification of thinking, namely the emergence of perceived failure compared to friends, underachievement, lack of success, and so forth which will bring inferiority.

Children will also learn to read and write, additions, and do things themselves. Therefore children need to be encouraged to take the initiative, start diligently, discipline, and believe in their ability to achieve goals. If this initiative is not encouraged and tends to be limited, children will not reach their own potential. The use of gadgets has a significant influence on psychosocial children, especially aspects of this initiative. That influence can lead to two opposite sides: strengthening or weakening student initiative.

Use of gadgets toward self-reliance

This study resulted in the use of gadgets having a significant influence on students' self-reliance. There does not appear to be a significant difference in the contribution of the indicators used in the variable self-reliance. Although emotional indicators have the highest value (0.72) in contributing to the self-reliance variable but tend not to differ greatly from the indicators of behavior and values / norms that recorded a contribution value of 0.70. This situation shows that there are quite close relationships from emotional indicators, behaviors, and values, as suggested by Steinberg (1993).

The influence of the use of gadgets on emotional autonomy of children (students), can be in the form of dependence or disengagement from other people's emotional support. The gadget itself is neutral, can be positive and negative. The impact of using gadgets can create emotional independence reduce or strengthen dependence on parents, be more responsible or less caring, and so on. In other words, the impact of the use of gadgets on children's emotional independence is expected to be independent, ie the release of children's emotional bonds without having to always have emotional dependence from parents for certain activities that can be done alone.
The use of gadgets also affects the independence of student behavior. This means that the use of gadgets can lead to the ability to make choices and make decisions with confidence, and not be influenced by others, or vice versa. The ability to make decisions will bring students independence to choose alternative solutions to problems and be responsible for their decisions. That behavior is done by not being influenced by other people, peers, or their own parents, because decisions are made with confidence and are based on needs. But on the contrary, students who are not able to make decisions will be completely dependent on others, feel less self-confident, and tend to obtain services to meet their needs. Olivia (2000) argues that it is not easy for children to fight for their independence, especially the difficulty in terminating infantile ties that have developed and enjoyed comfortably for a long time. Parents themselves often do not want to release the knots of emotional ties to children, and are considered as rebellion or resistance if the child does not follow his wishes.

The influence of gadgets on self-reliance is related to autonomy values. Value independence is the ability of individuals to reject pressure or demands of others relating to beliefs about values, norms, and principles about right and wrong. The influence of gadgets on these indicators can be seen through students' cognitive changes, especially related to values, norms, and principles in accordance with what they believe, not because of the value system provided by parents. Steinberg (1993) said that this could be caused by increasing rational power and developing the ability of individual hypotheses. Independence of values brings changes to individual conceptions about aspects of life.

Use of gadgets toward responsibility

The effect of using gadgets on student responsibilities can be positive or negative. Positive if the use of gadgets can encourage and develop student responsibility, both to support the obligation to study at home and school, work on assignments at home, and others. Negative if the use of gadgets ignores their obligations and responsibilities, where students become complacent and spend time playing games, care less, tend to shirk tasks / jobs given by parents, become aggressive if they feel disturbed, and are lazy to learn, and so on. Nurchayati (2016) found that the use of gadgets raises dependence on children, so children always want to use, even by lying. Setianingsih et al (2018) suggested that gadget addiction can affect children's brain development because excessive production of dopamine hormone disrupts the maturity of the cortex's prefrontal function, namely controlling emotions, self-control, responsibility, decision making and other moral values.

Explicitly, how to increase the positive impact of using gadgets, and vice versa minimize negative impacts. The use of gadgets must be a medium in developing students' responsibilities. Gadgets can cause addiction to children, so they tend to be less responsible for their obligations and duties, get pleasure in a one-way pattern, inhibit social interaction, lazy to learn, and others. However, Juandi (2019) argues, the use of gadgets can also bring up children's responsibilities, such as seeking information or knowledge, looking for topics that are appropriate to the subject matter in school, facilitating communication with parents, strengthening friendships, and so on.

Responsibility, self-reliance, psychosocial, socio-emotional toward student learning results

The model framework here does not see the direct effect of using the gadget (UGD) on student learning outcomes (SRL), but through mediating psychosocial (PSO), socio-emotional (SEM), self-reliance (SELF), and responsibility (RESP) variables. From testing the data obtained, that the mediating variable has a significant effect on student learning outcomes, with the largest coefficient value being responsibility (0.89), followed later by self-reliance (0.83), psychosocial (0.79), and socio- emotional (0.34).

These results also show that the use of gadgets that are able to stimulate and develop student responsibility, especially for the benefit of supporting the learning process (seeking knowledge, teaching materials, etc.), has a positive influence on achieving good learning outcomes (academic and non-academic). Conversely, the use of gadgets that are less able to stimulate and motivate students (for example: more are used to meet game addiction), will lead to weak learning responsibilities and tend to achieve low learning achievement. Helmi and Agustina's study (2017) concluded that the use of gadgets that are positive for learning outcomes if students are responsible as a media adds learning insights. Rozalia (2017) suggests, if students are less responsible and play too much gadget it will have an impact on learning achievement, but if students use gadgets that are responsible for increasing knowledge it will result in increased learning achievement. Harahap et al (2018) stated that the use of gadgets can have good or bad effects on students. If the decision about it is used as a responsibility, for example to fulfill the need to find learning materials, increase knowledge, etc. will get good learning outcomes. Dependence on targeted gadgets and being able to be used as media can support student learning achievement.

The next mediating element of the effect of using gadgets on student learning outcomes is independence, namely the ability of the gadget to build confidence and attitude of independence. Independence in using gadgets determines student learning outcomes: if students are free to meet the addictive needs of playing games, they will get unsatisfactory learning achievements; if it leads to freedom that is responsible for using gadgets to determine and add insight into knowledge, learning processes, or other constructive ones, it will lead to satisfying learning achievement. The independence needed is the ability to develop learning processes that are free from emotional ties, such as: new children learn if parents are anxiously sanctioned, new children learn if parents read textbooks, or new children learn when parents help with task completion given by the teacher. Self-reliance also refers to student behavior in carrying out the rights and obligations of learning, as well as consistency in applying values and norms related to the learning process, such as: the use of gadgets in collaborative learning, finding learning materials, searching for discussion material, completing assignments, summarizing the essence of books, etc. Saefullah et al (2013) suggested that there was a significant positive relationship between learning independence and learning achievement attitudes. This means, the better the learning independence attitude students have, the better the learning achievement achieved by students. Egok (2016) concludes, that there is a relationship between critical thinking skills and learning independence with learning outcomes. Suit et al (2017) shows that student independence consists of aspects of self-confidence, being able to work alone, respecting time, having a competitive desire to progress, be responsible and able to make influential decisions on student learning outcomes. This means that the use of gadgets that are motivated by students' independence in fulfilling the learning process will have a positive effect on learning outcomes.

Psychosocial development is one of the mediations that have a significant influence on the achievement of student learning outcomes, academic and non-academic. The use of gadgets that are compatible with psychosocial development of elementary school students will shape the ability, initiative, and simplification of

mindset to support the learning process. Latifah et al (2018) concluded that psychosocial development plays an important role in stimulating nerves and muscles and has an influence on student learning outcomes. Boty and Handoyo (2018) show that there is an influence of creativity on the learning outcomes of elementary school students. This means that the use of gadgets that stimulate psychosocial development in the form of competencies according to age, initiative and creativity will have a positive effect on student learning outcomes.

The last one is the socio-emotional development is a mediating variable that has a significant influence on student learning outcomes. The use of gadgets that are able to develop an attitude of self-adjustment, social participation, and not isolate themselves, will become the basic capital for students to realize collaborative learning with peers. Children will be happy, because they can learn in groups and complete learning difficulties together. Conversely students who tend to isolate themselves from association with peers, it will be difficult to interact, communicate, and get learning assistance. Putriana (2013) shows, how study groups encourage student motivation and influence learning achievement. Yulaeha and Rusdi (2016) suggest, there is the influence of small group discussions on student learning outcomes. Explicitly, the use of gadgets must be able to become an instrument of socio-emotional development so that it can become a basis for supporting learning processes and outcomes. Agung (2017) argues, that the challenge of education in the 21st century is the development of learning through mastery and use of digital technology to design learning programs that try to adapt relevant learning experiences, encourage learning of active and creative students; developing a learning environment that makes it easy for students to fulfill their curiosity, collaboration of students using digital tools and resources, conveying relevant information and latest ideas to students, exemplifying and facilitating the use of digital devices to search, analyze, and evaluate various information support learning.

Conclusion

Gadgets technology is an instrument that can have a positive or negative impact, depending on the user. The results showed that the use of gadgets had a significant effect on psychosocial, socio- emotional, self-reliance and student responsibility. Furthermore, the four variables also have a significant influence on student learning outcomes. Positive or negative impact that is caused on student learning outcomes is determined by the definition of what the gadget is used by students. If more gadgets are used to meet the needs of playing games all day by students, for example, learning time will also be consumed and lead to the achievement of learning outcomes that are less satisfying. If the use of gadgets is more responsible, raises the initiative's independence and creativity, encourages self-adjustment and collaborative attitude, utilizes to find material / material / reference, adds insight into knowledge, etc. will support the achievement of student learning outcomes.

It is difficult to limit the use of gadgets by elementary students, moreover a challenge in 21st century learning. Gadgets are indeed multi-functional can be used for various purposes, ranging from online shopping, playing games, interaction and communication, meeting entertainment needs, and so on. In the lives of students, it is necessary to find ways in which students can use gadgets to support the learning process, such as: being a learning resource, reference sources, enhancing knowledge insights, communicating ideas, etc. The latter is said to require teachers to develop and utilize the use of gadgets in teaching and learning activities to students, encourage creativity, critical thinking, collaborative learning, and encourage problem solving learning. In addition, every element in the school (principals, class teachers, guidance and counseling teachers, and others) must intensively explain to students about the impact of using positive or negative gadgets. The school also needs to work with parents to pay more attention to and control the use of gadgets by their children at home.

References

Agung, I. The Development of Character Education And Its Implementation As Educational Unit In Indonesia, The Office of Educational Research and Dvelopment: Ministry of National education. 2011; Vol. 3.
Agung, I. (2017). Competence and Professional Teachers: 21st Century Perspective, Oration of Research Professor, Jakarta: LIPI - MOEC.
Adiwiyoto, A. (2001). Training Responsible Children, Jakarta: Mitra Utama.
Albrow, M. (1996). The Global Age. http://www.globalizacija.com/doc_en/e0013glo.htm.

Al-Rodhan, N. R. F. (2006). Definitions of Globalization: A Comprehensive Overview and a Proposed Definition, GCSP.

Berger, P. L., T. Luckmann (1966), The Social Construction of Reality: A Treatise in the Sociology of Knowledge, Garden City, NY: Anchor Books.

Boty, M., Handoyo, A. (2018). Relationship between Creativity and Learning Outcomes of Class V Students of Indonesian Language Courses at Mi Ma'had Islamy Palembang, PGMI Scientific Journal, Vol. 4 (1), 41 - 55.

Chaplin, J. P. (2008). Complete Dictionary of Psychology, Jakarta: Raja Grafindo Persada

Chusna, P. A. (2017). The Influence of Media Gadgets on the Development of Child Character, Research Dynamics, Religious Social Communication Media, Vol. 17 (2), 315 – 330.

Criminal Code of the Republic of Indonesia.

Desiningrum, D. R., Indriana, Y., Siswati. (2017). Intention of using gadgets and emotional intelligence in early adolescents, Proceedings of the Scientific Gathering X Indonesian Developmental Psychology Association, Semarang: 22-24 Agustus, 65 - 71.

Egok, A. S. (2016). Critical Thinking Ability and Learning Independence with Mathematics Learning Outcomes, Basic Pendidian Journal, Vol 7 (2), 185 - 198.

Erickson, E. H. (1993). Childhood and Society, Publisher: W. W. Norton & Company

Ohmae, K. (1999). The Borderless World: Power and Strategy in the Interlinked Economy, London: Harper Collins.

Oliva, A. (2000). Personal, Social, and Family Correlates of Emotional Autonomy in Adolescence. Departamento de Psicologia Evolutiva y de la Education Universidad de Savilla.

Fitria Ayuningtyas, F., Abdullah, A. Z. (2016). Healthy and Good Internet Use for Elementary School Students in Dharma Karya UT, South Tangerang. Proceedings of the Teacher's National Scientific Meeting (Ting), VIII, 400 – 410.

Goleman, D. (2003). Emotional Intelligence, Jakarta: Gramedia.

Novitasari, W., Khotimah, N. (2016). The Impact of Using Gadgets on Social Interaction for Children Aged 5-6 Years, Lotus PAUD Journal, Vol. 05 (03), 182-186.

Zaenudin, A. (2017). Gadget Addiction Risk in Children. https://tirto.id/risiko-kecanduan-gadget- pada-anak-anak-ctga). Accessed 23 Januari 2019.

Hamzah, A. (2005). Legal Dictionary, Ghalia Indonesia.

Harahap, R. S., Elly, R., Safiah, I. (2018). The Effect of Using Gadgets on Learning Outcomes of Class V Students of SD Negeri 12 Banda Aceh, Scientific Journal of Primary School Teacher Education, Vol. 3 (1), 119 - 126.

Helmi, Agustina, N. A. (2017). The Effects of Using a Gadget for the Students' Study Result at SDN 1 Loktabat Utara Banjarbaru Subdistrict, Pahlawan Journal, Vol. 10 (1), 13 pages.

Horton, P, B., Hunt, C. L. (1999). Sociology, Erlangga Publisher.

https://id.theasianparent.com/hasil-survey-smartphone-yang-mengejutkan?utm_source=article-bottom &utm_medium=copy&utm_campaign=article-share diakses 23 Januari 2019

http://www.augustafamily.com/kids-RESPonsibilities-expectations-age-appropriate-chores/. Diakses 18 Februari 2019

https://id.wikipedia.org/wiki/Konvensi_Hak-Hak_Anak

http://www.augustafamily.com/kids-RESPonsibilities-expectations-age-appropriate-chores/

https://www.merriam-webster.com/dictionary/self-reliance.

Human Rights Law Number 39 of 1999 concerning Human Rights.

International Society for Technology in Education. (2008). National Educational Technology Standards (NETS•T) and Performance Indicators for Teachers, ISTE.

Jakarta Newspapaer. (2018). http://www.koran-jakarta.com/dampak-buruk-gadget/

Juandi, A. (2019). Be aware of the bad effects of `gadget` for children, Elshinta.com. https://elshinta.com/news/134073/0000/00/00/waspadai-dampak-buruk-gadget-bagi- anak.

Koentjaraningrat. (2009). Introduction to Anthropology, Jakarta: Gramedia. Law No. 23 of 2002 concerning child protection

Law of the Republic of Indonesia Number 4 of 1979 concerning Child Welfare

Latifah, Alfiani, D. A., Andini. (2018). Effect of Psychosocial Development on PPKn Learning Outcomes of Class IV MIN Students in Cirebon City, Al Ibtida: Journal of MI Teacher Education, Vol. 5 (2), 249 – 260.

Nasution, A. H. (1993). Educational Psychology, Jakarta: Rajawali Press.

NIE. (2005). A Teacher Education Model for 21st Century, The National Institute of Education Singapore.

Nurchayati, Z. (2016). The Impact of Using Gadgets on Underage Children on Family Communication in Character Formation, Research Journal of Social Sciences, Vol. 17 (1), 1411-5344.

Nurmalasari, Wulandari, D. (2018). The Effect of Gadget Use on Achievement Levels Private Vocational School of One Saturday Private Vocational School, Pakisjaya Karawang, Journal of Knowledge Science and Computer Technology, Vol. 3 (2), 111 – 118.

Pearlman, B. (2006). 21st Century Learning in Schools – A Case Study of New Technology High School in Napa, CA. New Directions for Youth Development.

Prabowo, A. (2016). The Influence of Gadgets on Children in the Interaction of Muslim Family in Yogyakarta's Winong Kotagede Housing, Sunan Kalijaga State Islamic University.

Putriana, S. (2013). The Effect of Group Learning and Student Learning Motivation on the Learning Achievement of Class VIII Students of State Middle School 23 Purworejo, Oikomomia Journal: Vol. 2 (4), 325 - 329.

Robbins, S. P. (2004). Essentials of Organization Behavior. New Jersey: Prentice-Hall International Inc.

Rozalia, M. F. (2017). Intensity Relationship Using Gadget With Learning Achievement of Basic V Vocational School Students, Elementary Thinking and Development Journal, Vol. V (2), 722- 731.

Saefullah, Siahaan, P., Sari, I. M. (2013). Relationship Between Attitude of Learning Independence and Learning Achievement of Class X Students in Portfolio-Based Physics Learning, Journal of Wahana Pendidikan Fisika 1, 26-36.

Sapardi, V. S. (2018). Relationship between the Use of Gadgets and the Development of Preschoolers in Budi Mulia Islamic Early Childhood Kindergarten / Kindergarten, Menara Ilmu Journal, Vol. 12 (2), 137 – 145.

Sari, T. P., Mitsalia, A. A. (2016). The Effect of Using Gadgets on the Pre-School Child's Social Personal at TKIT Al Mukmin, Profesi Journal, Vol. 13 (2), 72 – 77.

Setianingsih, Ardani, A. W., Khayati, F. N. (2018). The Impact of Using Gadgets on Preschool Children Can Increase Risk of Attention and Hyperactivity Concentration Disorders, GASTER Journal, Vol. XVI (2), 191 - 205.

Shaffer, D. R. (2005). Developmental Psychology Chilhood and Adolescence, Brooks/Cole Publishing Company.

Sherif, M., Sherif, C. W. (1956) An outline of social psychology, Publisher: Harper.

Soekanto, S. (2002). Introduction to Sociology, Jakarta: Gramedia.

Soemardjan, S. (1964). Setangkai bunga sosiologi: buku bacaan untuk kuliah pengantar sosiologi, Lembaga Penerbit FEUI.

Spich, R. (1995). Globalization Folklore: Problems of Myth and Ideology in the Discourse on Globalization", Journal of Organizational Change Management, Vol. 8 (4), 6-29, p. 7.

Spraedly, J. P. (1989). Anthropology: The Cultural Perspective, Publisher: Waveland Pr Inc.

Steinberg, L. (2002). Adolescence. New York: McGraw Hill Companies, Inc.

Suhana, M. (2017). Influence of Gadget Usage on Children's Social-Emotional Development. Advances in Social Science, Education and Humanities Research (ASSEHR), vol. 169. Atlantis Press.

Suid, Syafrina, A., Tursinawati. (2017). Analysis of Student Independence in the Learning Process in Class III of SD Negeri 1 Banda Aceh, Pesona Dasar Journal, Vol. 1 (5), 70 - 81.

Suryabrata, S. (2008). Educational Psychology, Jakarta: Raja Grafindo Persada.

Susanti, A. D. (2018). The Effect of Using Gadget in Learning Activities to Improve Students ' Learning Outcomes in Class XI IIS State 1st High School, Seputih Mataram, Bandar Lampung: University of Lampung.

Swatika, P. (2016). The Effect of Using Gadgets on the Development of Child Psychology, Holistika: PGSD Scientific Journal, Vol. ... (...), 49 – 54.

The Civil Code of the Republic of Indonesia.

Trinika, Y. (2015). Effect of Using Gadgets on Psychosocial Development of Preschool Children (3-6 years) in TK Immanuel Christian Private School 2014-2015 Academic Year, ProNers Journal, Vol. 3 (1).

Untario. (2004). Definition of School-age Children. http://untario.psychologymania.com. Retrieved 12 March 2019.

Wahyuni, S. I. (2018). Impact of Using Gadgets on Early Childhood Social Interaction Capabilities, Al Hikmah Proceedings on Islamic Early Childhood Education, Vol. 1, 463-472.Waters, M. (1995). Globalization, London: Routledge.

Witarsa, R., Hadi, R. S. M., Nurhanik, Haerani N. R. (2018). The Effect of Using Gadgets on Social Interaction Abilities of Primary School Students, Pedagogik Journal, Vol. VI (1), 9 – 20.

Wolfinger, Raymond, E., Rosenstone, S. J. (1980). Who Votes?, Yale University Press.

Young, K. S., Rodgers, R. C. (1998). Eastern Psychology, Eastern Psychological Association.

Yulaeliah, W., Rusdi, A. (2016). The Influence of Application of Small Group Discussion Methods on Class V Student Learning Outcomes in Social Sciences Subjects in Ibtidaiyah Nurul Huda Madrasah Air Sugihan District Ogan Komering Ilir, PGMI scientific journal, Vol. 2 (2).

The Effect of Reciprocal Peer Tutoring Strategy Assisted by GeoGebra on Students' Mathematical Communication Ability Reviewed from Gender

Laras Lestari[1], Mulyono[2], Syafari[3]

[1,2,3] State University of Medan, Medan, North Sumatera, Indonesia

Corresponding Author: Laras Lestari, Mathematics Education Department, Postgraduate Program, State University of Medan, Medan, North Sumatera, 20221, Indonesia. E-mail: laraslestari777@gmail.com

Abstract

The purpose of this study is to examine the effect of reciprocal peer tutoring strategy assisted by geogebra on students' mathematical communication ability reviewed from gender. The method in this study is the experimental method. The sample was consisted of 72 tenth grade students of SMAN 11 Medan and drawn using simple random sampling technique. The instrument has consisted of a prior mathematics knowledge test and mathematical communication ability test. Treatment consisted of teaching equations and inequalities learning the material to the experimental group using reciprocal peer tutoring strategy assisted by geogebra, while the control group was taught using expository strategy. The data analysis is done by using Analysis of Covariance (ANCOVA). The results show that: (1) reciprocal peer tutoring strategy assisted by geogebra affects students' mathematical communication ability significantly, (2) gender doesn't affect students' mathematical communication ability significantly, (3) There is no interaction between strategy (reciprocal peer tutoring strategy assisted by geogebra and expository strategy) and gender (male students and female students) on mathematical communication ability.

Keywords: Reciprocal Peer Tutoring Strategy, Geogebra, Mathematical Communication Ability, Gender

1. Introduction

At least there are two important reasons which make mathematical communication is important in mathematics learning, that is mathematics as language and mathematics learning as a social activity. Mathematics not only as a tool to aid thinking, a tool to find pattern or solving problem but also as an invaluable tool for communicating a variety of ideas clearly, precisely, and succinctly and as social activity such as interaction between students, communication teacher and students is an important part in mathematics learning for nurturing children's mathematical potential (Baroody, 1993). National Council of Teachers of Mathematics (NCTM) also expresses the opinion about the importance of communication in mathematics learning. According to NCTM, communication is an essential part of mathematics and mathematics education (NCTM, 2000). Similarly, Umar (2012) explained that mathematical communication is one of the core learning, so it needs to be developed in mathematics learning activities.

Similarly, in the learning process of curriculum 2013, the students who already have the mathematical understanding ability are demanded to be able to communicate it. That is the last level on the scientific approach, which is observing, asking, collecting information, associating, and communicating. The learning process which consists of five levels listed on Cultural and Education Ministry Regulation of the Republic of Indonesia number 81A in 2013 Appendix IV on Implementation of the Curriculum.

Based on the survey results of the Programme of International Student Assessment (PISA) in 2015, Indonesia is on the 62nd rank of 72 countries. Based on the survey results known that Indonesia's position is increased compared with survey results in 2012, Indonesia is on the 64th rank of 65 countries. Although Indonesia's position is increased Indonesia's achievement is still under the average of other Organization of Economic Cooperation and Development (OECD) countries.

The students' mathematical abilities in PISA are divided into six levels. The sixth level as the highest achievement level and the first level as the lowest achievement level. Each level shows mathematics competency level which must be achieved by students. One of the mathematical abilities at the third level until the sixth level 6 that students must achieve is mathematical communication ability. This is in accordance with the seven principles of mathematical abilities used in 2015 PISA framework, that is communication, mathematising, representation, reasoning and argument, devising strategies for solving the problem, using symbolic, formal, technical language and operation, and using mathematical tools.

Based on survey results of PISA in 2015 can be seen that for under second level questions, the percentage of Indonesian students who gave correct answers was higher than the average percentage of students from other OECD countries, that is 42.3% of 13%. While, for the fifth and sixth level questions, the percentage of students who gave correct answers was far lower than the average percentage of students from other OECD countries, that is 0.8% of 15.3%. On the previous explanation has been explained that one of the mathematical abilities that must be achieved by students at the third level until the sixth level is mathematical communication ability. It means that mathematical communication of Indonesian student is still low.

Students' mathematical communication ability which still low can also be seen from the cases found by a researcher at SMAN 11 Medan which will be used as a research location. Based on the results of observations and interviews at that school, it was found that students' mathematical communication ability included in the low category. There are many learning strategies which can be used to develop students' mathematical communication ability. One of them is the reciprocal peer tutoring strategy. Furthermore, NCTM stated that technology is important in mathematics learning and teaching. It affects mathematics which is taught and enhance students' learning. Therefore, the researcher will apply reciprocal peer tutoring strategy assisted by geogebra. Furthermore, this study will be reviewed by gender. Ajai and Imoko (2015) stated that literature about gender and academic achievement in mathematics was found with different views and findings. Therefore, to solve this problem, the researcher will do research entitled "The Effect of Reciprocal Peer Tutoring Strategy Assisted by GeoGebra on Students' Mathematical Communication Ability Reviewed from Gender.

2. Literature Review

2.1 Reciprocal Peer Tutoring Strategy Assisted by GeoGebra
Initially, Reciprocal Peer Tutoring was developed and tested for children with academic needs by Pigott, Fantuzzo, and Clement in 1986. While GeoGebra was first developed by Markus Hohenwarter in 2001. In the Reciprocal Peer Tutoring strategy, students gather in groups, two or more people in one group are trained to work together on certain academic tasks (Fantuzzo et al., 1990). While GeoGebra is a dynamic program which has the facility to visualize or demonstrate mathematical concepts and as a tool to construct mathematical concepts (Syahbana, 2016).

Reciprocal Peer Tutoring Strategy is one of the student-centered learning strategies. Currently, teachers are required to be able to apply learning methods that are more student center (Sapta et al., 2018). With the implementation of reciprocal peer tutoring strategy assisted by geogebra, students in one group take turns to act as tutors and tutees for teaching and observing academic material with teacher supervision. With the exchange of roles and assistance from the GeoGebra software, each student is given the opportunity to develop and practice their mathematical communication ability. This statement is supported by Benware and Deci (1984) who found that students who learn to teach a peer have higher values of conceptual learning, are more intrinsically motivated, and consider themselves more actively involved with the environment than students who are expected

only to remember information provided. In addition, research conducted by Yang et al. (2016) showed that the students' mathematical communication ability in the experimental class or which is taught by computer-supported reciprocal peer tutoring improved significantly.

Learning theory which supports the Reciprocal Peer Tutoring strategy is Vygotsky's theory. Vygotsky (1978) views the definition of teachers widely, and he states that a colleague (peer) or even a tool can act as a teacher. According to Slavin, there are two important concepts in Vygotsky's theory, that is Zone of Proximal Development and Scaffolding. Zone of Proximal Development is a gap between actual development and potential development, with another word is a child can do something without adult's assisting and is a child can do with directing adult or work together with colleague's friend. While scaffolding is giving to a child big amount for beginning learning steps and then to decrease the assisting and to give a chance to the children taking away the responsibility that so big soon after he can do himself (Syafari, 2017).

2.2 Mathematical Communication Ability
Mathematical communication has an important role in the learning of mathematics because through mathematical communication students can express, explain, describe, hearing that take students on a deep understanding of mathematics (Paridjo and Waluya, 2017). Besides, can be explained that mathematical communication ability is the skill of students in expressing the set of problem or idea in mathematics by using a concrete object, picture, graph, table or mathematical symbols as the content of the message to be delivered (Damayanti & Setianingsih, 2017).

The indicators of mathematical communication ability used in this study are formulating the component of the known elements and the asked elements (Saragih, 2007), use the language of mathematics to express mathematical ideas precisely (NCTM, 2000), explaining a situation or problem by using symbols, tables, diagrams, or other media (Qohar & Sumarmo, 2013), and declare the situation or picture of a problem in mathematical model (Maghfiroh, 2017).

2.3 Gender
Haralambos and Holborn (2004) state that there is prove which can explain that female student have better learning achievement level than male students. According to them, female students are motivated and more diligent than male students in doing the assignment. The statement is in accordance with the research conducted by Triyadi (2013) which shows that the female students have more dominant mathematical communication ability than male students. While Ormord (2009) states that there is a gendered tendency that male students have better abilities in mathematics and science naturally while female students have better abilities in reading naturally. The statement is in accordance with Husain (2014) which stated that mathematical communication of male students is higher than female students.

2.4 Hypotheses
The hypothesis in this study consisted of: (1) reciprocal peer tutoring strategy assisted by geogebra affects students' mathematical communication ability significantly, (2) gender affects students' mathematical communication ability significantly, (3) There is interaction between strategy (reciprocal peer tutoring strategy assisted by geogebra and expository) and gender (male students and female students) on mathematical communication ability.

3. Method

This study uses a quantitative research approach with experimental rmethods in the form of factorial design. This study was conducted at SMAN 11 Medan, which is one of the senior high schools in the city of Medan, North Sumatra Province, Indonesia.

3.1 Population and Sample
The population in this study was all students of tenth-grade students of SMAN 11 Medan in the academic year of 2018/2019 which consists of nine classes with the total student is 317 students. The sample is chosen randomly using simple random sampling technique. The researcher chooses X-IPA-5 class as an experimental group which taught by reciprocal peer tutoring strategy assisted by geogebra and X-IPA-6 class as the control group which taught by expository strategy. The learning material for both classes is Equations and Inequalities. The research sample based on gender is listed on Tabel 1.

Table 1. Total Sample of Research-Based On Gender

Groups	Male	Female	Total
Experimental Groups	16	20	36
Control Groups	16	20	36
Total	32	40	72

3.2 Instrumentation and Validation
The instrument in this study is prior mathematics knowledge tests which consist of 12 questions with a reliability coefficient of 0.811 and mathematical communication ability tests which consist of 5 questions with a reliability coefficient of 0.855. The prior mathematics knowledge tests were given before treatment in the experimental group, and the control group was applied.

3.3 Method of Data Analysis
Data analysis was conducted with the Analysis of Covariance (ANCOVA). This is because in this study there are two main factors namely learning strategy and gender and there is one covariate variable, namely students' prior mathematics knowledge. Before conducting ANCOVA, the assumptions discussed in Pallant (2007) have been examined. These assumptions are level of measurement, independence of observations, normality, homogeneity of variance, influence on covariate measurement, homogeneity of regression slopes and linearity.

4. Results

After checking the assumptions, ANCOVA analysis could proceed in order to examine the effect of reciprocal peer tutoring strategy assisted by geogebra on students' mathematical communication ability reviewed from gender. So, the SPSS output of ANCOVA in this study is listed in Table 2.

Table 2. Inferential Results on Mathematical Communication Ability Tests

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	15407.416[a]	4	3851.854	279.439	.000	.943
Intercept	7040.633	1	7040.633	510.774	.000	.884
Prior Mathematics Knowledge	14124.742	1	14124.742	1.025E3	.000	.939
Strategy	435.085	1	435.085	31.564	.000	.320
Gender	14.721	1	14.721	1.068	.305	.016
Strategy * Gender	1.004	1	1.004	.073	.788	.001
Error	923.543	67	13.784			
Total	423333.980	72				
Corrected Total	16330.960	71				
a. R Squared = .943 (Adjusted R Squared = .940)						

Based on Table 2, the significance number of the prior mathematics knowledge variable is 0.000, and it shows that the significance number is less than the predetermined α of 0.05. Therefore, it means that (by ignoring the effect of learning strategy) at the 95% confidence level there is a linear correlation between prior mathematics knowledge variable and mathematical communication ability variable. It means that analysis of covariance assumption which requires linearity between accompaniment variable (prior mathematics knowledge) and the response variable (mathematical communication ability) have been achieved.

Furthermore, for the strategy obtained the F value of 31,564 with a significance value of 0,000. This means that learning strategies affect mathematical communication ability significantly. For gender, the F value of 1.068 with a significance value of 0.305. This means that gender doesn't affect mathematical communication ability significantly. Or in other words, there is no significant difference between the scores of mathematical communication ability of male and female students. There are significant differences between the experimental group and the control group with the scores of the mathematical communication ability of the experimental group students higher than the scores of the mathematical communication ability of the control group students. For interactions between strategy and gender, the F value of 0.073 with a significance value of 0.788. This means that there is no interaction between the strategy (Reciprocal Peer Tutoring assisted by GeoGebra and expository) and gender (male and female students) on students' mathematical communication ability. It can also be described through the graph in Figure 1.

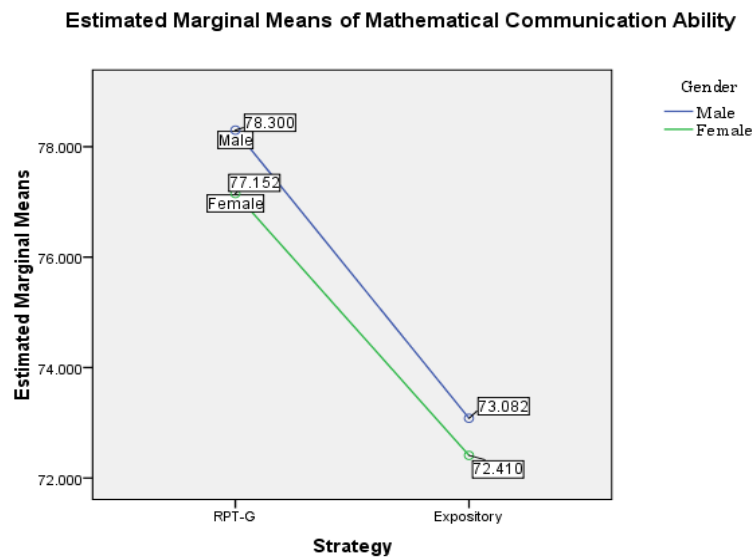**Estimated Marginal Means of Mathematical Communication Ability**

Figure 1. Graph of the Interaction between Learning Strategies and Gender on Students' Mathematical Communication Ability

Based on Figure 2, it can be seen that in the reciprocal peer tutoring strategy assisted by geogebra (RPT-G) and expository strategies, the mean score of mathematical communication ability of female students in the experimental class and control class was lower than male students. Therefore, there is no interaction between learning strategies and gender on students' mathematical communication ability.

5. Discussion

The result shows that the reciprocal peer tutoring strategy assisted by geogebra affects students' mathematical communication ability significantly. It means that the first hypothesis in this study was accepted. The result of this study is in accordance with the results of the study of Henson et al. (2009), which states that Reciprocal Peer Tutoring (RPT) is more effective than traditional learning on improving student performance significantly for Algebra courses.

Then, the result of the study shows that gender doesn't affect mathematical communication ability significantly. It means that the second hypothesis in this study was rejected. The results of this study are in accordance with the results of the study of Hidayat & Dwiningrum (2016), which states that there is no significant effect (p> 0.05) of gender characteristics on mathematics learning achievement.

Furthermore, based on the results of the study, it was also found that there was no interaction between learning strategies (reciprocal peer tutoring assisted by geogebra and expository) and gender (male and female students) on students' mathematical communication ability. This means that the third hypothesis in this study was rejected. The results of this study are in accordance with the results of the study of Akay (2011), which states that there is no significant interaction between group and gender on students' mathematical achievements.

6. Conclusion

Based on the results of research data analysis, it can be concluded that the reciprocal peer tutoring strategy assisted by geogebra affects students' mathematical communication ability significantly. But, gender doesn't affect students' mathematical communication ability significantly, and there is no interaction between learning strategies (reciprocal peer tutoring strategy assisted by geogebra and expository strategy) and gender (male students and female students) on students' mathematical communication ability.

References

Ajai, J.T. & Imoko, I.I. (2015). Gender differences in mathematics achievement and retention scores: A case of the problem-based learning method. International Journal of Research in Education and Science (IJRES), 1(1), 45-50.

Akay, G. (2011). The Effect of Peer Instruction Method On The 8th Grade Students' Mathematics Achievement In Transformation Geometry and Attitudes Towards Mathematics. A thesis submitted to the graduate school of social sciences of Middle East Technical University.

Baroody, A. J. (1993). Problem-solving, Reasoning, and Communicating, K-8, Helping Children Think Mathematically. New York: Macmillan Publishing Company.

Benware, C. A., & Deci, E. L. (1984). Quality of learning with an active versus passive motivational set. American Educational Research Journal, 21, 755-765. http://doi/10.3102/00028312021004755

Damayanti, A. & Setianingsih, R. (2017). Profile of Students' Mathematical Communication Abilities in Learning Using Reciprocal Peer Tutoring Strategy. Jurnal Ilmiah Pendidikan Matematika, 3(6), 107-114.

Fantuzzo, J. W., Polite, K., & Grayson, N. (1990). An evaluation of reciprocal peer tutoring across elementary school settings. Journal of School Psychology, 28(4), 309-323. http://dx.doi.org/10.1016/0022-4405(90)90021-X

Haralambos, M. & Holborn, M. 2004. Sociology: Themes and Perspectives Sixth Edition. London: Harper Collins Publisher.

Henson, L. D., Hagos, L. C., & Villapando, R. A. (2009). The Effectiveness of Reciprocal Peer Tutoring (RPT) on the Academic Performance of Students in Mathematics. Proceedings of the 2nd International Conference of Teaching and Learning, INTI University College, Malaysia.

Hidayat, A. & Dwiningrum, S. I. A. 2016. Pengaruh Karakteristik Gender dan Motivasi Belajar Terhadap Prestasi Belajar Matematika Siswa SD. Jurnal Prima Edukasia, 4(1), 32 – 45. https://doi.org/10.21831/jpe.v4i1.7692

Husain, S. A. A. (2014). Perbedaan Kemampuan Komunikasi Matematis Siswa Laki-laki dan Siswa Perempuan. FMIPA: Universitas Negeri Gorontalo.

Maghfiroh, M., Baiduri, & Ummah, S. K. (2017). Analysis of Students' Mathematical Communication of Junior High School Through The SAVI (Somatic, Auditory, Visualization, Intellectually) Approach. Mathematics Education Journals, 1(2), 72-81.

National Council of Teachers of Mathematics. (2000). Principles and Standards for School Mathematics. Reston, VA: The National Council of Teachers of Mathematics, Inc.

Ormrod, J. E. (2009). Psikologi Pendidikan Membantu Siswa Tumbuh dan Berkembang. Jilid 1. Jakarta: Erlangga.

Pallant, J. (2007). SPSS survival manual: A step by step guide to data analysis using SPSS for windows. New York: McGraw-Hill/Open University Press.

Paridjo & Waluya, S. B. (2017). Analysis Mathematical Communication Skills Students In The Matter Algebra Based NCTM. IOSR Journal of Mathematics (IOSR-JM), 13(1), 60-66. https://doi.org/10.9790/5728-1301056066

Qohar, A. & Sumarmo, U. (2013). Improving Mathematical Communication Ability and Self Regulation Learning of Yunior High Students by Using Reciprocal Teaching. IndoMS. J.M.E., 4(1), 59-74. https://doi.org/10.22342/jme.4.1.562.59-74

Sapta, A., Hamid, A., & Syahputra, E. (2018). Assistance of Parents in the Learning At Home. Journal of Physics: Conference series, 1114(2018), 012020. https://doi.org/10.1088/1742-6596/1114/1/012020

Saragih, Sahat. (2007). Mengembangkan Kemampuan Berpikir Kritis, Logis dan Komunikasi Matematik Siswa SMP Melalui Pendekatan Matematika Realistik. Disertasi tidak diterbitkan. Bandung: UPI.

Syafari. (2017). Developing Algebra Structure Module and Model of Cooperative Learning Helping Concept Map Media for Improving Proofing Ability. International Education Studies, 10(3), 207-214. https://doi.org/10.5539/ies.v10n3p207

Syahbana, A. (2016). Belajar Menguasai GeoGebra (Program Aplikasi Pembelajaran Matematika). Palembang: NoerFikri Offset.

Triyadi, R. (2013). Kemampuan Matematis Ditinjau dari Perbedaan Gender. Skripsi tidak diterbitkan. Bandung: UPI.

Umar, W. (2012). Membangun Kemampuan Komunikasi Matematis dalam Pembelajaran Matematika. Jurnal Ilmiah Program Studi Matematika STKIP Siliwangi Bandung. 1(1). 1-9.

Vygotsky, L. S. (1978). Interaction Between Learning and Development. In Gauvain & Cole (Eds.) Reading on the Development of Children. New York: Scientific American Books. Pp. 34-40.

Yang, E. F. Y., Chang, B., Cheng, H. N. H., & Chan, T. W. 2016. Improving Pupils' Mathematical Communication Abilities Through Computer-Supported Reciprocal Peer Tutoring. Educational Technology & Society, 19(3), 157–169.

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Awareness and Usage of Data Triangulation among University Students in Rivers State, Nigeria

Amatari Veronica Odiri[1]

[1] Niger Delta University, Faculty of Education, Department of Educational Foundations, Wilberforce Island, Amassoma, Bayelsa State. Email: dramatariodiri@gmail.com

Abstract

The primary objective of the study is to examine the level of awareness and usage of data triangulation among under and post graduates in the tertiary institution. A descriptive survey was adopted and data collected from a sample of 114 selected randomly. A self-developed and validated instrument was used to collect data. Data collected were analysed with simple descriptive statistics. Findings show that although 40% of the students reported that they had knowledge of data triangulation, this is at the shallow level as 72% of the students have no in-depth knowledge of the concept. Only 23% of the students had applied data triangulation in a previous study. In order to correct this deficit, it is recommended that students should be exposed to learning experiences that is a blend between quantitative and qualitative research in order to enhance the student's skills and usage of triangulation of data.

Keywords: Data Triangulation, Qualitative Research, Quantitative Research, Usage, Knowledge

Introduction

Data collection is an important and central component of every study carried out within the domain of research. It affords the researcher the opportunity to interact with the various elements or subjects of the study that supply him/her with the appropriate information needed to answer the formulated research questions or testing of hypotheses. Basically, sources of data collection are dichotomized into primary and secondary sources. The primary source of data involves collecting information directly from the 'eyewitnesses' or subject being studied. This may be through the means of a questionnaire, ratio scale, checklist, case study, life history, longitudinal study, interview, observation, focused group, inventory, etc. On the other hand, secondary source involves data acquired from optional sources like books, magazines, archives, historical data, official statistics, diaries/log, letters, school records, films/tapes, documents, journals, encyclopedia, reports, web information, etc.

Collecting data for research purpose is an extremely challenging task which requires deliberate planning, diligent work, understanding, and determination to bring it to completion. However, the beauty of this task lies in the adoption of more than one source or means of data collection in a study. The intricacy underlying this task is not attained by just one or two but several applied experiences that eventually will culminate to skill acquisition in data gathering and researches that are robust in the true sense. The use of multiple data sources in an

investigation to produce understanding underscores the concept of data triangulation. Triangulation occurs when multiple theories, materials or methods are used in an investigation to produce understanding. This is because the main purpose of triangulation in research is to increase the credibility and validity of the research findings.

Conceptual Framework

The concept of triangulation originated from ancient Greek Mathematics which is applied in a wide range of spheres including geometry and surveying in navigation. It is used to establish a ship's position measuring a vessel's distance from more than one point on the shore and gives a more accurate reading of its location. Triangulation was first applied to research by Campbell and Fiske (1959) and later used by Webb, Campbell, Schwartz & Sechrest (1966), who argued that researchers should employ more than one instrument to measure variables. They introduced the notion of triangulating multiple sources of data to enhance the validity of the research.

Denzin (1978) and Patton (2002) identify four types of triangulation:

- **Methods triangulation** - it checks out the consistency of findings generated by different data collection methods. With this type, it is common to have qualitative and quantitative data in a study and these elucidate complementary aspects of the same phenomenon. Often the points were these data diverge are of great interest to the qualitative researcher and provide the most insights
- **Triangulation of sources** -it examines the consistency of different data sources from within the same method. For example: at different points in time, in public vs. private settings or comparing people with different viewpoints
- **Analyst Triangulation** - it uses multiple analysts to review findings or multiple observers and analysts. This can provide a check on selective perception and illuminate blind spots in an interpretive analysis. The goal is not to seek consensus but to understand multiple ways of seeing the data
- **Theory/perspective triangulation** - it uses multiple theoretical perspectives to examine and interpret the data

The importance of triangulation cannot be underestimated to ensure reliability and validity of data and results. This occurs when data is accurate and truthful (Roe & Just). A single method can never adequately shed light on a phenomenon. Using multiple methods can help facilitate a deeper understanding. The benefits of data triangulation include:

- Additional sources of information often give more insight into a topic
- Inadequacies found in one-source data is minimized when multiple sources confirm the same data
- Multiple sources provide verification and validity while complementing similar data
- More comprehensive data is obtained
- Data and information is supported in multiple places/types of research, which makes it easier to analyze data to draw conclusions and outcomes
- Inconsistencies in data sets are more easily recognized

Specifically, the problem with relying on just one method is to do with bias. Triangulation of data minimizes bias such as measurement bias that is caused by the way in which one collects data. Related to this is the 'Response bias' in which participants tend to tell one what one wants to hear. This is very common in self-reported data. Such a report could be combined with an observational source of data to help balance out the bias.Sampling bias has to do with when one does not cover all of the population under study (omission bias) or one covers only some parts because it is convenient (inclusion bias). The use of phone interview can make it easier and serve as a good substitute for the face-face interview. Another kind of bias that triangulation minimizes is procedural bias. This occurs when participants are put under some kind of pressure to provide information. This is common with the use of questionnaire especially when the respondents have to express their opinion on the spot for quick retrieval of the instrument. Participants are caught unaware, and this could affect

their answers. Triangulation of data allows one to combine short engagements with longer engagements where participants have more time to give considered responses.

Statement of Problem

A perusal of several research studies carried out in our tertiary institutions shows a one-sided source of data collection as against multiple sources of data collection. Most often, the present class of young researchers has limited or no knowledge and skill in the use of more than one source of data in research. They are deprived of that euphoria of fun and sense of adventure associated with direct observation of data collection. No wonder several studies carried out are plagued with faulty, manipulated, cooked and plagiarized data, and researching is perceived as drudgery by upcoming researchers. As an attempt to collaborate the above assertion, a research study carried out showed the extent of awareness and usage of data triangulation (multiple methods of data collection) among undergraduates and postgraduates in a tertiary institution.

Research Questions

These questions guided this study:
1. What is the level of awareness of data triangulation among the students?
2. What are their sources of students' awareness?
3. What is the level of usage of data triangulation among the students?
4. What method of data collection is mostly used among the students?

Methodology

The survey design which is descriptive in nature was adopted in this study. Information was retrieved from a sample of 114 undergraduates and postgraduates via a simple random sampling technique, from Rivers State University of Science and Technology. An instrument of data collection was developed by the researcher and tagged 'Questionnaire on Triangulation of Data Collection (QTDA).' It consisted of sections A and B. While section A retrieved the bio-data of the respondents, section B entailed 16 item statements with the alternate option of response format. An additional component where respondents were to pick from the list of sources of data complements this section. Reliability index of 0.85 was established with the use of Cronbach Alpha. Data collected were analysed using simple descriptive statistics.

Results

Research Question 1: What is the level of awareness of data triangulation among the students?

Table 1: Descriptive statistics of the degree of awareness of data triangulation

Item Statements	TM %	NTM %	N	M	SD	MIN	MAX
I have an idea of what triangulation of data collection (TDC) is about	51	49					
I have an in-depth knowledge of what TDC is							
I could easily define the term TDC	27	72	114	8.13	1.71	2	12
I had once thought of using TDC in my study/project	44	54					
I have not heard of TDC	33	65					
I have not read about TDC	33	65					
	37	59					

TM=True of me. NTM=Not of me.
Table1 statistics of mean = 8.13, standard deviation = 1.71 imply that 40% of the respondents are aware of the concept of data triangulation.

Research Question 2: What are the sources of students' awareness?

Table 2: Descriptive statistics of sources of awareness of data triangulation

Item Statements	YES	NO	N	M	SD	MIN	MAX
	%	%					
From reading journal articles that applied triangulation of sources of data collection	33	64					
From reading related textbooks	42	56					
From reading abstracts	35	63					
From reading students' projects or dissertation or thesis	33	63	114	10.82	3.02	0	16
From web information	59	38					
From organized workshop/ Seminar	39	58					
From students' seminar presentation	27	68					
From direct classroom teaching	38	60					

Statistics from Table 2 show respondents' most sources of awareness to include web information (58%), textbook (42%) and the least is seminar presentation (27%)

Research Question 3: What is the level of usage of data triangulation among the students?

Table 3: Descriptive statistics of the level of usage of data triangulation

	N	Mean	Standard deviation	Minimum	Maximum
Level of Usage	114	2.31	0.80	1	4

Table 3 statistics imply that the level of usage among students is 33% i.e. (Mean = 2.31, SD = 0.80)

Research Question 4: What method of data collection is mostly used among the students?

Table 4: Descriptive statistics of the method of data collection

Methods		Undergraduates	Postgraduates	Sum
		%	%	
Questionnaire	Primary Source	8	32	40
Ratio Scale		2	6	8
Checklist		2	2	4
Case Studies		5	26	31
Life Histories		5	0	5
Longitudinal Studies		2	0	2
Interview		5	21	26
Observation		5	4	9
Focused Group Discussion		2	0	2
Inventory		0	2	2
Official Statistics	Secondary Source	3	15	18
Government reports		0	11	11
Historical data		3	4	4
Mass Media		8	11	19
Archives		3	17	20
Diaries/logs		3	2	5
Letters		0	2	2
School Records		0	6	6
Anecdotal records		0	0	0
Web Information		3	34	37
Films/Tapes		2	0	2

From Table 4, the most common method of data collection is Questionnaire (40%), followed by Web information (37%), and the least applied is Anecdotal records (0%)

Most Used Sources of Data

- Questionnaire
- Case studies
- Interview
- Mass media
- Archives
- Web information
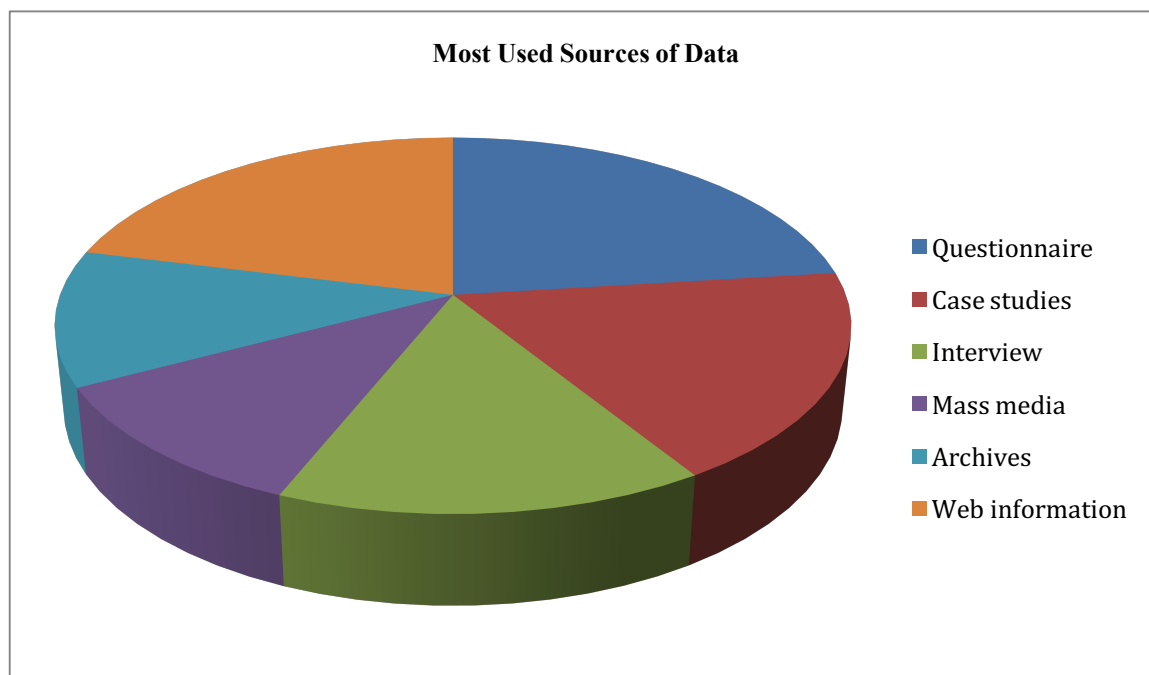
Discussion

Statistics on table 1 show that 40% of respondents agreed that they were aware of the concept of data triangulation. However, it is deduced that their awareness is on the shallow level. This is corroborated by the same students' responses that showed that 72% does not have in-depth knowledge of what triangulation of data collection is; 54% cannot define the concept; 65% has not heard of it; while 59% has not read about triangulation of data collection.These findings imply that the students are actually used to one method of data collection in carrying out research studies in their disciplines of study. It could also mean that most of the studies conducted by these students are premised on the inadequacies associated with one- sourced data collection. This asserts the researcher's opinion that as a result of using only one source of data collection for research purpose, most likely, students in our tertiary institutions perceived research study as a task that is boring, difficult or unpleasant work through a compulsory academic activity needed before graduation.

Finding from table 2 indicates the most accessible sources of related literature on data triangulation for the students. Common sources of literature readily available to researchers such as journal articles, textbooks, abstracts, students' project, dissertations or theses, seminar presentations, and direct classroom teaching provide little or no information about the knowledge and application of triangulation of data collection. It is thus not surprising that our upcoming researchers lack in the use of triangulation of data collection. This probably indicts the quality of education made available in our institutions; especially when an important function and component of university education shall be knowledge generation (or research) in extending the frontiers of knowledge relevant to the nation's developmental goals. (NPE, 2014).

23% of the students reported that they had applied triangulation in one or more previous studies they had participated in. The implication of this finding is that 73% of the students had never applied multiple sources of data collection in a research study. That the undergraduates had not participated in a study that involved triangulating is understandable since they are assumed to be neophytes in researching. But that postgraduate students particularly the Ph.D. students had never adopted triangulation in any previous studies, especially when it is considered that they must have been exposed to experiences in research either at the first or second-degree level.; is an issue of great concern. This missing gap is probably linked to the one-sided learning experiences that

overemphasized quantitative research at the detriment of qualitative research. What a drudgery for a student researcher who must had passed through the university system and acquired the first, master and doctoral degrees but only equipped or skilled in the use of one sourced data to arrive at findings. This is a recurring scenario enacted in university research and pass on to the younger generation of researchers.

Consequently, the dire need to restructure the experiences offer to the students in the domain of research particularly in the faculty of education cannot be overemphasized. It is therefore suggested that a synergy of quantitative and qualitative research should be an imperative component of researching. Policy and document on research should underscore mixed methodology in the researches carried out by tertiary institution in order to make university research stands a better position to engineer innovation in education relevant to the nation's development goals.

Enabling and enriching learning environment when created will expose the students to the acquisition of knowledge, skills, and attitude that will reflect robustness in research via multiple sources of data collection and triangulation. However, to achieve this, it implies the retraining of university teachers to acquire, improve and perfect the skills of triangulating. Short-courses, workshops, seminars can easily be utilized to increase their expertise.

Conclusion

This study examined the level of students' knowledge, and usage of data triangulation and findings showed that most of the younger researchers have little or no knowledge and adoption of this concept. This is explained in line with the learning experiences made available to these researchers. Therefore the need to restructure the learning experiences that they are exposed to, to evolve into the production of mixed methodologists in the research domain.

References

Fush, P., Fush G.E, & Ness, L.R.(2018). Dezin's paradigm shift: Revisiting triangulation in qualitative research. *Journal of Social Change* 10,1

Heale, R & Forbes, D. (2017). *Understanding triangulation in research*. Retrieved on 20th   February 2019 from http://ebn.bmj.com.

Webb, E.J., Campbell, D.I., Schwartz, R.D.&Sechrest, L.(1966). *Unobtrusive measures: Nonreactive research in the social sciences*. Chicago II: Rand McNally

Campbell, D., & Fiskel, D.(1959). Convergent and discriminant validation by the multitrait-multimethod matrix. *Psychology Bulletin* 58, 81-105

Patton, M.O. (2002). *Qualitative research and evaluation method*. (3rd ed). Thousand Oaks, CA: Sage

Dezin, N.K.(1978). The research act: A theoretical introduction to sociological methods (2[nd]ed.). New York: McGraw Hill.

Roe, B.E.& Just, D.R.(2009). Internal and external in economics research: Tradeoffs between experiments, field experiments, natural experiments, and field data American Journal of Agricultural Economics 91, 1266-1271

Wilson, V.(2014). Research methods: *Triangulation. Evidence Based Library and Information Practice* 9, 74-75

FRN. (2014) *National Policy on Education* (6th ed) Lagos: NERDC Press.

The Suitability of EAP Textbooks to the Learning Needs in Chinese Context—From a Pre-Use Perspective

Ning Dali[1]

[1] Guangdong University of Foreign Studies, Guangzhou, China

Abstract

The selection of an appropriate textbook has always been a great concern of teachers and students. Frameworks for the evaluation of textbook in previous researches are too complex to help a quick decision. This paper firstly gives an account of Chinese students' needs in learning EAP. It then proposes a framework for the suitability of the textbook and applies it to three textbooks for meeting the learning needs in the Chinese context. The result shows that domestically designed textbooks are, to some extent, inexperienced in the arrangement of content and academic skills, and even in the understanding of the nature of EAP learning. It also reveals that the imported classical textbook though quite experienced and shows general good suitability presents some problems in its suitability to a particular culture. Given the limited researches on EAP textbooks, this study sheds light on the selection and construction of EAP textbook in the Chinese context.

Keywords: Textbook Suitability, EAP, Learning Needs, Revised Bloom's Taxonomy

1. Introduction

The rising trend of learning English for academic purposes in China is the result of economic globalization and internationalization of college education. It is essential that universities offer internationally competitive undergraduate and graduate courses taught in English. (Hao Ping, 2009). EGAP (English for general academic purposes), is a branch of EAP and on most of the occasions in China, it is called EAP for short. It is a bridge course that helps students with fundamental English academic skills paves the way for their disciplinary courses taught in English when they enter senior years in college. In a national survey conducted among 530 universities in China, 29.% of the 'key universities' and 11.7% of 'non-key universities' consider the cultivation of academic competence as important (Wang &Wang, 2011). In response to such great need, a large number of universities started the implementation of the EAP course. In 2010, Shanghai issued *A Framework of Reference for EFL Teaching at Tertiary Level in Shanghai*, claiming that EGAP (compulsory) and ESP (compulsory or selective) should comprise 75% of the total English courses in the university. It is even argued that English for general purposes would be replaced by EAP in China as most of the skills and grammar learning for daily communication purposes have already been finished in high school (Cai 2014, Wang et al., 2015).

Despite the increasing demand for learning EAP, the supply of textbooks in the domestic market is far from satisfaction. First, there are few textbooks available in the market (Zhao & Zheng, 2006; Wang, 2011, Cai

2013An & Shu，2014; Zhang et al. 2017; Liao & Cai, 2017). Second, EAP is a newly started course in China, and there is a little experience for the selection of a suitable textbook. A framework that helps users in making a quick decision on the selection of a textbook at the pre-use stage is of urgent need. This paper, by matching the features (purpose, methodology, content allocation, skill arrangement, etc.) of a book with learners' needs, proposes a framework for the evaluation of an EAP textbook so as to help the users with the selection of a suitable textbook. RBT (revised Bloom's taxonomy) will be applied for the evaluation of micro-skills of the book, as the course EAP is to provide learners with the core skills of disciplines.

2. Learning needs of EAP in the Chinese context

To better the curriculum design and help students develop the academic skills they will use in future study and work, a needs analysis survey was conducted by Cai Jigang (2012) among four universities in China. Students from the first year to the fourth were asked to complete the questionnaire, and 927 valid copies were collected. According to the questionnaire results, 95% of the students have the need to use English as the tool in their academic study: to read articles related to their major (69%), select a course that is taught in English only (56.5%), or attend lectures given by foreign experts (62.9%). As to the difficulties they come across in satisfying the above needs, 85.1% of the students agree that lack of vocabulary, especially the vocabulary of a specific discipline is the biggest obstacle. Over half (68.5%) of the students admit their difficulty in giving a presentation or participating in academic discussions. There is also a large number (67.3%) of students who cannot read authentic articles or textbooks efficiently. The main reason as they (77.6% of the respondents) clarified in the questionnaire result, is insufficient vocabulary. About half (51%) of the students cannot fully understand a lecture or taking effective notes of a lecture given by foreign experts. When asked the tasks (given by teachers of their majors) for writing literature review, abstract, experimental report or term paper, only 9.4% of the students ticked 'now and then,' while 39.2% said 'almost never.' However, 23.6% of students believed they would be assigned such tasks in the future, and 79.3% of them consider the skill to be very important.

Liu (2014) conducted a survey on EAP needs analysis among 210 students (sophomores and juniors) in a university in Beijing and found out that most of the students (97.2%) have the need to search or read English literature, listen to English lectures, etc. Among the needs, what they want badly is methods to write academic articles, understand lectures and skills of taking notes. Writing literature review, report and academic paper are reported as the last item on the need list, mostly because it is something that they will not use until they start their graduation thesis. In another survey conducted by He (2014) in Wuhan, where 143 students were investigated about their EAP learning needs, students admit that they learn the course either for their future disciplines or for the exchange program to study abroad. The skills that they are most interested in are listening and speaking (38.9%), reading (23.9%) and writing (24.1%). and the skills they want (need) to improve the most are speaking (31.6%), writing (32.3%) and reading (18.3%).

From these investigations conducted in different cities, we may conclude that currently, students in China share similar needs in learning EAP: they have clear goals of learning the course (either for future disciplinary learning or for international exchange situations). They need to develop their academic competence in listening, speaking, reading and writing (listed from the most needed). Their top concern and weakest part is vocabulary as it is considered to be the biggest obstacle in learning. Skills such as writing an experimental report or academic paper, though considered to be important and useful may not be as needed as the others, especially in the early period of learning since they are neither required by their major courses nor needed to use in the first several years of college study.

3. Literature review

3.1 Frameworks on the design of textbooks
Textbooks are extensively used in the classroom and are much relied on for the delivery of course content. Researchers argue that the choice of textbooks is highly influential on students' learning achievement (Piret &Jaan 2008; Jukka, Maria &Marie-Anne, 2013; Ann-Katrin & Aiso,2018). Selecting an appropriate textbook is

a big concern for both teachers and students. Textbook evaluation thereby is essential. It not only provides criteria for choosing suitable teaching material but also helps teachers with a better understanding of the content, structure as well as the pedagogical approaches it proposes. In addition, textbook evaluation brings book designers the realization of weaknesses of the book so as to improve in the next edition (Zhao &Zheng).

Textbook evaluation became a concern of researchers in the 1980s. Seaton (1982) proposed over ten principles for the evaluation of teaching material which turned out to be too detailed to be feasible. Till today, the most influential frameworks for textbook evaluation are Hutchinson &Waters (1987), Cunningsworth (1995), MMcDonough &Shaw (1993), and Breen & candling (1987).

Hutchinson &Waters (1987) advocated a matching work between a list of requirements for a textbook and features of the teaching material that match the requirements. Also, opinions from teachers and students are collected through questionnaires and are taken into account in the matching work. This framework is still adopted by many researchers today for the feasibility of the matching approach and its consideration of the needs of the learners. It is of referential use to the study of the suitability of textbooks for EAP which is a needs-based course.

Cunningsworth (1995) introduced a framework made up of impressionistic overview and in-depth evaluation. An impressionistic overview is a general impression on the whole of the book based on the evaluator's own experience. This approach, though helps potential users to make a quick judgment of a textbook, may not be reliable for its subjectivity. The in-depth evaluation consists of three stages: pre-use evaluation, in-use evaluation, and post-use evaluation, a complete judgment for the whole process of the implementation of a textbook. However, to complete the whole evaluation process is quite time-consuming. For courses like EAP, which has not been widely carried out (in China) for long, to gather large-scale opinions (from users) for the last two stages, especially post-use evaluation, is quite difficult. Furthermore, compared with the last two stages, helping users to make a quick decision on the selection of a suitable textbook is far more important for EAP learning in Chinese context which though still at exploring stage, is expecting increasing number of learners (Cai, 2012; Luo& Chen, 2012; Wang et al 2015; Wang &Wang 2011).

Compared with Cunningsworth's framework, the one suggested by McDonough &Shaw (1993) is more simple and feasible. According to McDonough &Shaw (1993), the evaluation of a textbook consists of two phases— external evaluation that focuses on the cover, introduction and catalogue of the book and internal evaluation that examines the language skills, types of materials and their level of difficulty, exercises, and the suitability of the materials to teachers and learners. Generally, the internal evaluation is a more detailed exploration of the materials to estimate the matching of what the designers promote (in the introduction) and the detailed arrangement of the materials in the specific units. This framework simplifies the evaluation process and helps a quick decision on selecting a textbook since once the users, at the external evaluation stage, find that the design of the book cannot meet their requirement for use, they can immediately stop further examination. However, the evaluation in this framework is mainly conducted from the perspective of teachers and experts without much consideration of students' needs and opinions. Hence, it is not completely suitable for courses like EAP, a course born to satisfy the needs of learners.

To help teachers with the selection of a textbook for different levels of students in various learning environment (Breen & candling, 1987), Breen & candling (1987) proposed a framework evaluating not only the purpose and content of the textbook but also the suitability of the book to the needs, interest, and learning strategies that students prefer. Students, as a major concern, are invited in the evaluation process to present their needs and preferences as evaluation criteria. Generally, the needs of learning a course might be somehow similar, as they are also reflected in the teaching syllabus. But the learning preferences would be quite different as each has his own interest and learning habit. Therefore, it is quite difficult to design a book align with learning preferences of all students. What's more, there are over 40 evaluation questions included in this framework, which is a rather heavy workload for evaluation.

3.2 EAP textbook studies in China

For the increasing number of EAP teachers and students in China, selecting a suitable textbook is the first concern. However, there is little experience accumulated. According to CNKI (China National Knowledge Infrastructure), before 2013, there were less than 5 papers (fewer if it is restricted to CSSCI publication) on EAP textbook annually. The number of publication then gradually increased, with a peak at 24 (fewer if it is restricted to CSSCI publication) in 2016. The limited number of studies mainly focus on the introduction of textbook evaluation theories abroad (Zhao &Zheng, 2006; Wang, 2011, Cai 2013), analysis of the features of some EAP textbooks (An &Shu, 2014; Zhang et al. 2017; Liao & Cai, 2017), and theoretical reflections on EAP textbook designs and suggestions (Gao, 2009; Wang, 2011; Ding, 2016; Liao & Cai, 2017; Li, 2017).

As is summarized in the researches, problems that revealed during this exploring stage on textbook construction are as follows: teaching materials fail to differentiate the writing principles of GE (general English) from those of Subject-based English textbooks; books are not designed on the basis of sound theory or framework, therefore, not systematic; language skills and disciplinary content are not well-aligned; mainly focus on the development of reading and writing competence and ignore listening and speaking, books are not designed to meet the needs of different levels of learners (Gao, 2009; Wang, 2011; Ding, 2016; Liao & Cai, 2017; Li, 2017). As for the insights into the textbook design in the Chinese context, it is suggested that materials for EAP study should, first of all, meet the needs of Chinese learners, and related to specific disciplines. Materials should also be authentic, reflect the real communicative situations and are designed in a multi-modal way (Zhao &Zheng, 2006; Wang, 2011, Cai 2013; Gao, 2009; Wang, 2011; Ding, 2016; Liao & Cai, 2017; Li, 2017).

3.3 RBT for EAP textbook evaluation

Bloom's Taxonomy (BT) serves as the backbone of many teaching philosophies, in particular, those that lean more towards skills rather than content. (Anderson et al., 2001, Krathwohl, 2002).The original BT (Bloom, Engelhart, Furst, Hill, & Krathwohl, 1956) contained six categories within one dimension: knowledge, comprehension, application, analysis, synthesis, and evaluation, arranged from simple and concrete to complex and abstract. A cumulative hierarchy is assumed, with mastery of each simpler category regarded as a prerequisite to mastery of the next more complex one (Krathwohl, 2002). RBT (revised Bloom's taxonomy) extends the one-dimension framework to a two-dimensional one, consisting of the cognitive process dimension and the knowledge dimension (as is shown in graph 1). It is designed to a classification of student behaviors which represent the intended outcomes of the educational process (Anderson et al., 2001). Behaviors are verbs. Hence, the six categories in the cognitive process were converted to their active verb counterparts. The cognitive process dimension represents a continuum of increasing cognitive complexity—from remember to create. The vertical dimension measures four types of knowledge: Factual (i.e., basic elements that needs to be known), Conceptual (i.e., interrelationships among basic elements), Procedural (i.e., know-how, skills, techniques, and methods), and Meta-cognitive (i.e., knowledge of one's own cognition), from concrete to abstract. The RTB provides a means by which educators can develop a complete understanding of specific objectives and use this understanding to improve assessment, instruction and essential links between them (Anderson, 2005).

| The knowledge dimension	The cognitive process dimension					
	Remember	Understand	Apply	Analyze	Evaluate	Create
Factual knowledge						
Conceptual knowledge						
Procedural knowledge						
Meta-cognitive knowledge						

Graph 1: revised Bloom's Taxonomy

Bloom's taxonomy has been used as a basis to measure the efficacy of traditional textbooks (RockinsonSzapkiw, Courduff, Carter, & Bennett, 2013). Previous studies (Wang & Hwang, 2012) suggest that learning in different stages can be more effective with the support of appropriate learning resources. It is suggested by Anderson (2002) that the value that taxonomy table has in examining and improving curriculum alignment is to place all the objectives of a given curriculum unit (or set of units) in the cells and analyze them in terms of knowledge and cognitive level. In this study, we follow the same procedure to examine the suitability of the arrangement of micro skills/learning objectives in EAP textbooks.

4. A framework for the suitability of EAP textbook in the Chinese context

Currently, most of the few domestically designed EAP textbooks only focus on reading and writing. However, as is depicted in the questionnaires, students need textbooks that facilitate their overall (listening, speaking, reading and writing) EAP competence. So, as to the few textbooks that aim to help students' overall development, how do these they suit the students' needs in China? What indications do they bring to future textbook design?

To probe such questions, this study selects three EAP textbooks as the subjects: Oxford EAP, an imported textbook published in 2012 by oxford university press, a publisher that firstly designs EAP textbook and still plays a leading role in EAP textbook construction in the world; English for General Academic Purposes (EGAP), a textbook designed by Chinese teachers and was is published by higher education press in 2017; and Academic Encounters (AE), a textbook adapted from *Academic Encounters: American* studies and was published by Shanghai Foreign Language Education Press in 2017. Both the latter two publishers are the most prestigious in the field of foreign language teaching and learning in China. All of the three textbooks provide materials for listening, speaking, reading and writing. Of all the books in these three series, Oxford EAP B2, EGAP book 1 and AE book1 are used for college students in China and therefore, are selected as research subjects of this study. Based on the results of the questionnaires and RBT (revised Bloom's taxonomy), I propose the following framework to check the suitability of an EAP textbook in the Chinese context.
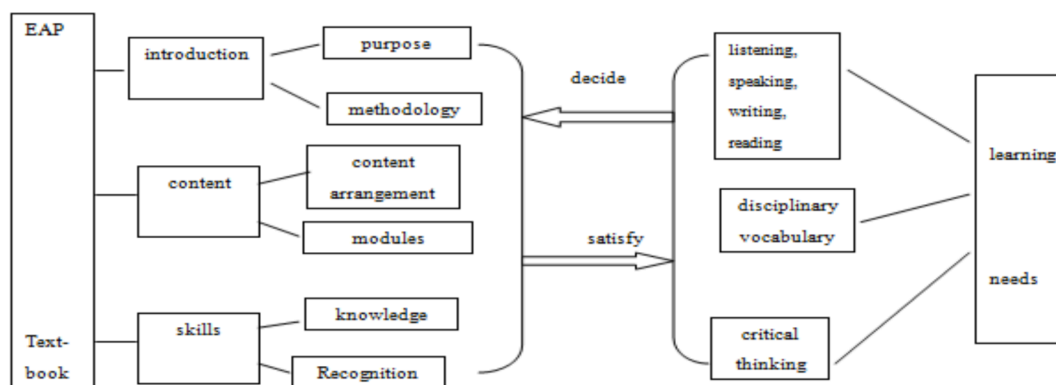
Graph 2: a framework for EAP textbook suitability in the Chinese context

The design of an EAP textbook should cater to the learning needs (including specific requirements on listening, speaking, reading, writing, vocabulary, critical thinking, etc.). The matching of the textbook with the learning needs can be reflected from the introduction and content arrangement as the former introduces the purpose and methodology of the book while the latter shows the module distribution, unit content, and task design, etc. It also can be examined from the book's skill arrangement as it shows whether the knowledge suits the current level of the students and the arrangement matches the recognition development of them.

5. The suitability EAP textbooks to the learning needs in the Chinese context

5.1 introduction

	methodology	target user	purpose	disciplines involved	teacher's book	skill arrangement
OE	content-based	students who are non-English speakers, with whatever disciplinary and cultural background	provide students of different disciplines with common core skills	biology, science, technology, business, culture, etc	key, purpose of tasks, activity suggestions	micro skills arranged in the modules, from easy to difficult
AE	content-based	Chinese students who have finished high school education	prepare students for their college study	social life	key	develop strategies for listening and writing, critical wiring presentation
EGAP	content-based bloom's taxonomy, ismart platform	Chinese college students	provide Chinese college students of different disciplines with common core skills	education, psychology, biology, technology, business, economy, etc		group the micro skills into modules and arrange them from easy to difficult according to Chinese students' learning situation

Graph 3: comparison of the introduction

The introduction of an EAP textbook informs the users a lot of information, such as methodology, target user, purpose, disciplines involved, teacher's book and skill arrangement, etc. As is shown in the above table, all of the three textbooks adopt a content-based approach, which is commonly accepted for EAP study as it is a course that equips the students with skills for academic study in which skill is the core while disciplinary discourse is the carrier.

EGAP differs from the other two textbooks in its design of 'i-smart' platform. It is a design that combines offline learning with online learning. In addition to the paper book, this course also provides an online learning community for students. It offers mini-lectures, supplementary reading materials, and analysis to vocabulary learning. On this platform, students can do both autonomous learning and interactive learning. As is argued by Ning (2017), "Due to the limited time in EAP classroom learning (80-90 minutes per week) in China, a textbook cannot be fully made use of if the learning is not successfully extended to the outside of the classroom". What's more, Chinese students are competitive learners (Tang 1999) who do not like interactive learning in the classroom but are quite active in the virtual learning environment. The establishment of a virtual learning community extends the use of teaching materials in the classroom and enhances the interactive connection among teachers, learners, and the textbook. Online learning community brings the learners a feeling of being accepted, cared and respected and hence becomes an effective way of enhancing learners' participation by providing a good environment for cooperation and knowledge construction. (Arlan & Sahin-kizil, 2010).

The invention of ''i-smart' learning platform, which is accessible to both the computer and mobile phone users, brings a new way of learning. Beside every task, there is a two-dimension code. Once the users scan it with wechat, the most widely and frequently used communication software in China, they will be connected to the video or audio materials. For example, at the beginning of each section, a mini-lecture is offered as a general introduction. It is a short video that explains the important concepts and can be watched either on the webpage by computer or by smartphone after scanning the code with wechat. These mini-lectures can be watched before class as part of flipped classroom learning and enables teachers and students to have more time exchanging information and ideas in class. What's more, to the Chinese who always carry the smartphone wherever they go, the accessibility to the materials with a phone in hand enables them to make full use of their fragmental time and enhance their learning efficiency.

The target users of both EGAP and AE are Chinese college students, an implication that the books are specially designed to suit the EAP learning needs in the Chinese context. OE defines its users as students from a variety of cultural and educational backgrounds whose first language is not English (Oxford EAP, 2012). It aims to suit the

learning needs of all EAP learners across the world. As is stated in their introduction, OE and EGAP aim to accommodate the users of different disciplines with common core skills. However, the goal of AE is to 'expose students to the types of texts and tasks that they will encounter in their academic coursework and provide them with the skills to be successful when that encounter occurs' (Academic Encounters, 2017). Unlike OE and EGAP that explicitly claim the provision of materials of various disciplines, AE does not mention the importance of learning skills common to different disciplines. This difference is reflected in the latter content arrangement as well.

In terms of disciplines that are involved in the textbook, there are twelve topics in OE series: education, system, communication, order, intelligence, change, culture, interpretation, persuasion, connection, technology, and independence. Similar to OE, EGAP series covers 16 topics: education, system, behavior, psychology, nature, environment, social life, technology, communication, information, economy, energy, health, safety, research, and diversity. On the other hand, AE series does not attach importance to disciplines (as is discussed above), and only focuses on eight topics: belonging to a group, gender in society, media and society, breaking the rules, mind body and health, development through life, nonverbal messages and interpersonal relationship. It seems that the topics in AE are quite like those in General English textbooks, focusing on daily life areas rather than various academic disciplines. Instead of showing one type (sociological) of discourses, OE and EGAP provide users with different subjects and genres of materials so that they will be exposed to various kinds of discourse features, and therefore show better adaptability to students from different disciplines.

The teacher's book in OE not only offers the key to the exercises in the textbook but also explains the purpose of every task and gives activity suggestions to classroom teaching. The clarification of the purpose of tasks helps the teacher to understand the rationale of the design. More importantly, in EGAP learning, the understanding of the purpose of tasks motivates the students before doing the exercises and brings the a sense of achievement after finishing them as they know academic skills are learned through doing these tasks. Different from OE, AE, though it provides a teacher's book, it offers the only key to the exercises, while EGAP offers no teacher's book.

As to the skill arrangement, OE and EGAP are alike in that they design micro skills for every unit and module and arrange them from easy to difficult. EGAP further clarifies that the skills are arranged according to Chinese students' learning situation. In contrast, AE only states that it helps students develop strategies for listening and writing, critical thinking and presentation, without explaining how the skills are arranged.

5.2 Content allocation

content book	uint	Page/task	listening	Speaking	Reading	Writing	vocabulary	Critical thinking (module)
OE	12	16 pages	4 pages	4 pages	4 pages	4 pages	1 page	
AE (R&W)	4	55 pages			48 pages	5 pages	2 pages	
AE (L&S)	4	40pages, 19-20 tasks	6-7 tasks	13-14 tasks				
EGAP	8	27 pages	3-4 pages		8-9 pages	4-5pages	4-5pages	4-5pages

Graph 4: content allocation
R: reading W: writing L: listening S: speaking

There are twelve units in OE. Each unit lasts sixteen pages, averagely made up of four sections -- listening, speaking, reading and writing, giving equal attention to the development of the four skills. Following the four sections, there is always a one-page vocabulary exercise. AE divides the four skills in two books: one for reading

and writing and one for listening and speaking. The lengthy content (55 pages per unit and 40 pages per unit respectively) brings problem for teachers and students. In most of the universities that offer EAP course in China, an EAP class lasts 80-90 minutes, once a week. Such lengthy design probably puzzles the users as they have trouble integrating the four skills, and selecting the useful content without interrupting the connection between them. In the book of reading and writing, AE gives most of its attention to the development of reading skills, as the content of reading is almost ten times that of writing. In the book of listening and speaking, more attention is given to speaking than listening, as the former is designed twice as much as the latter. Similar to AE, in EGAP, reading is the absolute focus of all skill modules, while listening and speaking are given the least attention. However, vocabulary and critical thinking are given much attention in this book, corresponding well to the requirement of the national syllabus and the learners' need for such skills. Generally, the content allocation of two domestically designed textbooks reflects the typical learning results/habits of the L2 learners in the Chinese context: strong in reading, weak in writing and much weaker in listening and speaking (especially speaking).

5.3 Matching of content and learners' specific needs

As is concluded in the above part, Chinese students need to learn academic skills of taking notes, doing a presentation, attending the discussion, writing report and paper, reading discourses of particular disciplines, expanding disciplinary vocabulary, and enhance their critical thinking ability, etc.

need book	Note taking	presentation & discussion	writing report &paper	reading disciplinary literature	vocabulary
OE	8/12	presentation（7/12）， seminar(2/12)， tutorial (2/12)， informal discussion(1/12)	unit 1,2summary, unit 4: introduction, thesis statement unit5:conclusion	materials from textbooks published by Oxford press	1 page/u, different forms of exercises (matching, cloze, blank filling…). Some don't suit Chinese students(e.g. unit 4 word class)
AE	every unit	presentation（3/4）,	unit 2: summary	materials from textbooks published abroad	1 page/u, always blank filling of sentences
EGAP	6/8	presentation (1/8）	unit 5:summary unit8: report	materials from online journals of open access	4-5pages/u, different forms of exercises (matching, paraphrase, table filling…).

Graph 5: matching of content and learners' specific needs

As is demonstrated in the table, all of the three textbooks attach great attention to the skill of taking notes: out of the 12 units, OE spares 8 in training how to take notes; 3/4 of the units in EGAP introduce note taking skill, and it is shown in every unit in AE. Presentation skills are included in all of the three textbooks. OE differs from the other two books in that instead of introducing the skills of doing a presentation, and it also helps the users to learn how to attend a seminar, tutorial, and informal discussion. It helps its users with consideration of all possible communication occasions they might come across in academic study. All of the three books introduce the skill of writing a summary. OE and AE put the skills in the first units of book whereas EGAP put it in the middle, showing a better consideration of the learners as summarization through a very important academic ability is somehow not easy for the first year student. Skills of writing report or paper are introduced in the early parts of OE, but they are put in the last unit of EGAP. Such arrangement difference is probably because students studying abroad are required to do projects and write reports and term papers since their first year of college study. However, in China, students consider writing report/paper very challenging, and they have rare chances to do such work till their junior year study in college when they are preparing for a graduate thesis. Therefore, at present, putting such skills in the late part of the book suits the Chinese better as otherwise students may feel discouraged and lose the interest in learning the course.

As to reading materials, both OE and AE select excerpts from textbooks published abroad, hence, ensuring the authenticity of the materials. Materials in EGAP are chosen from online journals of open access. On the one

hand, the accuracy and authenticity of the materials cannot be guaranteed as some of the online papers may not be of high quality. On the other hand, users of the book are provided with discourse features of journals which cannot satisfy their needs of discourses of different genres.

Among the tasks, there is always one or two highlighted boxes named 'academic language' summarizing the particular language skill (e.g., sentence structure for giving a definition, using noun phrases to take notes, etc.) that students should pay attention to while learning the content. This language skill summary helps students understand the purpose of the content tasks and recall on the skills they learned.

In OE, after the four skill modules, there is always a one-page section given to training vocabulary competence. However, some of the content and exercises do not suit well the learners' ability and needs in the Chinese context. For example, the vocabulary skill introduced in unit 4 is classification. It explains how words are divided into categories like noun, verb, and adjective, etc. This, though important, is regarded as basic knowledge and is designed in the early period of junior high school textbook (which attaches great importance to grammar learning) in China. Collocation is the vocabulary skill introduced in unit 5. It explains to the learners the involvement of different combinations of nouns, verbs, adjectives, or other grammatical words. As a matter of fact, collocation is regarded as an essential part of vocabulary and grammar learning since junior high school in China and has always been tested in all levels of examinations, such as a mid-term quiz or College Entrance Examination.

In AE, there is a one-page exercise for vocabulary at the back of each unit. However, the tasks are always blank filling sentences, which only train the meaning and word speech of the word knowledge. EGAP allocates about 4-5 pages of vocabulary exercises in every unit. These are diversified forms of tasks, such as matching, paraphrases, table filing, etc., that different train types of word knowledge the Chinese students need to acquire.

5.4 Expression and classification of skills

book skills	OE	AE	EGAP
Critical thinking			Defining a term in an effective way
Reading	Identifying main ideas and supporting evidence	Reading actively Applying what you have read	Identifying a definition Categorizing similarities
Writing	Analyzing topic sentences	Writing about changes The passive voice definitions	Defining a concept by following logical patterns
Listening	Recognizing the language for introducing main ideas and evidence	Listening for specific information	Taking notes of definition as you listen Taking notes of classification
Speaking	Identifying assumptions in questions	Sharing your opinion Personalizing the topic	
vocabulary	Working out the meaning of unknown words Using a monolingual dictionary	Words related to the topic Guessing meaning from context	Using noun phrases in academic contexts
Academic success skills		Answering short-answer questions Making a chart Reviewing a test	

Graph 6: expression and classification of skills

All of the three textbooks begin with a content table that lists the skills to be introduced. The skills are divided into categories of competences, such as listening, reading and writing, etc. And these skills/modules are further classified into micro skills listed in the grids.

As for AE, the skills are categorized into reading skill, writing skill, vocabulary skill, and academic success skills. Viewing these skills as a whole, we may find 'academic success skill' is an ambiguous category as it is not in parallel with the other skills. As a matter of fact, all the other skills can be grouped as 'academic skills.' For example, 'answering short-answer questions' can be grouped as a micro reading skill, and 'making a chart' can be grouped as micro writing skill. The skills listed in OE and EGAP are all clearly explained in gerund forms, such as 'identifying main ideas and supporting evidence' and 'identifying definition.' However, the skills listed in AE are expressed in an ambiguous and incoherent way. Some of them are written in gerund forms, like 'writing about changes' while some are written in nouns, like 'the passive voice' and 'definitions.' In fact, 'definition' is not a skill but a concept only. In OE, it is clearly explained as 'recognizing and writing definitions.'

On top of that, some of the micro-skills listed in AE are confusingly phrased. For example, one of the reading skills listed is 'reading actively.' What are reading actively? Is it the opposite to 'reading passively'? But what is the latter? There are other similar cases, such as 'thinking about the topic,' 'applying what you have read,' 'personalizing the topic,' and 'understanding key terms,' etc. Unlike the other two textbooks that explicitly inform the readers of the specific skills at the sight of the expressions, such phrases leave the users in the dark and may not motivate them to do the tasks as they do not know what skills or knowledge they will acquire in doing such tasks.

In EGAP, the skills in all sections of a unit are centered on the academic focus of that unit. For example, the academic focus in unit 5 is summary and the skills in the sections are 'identifying summaries in a research article', 'identifying topic and main points', 'listening for main ideas and supporting details' 'writing a summary following a five-step guide', and 'using reporting words in a summary'. This arrangement not only reflects a rigid coherence between sections within the unit but also strengthens students' understanding and using of the skills by training them the skill repeatedly from different aspects (thinking, listening, speaking, reading and writing).

There is also an academic focus in every unit of OE, but the skill centering on it is usually trained one or two sections, mostly in the reading section. For example, the academic focus in unit 4 is classification, the skills trained in reading, writing, listening and speaking are 'using classification to make notes as you read', 'writing and evaluating an essay introduction', 'understanding the organization of a lecture', and 'giving a short presentation' respectively. Though not as rigidly coherent as EGAP between sections, OE, to some extent seems to be more efficient as it is able to include many more specific skills for learners.

5.5 Arrangement of micro skills
The following part of the paper will illustrate how the skills in the textbooks (except AE, as the skills in it are not academically phrased and show no difference in different units) are arranged. As is illustrated in the content table, OE aims to facilitate the users' academic skills in listening, speaking, reading, writing and vocabulary. Accordingly, all the units of the book are composed of such five modules, and each develops some micro skills through a sequence of tasks. Similar to OE, EGAP categorizes the skills into critical thinking, listening, speaking, reading, writing and vocabulary and accordingly set six modules for each unit. As is explained in the introduction, the book employs Bloom's taxonomy to divide the EAP learning skills into sixteen micro ones and distributes them into the units. The micro skills are organized from easy to difficult, from low-level capability to high level to accommodate the students' needs and development in the Chinese context.

Skills included in AE are organized in a quite different way. First, many of the skills included in the modules are not clearly phrased. As is discussed above, skills like 'reading actively,' 'thinking about the topic,' 'personalizing the topic,' 'applying what you have read,' etc., fail to inform the users of the specific academic ability they may acquire. Second, these confusingly phrased skills repeatedly appear in almost every unit. It is impossible to analyze the skills in terms of Bloom's taxonomy.

To ensure the right categorizing of the micro skills, three EAP teachers are asked to do the classification twice (the second time classification was done two weeks after the first time to ensure the first time results impose little influence on the second time work). After one month, skills that were classified differently were brought to further discussion until the agreement was reached. For example, "recognizing signposting language" is

considered to be "remember" "factual knowledge," "using noun phrases" is regarded as "apply" " conceptual knowledge," and " evaluating presentation guidelines" is "evaluate" "procedural" knowledge, etc. The following tables are the results of times of work and discussion.

Recognition / knowledge		Remember	Understand	Apply	Analyze	Evaluate	Create
factual	U2	R2,S2, L4, L6,R9,L9,R 10,R11,W1 1,L11,L12	R1,W1,L1,S1, R2,W2,L2, R6,S7,L8,L9, R111,S11,R12	R1,L2,L4,L5, R7,W7,L7,W 10,W11	R8,W9,L12	W1,W8,S8,S9, L12	W1,R2
conceptual	U2,U3, U4,U7, U8,U10	L2,R6,R7	R1,L1,R3,L3, S3,R4,L4,R5, R7,L7,R10,L1 0S10	W2,W3,R4, W4,S4,W5,R 6,L6,R10,R1 2,W12	L3,W4,W5,S 6,R7,W7,R8, W9,W10,	W4,W5,W7	R7,W10 ,W10,W 12,S12
procedural	U5,U6, U9,U12	L6	R6,S8,L9,L11	S2,W5,W8,L 8,S8,L9,W12	W6	S4,W11	S4,W6, S7,W11, S11
metacognition	U11	R11	S5,R8,L8, L11	R3,S5,S6,,S1 0	S10	W3,S5,W7,L9, S11	S10,S12

Graph 7: micro skills in Oxford EAP
U: unit R: reading L: listening W: writing S: speaking

In the above table, U, R, L, W, and S represent a unit, reading, listening, writing, and speaking respectively. The numbers in the table refer to the number of the unit. For example, R2 means reading in unit 2, and L4 refers to listening in unit 4. As is shown in the table, the micro skills in OE occupy every cell, an indication that all types and levels of skills are introduced in this book and therefore cater to the needs of different students.

Generally, the units in OE are sequenced in terms of knowledge complexity, from simple to difficult. For example, the academic focus in unit 2 is "description and definition," which introduces the features and elements of these two concepts, as well as types of definition. Therefore, U2 is a cross-dimension unit, introducing conceptual as well as factual knowledge. Take unit 5 for another example, and the academic focus is "connecting idea," which addresses the techniques (cohesive language, hedging language, etc.) that can be used to link ideas. Therefore, in general, unit 5 is about "procedural" knowledge.

Viewed from the knowledge (vertical) dimension, most of the micro-skills dwell on low-level learning (Anderson, 2005, Kwok, et al. 2018), focusing on factual knowledge and conceptual knowledge. Factual knowledge includes terminology (eg. recognizing definitions in reading in U2, and recognizing signposting language in listening in U4), and details (eg. identifying features of descriptions of visual information in writing in U2 and understanding the main points of a lecture in listening in U5) that students must know to be acquainted with a particular subject matter.

A lot of examples that introduce conceptual knowledge can be found in unit 2, unit 3, and unit 4, etc. for example, the writing section in unit 2 firstly introduces types of the diagram (classification and categories) and then analyzes the features (structure) of a description for a diagram. Before students are required to practice writing descriptions, models are given for references. In unit 3, for example, an important skill is to identify main ideas and supporting evidence. To fulfill such a goal, types of evidence are shown (such as for example and reasons), followed by exercises to distinguish the main idea from a group of sentences chosen from an essay. There are similar exercises in this unit, such as knowing the structure of a paragraph, and identifying topic sentences, etc. In the listening module, languages that introduce evidence (e.g. "Think about...", "Let me clarify..") are listed in terms of their functions (giving an example, and giving an explanation, etc.).

Chinese students are trained to be adapted to examinations in their high school study. They have never been instructed of academic skills in a systematical way. EAP, a bridging course that connects the high school learning with the disciplinary courses in college, undertakes the task of equipping students with such basic academic skills. A very effective way of achieving this is to give them a detailed account of the skills and provide exercises for strengthening the skills. Hence, factual knowledge, which mainly offers the basic information about subjects and conceptual knowledge that introduces the interrelationships among the basic elements within a larger structure will meet the needs of students starting the learning of academic skills.

Other higher levels of skills, like procedural knowledge and metacognitive knowledge are also exercised in this book. Procedure knowledge informs how to make or do things, including methods, techniques, algorithms, and criteria that one uses to decide when to use that knowledge. It helps students to complete a rather complex task efficiently. For example, unit 6 is about process description. Texts in this unit are processes (e.g. sand movement, and production of soybean source, etc.) with exercises to understand and analyze the stages of a process, using signposting languages for describing processes, taking notes of a process and design a well-structured process, etc. As mid-level knowledge (Anderson, 2005, Kwok, et al. 2018), it is moderately trained in OE.

Metacognitive knowledge is knowledge of cognition in general as well as knowledge of one's own cognition (Anderson, 2005). Unit 11 in OE focuses on knowledge of evaluation. Micro skills in this unit range from the introduction of evaluation language, evaluation stages to the practice of evaluating a presentation. Students learning this unit are offered many opportunities for making reasonable judgments and reflecting on their own work.

Viewed from the cognitive process dimension, OE focuses more on skills of understanding and applying. Understanding knowledge is low-level thinking skill, including interpreting, exemplifying, classifying, summarizing, inferring, comparing and explaining skills. This type of skill is sufficiently trained in OE, for example, "understanding and extracting factual information in a text" in the reading module in unit 2 and "interpreting written feedback" in speaking in unit 5. Applying, the mid-level cognitive skill is also fully trained in the book. In every unit, students are asked to use the learnt knowledge to fulfill a task, for example, "using adverbs to express stance" in the reading module in unit 3, and "using noun phrases in note-taking" in listening in unit 2. There are more tasks designed for applying than for understanding, especially in terms of procedural and metacognition knowledge. This design embodies the belief of the writers of the book that ability to put skills into real situation practice is more important than only knowing them. For Chinese students who just start learning EAP skills, this design helps a quick round of internalization. Abilities to analyze, evaluating and creating are also sufficiently trained in the book. But as the difficulty of the skills increases, the training decreases, a design that goes along well with human cognitive development.

Recognition / knowledge		Remember	Understand	Apply	Analyze	Evaluate	Create
factual	U1, U2, U7	L2	R1,L1,C5,R5,C7	R1,L1,W1	R7	C1,C2,C5,C7	-
conceptual	U3,U4,U5	R3,L3	R2,L2,R3,L3, C4,R4,L4,W4 ,R5,L5,W5,L 7,R8,L8,C8	L2,R3,W5, W7,L8,W8	W2,C3,R3,L3 ,W3,L4,W7	C3,C4,C5,W5,	W3,
procedural	U6,U8		W6,	C6,W2,W6	L4	C6	W2,W6, W8
metacognition	U7			R7			

Graph 8: micro skills in EGAP

Compared with OE, EGAP include much less micro skills in the book. Some of the knowledge and skills, such as create factually, remember procedural and understand metacognition, etc., are not included, with metacognition to be the least trained skill.

Generally, the way that skills are distributed in EGAP is similar to that in OE. First, the units are generally sequenced in terms of knowledge difficulty. The academic focuses start from a definition that mainly introduces factual knowledge to the literature review that includes knowledge of summary and evaluating other's work.

Similar to OE, most of the micro skills in EGAP focus on factual and conceptual knowledge, for example, "identifying a definition as you read" in reading module in unit 1that asks students to understand what makes a definition and find it out in a text, and "evaluating assumptions" in critical thinking module in unit 5 that asks students to make judgment on the information other people stated. Conceptual knowledge that is the most trained knowledge in the book, an indication that the writers of the book want students to pay more attention to the structures and relations between concepts. For example "identifying, understanding and noting a classification" in the reading module in unit requires the students to figure out the inner structure of a passage by finding out the relations between sentences and paragraphs. One thing to be noted is that metacognition is the least trained knowledge in the book with only two micro skills listed in unit 7. If we further examine the "critical thinking" module in the book, we will find that most the micro skills listed are about factual or conceptual knowledge (e.g. defining a term, understanding contextualization and understanding the features of the report). Instead of providing chances for thinking of self or other's work, this module functions more like a preparing part for the following modules.

In terms of cognitive skills, EGAP is the same with OE in that it also offers more chances on skills of understanding and applying. For example, "categorizing similarities and differences" in the reading module, unit 3, requires students to put information into groups based on their understanding of the features of these two groups. There are many micro skills starting with the verb "using," training students' competence in using theoretical knowledge to accomplish tasks in real situations. However, as is shown in the table, it offers very few opportunities for students to reflect on their own work, as metacognitive knowledge is rarely trained in this book.

Generally, EGAP trains mostly low-level skills/knowledge, little on mid-level skills/knowledge and offers no training on high-level competence that requires metacognitive knowledge and skill of evaluating or creating. It reveals a truth that through critical thinking and creativity are emphasized repeatedly by all levels of English teaching syllabus in China, EAP, in particular (as the ability is essential for writing report and paper), it seems that the textbooks may not be designed in alignment with it. Hence, EGAP shows poor suitability with students' needs and poor alignment with the curriculum in terms of these two important abilities.

6. More explanation on the design of AE

AE (either the book for listening and speaking or the book for reading and writing) consists of only four units, eight chapters, and dwelling on four topics only, all are about social life. Either in terms of topic or the way it is designed, it looks more like a textbook for General English than for academic purposes.

The learning content in AE starts with 'previewing the unit,' made up of four discussion activities, two for the first chapter and two for the second. Compared with the lengthy discussions, 'warm-up' exercise in OE and EGAP are brief and skill-based. For example, in unit 3, OE, the warm-up exercise is to discuss the reading skills (skimming and scanning) learners would use to read the passage. In EGAP, the warm-up task usually is a mini-lecture that introduces the important concepts or skills involved in the unit. Discussion activities in AE are topic-based. For example, in unit 1, 'write down five to ten things that are considered to be good behavior for children from your own point of view. Then discuss the following question with your classmates: how do people generally teach these behaviors?' Such warm-up discussions look more like GE (English for General purpose) design.

In contrast with OE and EGAP, in which every task is designed to train a certain academic skill, the skills exercised in AE are designed in a way that is most frequently used in General English learning. 'Thinking about the topic' is a skill/task trained in every unit of the book. Instead of training a specific academic skill, it mainly asks questions related to the topic of the reading passages. For example 'Is this common in your community? How common do you think this is in the United States' in unit 1. Similarly designed skills are 'Applying what you have read' and 'Personalizing the topic,' etc. All the questions in these skills are topic-based. For example, in unit 2, one of the questions for 'Applying what you have read' is 'Who generally did/ does better in your school? Boys or girls?' and in unit 3, one of the questions for 'Personalizing the topic' is 'Think about your own use of new media. Do you ever use two forms of media at once?' Answers to such questions only require learner's recall of personal experience or knowledge related to the topic rather than the use of academic skills (required by EAP).

7. Conclusion

According to several large-scale investigations conducted in universities located in different cities of China, currently, Chinese students are in urgent need of a systematic introduction of English academic skills that connects their high school study to disciplinary study in college. Despite the fact that the number of universities offering EAP course keeps increasing in recent years, EAP textbook construction in China is still underdeveloped. By analyzing three textbooks (imported, adapted and domestically designed) popular in the domestic market, this study attempts to examine the suitability of these textbooks to the EAP learning needs in the Chinese context. The result reveals successful experience as well as problems in textbook writing either abroad or at home with regard to their suitability in the Chinese context.

OE, an imported textbook designed by experienced writers abroad, demonstrates general good suitability in its clear purpose, instruction, division of skills and objectives, and logical arrangement of materials. It keeps a good balance between the four types of skills (listening, speaking reading and writing). On top of that, it gives thoughtful consideration to the training of all possible occasions that students may come across to communicate in their study-seminar, presentation, formal and informal discussion. In terms of skill arrangement, OE covers every cell in RBT, able to meet different levels of needs. And the units and micro skills are generally in line with the development of the recognition process. Nonetheless, the results also find some parts that may not well suit the needs and situation of Chinese students: it puts the skills of writing paper in the early units of the book which may discourage the learning interest and motivation as Chinese students consider it to be boring and difficult and rarely need to use them in the first two years of college study. Still, due to the lack of knowledge of Chinese students, OE shows weak suitability in vocabulary training as some of the techniques have already been repeatedly trained by Chinese students in their high school.

The study reveals some problems with EAP textbook writing in China. First, there are few domestically designed EAP textbooks, among which fewer, integrate the four types of skills students need. Some textbooks like AE separate the four skills into two books, putting a huge challenge ahead of the teachers as it is very hard to integrate the lengthy content in a time-limited classroom setting without cutting the connection among the skills. Further, in this pioneering stage of EAP learning in China, some EAP textbook writers do not have a sound understanding of the course and makes little difference in the design of EAP textbook and General English textbook. This is reflected in their work: unclearly stated purpose, content not covering different disciplines, not giving clear division and expressions to the micro skills and their arrangement, hence unable to match well with the students' learning needs.

On the other hand, textbook such as EGAP demonstrates some successful experiences for future textbook writers. First, it is one of the very few textbooks that integrate the four types of skills in one book and all modules of a unit center around the same academic focus, and they are interconnected so that each can be a pre-learning part section for the next. In addition to the four types of skills, it sets two more modules for each unit-critical thinking and vocabulary, both are considered of urgent need by Chinese learners. The vocabulary tasks and exercises designed in the textbook are diversified and meet the different needs of the learners. I-smart platform is another successful design of this book. It well combines offline with online learning and offers

opportunities for learners to communicate in the virtual community by the adoption of the most popular communicative software-wechat. As a bridging course, EGAP suits students' needs in that it mostly helps them understanding and using basic academic skills. However, there are problems in design as well. The distribution for modules, for example, are not reasonably balanced. It allows much more attention to the reading section than writing and even less to listening and speaking. Moreover, the critical thinking module mostly functions in preparing the basic introduction of knowledge for other modules rather than motivates students' reflective thinking. Also should be noted is that high-level skills/ knowledge, like metacognitive knowledge and skills to evaluate and create are not adequately trained in the book.

To sum up, for EAP textbooks either designed by oversea experienced writers or by writers at home, there is still room for improvement so as to suit the needs of the learners in the Chinese context. This paper also sheds light on the selection of a suitable textbook—as is suggested in the framework, that an examination of the introduction, content arrangement and skill distribution of the book may help a quick decision.

References

Anderson, L. W., Krathwohl, D. R., Airasian, P. W., Cruikshank, K. A., Mayer, R. E., Pintrich, P. R., Raths, J., & Wittrock, M. C. (Eds.). (2001). *A Taxonomy for learning, teaching, and assessing: A revision of Bloom's Taxonomy of Educational Objectives* (Complete edition). New York, N.Y: Longman.

Anderson, L. W. (2005). Objectives, evaluation, and the improvement of education. *Studies in Educational Evaluation*, 31(2), 102–113

Ann-Katrin van den Ham, Aiso Heinze, (2018). Does the textbook matter? Longitudinal effects of textbook choice on primary school students' achievement in mathematics. *Studies in Educational Evaluation*, 59, 133-140

Arlan, R. S., & Sahin-kizil, A. (2010). *How Can the Use of Blog Software Facilitate the Writing Process of English Language Learners? Commuter Assisted Language Learning*, 3, 183-192. https://doi.org/10.1080/09588221.2010.486575

Bloom, B. S., Engelhart, M. D., Furst, E. J., Hill, W. H., & Krathwohl, D. R. (1956). *Taxonomy of Educational Objectives: The classification of educational goals*. New York: David McKay Company.

Cai Jigang. (2012). The Design and Illustration of the EAP-Oriented Guidelines for EFL Teaching at Tertiary Level. *Foreign Language Learning Theory and Practice,* 4, 1-9,41

Cai Jigang. (2014). Brand new teaching philosophy and methodology: a study of English for academic purposes and College English. *Foreign Language Learning Theory and Practice*, 2, 1-7,45, 94

Cai Jigang. (2016). Theoretical Foundations of EAP as an Independent Course in Chinese Tertiary Education. *Technology Enhanced Foreign Language Education*, 2, 9-16

Crowe, A., Dirks, C., & Wenderoth, M.P. (2008). Biology in Bloom: Implementing Bloom's taxonomy to enhance student learning in biology. *Cbe-life Sciences Education*, 7(4), 368–381.

Cunningsworth, A. (1995*). Choosing Your Coursebook*. Oxford: Heinemann.

Chazal, E. de & L. Rodgers. Oxford EAP (Intermediate/B2)Oxford University Press, 2012. Ding Yan. (2016). EGAP Textbooks in China: Problems and Solutions. *Foreign Languages in China*, 7(2):85-91.

Dudley-Evans, T. & M. J. St John. (1998). *Developments in English for Specific Purposes: A Multi-disciplinary Approach*. Cambridge: Cambridge University Press.

Edeward de Chazal & Sam McCarter. (2012). Oxford EAP. Oxford University Press, Oxford, UK.

Flowerdew & M. Peacock eds. (2001). *Research Perspectives on English for Academic Purposes*. Cambridge: Cambridge University Press, 177-194.

Jessica Williams, Kristine Brown, Susan Hood, (2017). *Academic Encounters: Life in Society*. Shanghai Foreign Language Education Press, Shanghai, China.

Johns, A. M. *English for specific purposes (ESP): Its history and contributions*. In M. Celce-Murcia (ed, 8). (1991). Teaching English as a Second or Foreign Language. Boston: Heinle & Heinle. 67-75.

He Jiabao. (2014). *Needs Analysis and Evaluation of EAP Courses for Chinese College Students*, Huazhong University of Science and Technology, Wu Han, China.

Hutchinson, T., & Waters, A. (1987). *English for Specific Purpose*. Cambridge: Cambridge University Press. https://doi.org/10.1017/CBO9780511733031

Hyland. K. (2006). *English for Academic Purposes: An Advanced Resource Book*. London: Routledge.

Jukka Törnroos, (2005). Mathematics textbooks, opportunity to learn and student achievement. *Studies in Educational Evaluation*, 31 (4), 315-327

Lau, Kwok Hung, Lam, Tri, Kam, Booi Hon Kam, Mathews Nkhoma, Joan Richardson, Susan Thomas. (2018). The role of textbook learning resources in e-learning: A taxonomic study. *Computers & Education*, 118: 10-24

Krathwohl, D. R. (2002). A revision of Bloom's taxonomy: An overview. *Theory into Practice*, 41(4), 212–218.

Liao Leizhao, Cai Jigang. (2017). Transcending GE: A study of the writing principles of college ESP teaching materials. *Foreign Language Education in China* (Quarterly), 10 (4):17-24

Liu Rui, Zhang Laixiang, Yan Pengfei. (2014). A Study on EAP Needs Analysis of Students in Universities of Science and Technology, *Education Review*, (3), 78-80

Luik, Jaan Mikk, (2008). What is important in electronic textbooks for students of different achievement levels? *Computers & Education*, 50(4): 1483-1494

Luo Na & Chen Chunmei. (2012). EAP Needs Analysis of Graduate Students of Science and Technology from the Mentors' Perspective, *Contemporary Foreign Language Studies*. (5), 38-42

Maria Kuecken, Marie-Anne Valfort, Ann-Katrin van den Ham, Aiso Heinze, (2013). When do textbooks matter for achievement? Evidence from African primary schools Economics Letters, 119(3): 311-315

Nation,I.S.P. (2006).How large a vocabulary is needed for reading and listening? Canadian Modern Language Review, 63, 59–82. Rockinson-Szapkiw, A.J., Courduff, J., Carter,K.,&Bennett,D.(2013).Electronic versus traditional print textbooks: A comparison study on the influence of university students' learning. *Computers & Education,* 63, 259–266.

Tang S. (1999). Cooperation or competition: a comparison of U.S and Chinese college students. *TheJournall of Psychology*, (133), 413—423

Ning Dali. (2017). The Construction of EAP Textbooks in Chinese Context from the Perspective of Eco-education. *English Language Teaching*, 5, 214-221

Valverde, G., Bianchi, L. J., Wolfe, R., Schmidt, W. H., & Houang, R. T. (2002). According to the book: Using TIMSS to investigate the translation of policy into practice through the world of textbooks. Netherlands: Springer

Wang Hua. (2018). A survey on the Needs of Academic Spoken English of Chinese College Students, *Journal of Xi'an International Studies University*, 1, 81-87

Wang Shoureng &Wang Haixio. (2011). On the State of College English Teaching in China and Its Future Development. *Foreign Languages in China*, (5), 4-11, 17.

Wang, S. L., & Hwang, G.J. (2012). The role of collective efficacy, cognitive quality, and task cohesion in computer-supported collaborative learning (CSCL). *Computers & Education*, 58(2), 679–687.

Wang Xiaoli, Lu Yongli, Li Bin. (2014). Theoretical and Empirical Study of Evaluation Index System of. *Curriculum, Teaching Materia, and Method*, 34(10), 40-45

Wang Xuehua, Chen Meihua, Li Xiaoxiang, (2015). Transition of College English Teaching Oriented towards EAP——problems and countermeasures. *Foreign Language Learning Theory and Practice*, 4, 55-58, 94

Wang Yan. (2011). On the principles of compiling ESP textbooks. *ESP Studies in China*. 2(1):106-115

Zhang Jingyuan, Wang Na. (2017). *English for General Academic Purposes, Higher Education Press*, Beijing, China.

Zhao Yong & Zheng Shutang (2006). A theoretical analysis to the textbook evaluation systems abroad. *Foreign Language Education*, 27(3):39-45

Zheng Dahu. (2016). The Construction of Multicurricular System of college English Based on Needs Analysis. *Foreign Language World*, 6, 49-56.

Film Education Project with Youth

Anabela Moura[1], Carlos Almeida[2], Raquel Pacheco[3]

[1] School of Higher Education (ESE), at the Polytechnic Institute of Viana do Castelo (IPVC)
[2] School of Higher Education (ESE), at the Polytechnic Institute of Viana do Castelo (IPVC)
[3] Center for Research in Arts and Communication (CIAC, University of Algarve)

Abstract

There is a broad consensus on the recognition of cinema as a means of acquiring media literacy. The problematization of cinema as an artistic expression and the promotion of interdisciplinarity between the areas of communication, cinema and education and artistic education in particular that have been established in the field of communication science teaching. In this context, the purpose of this article is to describe action-research projects that are repeated annually, when students are confronted with cinema, audiovisual language, analysis of still and moving images, the follow-up of documentary creation with students from different courses, and their involvement in the dynamization of an audiovisual space from the text of a Portuguese writer, Almada Negreiros "Manifesto Anti Dantas" or interviews in rural communities, using video cameras, within the International Project Rural 3.0 Service-Learning for Rural Development, which is an international transversal project, funded in July 2018 by E+ Knowledge Alliances, coordinated by the School of Education of the Polytechnic Institute of Viana do Castelo, involving sixteen partners from eight European countries.

Keywords: Cinema, Visual Culture, Service-Learning, Young

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[1] Anabela Moura is a teacher of Artistic Education at the School of Higher Education (ESE), at the Polytechnic Institute of Viana do Castelo (IPVC). She has a master's degree in Art, Craft & Design Education, from De Montfort University, Leicester (1993), Ph.D. at the University of Surrey, Roehampton (2000), London. She also coordinates the Professional Superior Course of Art and Technology (Light, Sound, and Image) at ESE. Anabela is a member of the Research Center, at Minho University (CIEC), Braga-Portugal. She is the author of numerous articles and co-publisher of books. She co-edits the International Journal *Dialogues with the Art* www.ese.ipvc.pt/revistadialogoscomaarte/ and coordinates the International Project Rural 3.0- Service-Learning for Rural Development, co-supported by Erasmus +, https://rural.ffzg.unizg.hr/ FACEBOOK: Rural 3.0; INSTAGRAM: Rural.three.zero; TWITTER: Rural 3.0 Email: amoura@ese.ipvc.pt

[2] Adjunct teacher of the School of Higher Education (ESE), at the Polytechnic Institute of Viana, do Castelo (IPVC), Portugal. He is the coordinator of the Master's Degree in Arts Education. He holds a BA in Music Education from ESE-IPVC, an MA in Music Education, from the University of Surrey / Roehamptron, London, and a Ph.D. in Didactics: Music Education, from University of Valladolid, Spain. Member of the Research Center, at Minho University (CIEC), Braga-Portugal. He co-edits the International Journal *Dialogues with the Art* www.ese.ipvc.pt/revistadialogoscomaarte/ Member of the Rural 3.0 Project. Email: calmeida@ese.ipvc.pt

[3] Raquel Pacheco is a researcher at the Center for Research in Arts and Communication (CIAC, University of Algarve). She is currently a postdoctoral fellow at the Foundation for Science and Technology (FCT-FSE). Her Ph.D. was in Communication Sciences at Universidade Nova de Lisboa, 2016. She holds a specialization in Communication Sciences-Media Studies and Journalism. Email: raquel.pacheco@gmail.com

Introduction

This article aims to present contributions for reflection on the cultural formation of students of higher education, having as reference what is considered by us as the basic for the discussion of cinema, visual culture and education-based service-learning in contemporary teaching. So, we present the theories of Morin (1997), Bergala (2008) Migliorin (2015), Lobo (1999), Pacheco (2009) Moura, Barbosa and Almeida (2017). Finally, we also present a position regarding the insertion of cinema in the higher education students' training, regardless of scientific areas in which they are enrolled. In this context, we diagnose students' previous ideas when they begin a basic training in cinematographic language, supported by film and audiovisual specialists, the AO-NORTE cineclub, longstanding partners of the ESE-IPVC. We describe examples of action-research that are repeated annually, when students are confronted with cinema, audiovisual language, analysis of still and moving images, the accompaniment of the creation of documentaries with students from a film course, and the dynamization of an audiovisual space from the text of Almada Negreiros entitled "Manifesto Anti Dantas", or interviews using multimedia equipment.

Cinema as a pedagogical language

In a time when the images that are given to us from the world tend to confuse our gaze, reflecting on image and sound is not a superfluous activity. Bazin (1992) saw the cinema as "an open window to the world," mainstream cinema has been manifesting a strong tendency to become a videogame on a large screen while the television screen increasingly takes the form of a lock, that is, the visual tends to take the images place. We live in a culture saturated with audiovisual stimuli, consumers of still and moving images, young people (and also children and adults) are constantly in contact with videos, photographs, as well as the digital devices that allow them to be producers and disseminators of all of the produced material. Concepts of culture, identity, citizenship, values, and rights of citizens, the role of art in society have been addressed. Students are expected to 'see' themselves in the position of the "other" and are engaged in critical dialogue, through an examination of fundamental values (Moura, et al., 2017a).

Theorists have always tried to explain this enchantment of the human being by the cinema. Morin (1997) considers that cinema is like the dream and the human imagination that can awaken and reveal shameful and secret identifications, which he calls a phenomenon of projection-identification, where the spectator tends to incorporate in himself the characters of the screen thanks to physical and moral similarities that he finds in them. In this way, the cinema "brings a way relating images, subjects, discourses, objects, narratives that transfigure, so to speak, other spaces and relations" (MIGLIORIN, 2015, p.185). Humans construct images from the earliest days of life,

> Reading images, however, as an intrinsic process from the external stimulation, is a competence forced on a story of its own. And some authors, like Jean Piaget, have demonstrated that it is a competence that develops in parallel with the acquisition and mastery of verbal language, both (image decoding and linguistic coding) participating in and of the process of intelligence "(LOBO, 1999, p. 108).

Machado (2005) believes that the myth of the cave, celebrated by Plato, described for the first time what would be the cinema. In the allegory of the Greek philosopher, the wall fulfills the role of the screen, and the flame replaces the projector and the sculptures, created by illusionist artisans, are what today is film or film support.

Cinema is the basis of the audiovisual (PACHECO, 2009), the cinematograph built at the end of the 19th century by the Lumière brothers was the forerunner of all this audiovisual panoply which we have access through the new technologies in the days that follow. When cinema comes out of the dark room, it is no longer only displayed on the big screen, it "multiplies in forms and devices that the visual arts are constantly renewing: multiple screens, mobile projectors, spectators' interventions" (MIGLIORIN, 2015, p.185).

The reading of images and the understanding of the visual culture continues to be increasingly the object of study of researchers and educators of all scientific areas, who state that "almost everything of the little that we know, in relation to the produced knowledge, arrives to us by the means of communication and information.

These, in turn, also construct images of the world. Images to delight, to entertain, to sell, with messages about what we should wear, eat, pretend, think"(SARDELICH, 2006, 203). This argument, used in an article written for 12 years, warns of the need for visual literacy, which is expressed in various names such as reading the image and critical understanding of visual culture.

This and many other articles, research projects and research at masters and doctoral level, point to the need to use theoretical frameworks in the fields of arts, education, anthropology, sociology, history, science and technology (virtual reality, artificial intelligence, robotics, nanotechnology, biological engineering, artificial life, genetic engineering, the internet, and others) and communication. We cannot ignore the role that technology has in transmitting knowledge in education in general and specifically in arts education (MOURA, et al., 2017b), enabling new paths for creative forms and promoting incentives for permanent innovation.

Cinema, mainly in France, has a pedagogical tradition as a language (BERGALA, 2008) and arises along with the appearance of film clubs or cinema clubs. If, on the one hand, they often sinned by taking a film approach as an almost unattainable "work of art," giving too much emphasis on content, on the other they allowed informal discussions and approaches trying to understand them within their sociopolitical and artistic contexts. The cine club was the first way of film education and has until today a prominent role in this field, mostly through the socio-educational side, developing several number of projects, such as socio-cultural projects, pedagogical, social projects, with the community and different institutions giving emphasis on the work of sensitization and education to the cinema.

The relationship between cinema and education was historically marked by didactic practices, especially in the school context, which used cinema as an audiovisual resource. The films have long been used in the classroom as common pedagogical resources that illustrate or deepen certain subjects that are part of the school curriculum. With the formative potential that cinema has, its use is inevitable as this type of resource. Service-Learning moves away from the traditional classroom to enable students to engage with real *versus* imagined subjects and, thus, learn about culture through their own lived experience. The core concept is the combination of service and learning objectives, with activities designed to positively affect both service recipient and provider (FURCO, 1996; FURCO & BILLIG, 2002).

Research and Methods: Education-Based Service Learning

In the first semester of the academic year 2017/18, in addition to the 3rd edition of the DOC NOMADS of the Master Course of the Lusófona University of Lisbon, literature and film appear as a challenge of the new project launched by Ao-Norte (Association of Production and Audiovisual Animation), to the Higher School of Education of Viana do Castelo, where yearly students of various degrees in the field of arts have the opportunity to hear, see, think and talk about cinema. DOC NOMADS is the first joint master's degree in Europe in the field of documentary film production and study. Being a two-year international postgraduate program, it is run by European universities from three countries: Portugal, Hungary, and Belgium.

Ao-Norte is a non-governmental organization (NGO), a non-profit audiovisual production and animation association, founded in 1994, headquartered in Viana do Castelo, Portugal. This association has the purpose of audiovisual production and dissemination, as well as cooperation in the development of different areas, such as teaching, education, and culture. Ao-Norte is also a member of the Portuguese Federation of Cine clubs and develops projects in the area of cinema and education in Portugal, such as: Look at the Real; Stories in the Square; Video in the School; Meetings of Cinema at Viana; among others. As for the European level, it develops projects such as: YEFF - Young European Film Forum for Cultural Diversity; YEAD - Young European (Cultural) Audience Development; ICCI Network-Images of Culture / Image Culture. And now it also has partnerships in Africa and Brazil. Like Ao-Norte, the Viana do Castelo Higher School of Education (Teacher Training College) at Viana do Castelo Polytechnic, is constantly open to develop new and attractive projects. Developing an ancient and profitable partnership with Ao-Norte and with a great passion for cinema, the Higher School of Education, does not measure efforts to connect cinema, education, and arts within this synergy. This

year the project was entitled "Cine-Poetry-Literature and Cinema" and was introduced to the new students as an artistic space and privileged place of aesthetic enjoyment and identity development.

We believe that such an experience would provide learning from the interpretation of a text and would develop creativity, from building each student individuality, fostering increased confidence in one's personal capacities. We also knew that for future Arts and Culture Management specialists and Art and Technology technicians such a project would contribute to an enrichment of their communication and intercultural skills, since it would involve interaction between students, in a systematic exchange of ideas, beliefs and symbolic values. Gardner (1987) states that the human being is able to create symbolic entities in order to convey codes of meaning so that their peers can understand, interpret, recognize, criticize or transform themselves in a given context. He also points out that the question of symbols is directly linked to culture, for our construction of the reality is based on the availability of a wide range of mental conceptions or symbolic forms. Individuals' efforts to capture their experiences and express them in a way that can communicate effectively depend on a combination of these conceptions or symbolic forms that convey emotional states. The human being lives in a symbolic universe and has a basic and intense need to create meanings and invest in the world, trying to find meanings everywhere and transform experience constantly to discover new meanings. This will enable artists, filmmakers, and teachers to create new symbols that will generate different readings systematically.

The methodology adopted in these projects is that of action-research previously mentioned, with the teams formed by students, professors of institutions of Higher Education and a trainer of a Cultural Association, with protocol of collaboration with one of the Institutions: Universidade Lusófona de Lisboa (ULL) and the Higher School of Education at Viana do Castelo Polytechnic Institute and Ao-Norte, covering students between the ages of 18 and 40 years.

Methodology

A qualitative method was selected as it was considered more appropriate than other qualitative methods because of its emphasis on solving educational problems diagnosed in specific situations. There are other reasons why we chose this research method:
- ✓ Participatory;
- ✓ It promotes social change;
- ✓ Contributes to the knowledge and personal understanding of educators;
- ✓ Methodology that stimulates curricular innovation;
- ✓ Potential to work on a theoretical model of curricular reorganization with students.

Data collection took place through:
- ✓ Realization of 3 documentaries and 9 videos (performances produced by students);
- ✓ Contents (teachers / trainer from Ao-Norte);
- ✓ Classroom Photos;
- ✓ Field Notes, which included informal talks with students;
- ✓ Written and oral reflections.

Subjects and context of the study

DOCNOMADS and Cinepoesia (Cine-Poetry) were two action-research projects that aimed to implement collaborative practices among professors, students of Arts and Cultural Management BA and Art and Technology (Light, Sound and Image) Professional Degree and film experts from Ao- Norte and Lusófona University, to promote innovative performances of students in the Art and Technology sector. The key questions that were addressed in the design of this action research were (i) will the use of image analysis strategies allow Arts students to develop their motivation for film and photography? (ii) will this scientific-didactic knowledge facilitates the development of cultural, communication, and professional skills of the future professionals of Arts?

Sample

The following students and teachers collaborated in both Projects (see Table 1):

Table 1. Participant Students and Teachers

Lusófona University	Lusófona University	Higher School of Education at IPVC	Higher School of Education at IPVC	Higher School of Education at IPVC
Masters on Cinema	Sound Degree	Artistic and Cultural Management BA Degree	ERASMUS students	Profissional Art and Technology Degree
19 students	6 students	13 students	2 students	23 students
2 teachers	2 teachers	1 teacher and 1 Ao-Norte trainer	1 teacher and 1 Ao-Norte trainer	1 teacher and 1 Ao-Norte trainer
Docnomads Project	Docnomads Project	Docnomads Project	Docnomads Project	Docnomads Project
		Cine-poetry Project	Cine-poetry Project	Cine-poetry Project

At the end of October, beginning of November, the students of the Lusófona University Master's Degree - DOCNOMADS, returned to the ESE-IPVC for the 3rd time, and this time they brought 6 colleagues from the Sound Degree. Along with 13 Arts and Cultural Management students at Higher School of Education + 2 of ERASMUS of Valencia and the 23 students of the Professional Arts and Technologies Degree (Light, Sound and Image), they produced three documentaries related to the following themes: Twilight to night, night to twilight; Underground; and Ocean.

When confronted with a module related to media education and image education, students always react with a certain mistrust. Firstly, they do not understand the interest that such a confrontation might have for their formation as professionals of basic education, light, sound, and image, or future artistic and cultural management sector. At the end of the training, which usually runs between 4 and 6/7 weeks, they show enthusiasm and very different perceptions, although they feel the experiences differently, as the examples presented here will confirm:

> The experience I took from the Docnomads project was little or nothing, that is, it was a disappointment due to the lack of cooperation on the part of foreign students in sharing their ideas and even requiring assistance (3rd year Arts and Cultural Management's student).

Another student stated the following regarding the same project:

> This project is very important in my view because we had the possibility to work with different people and cultures, which ends up making our professional and personal growth (...) more and more comprehensive. Regarding the activity of the Docnomads I participated in all sessions, namely in the session of reception to the students and in the final session, for the visualization of the final videos projected at Verde Viana cinema (3rd year Arts and Cultural Management's student).

The Cine-poetry project provided the articulation of literature and cinema in the classes of Show Production at the Arts and Technologies Professional Superior Course and Work Placement I of the Art and Cultural Management BA, and made those students aware of artistic values that dialogue and interacted with culture through the symbolic and allegorical dimensions of literary and cinematographic languages. This experience allowed students to reflect on the metaphorical meshes of a literary text through the metaphors of cinematic language and codes of meaning. This pedagogical project supported by Ao-Norte approached the poetic text and provided a space for audiovisual creation (Fig.1).

Fig 1. Creation/ Interpretation©ines pereira

The students were confronted with cinema, audiovisual language, analysis of still and moving images, after having created documentaries with DOCNOMADS students.

Having analysed and interpreted Almada Negreiros text - "Manifesto Anti Dantas," one of the Arts and Technology students said:

> It was the presentation that stood out the most, it was very interactive, and in a short time and in a few words, we were able to explain, open, and think better about life. That not everything appears from nothing, that everything has a methodology. Showing us various types of works of art, with the intention of knowing how to appreciate and develop our ability to interpret. This way, we realized that each work had a different story, and each one can have different points of view, making the presentation funnier. The works also made us think and reflect, they communicate with us, we are curious to see why each character was painted in the first or last plane, why a light should emerge in a character, and many more techniques that we think are irrelevant, but in the end we realized that whoever did it was a genius and had so much imagination that it gave life to the work. I realized that without light, there is no image, which makes us think a lot, that the world was not made by chance, like works of art, even the world itself has its history. As the world evolves the image too, and today to get a video, we start from the image, which by itself, has developed by the light, and we are always evolving without limits.

An Art and Cultural Management student noted the following:

> The sessions of Cine-Poetry were one of the most interesting and stimulating activities of this semester. I was present in all the sessions and in the recordings, and I collaborated not only with my group but also with the groups of my colleagues.

The words that were associated to the excerpts of the text distributed to each of the five groups led the students to the selection of spaces and props, construction of characters (physical presence, facial expression, gestures, movements, sound elements) and through body expression, they reinterpreted the Almada's words (Fig.2):

> The idea will be backlit, and we plan to record our video-performance in the Higher School at the dance & drama room. Face to face, I and SM will attack each other, while CL throws objects at us, until one falls to the floor, thus transmitting all the anger and revolt that Almada Negreiros felt to his 23 years when he wrote this text, represented by the action of throwing objects at a portrait of someone. The reason for not being chosen a specific character is related to the fact that we can give the public the opportunity to be him to choose 'his Julius Dantas', and we all feel that there is a Dantas that prevents us from do what we want...

Fig 2. Interpretation©anabela moura

Another Art and Technology student mentioned in his report:

> ... at the end of image analysis exercises, we were able to explain, open, and think better about life. That not everything appears from nothing, that everything has a methodology. Showing us various types of works of art, with the intention of knowing how to appreciate and develop our ability to interpret. (...). With this module on visual culture, I improved my technical knowledge of the image because now I am more aware of what to do and think how I will do (...)

Some Findings

Cinema and education as part of media education (PACHECO, 2009), were the teaching learning strategies considered as fundamental for acquiring a complete media literacy and that education for the media is to know their contexts, their cultures, and languages so to combine technologies and these same languages. The interdisciplinary curriculum and image analysis and education strategies for the media used as pedagogical methodology in this project were considered appropriate for use in the context of both courses. However, we believe that students would need a more extensive professional preparation not only in art but also education for the media. The strategies of analysis and production of images were considered adequate for the development of cultural, aesthetic, artistic, and technological competences of the students. The use of literature in its various aspects, from the literature of oral tradition to the interaction of text and image, was an effective stimulus that allowed to increase the capacity of reading visual images by the students and consequent extension of their understanding about the society in which they live.

The development of the literacy in these two projects consisted on developing understanding of the meaning of art in context, and particularly but not exclusively, concerned itself with the role that language can play in making accessible at various levels of understanding and complexity.

This action research allowed us to verify that critical analysis strategies encourage significant discussion about art in general and cinema in particular and that they are symbolic representations of diverse realities and that the study of visual culture in terms of economy, business, technology, experiences provide a more critical understanding of society (HERNANDEZ, 2006).

Final Considerations

Among a number of aspects that have been mentioned previously, we intend to highlight some of those that we believe may provide future guidelines:
1. The strategies of analysis and production of images allow students to develop their motivation to increase their perceptual, historical, and critical skills and understanding of social and cultural issues.
2. The construction/appropriation of these scientific-didactic knowledge during the 1st semester facilitate the development of cultural, communication, and professional skills of the students.
3. Teachers need to examine their curricular interventions and reflect how images can be used as part of the general training of students, or as part of specific courses.
4. Cinema as an important language in the pedagogical process.

Observation of the participants during the projects and their reflections and evaluations suggest that the objectives that were devised for this action research were attained in the short term. We believe that this experience has provided the learning of the interpretation of life (case of the Docnomads) and of a text (Cine-poetry) and developed the creativity from the construction of the individuality of students, increased their confidence in their personal capacities. Cine-poetry provided the articulation of literature and cinema in the classes of Show Production of Spectacle of the Professional Higher Course of Art and Technologies and of Work Placement I of the Art and Cultural Management BA and made the students aware of artistic values that dialogue and are in interaction with culture, through symbolic and allegorical dimensions of literary and cinematographic languages.

Such experiences made students aware of technological changes that are developing in parallel with social, economic, and political transformations. New languages emerge, directed towards a cyberculture, where unprecedent premises are discussed, and new perspectives are opened for different areas of knowledge. We realize that technology alone does not promote change, it needs to be associated with projects that develop their critical, creative aspects, connecting technology to the arts, promoting an education without boundaries or limits. We underline the urgency of working with young people also on the less positive aspects of the media and new technologies that often, when used as tools of the system, treat them as mere consumers, using less noble strategies such as manipulation.

We are aware that, for future managers of the sectors of Arts and Culture and for the future professionals of Performative Arts, these projects help to enrich their communication, artistic and intercultural skills, as they imply interaction between people, in a systematic exchange of ideas, beliefs, and values. Such projects guarantee a free and flexible teaching-learning program and stimulate much discussion and polemic. Many educators around the world have been pointing out that the training of students has been weighted heavily on the side of their producing practical work to the detriment of examining content and meaning (ALLISON, 1988;).

It should be emphasized that all this implies a necessary adaptation of curricula and methodologies, where learning shall not be limited to the mere acquisition of some knowledge but also shall involve the development of processes that imply new knowledge and professional skills in specific and multidisciplinary fields (MOURA, et al., 2017a). These tools also strongly influence students' creative responses, so a professional attitude to curriculum development should draw from and build upon the extensive work already carried out in this field, and teachers should renew their teaching content and the strategies they use to reach their students.

References

ALLISON, Brian (1974). Professional art Education? In *Journal of the NSAED*, 1, 1, pp.3-9;

ALLISON, Brian (1988) Arte em Contexto, In *Journal of Art and Design Education*, Vol. 7, 2.

BAZIN, André (1992). *O que é o cinema?* Lisboa: Livros Horizonte.

BERGALA, Alain (2008). *A hipótese cinema: pequeno tratado de transmissão do cinema.* Rio de Janeiro: Booklink.

EISNER, Elliot (1985). *The art of Educational Imagination.* London: The Falmer Press.

GARDNER, Howard (1987). *Arte, mente y cerebro: una aproximación cognitiva a la creatividad.* Buenos Aires: Paidós.

HERNÁNDEZ, Fernando (2006). *Cultura Visual, Mudança Educativa e Projeto de Trabalho.* Porto Alegre: Artmed.

LOBO, Graça (1999). *Formação de Público para o Cinema.* Dissertação de mestrado em Gestão Cultural, Universidade do Algarve.

MACHADO, Arlindo (2005). *Pré cinemas & Pós cinemas.* Campinas: Papiros.

MATOSO, Rui (2014). Experiências de Intervenção Cultural, In *Ciclo de Conferências- Cultura, Espaço Público e Desenvolvimento – Que Opções para uma Política Cultural Transformadora?* Évora: CIMAC, pp.27-32

MIGLIORIN, Cezar (2015). *Inevitavelmente Cinema: educação, política e mafuá.* Rio de Janeiro: Beco do Azougue.

MORIN, Edgar (1997). *O cinema ou o homem imaginário.* Lisboa: Relógio D´Água.

MOURA, Anabela; CACHADINHA, Manuela; ALMEIDA, Carlos (2017a). Cinema Integrated Learning in Higher Education – the Case of Viana do Castelo Polytechnic – Northern Portugal, In *Journal of Education & Social Policy*, Vol. 4, March, pp:143-151.

MOURA, Anabela; BARBOSA; Gabriela; ALMEIDA, Carlos (2017 b). Cinema in Higher Education – Languages in Approximation, In *Journal of Education, Society and Behavioural Science*, ISSN: 2456-981X, ISSN: 2278-0998, Vol.: 21, Issue.: 2, pp:1-11.

PACHECO, Raquel (2009). *Jovens, media e estereótipos. Diário de campo numa escola dita problemática.* Lisboa: Livros Horizonte.

SARDELICH, M. E. (2006). Leitura de Imagens e Cultura Visual: desenredando conceitos para a prática educativa, In Educar, (27) Curitiba: Editora UFPR, pp. 203-219

Including Diversity Awareness, Anti-Violence and Vocational Skills in Language Learning: An Evaluative Study to English Textbook in Indonesia

Desak Gede Chandra Widayanthi[1], I Wayan Simpen[2], I Nyoman Udayana[3]

[1,2,3] Fakultas Ilmu Budaya, Universitas Udayana, Bali, Indonesia

Corresponding Author: Desak Gede Chandra Widayanthi, Fakultas Ilmu Budaya, Universitas Udayana, Denpasar, Bali, 80363, Indonesia. E-mail: chandrawidaa@gmail.com

Abstract
As the government of Indonesia is implementing a program of Vocational School Revitalization, improving the quality of instructional material, including the quality of textbooks. This study aims at analyzing how the English textbook for grade X of vocational high school has included diversity awareness, anti-violence, and vocational skills in their content. Diversity awareness, anti-violence, and vocational skills are important to be presented in the textbook in Indonesia because Indonesia has more than 300 ethnic groups, or in exact number, there are 1340 ethnics spreading all over the islands. This awareness is important in order to build tolerance among others and also anti-violence habit. As the textbook plays an important role in Indonesian education, this action on building diversity awareness could be assisted through the inclusion in the textbook. The textbook being evaluated in one published by the Ministry of Education and Culture of Indonesia. The research conducted as a descriptive, evaluative study, through content analysis data collection method. In general, it is found that textbook being evaluated has including diversity awareness, anti-violence, although it is found that there is one picture that may promote violence. However, the textbook has not sufficiently facilitated the development of vocational skills since the materials are more based on General English instead of English for Specific Purposes.

Keywords: Textbook Evaluation, Learning Material, Vocational, Character Building

1. Introduction

On 9 September 2016, President of Indonesia instructed to all the responsible stakeholders to start conducting a program called Vocational School Revitalization. The program includes improvement of the national curriculum for vocational school and all the instructional tools to meet the industrial demand and to enhance the quality of the graduates professionally. Regarding the instruction, the Ministry of Education and Culture (or in Kementerian Pendidikan dan Kebudayaan/Kemendikbud) (2017) designed the plan in implementing the program, which included the program in improving students' English proficiency since competitive English

proficiency has become an essential job demand. Thus, it is expected that the curriculum and the instructional design and tools facilitating the learning of related vocational skills.

To improve the quality of vocational education and the quality of the graduates, maintaining the quality of the textbook is significant to be done. According to Peraturan Menteri Pendidikan Nasional (Permendiknas) Republik Indonesia Nomor 2 Tahun 2008 (an official rule which regulates about textbook for Indonesian formal education), the textbook is at a vital position since it is stated as the compulsory sources in all grade of formal education. According to Tomlinson (1998), one of the crucial standard to be fulfilled by a textbook is it has to be in line with the curriculum, syllabus or any instructional planning which becomes the basis of the learning process.

Indonesia has more than 300 ethnic groups, or in exact number, there are 1340 ethnics spreading all over the islands. Regarding this diversity, it is important to build awareness to students as the younger generation of the nation, through formal and informal education. This awareness is important in order to build tolerance among others and also anti-violence habit. As the textbook plays an important role in Indonesian education, this action on building diversity awareness could be assisted through the inclusion in the textbook. Actually, Evaluative studies to language textbook in Indonesia had been conducted. Asri (2017), Firdaus, dkk. (2014), Pujiastuti (2013), and Anam (2014) conducted evaluative studies to examine the quality of Indonesian language textbook for elementary, junior high and senior high school, while Nurdeani (2014) conducted an evaluative study towards English textbook for elementary school. However, none of the study considering on English textbook for vocational school, and none of them consider their evaluation on the diversity awareness, anti-violence, and vocational skill inclusion.

Considering the urgency and novelty, evaluative study to examine how the English textbook has the inclusion of diversity awareness, anti-violence, and vocational skills is significant to be conducted. This study focused on analyzing the content of English textbook for grade X in vocational high school, especially on how it is including diversity awareness, anti-violence, and vocational skills in its content, which is published by the Ministry of Education and Culture of Indonesia. Evaluation of other books and other grades is suggested to be conducted as further prospective research.

2. Method

This study was descriptive, evaluative research. According to Sudaryono (2017) descriptive research is aimed at describing condition or phenomenon as what it is, while Irina (2017) stated that descriptive research focuses on fact-finding and not only describes it but also analyse it deeply. Sudaryono (2017) also stated that evaluative research is functioned as an assessment of the benefits and quality of products or result of the process. In accordance, Nunan (1992) defined evaluative research as a systematic process to examine the achievement of an objective. Thus, evaluative research will not only obtain information but also analyse it as a basis of the decision-making process. The below table is presenting the identity of the textbook being evaluated:

Table 1. Identity of Evaluated Textbook

Title	*Bahasa Inggris untuk SMA/MA/SMK/MAK Kelas X*
Author(s)	Utami Widiati, Zuliati Rohmah, and Furaidah
Publisher	*Kementerian Pendidikan dan Kebudayaan* (Ministry of Education and Culture)
Publishing Year	2017
Number of Pages	i-viii; 1-224
Number of Chapters	15 Chapters

3. Results and Discussion

In language learning and acquisition, Muñoz (2007) stated that there are four aspects in psycholinguistics that bring impacts, such as cognitive development, language intelligence, learning style, and affective, character, and social factors. Each of the factors is explained as below.

a) Cognitive Development
    Muñoz (2007) stated that the theory raised by Piaget and Neo-Piagetian categorizes human intellectual development into chronological phases. In general, the phases are explained as (1) the first phase that shows the children development situation in the age of 18 months until 4 years, which is called as "concrete operations" which is to understand concrete things, then (2) the phase in the age of 4 years old to 7 years old, which focuses on development of intuitive thinking, (3) at age of 7 to 12 years old the development is marked by the ability to operate something concrete like combining, sorting, re-arrange and reconstruct, and (4) phase after the age of 12 years old that is marked by the ability to think abstract things, like interpreting implicit meaning, thinking logically, drawing conclusion, formulating reason, and realizing consequences of any acts.

    Based on the explanation, it can be concluded that the difference between the intellectual development of children and adult is on the ability to solve a complex problem which is not only involving concrete factor but also abstract things which have to be interpreted. Older language learners have a better ability to solve the problem than the younger ones. This is because their biological maturity and experiences which enrich their knowledge.

b) Language Intelligence
    Younger language learners use their memory rather than their analytical ability. Thus, the language learners who are below 12 years old tend to observe visual things and remember them by memorizing. This is in contrast to what adult language learner does. The adults tend to chunk the information they receive, analyse it then keep it in their memory (Muñoz, 2007). It can be concluded that (1) adult learner tend to learn through their analysis ability, (2) Adult learner tend to learn consciously while the younger ones learn unconsciously (acquire).

c) Learning Style
    According to Muñoz (2007), most young language learners have a kinaesthetic learning style as their dominant style. Learners with kinaesthetic learning style like to learn by associating the material being learned to the verbal stimulus to move their body. This body movement could be in the form of practicing, touching an object, or playing games. For the reason, young language learners learn through (1) repetition, (2) organization (grouping concepts into several categories), (3) elaboration (associating concept to visual media or story). Along with the time going, learning style tends to change into visual or auditory.

d) Affective, Character and Social Factor
    Muñoz (2007) explained that affective, character and social factors that are most influencing is self-confidence. Other than impacted by mental maturity, self-confidence is also impacted by the social environment. Learners who are less than eight years old tend not to understand yet the effect of other people judgment toward their self-evaluation. However, significant change happens in the range of age 11 to 17 years old, in line with the puberty phase. At this phase, self-confidence is much affected by other people's judgement. Comments of others will significantly affect the self-confidence of the learners. While when they have become adults, their confidence will be instability, but the self-evaluation that they had been drawn in the puberty phase will significantly shape their confidence level.

    Another affective aspect that significantly impacts language learning is motivation. The thing that enhances the motivation of young and adult learners is very different. Young language learners are motivated by the learning process that they enjoy. This motivation is related to the learning activity

being offered, interesting media, and teacher's characteristics. In contrast, adult language learners' motivation is impacted by their understanding of the urgency of the learning process. Thus, in order to enhance adult learners' motivation, it is needed to ensure the learners understand explicitly the benefit of the learning process to their selves, practical value of the learning objectives and how the learning can boost their daily communicative skill and also professional language skill.

The evaluated textbook is for vocational high school students at grade X, who are considered at the age of 14 to 16. As stated by Muñoz (2007), these students adult language learner who has characteristics as mentioned below:

a) Having the capacity to learn the use of more abstract ang complex language;
b) Being able to learn through activities that encourage logical reasoning;
c) Learning through analysis and comprehension;
d) Learning consciously;
e) Having a visual and auditory learning style;
f) Having unstable self-confidence because they are much impacted by judgment from other people;
g) Having motivation that is influenced by the understanding of the urgency of their learning to their own communication and professional skill.

Based on the above characteristics, a textbook that suitable for their cognitive and socio-emotional development at the age of 14 to 16 have to have these following characters:

a) Able to facilitate cognitive development which aligns to the level of being able to communicate in more abstract and complex language;
b) Able to facilitate the learning with activities that encourage logical reasoning;
c) Able to encourage the development of analytical and comprehension ability;
d) Able to give direction on how the material could help them to achieve related learning objectives and skill, as students learn consciously. This will enhance their learning motivation because the students will understand the urgency of their learning;
e) Able to facilitate all learning styles students have;
f) Able to use instruction that can enhance students' unstable self-confidence.

As a result of the analysis, the evaluated textbook has been facilitating cognitive development, which includes facilitating students to learn the use of more complex and abstract language and to learn through logical reasoning. It is reflected by the learning activities being presented in the textbook. For example, on page 111, there is an activity of answering comprehension questions based on the text entitled "Meeting My Idol." In the activity, students are asked to answer some questions which direct them to the use of abstract language to describe feelings (for example in question "How did the writer feel when she knew that Afgan was coming to town?" and "How did the writer feel when she finally got the turn to get Afgan's signature?), and to describe thought (for example in question "Why do you think people like Afgan*?"). The use of complex language is shown in sentence construction in the example of reading activities. For example, on page 146 in a text entitled "Cut Nyak Dien" there is a sentence "In 1875, Cut Nyak Dhien and her baby, along with other mothers, were evacuated to a safer location while her husband Ibrahim Lamnga fought to reclaim VI mukim." Other example of the use of complex sentence is on page 59: "At a moonlit night when the full moon rays reflect back from the white marble and give the Taj Mahal a tinge of blue color."

Example of the learning activity that encourages the use of logical reasoning and enhance students analytical and comprehension ability is found in Chapter 9. In Task 2 (page 124), there are questions and instruction: "What caused the battle? Draw a diagram that shows chronologically the events that led to the battle" and "Indonesia had gone through many battles. Why do you think the date of the Battle of Surabaya is used as a momentum to commemorate our hero's contribution?". These questions encourage students to find and conclude the answer based on their understanding of the content of the text. Furthermore, the information that will be the answer is stated implicitly in the text, which can be an encouragement to students to develop logical reasoning and analytical ability.

The theory stated by Muñoz (2007) is in accordance to the standard of the English textbook ruled by Badan Standar Nasional Pendidikan (Indonesia's National Education Standardization Body) (2011), that stated that an English textbook has to motivate the students to do what it is important to develop life skills. What it means by life skills are:

a) Personal skill, which includes acknowledging strengths and weaknesses of self and others, and developing self to be independent, social, and religious;

b) Social skill, which includes being able to cooperate, tolerate, respect gender equity, solve problems, and take the decision;

c) Academic skill, which includes digging and using information, solving problems, and taking a decision in scientific activity;

d) Vocational skill, which includes having the ability, attitude, and competency which are needed to do a certain professional job.

Moreover, a textbook has to presented materials that may encourage the students to have sufficient diversity awareness (Badan Standar Nasional Pendidikan/ BNSP, 2011). It means that the activities presented in the textbook have to be able to motivate students to do something to develop the attitude showing respect and tolerance on diversity. Things that could reflect the development of diversity awareness, according to BNSP (2011) are:

a) Appreciation of diverse culture and differences in the community, which includes various cultural value and local genius;

b) Consciousness on local potentials in order to promote them locally, nationally and globally;

c) Appreciate democratic values which is appropriate to surrounding socio-cultural context;

d) Understanding national insights to develop a sense of nationalism;

According to the result of the study, the development of personal, social, and academic skills have been facilitated in the learning activities presented in the textbook. Self-assisted activities which are stressing on student-centered learning is a form of personal and academic skill development, while social skill is developed through group assignments which encourage students to develop their cooperating skill and tolerance to others. However, it is found one picture which is considered as not in-line in promoting anti-violence attitude. The mentioned picture is an illustration for Hangman game activity, which shows a doodle of hanging person's body (see Figure 1). Although it might be understood that the use of the picture is not intended to promote suicidal or sadistic attitude, it is recommended to provide another game activity with minimum risk of misinterpretation and misleading.
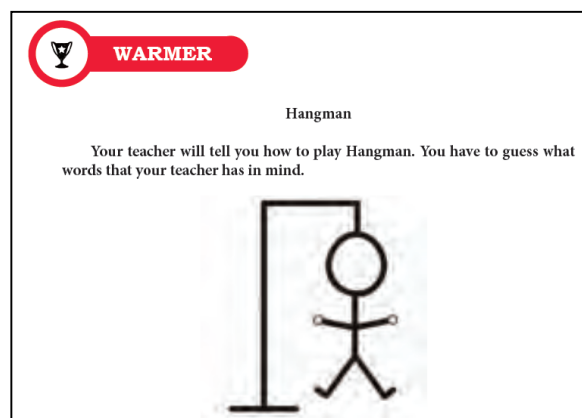
Figure 1. Illustration of Hangman Game Activity
(Textbook Chapter 10 page 133)

Diversity awareness development is facilitated by the textbook by providing an example of texts in which are told the story of national independence heroes and story of other people who may become models of nationalism and patriotism. Moreover, the textbook also provides descriptive text examples which explain the beauty of Indonesia's nature. This kind of texts is also useful in developing the feeling of proud to be Indonesians who

have a wealthy nation. Diversity awareness is also developed through the use of situational context within activities. For example, in a writing activity, the given situational context is "Your friend got an opportunity to be an interpreter in an international conference on inter-religion dialogue to create and preserve peace and harmony" (see Figure 2). This context shows the importance of peace and harmony among religions. Furthermore, diversity awareness is also developed through the use of picture illustration (see Figure 3). The picture illustration shows the diversity in the form of difference in physical characteristic, and people with the difference are living in peace and harmony.
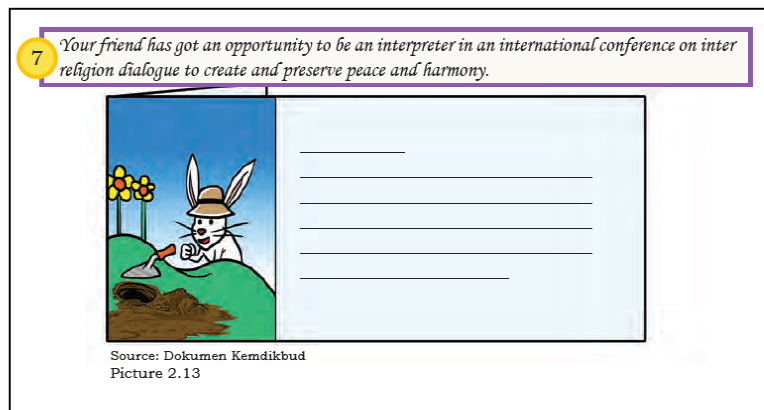

Figure 2. Example Situational Context in an Activity Which Shows Peace and Harmony among Religions (Textbook Chapter 2 Page 32)
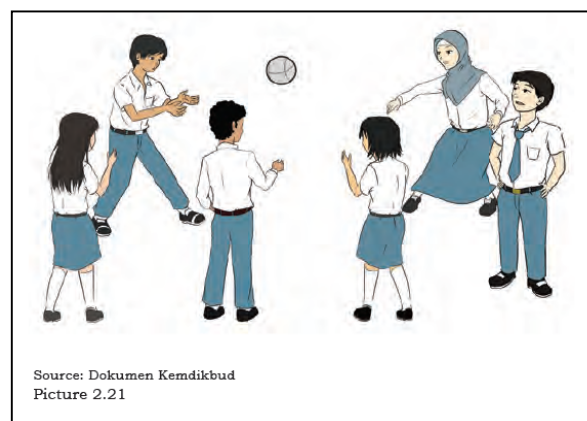

Figure 3. Picture Illustration That Shows Unity in Diversity (Textbook Chapter 2, Page 36)

A serious problem that is found in the evaluated textbook is there is not enough learning material and activities that facilitate the development of related vocational skills. The importance of vocationally related content is stated by Muñoz (2007), and especially for Indonesia, it ruled by BSNP (2011). As stated by Muñoz (2007) in previous explanation, the motivation of adult learner is influenced by the understanding that what is learned is urgent and important in order to be able to communicate and to do the desired professional job. In accordance to that theory, because students learn in the situation that they are conscious too, it is needed to make them to explicitly understand the objectives of the learning process and the competence they will achieve after the learning process has been done. This will increase the learning motivation because the students understand the urgency of their learning and how the learning will impact their communication and professional competence. The students of vocational high school have had more specific interest and career goal, if we compare to students of general high school. Thus the English they need to learn is more towards the English, which more specified according to the career goal, or English for Specific Purposes (ESP).

It is found that the evaluated textbook has not facilitated ESP learning sufficiently. There is no activity which presents specific term related to specific job demand. The textbook is more like a textbook for general English,

which is more suitable to be used by students of general high school than students of vocational high school. Some examples of descriptive texts which are about description of tourism destination are suitable for tourism vocational high school students, but more than that there are no more materials which are suitable for ESP learning.

4. Conclusion

From the above explanation, it can be concluded that:

a) The evaluated textbook has been facilitating cognitive development, which includes facilitating students to learn the use of more complex and abstract language and to learn through logical reasoning. It is reflected by the learning activities being presented in the textbook.

b) The development of personal, social, and academic skills have been facilitated in the learning activities presented in the textbook. However, it is found one picture which is considered as not in-line in promoting anti-violence attitude. It is recommended to provide another game activity with minimum risk of misinterpretation and misleading.

c) Diversity awareness development is facilitated by the textbook by providing an example of texts in which are told the story of national independence heroes and story of other people who may become models of nationalism and patriotism. Moreover, the textbook also provides descriptive text examples which explain the beauty of Indonesia's nature. This kind of texts is also useful in developing the feeling of proud to be Indonesians who have a wealthy nation. Diversity awareness is also developed through the use of situational context within activities and the use of picture illustration.

d) A serious problem that is found in the evaluated textbook is there is not enough learning material and activities that facilitate the development of related vocational skills. It is found that the evaluated textbook has not facilitated ESP learning sufficiently. There is no activity which presents specific term related to specific job demand. The textbook is more like a textbook for general English, which is more suitable to be used by students of general high school than students of vocational high school. Some of the examples of descriptive texts which are about description of tourism destination a material are suitable for tourism vocational high school students, but more than that there are no more materials which are suitable for ESP learning.

References

Asri, A.S. (2017). "Telaah Buku Teks Pegangan Guru dan Siswapada Mata Pelajaran Bahasa Indonesia Kelas VII BerbasisKurikulum 2013". *Jurnal Ilmu Bahasa*, Vol. 3, No. 1 April 2017, 70-82.

Badan Standar Nasional Pendidikan. (2011). "Deskripsi Butir Instrumen Penilaian Buku Teks Pelajaran Bahasa Inggris Sekolah Menengah Kejuruan". Jakarta: Kemendiknas.

Ditjen Informasi dan Komunikasi Publik. (2017). Suku Bangsa. Accessed on 10 May 2019 from https://indonesia.go.id/profil/suku-bangsa.

Ellis. R., (1998). "The Evaluation of Communicative Tasks." In: Tomlinson, B, (eds.). *Materials Development in Language Teaching.*UK: Cambridge University Press.

Firdaus, et.al. (2014). "Analisis Kelayakan Isi Buku Teks Bahasa Indonesia Terbitan Erlangga Kelas VII SMP/MTS". *Jurnal Kata (Bahasa, Sastra, danPembelajarannya)*, August 2014.

Irina, F. (2017). *Metode Penelitian Terapan*. Yogyakarta: Parama Ilmu.

Kementerian Pendidikan dan Kebudayaan. (2017). *Strategi Implementasi Revitalisasi SMK melalui Bilingual Learning Ecosystem*. Jakarta: Direktorat Pembinaan SMK.

Muñoz, C., (2007). "Age-Related Differences and Second Language Learning Practice." DeKeyser, R.M. (Editor). *Practice in A Second Language: Perspective in Applied Linguistics and Cognitive Psychology*. New York: Cambridge University Press.

Nurdeani, R. (2014). "Analisis Buku Teks Pelajaran Bahasa Inggris Berdasarkan Standar Penulisan Buku Teks Pelajaran". *Pedadidaktika: Jurnal Ilmiah Mahasiswa Pendidikan Guru Sekolah Dasar,* Vol.1, No. 1 (2014). Accessed on Ejournal.upi.edu/index.php/pedadidaktika/article/view/4694.

Pujiastuti, I. (2013). "Analisis Kualitas Buku Pelajaran Bahasa Indonesia untuk Kelas Tinggi yang Digunakan di SD Negeri 2 Centre Curup Tahun Ajaran 2012/2013" *(tesis)*. Bengkulu: Universitas Bengkulu.

Republik Indonesia. "Peraturan Menteri Pendidikan Nasional Republik Indonesia Nomor 2 Tahun 2008 tentang Buku". Jakarta: Kepala Bagian Penyusunan Rancangan Peraturan Perundang-undangan dan Bantuan Hukum II Biro Hukum dan Organisasi Departemen Pendidikan Nasional.

Sudaryono. (2017). *Metodologi Penelitian*. Depok: PT. Rajagrafindo Persada.

Sugiyono. (2011). *Metode Penelitian Kombinasi (Mixed Methods)*. Bandung: Alfabeta.

Tomlinson, B., (1998). *Material Development in Language Teaching*. UK: Cambridge University Press.

Strengthening the Quality of Graduates in Dealing with the Asian Economic Community and Demographic Bonuses

Waston Malau[1]

[1] Department of Anthropology Education Universitas Negeri Medan, Indonesia

Corresponding Author: Waston Malau, Department of Anthropology Education, the Universitas Negeri Medan, the Republic of Indonesia, 20221; wastonmalau@unimed.ac.id

Abstract

The purpose of this article is to describe the learning outcomes that graduates needed to face AEC and demographic bonuses. The data used in this article from the research result held in the Department of Anthropology Education of Universitas Negeri Medan. This research was conducted in the Sociology Subject Teachers' Meeting. This research is descriptive using data collection techniques through Forum Group Discussion (FGD). Mapping the ability of teachers needed by the graduates of the Department of Anthropology Education in dealing with the Asian Economic Community (AEC) and demographic bonuses. The graduates need to master two things in dealing with AEC, namely mastery of technology and mastery of knowledge.

Keywords: Learning Outcomes, Graduates' Ability, Demographic Bonuses, Technology

1. Introduction

Given that the education sector is a product that has the potential to be developed as a product with high competitiveness, the learning achievement of high school graduates must be able to answer the challenges of the period. Based on the results of the 2010 census the Government made population projections for 2020 and 2035. The projection results show that in 2020 there will be a change in population structure in Indonesia. The age group 0-4 years begins to decrease due to a decrease in the number of births. The age group of 5-9 years will experience swelling due to the high number of births from the previous 10 years and the population of the 65 years and above also increases.

The Indonesian National Qualifications Framework mandates that all learning outcomes set in the study program must refer to the needs of the business world and the industrial world. Therefore, the establishment of a curriculum at the Anthropology Education study program level must be based on tracer study results and input from professional associations and be able to answer the challenges of graduates in their time. The AEC and bonus demographics that are coming and continuing to approach are the conditions that will be faced by all college graduates in Indonesia, including study program graduates of Anthropology Education of Universitas Negeri Medan in the future (Malau, 2012).

Responding to this, the Study Program of Anthropology Education must be able to prepare prospective graduates to face all possibilities that will be faced in the future. Learning Outcomes are capabilities acquired through the internalization of knowledge, attitudes, skills, competencies, and accumulated work experience. In other words, the learning achievement can also be referred to as a measure of one's acquisition in analyzing the learning process both structured and unstructured. A research report conducted by the Institute for Strategy and Competitiveness, Harvard Business School, Indonesian products has strong global competitiveness, namely fisheries, agriculture, furniture, forestry, apparel, and footwear products. While other products such as education have the potential to be developed to have competitiveness in the global market (Ridhwan et al., 2015)

Starting from the description, this study tries to pass through the formulation of learning outcomes obtained by anthropology education students when they finish their undergraduate education in accordance with the profile of graduates determined by the Study Program of Department of Anthropology Education. Based on the background described earlier, the identified problems encountered are as follows:
1. Challenges faced by study program graduates. Anthropology education in the AEC period and the demographic bonus will be bigger and tighter
2. College graduates must be able to face the challenges faced in their time
3. The need to adjust the learning outcomes of study program graduates. Anthropology education faces the challenges of the AEC and the demographic bonus
4. There is a need for capacity mapping needed by Sociology or Anthropology and Integrated Social Studies teachers in facing the challenges of the AEC and demographic bonuses.

Based on the identification of the problems described, formulated the problem statement as follows:
1. What is the ability of integrated Sociology / Anthropology and Social Sciences teachers in the Sociology Subject Teacher Discussion?
2. What abilities are needed by study program graduates? Anthropology Education to become a teacher of Sociology / Anthropology and Integrated Social Sciences during the AEC and demographic bonuses?

The objectives of this study are as follows:
1. Identify what abilities are needed by Sociology and Integrated Social Studies teachers to face AEC and demographic bonuses
2. Formulate learning outcomes of study program graduates. Anthropology Education.

Achievement of learning as stated in the Guidelines for Preparation of Learning Outcomes of Study Program Graduates is a formulation of learning objectives to be achieved and must be owned by all graduates, also a statement of the quality of graduates (Dirjen, Kemahasiswaan, Kementerian, & Kebudayaan, 2014). Learning Outcomes can be used by study programs as a direction to achieve the quality target of graduates that must be achieved. Descriptions of learning outcomes include knowledge, attitudes, skills, competencies, and accumulated work experience. 4 elements in the formulation of learning outcomes are attitudes and values, workability, mastery of knowledge, and authority and responsibility. Each element of Learning Outcomes in Graduate Competence Standard as stated in the Guidance is interpreted as follows:
1. Attitude is right and cultured behavior as a result of internalization and actualization of values and norms reflected in spiritual and social life through the learning process, student work experience, research, and/or community service related to learning.
2. Knowledge is systematic mastery of concepts, theories, methods, and/or philosophies in certain fields of science which are obtained through reasoning in the learning process, student work experience, research and/or community service related to learning. What is meant by student work experience is experience in activities in a particular field for a certain period of time in the form of work training, practical work, fieldwork practices or other similar types of activities.
3. Skills are the ability to perform performance using concepts, theories, methods, materials, and/or instruments, which are obtained through learning, student work experience, research and/or community service related to learning.

The skill element is divided into two namely general skills and special skills which are interpreted as follows:

a)   *General skills are general work abilities that must be possessed by each graduate in order to guarantee the equality of graduates' abilities according to the program level and type of higher education; and*

b)   *Special skills are special work abilities that must be possessed by each graduate in accordance with the scientific field of the study program.*

The main problem of education in Indonesia today, is the less effective of teaching in the education process in schools, caused by the following problem: (1) cost of education, this is the primary problem of education in this country, namely the high cost of education from basic to advanced level, this is appearing a lot phenomenon of dropping out of school among Indonesian children. Let alone for private schools, for public schools too, the cost of education remains high, School Operational assistance options provided by the government are still not able to overcome the problem of the high cost of this education; (2) lack of educational equality in Indonesia for some people, education is common, but for many people in remote areas, education is very luxury and valuable, because, in a country that embraces decentralization of irony, education is more focused on the more potential core areas, this causes less equity and makes the gap in education; (3) low-quality education facilities and infrastructure, we would have heard a lot of news about schools collapsed, or schools damaged because the building that have weathered but did not get help from the government, this is one proof of how low the quality of educational facilities and infrastructure in Indonesia; and (4) the low achievement of students from research and development, the ability of students to capture material in Indonesia only about 30% of all the material taught. this is influenced by many factors, such as lack of awareness in the world of education and also still lack of knowledge of students about the meaning of education (Ahmad, 2017)

The presence of qualified teachers is one of the hopes amid efforts to improve the quality of education. Qualified teachers are expected to be able to carry out their responsibilities properly and correctly. Not only that teachers are expected to be able to prepare students to face the challenges faced in their time. Colleges such as Medan State University must be able to present solutions by producing quality teachers. Therefore, the seriousness of universities such as Medan State University in producing quality teachers is needed at this time.

Based on the things mentioned above, identification of the abilities needed by students to face challenges in the future needs to be taken seriously. Revisions to the competencies needed by students need to be improved in accordance with the development and needs of their time.

2. Method

Based on the purpose, this study uses qualitative methods with focus group discussion as a technique of data collection. Participants in the focus group discussion are informants or informants consisting of lecturer representatives and associations associated with graduates. This research was conducted in several stages, namely: (i) inventory of problems, (ii) Focus Group Discussion with topics: competencies needed by teachers in facing ASEAN Economic Communities, (iii) Focus Group Discussion with topics: Profile of graduates and Learning Outcomes, and (iv) analysis of the Focus Group Discussion results

Inventory of problems aims to record the problems related to the challenges needed by graduates in facing the times of the ASEAN Economic Community. Inventory is carried out through a literature study of various published research results. The results of the inventory carried out are used as material for focus group discussions conducted in two stages. Focus Group Discussion invited various representatives from various associations related to graduates and lecturers of Study Programs of Anthropology Education. All information obtained from discussion participants was analyzed to get recommendations on revisions to graduate profiles and learning outcomes.

The data analysis used in this study is a qualitative descriptive analysis. The analysis technique is carried out by compiling a matrix of linkages of capabilities needed with predictions of challenges faced in the MEA period and demographic bonuses. Presentation of the results of data analysis is displayed in the form of narratives, and tables.

3. Result and discussion

The ASEAN economic community will shape ASEAN as a single market and production base, making a region more dynamic and competitive with mechanisms and steps to strengthen the implementation of new economic initiatives, accelerate regional integration in priority sectors, facilitate the movement of businesses, personnel skilled and talented work, and strengthening institutional mechanisms as a first step towards realizing the ASEAN Economic Community. An inventory of problems finds several problems that will be faced by graduates in the ASEAN Economic Community. These problems are related to the competencies needed by teachers in facing challenges in the era of the ASEAN Economic Community (Darmoko, 2016)

The teacher's professional competence describes the abilities that must be possessed by someone who is in charge of a position as a teacher, meaning that the ability displayed is a feature of his professionalism (Usman, 2000). The statement emphasizes that the ability possessed by the teacher is the key to the success of the teacher in carrying out his/her responsibilities in educating and preparing students to face future problems.

The first Focus Group Discussion discussed the competencies needed by teachers in facing the ASEAN Economic Community. The discussion was attended by study program lecturers. Anthropology Education, Universitas Negeri Medan. In the discussion obtained some understanding of the need for revisions to the curriculum implemented in the study program. The Department of Anthropology Education in an effort to prepare graduates to face challenges in the era of the ASEAN Economic Community.

Recognized by participants in the discussion of material mismatches even the courses on competencies needed by graduates (prospective teachers) were one of the reasons for the formation of the Teacher Education Program. The existence of the Teacher Education Program has eliminated the authority of the education program at the College in providing teaching certificates to graduates of Bachelor of Education. In this first Focus group discussion, it was also agreed on the profile of graduates produced by the Anthropology Education Study Program. Based on the results of the discussion and the tracer study, it was agreed that several profiles of graduates were teachers, social workers, and research assistants in social and cultural fields.

Competition for workers, especially Social Education subject teachers in schools, is believed by the discussion participants to soon become apparent. Therefore improving the quality of competency of prospective teachers produced by educational programs is very important. Improving the quality of teacher candidates' competencies is only possible if there is a change in the curriculum of the education study program so that graduates (prospective teachers) have high competitiveness (Darmoko, 2016).

Learning outcomes is a description that is used as a tool to map skills or careers or what is also called a graduate profile and develop curriculum. The achievement of graduate learning and competency standards of graduates of the department should be adjusted to the competency needs needed by graduate users. These competency needs always change according to the times. Departments must be able to prepare graduates to face the challenges that graduates will face when they graduate.

The process of developing and preparing curriculum for a department must be continued by determining the competency standards of graduates and the standard of learning content. Graduates Competency Standards are the minimum criteria for graduate qualifications which include attitudes, knowledge, and skills. Whereas the standard of learning content is a minimum criterion for the level of depth and breadth of learning material. The role of professional associations related to majors becomes very important in the preparation of graduate competency standards and standards of learning content. Information about the profession of alumni from majors can help majors develop the curriculum according to the competency needs needed by graduate users. This information can also be used as input for those who are future graduates. Based on the discussion that developed in the focus group discussion, it was agreed that the second and third graduate profile competencies must be adjusted to the applicable laws and regulations.

The period of the ASEAN Economic Community will be accompanied by the era of the Industrial Revolution 4.0 which was marked by the development of the digital era. Industrial Revolution 4.0 demands all fields to

master digital technology. So, the mastery of technology is also a competency that must be owned by prospective teachers, especially teachers of Social Sciences subjects. There are three important abilities that must be possessed by professional teachers, namely; professional, personal or personality, social, and pedagogical competence (Darmoko, 2016). Professional competence requires teachers to have extensive and in-depth knowledge of the fields of study being taught, and methodological mastery in terms of having knowledge of theoretical concepts, being able to choose the right method and being able to use it in the teaching and learning process. This competency requires the teacher to have a solid and commendable personality attitude, as Ki Hajar Dewantoro teaches, namely *Ing ngarso sung tulodho* means that in front of you becomes a role model*, ing madya mangun karso means in the middle build intentions, tut wuri handayani* means behind giving moral support.

Social competence means that a teacher must have good social communication skills, with students, with fellow teachers, with principals and employees, as well as with the community. Pedagogic competence is the ability in the management of students which includes: (1) understanding insight or educational foundation; (2) understanding of students; (3) development of curriculum or syllabus; (4) learning planning; (5) implementing learning that is educational and dialogical; (6) evaluation of learning outcomes; (7) developing students to actualize their various potentials. Focus Group Discussion agreed on two major needs by graduates (prospective teachers), namely; mastery of technology and mastery of knowledge.

Table 1 Matrix of Graduates' Need and Learning Outcomes

Graduates' Need	Learning Outcome
Mastery of Technology	Managing resources, technology, implementing minimum professional standards equivalent, evaluating, strategic development of the organization.
Mastery of Knowledge	mastery of the application theory of knowledge and skills related to his duties as a teacher who will face the ASEAN economic community

Discussions on the need for mastery of technology agree on some of the learning outcomes needed, namely; managing resources, technology, implementing minimum professional standards that are equal, evaluating, strategic development of the organization. Mastery of knowledge requires graduates to achieve a number of things, namely mastering the theory of application of knowledge and skills related to their duties as teachers who will face the ASEAN economic community.

Technology will be a resource in various aspects of life including education. Therefore the learning outcomes needed in managing technology resources are an important part of fulfilling a teacher's professionalism in the future, given the technological developments that cannot be avoided in the future. Not one teacher can survive in the future without having the ability to master technology.

The ability to evaluate the learning program that has been implemented is intended so that the teacher is able to develop a learning program that fits the needs of his students in the future. Successful teachers are teachers who are able to prepare their students to face the challenges faced by their students in the present and future. Mastery of knowledge in the subjects that are utilized becomes an unchanging ability. This is due to the views of participants who still assess the importance of the role of teachers as verifiers of knowledge obtained by students.

4. Conclusion

The learning outcome of graduates of the Department of Anthropology Education is must be upgraded to level 7 of the Indonesian National Qualifications Framework. This result could be used as a recommendation for any department to update the learning outcomes.

References

Ahmad, Y. B. (2017). Management of Quality-Based Education in Facing Asian Economic, *128* (first edition), 172–175.
Darmoko, P. D. (2016). Peran strategis guru dalam mea. *Jurnal Madaniyah*, *1*, 143–156.
Dirjen, Kemahasiswaan, P., Kementerian, D. P. T., & Kebudayaan. (2014). Capaian Pembelajaran Lulusan Program Studi.
Malau, M. T. M. (2012). Aspek Hukum Peraturan Dan Kebijakan Pemerintah Indonesia. *Rechtsvinding*, *1*(2 Agustus), 375–395.
Ridhwan, M. M., Wicaksono, G., Nurliana, L., Bary, P., Suryani, F. T., & Satyanugroho, R. (2015). Working Paper Industri Nasional Di Era Masyarakat Ekonomi Asean Dan Perdagangan Bebas.
Usman, M. U. (2000). *Menjadi Guru Profesional*. Bandung: Remaja Rosdakarya.

Evaluating Quality of Teacher-Developed English Test in Vocational High School: Content Validity and Item Analysis

Putu Irmayanti Wiyasa[1], I Ketut Darma Laksana[2], Ni Luh Ketut Mas Indrawati[3]

[1] Magister of Applied Linguistics Program, Universitas Udayana, Denpasar, Indonesia
[2] Universitas Udayana, Denpasar, Indonesia
[3] Universitas Udayana, Denpasar, Indonesia

Corresponding Author: Putu Irmayanti Wiyasa, Magister of Applied Linguistics Program, Universitas Udayana, Denpasar, Indonesia Tel: +6287 862 388 556. E-mail: irmayantiwiyasa@yahoo.com

Abstract
Teacher-developed test, in the form of multiple-choice questions has widely used for measuring the students' final learning process. Content validity and items analysis is used to evaluate the quality of the test that is developed by the teacher. The study focused on content validity that analyzed the content of the test and basic competency which have been asserted on the syllabus. The content validity analysis using Gregory Formula calculation. In addition, the items test includes validity, reliability, index of difficulty (I), discrimination index (DI) and distractor efficiency (DE) is measured by using respective formula that processing in Microsoft Excel program. This mixed-method study was conducted among 211 students of grade X, XI, and XII of Senior Vocational High School, Sekolah Menengah Kejuruan Negeri 2 Denpasar. Total test items that analyzed in this study were 180 items. The result of this study showed that according to the basic competency and also the topic that occurred on the test, there are 6 out of 180 test items which are not in line with the basic competency on the syllabus of K13. In addition, the items test analysis resulted that in terms of validity, reliability, index of difficulty (I), discrimination index (DI) and distractor efficiency (DE) the tests are categorized as moderate.

Keywords: Content Validity, Test Items Analysis, Validity, Reliability, Index of Difficulty (I), Discrimination Index (DI) and Distractor Efficiency (DE)

1. Introduction

1.1 Introduce the Problem
In 2016, the President of the Republic of Indonesia issued Presidential Instruction (Inpres) Number 9 of 2016 concerning Revitalization of Vocational High Schools (SMK). The Presidential Instruction aims at reversing the pyramid of qualifications of Indonesian workers who are educated in Elementary School (SD) and Middle School (Vocational High School) to become educated and skilled workforce by taking education in Vocational Schools. The Presidential Instruction also answers the challenges of the Asean Economic Community (MEA) program in which vocational graduates have the potential to face global competition so as to produce superior and competitive graduates, it is expected that the quality of education at the SMK level should be increased by reforming the SMK development roadmap; perfecting and harmonizing the Vocational curriculum with competencies in accordance with graduate users (link and match). In addition, the Ministry of Education and

Culture has the duty to be able to increase the number and competence of vocational educators and education staff; enhance cooperation with ministries or institutions, regional government, business world and industry; and increasing access to vocational school certification and vocational accreditation; and form a vocational development working group.

From the revitalization of vocational schools that has been proclaimed, the quality of education can then be measured from educational evaluations in accordance with the Education Assessment Standards stipulated in the Minister of Education and Culture of the Republic of Indonesia Number 23 of 2016. Evaluation plays an important role in determining the success of education. Good evaluation and assessment give a big impact towards the learning process (Popham, 2009) and influence the education policy (Mardapi, 2008). The results of the evaluation are closely related to the assessment method and instruments used to take measurements. The accuracy of the selection of assessment methods and instruments are greatly influenced the objectivity and validity of the quality of education.

By looking into the importance of the evaluation role on the quality of education, the evaluation must be carried out periodically to measure students' abilities on a regular basis. However, the implementation of evaluation remains a big problem in the field. Problems related to the evaluation of learning outcomes, for instance the validity of evaluation instruments (tests), assessment methods that are used, and students' answers that are not well analyzed after being tested, have been found in several previous related studies related and also during the pre-observation in several vocational high schools in Denpasar.

According to the phenomena, this study aims at improving the quality of evaluation instrument used in an English language class in Vocational High School. Appropriate evaluation instruments can measure the quality of education well so that the analysis of the quality of evaluation instruments at SMK Negeri 2 Denpasar in the academic year 2018/2019 is undeniably important to be conducted. The quality analysis of the instrument includes the relevance of the test with basic competency on syllabus, validity, reliability, difficulty level, discrimination index, and efficiency of the distractors. By paying attention to the quality of test items henceforth the function of the test namely for education (identify the problem in order to create better learning in the future), policy maker (the institution could evaluate the policy that has been implemented either it works well or not), diagnostic (diagnose the students' difficulty in learning and help them to overcome the problem), administrative (enhance the teacher's ability in preparing, conducting, and evaluating the learning process) (Rohmawati, 2015).

1.2 Importance of the Problem

The focus of this study is evaluating the tests that have been developed by the teacher from the content validity and items analysis perspective. There are three rationales of this study important to be conducted. First, for the teacher, this study would bring a reflection of the tests that have been created and administered to the students. Teacher somehow preparing and conducting the lesson well, however, they take less attention towards the evaluation process (according to the pre-observation result). Nevertheless, the teacher needs to be realized that evaluation brings essentials impact towards the learning continuity. Second, for the students, by developing good evaluation instrument, it thoroughly helps the students mapping their learning achievement. They feel appreciated when they did the test that is in accordance with what they have learnt. Additionally, they also can evaluate their learning if there is any particular material or topic that they have not comprehend well yet. Third, from the researcher perspective, this study supports the government plan for revitalizing and giving more attention towards education in vocational high school. Furthermore, this study would bring complete insight of good evaluation instrument, according to Harmer (2007) theory. Several previous studies conducted similar studies in terms of index of difficulty, index of discrimination, and efficiency of distractors. However, this study evaluates the test holistically from the content validity and items analysis that includes the analysis of the test validity, reliability, index of difficulty, index of discrimination, and efficiency of the distractors.

1.3 Relevant Scholarship

Several former studies related to evaluation, particularly test items analysis had been conducted and used as a reference in this study are as follows.

The first study conducted by Quaigrain and Arhin in 2017 with a study entitled "Using reliability and item analysis to evaluate a teacher-developed test in educational measurement and evaluation." That study aims at improving the quality of test and avoiding misleading items occurred in a test. The study conducted in Education at Cape Coast Polytechnic with taken answers from 247 first-year students. The study focused on item and test quality by analyzing the difficulty index (p-value) and discrimination index (DI) with distractor efficiency (DE). The result of their study showed that the internal consistency reliability of the test was 0.77 using Kuder–Richardson 20 coefficient (KR-20). The mean score was 29.23, with a standard deviation of 6.36. Mean difficulty index (p) value and DI were 58.46% (SD 21.23%) and 0.22 (SD 0.17), respectively. DI was noted to be a maximum at a p-value range between 40 and 60%. Mean DE was 55.04% (SD 24.09%). Items having average difficulty and high discriminating power with functional distractors should be integrated into future tests to improve the quality of the assessment. Using DI, it was observed that 30 (60%) of the test items fell into a good category.

Comparing the previous and current study, this study is not merely conducted the test analysis of difficulty index (p-value) and discrimination index (DI) with distractor efficiency (DE) but also includes the content validity that analysed the accordance of basic competence and the content in the test, items validity as well as the reliability. In addition, in this study, the sample was taken from test items that administered in vocational high school level. The items test were gathered from English summative test for grade X, XI, and XII with two different types of test for each grade (Type A and B). Therefore, this current study brings more various result than the previous one.

The second related study entitled Item Analysis of a Multiple-Choice Exam by Toksöz and Ertunç in 2017. Similar with Quaigrain and Arhin (2017), this study focused on the analysis of test items from the difficulty index, discrimination index (DI) and distractor efficiency (DE). The study was conducted at the University Level with the answer gathered from 453 participants who are in the language preparation class. Data was collected from the responses given by the participants to 50 multiple choice items. The multiple choice part included three main sections: vocabulary, grammar, and reading. The result of this study revealed that most of the items are at the moderate level in terms of item difficulty. Besides, the results show that 28% of the items have a low item discrimination value. Finally, the frequency results were analyzed in terms of distractor efficiency, and it is found that there some ineffective distractors that should be revised subsequently.

The current study has some similarities as well as differences towards the study of Toksöz and Ertunç (2017). First of all, the current study not only analyzed the difficulty index, discrimination index (DI) and distractor efficiency (DE) but also the content validity, validity, and reliability of the test. Second, the previous study conducted at the level of University students as same as Quaigrain and Arhin (2017), but this study were taken the responses from the vocational high school students. Nevertheless, the result of this study also found that the test items have low discrimination value, moderate item difficulty, and there some distractors given as an option on the test that did not work effectively.

Next, Setiyana (2016) conducted a study related to the quality of the summative English test at the Meulaboh I. MAN boarding school. This study focused on the analysis of validity, reliability, level of difficulty of the problem, discrimination level, and distractor efficiency. The data collection technique used is a checklist and document analysis. The results of the study on the English language test at the Meulaboh MAN boarding school for question consistency (reliability) and the difficulty level of the questions obtained results above 70%. Additionally, for discrimination level, and distractor efficiency, it is also revealed a good result.

Current research with research conducted by Setiyana (2016) has similarities about analyzing validity, reliability, level of difficulty of the problem, discrimination level, and distractor efficiency. In this study, the object of the study was a summative test for classes X, XI, and XII at Vocational High School 2 Denpasar, and this study analyzed the relevance of the test with the basic competency in the syllabus and curriculum.

1.4 Research Design

The research problem of this study is evaluating the quality of the test developed by the teachers. The research design in this study is mixed-method research or a combination of quantitative and qualitative research. Combination research aims at gaining a full understanding to solve problems or phenomena that had been occurred. In addition, this study used to verify and complete the findings and discussions of the study (Dornyei, 2007). In this study, quantitative methods were used to calculate the data presented in the form of numbers. From the results of data quantification, it is supported by qualitative data. Qualitative descriptions are used to describe the suitability of the basic competencies in the syllabus with the questions on the test (content validity), explanation of the results of the items by conducting expert judgment, and the description of the results of integrated interviews. The grand theory of this study is designing an evaluation instrument from Harmer (2007). After forming the research study and determining the research design, then it is started by gathering the data from document analysis and interview. Then, analyzing the data by using the statistic program in Microsoft Excel and also describing the data qualitatively. Next, presented the data in the form of a percentage, numbers, as well as data description. The last is drawing a conclusion as well as giving a recommendation for future studies.

2. Method

The research problem of this study is evaluating the quality of test developed by the teachers. The test quality that is intended in this study includes the content validity, items test analysis (validity, reliability, index of difficulty, index of discrimination, and efficiency of distractors (Harmer, 2007). The tests that developed by teachers in this study refer to the English summative test created by teachers at vocational high school *SMK Negeri 2 Denpasar* for grade X, XI, and XII. The research design in this study is mixed-method research or a combination of quantitative and qualitative research. Combination research aims at gaining a full understanding to solve problems or phenomena that had been occurred. In this study, quantitative methods were used to calculate the data presented in the form of numbers. From the results of data quantification, it is supported by qualitative data. Qualitative descriptions are used to describe the suitability of the basic competencies in the syllabus with the questions on the test (content validity), explanation of the results of the items by conducting expert judgment, and the description of the results of integrated interviews. The grand theory of this study is designing an evaluation instrument from Harmer (2007). After forming the research study and determining the research design, then it is started by gathering the data from document analysis and interview. Then, analyzing the data by using the statistic program in Microsoft Excel and also describing the data qualitatively. Next, presented the data in the form of a percentage, numbers, as well as data description. The last is drawing a conclusion as well as giving a recommendation for future studies.

2.1 Object of the Study

The object of this research is an English summative test for students of class X, XI, and XII at SMK Negeri 2 Denpasar. In total, there are 180 items test that being analyzed. This is because vocational education is still an interesting focus of study especially the evaluation and implementation component so that it can be expected that vocational students are ready to compete with a better quality evaluation and learning system. In addition, in order to meet the demands of national education goals, namely the implementation of national examinations and the SMK revitalization program, summative test quality analysis research can be used as a reference to training students to be ready to face national examinations with satisfactory results.

2.2 Data of the Study

The types of data in this study are quantitative and qualitative data. The type of quantitative is an English summative test result that has been answered by students. Whereas for qualitative data is a description or explanation of the results of document studies and the results of interviews. The source of the data from this study is the summative test results of students of class X, XI, and XII in English subjects in the 2018/2019 school year, syllabus, and the results of interviews.

2.3 Instrument of Evaluation

In this study, there were two research instruments used, namely checklists and interview guides. Checklist instrument is a series of statements filled out by the evaluated respondent or researcher for collecting data by

putting a matching sign (√) in the place provided (Fadarwati, 2015). In this study, the checklist filled out by researchers and experts based on document studies. Next instrument is a list of integrated interview questions. List of integrated interview questions is a form of question prepared by the interviewer to obtain information from the interviewee at the time of conducting the interview. In this study, the researcher interviewed the teacher as the creator of the test to gather supporting information after quantitative analysis.

2.4 Procedures for Conducting the Study

The procedure of conducting research of evaluating the quality of teacher-developed English test in vocational high school from the content validity and item analysis is divided into three parts, namely, planning, implementation, and the final stage of research. Each of the more detailed stages is presented as follows. First, research planning includes the stages of conducting preliminary observations and interviews with English teachers at SMK Negeri 2 Denpasar (informally), requesting permission for research to go to school, and identifying problems and formulating problems. Second, for research implementation includes the stage of preparing research instruments, gathering syllabus and collecting research data, namely summative test questions in the form of multiple-choice English for grade X, XI, and XII in Vocational High School 2 Denpasar academic year 2018/2019. Third, the final phase of research includes analyzing the results of item analysis to determine the validity, reliability, index of difficulty, index of discriminators, and efficiency of distractors of English summative tests at Vocational High School 2 Denpasar. Next, analyzing the relevance of multiple-choice test with the basic competency, drawing conclusions to answer research problems and the last is reporting the results of research, drawing conclusions, and recommendations.

2.4.1 Data Collection

In this study, the data collection methods used were document studies and integrated interviews. The study of documents uses a checklist instrument while the interview method uses an interview guide instrument equipped with a questionnaire. In this study, a document study was conducted by collecting English summative test items for the 2018/2019 academic year to obtain the data. Document studies are also supported by checklist instruments. The first checklist is used to test the validity for the relevance of the test with the basic competence on the syllabus used in the school. The results of the first checklist will also be attached by the researcher as supporting data on the review of the content validity component. The expert then put a check mark (√) related to the relevance of the basic learning competence and the questions. The second checklist used was developed according to the criteria of good evaluation instrument by Harmer (2007). In this study, integrated interviews were used to obtain additional information related to the results of the analysis that had been obtained, either in the form of reasons for a problem that could occur, or the advantages found in the tests that had been made so that they could add recommendations to be given in this study. In the interview method, the researcher interviewed the teacher and gathered other information to support the quantitative data result.

2.4.2 Data Analysis

Data analysis is a method that is used to determine the results of the analysis. The type of data obtained in this study is quantitative and qualitative data, namely data obtained from the results of item analysis (quantitative data), and interview result (qualitative data) of summative English test for grade X, XI, and XII at SMK Negeri 2 Denpasar in the academic year 2018/2019.

2.4.3 Research Design

The research design in this study is mixed-method research or a combination of quantitative and qualitative research. In this study, quantitative methods were used to calculate the data presented in the form of numbers. From the results of data quantification, it is supported by qualitative data. Qualitative descriptions are used to describe the suitability of the basic competencies in the syllabus with the questions on the test (content validity), explanation of the results of the items by conducting expert judgment, and the description of the results of integrated interviews. The grand theory of this study is designing an evaluation instrument from Harmer (2007). After forming the research study and determining the research design, then it is started by gathering the data from document analysis and interview. Then, this research is analyzing the data by using statistic program in Microsoft Excel, and after getting the result, the analysis then supported by qualitative data supporting. Next,

presenting the data in the form of a percentage, numbers, as well as a description. The last is drawing a conclusion as well as giving a recommendation for future studies.

3. Results and Discussion

The results of this study discussed in the findings and discussion of the problem formulated in this study. The problem discussed with quantitative analysis (Likert scale calculation and statistics) and qualitative regarding to the relevance of the items with basic competency and item analysis including validity, reliability, index of difficulty, index of discrimination, and the efficiency of distractors.

3.1 The relevance of basic competencies and items of the test (content validity)

The relevance between items with learning indicators was carried out by analyzing the basic competencies in the syllabus, the items used, and cognitive domains achieved in the respective item. After that, expert judgment sheets then assessed by experts, practitioners, or someone who has the ability in the assessment field. In this study, two expert judges were used namely lecturers from one of the educational universities with educational backgrounds in the field of assessment.

For grade X test there are a number of topics taught had to be taught in the first semester namely Personal Identity, Congratulating, Showing Intention, Descriptive, Announcement, Present Perfect & Simple Past Tense (Sentences for expressing actions or events in the past and / or those that happened in the past and are still valid today). The test items for grade X are divided into type A and B in which according to document analysis, all the items given in the test already included all the material contained in the topic in the syllabus for the first semester at SMK Negeri 2 Denpasar.

For grade XI test, the topics taught are Suggest & Offer, Opinions, Invitation, Personal Letters, Passive Voice, Conditional, and Factual Report. For the test of grade XI type A and B already cover the entire contents of the material contained in the syllabus.

For grade XII, the topics taught were Offering Help, Surprising News, Asking for Attention, Caption (accompanying text images), Application Letter (letters applying for jobs), and Factual Report. Overall, the questions given include the material provided. But there are a number of questions that need to be concerned namely, on questions number 24 and 25 are questions with the topic of Personal Letter, whereas on the basic competencies in the syllabus are not included in the topic of the first semester for XII grade. In addition to numbers 24 and 25, there are also questions number 29 and 30, which contain material about Personal Identity in which the material does not appear in the syllabus for grade XII. In addition to the test of type A problem, the type B also found a number of questions whose topics were not included in the syllabus, namely questions number 21, 22, and 23 where the questions contained material about Procedure Text and for questions number 9, were not available in the questions so in total there are only 29 questions available on the test.

3.2 Items Analysis

The results of the analysis of the items included tests of validity, reliability, level of difficulty, index of discrimination, and index of difficulty (Harmer, 2007) and Brown (2004). In this study, dichotomous analysis of test items was used because the types of tests used had true or false values or 0 or 1. Multiple choice tests merely have the right or wrong answers, and there is no range of scores between right and wrong answers. Overall, the items analyzed were 180 items divided into 60 questions at each level with packages A and B for the respective grade. The summary of the analysis is presented as the following table.

Table 1. Analysis of Test Items Result

Class/ Type	Items Analysis				
	Validity	Reliability	Index of Difficulty	Index of Discrimination	Distractor Efficiency
X / A	15 items	0.828 High	• 18 (Easy) • 8 (Moderate) • 4 (Difficult)	• 23 items (*poor*) • 7 items (*satisfactory*)	• 14 items (ineffective) • 13 items (moderate) • 3 items (effective)
X / B	10 items	0.708 High	• 15 (Easy) • 10 (Moderate) • 5 (Difficult)	• 28 items (*poor*) • 2 items (*satisfactory*)	• 11 items (ineffective) • 7 items (moderate) • 9 items (effective)
XI / A	15 items	0.741 High	• 18 (Easy) • 9 (Moderate) • 3 (Difficult)	• 25 items (*poor*) • 5 items (*satisfactory*)	• 16 items (ineffective) • 12 items (moderate) • 2 items (effective)
XI / B	15 items	0.868 High	• 18 (Easy) • 10 (Moderate) • 2 (Difficult)	• 24 items (*poor*) • 6 items (*satisfactory*)	• 4 items (ineffective) • 17 items (moderate) • 2 items (effective)
XII / A	9 items	0.836 High	• 24 (Easy) • 5 (Moderate) • 1 (Difficult)	• 28 items (*poor*) • 2 items (*satisfactory*)	• 17 items (ineffective) • 11 items (moderate) • 2 items (effective)
XII / B	15 items	0.792 High	• 15 (Easy) • 12 (Moderate) • 3 (Difficult)	• 24 items (*poor*) • 6 items (*satisfactory*)	• 11 items (ineffective) • 12 items (moderate) • 7 items (effective)

3.2.1 *Items Analysis of Grade X*

Validity

The results of the items test validity showed the test accuracy to measure students' abilities. The results of this validity test are obtained from the calculation of student scores compared to the total value of all correct answers. Quantitative calculations on content validity are also supported by data from expert judgment result. For the type A test, there are 15 valid questions and 15 invalid questions. Invalid questions constitute half of the total number of questions. The questions that are classified as invalid are questions number 1, 4, 6, 8, 10, 11, 12, 13 18, 19, 20, 21, 25, 26 and 29 meanwhile valid questions are number 2, 3, 5, 7, 9, 14, 15, 16, 17, 22, 23, 24, 27, and 28. For the type B resulted in 10 questions were valid, and 20 questions were invalid. Items with valid category are questions number 1, 3, 4, 5, 12, 14, 15, 16, 28, & 29 whereas for questions number 2, 6, 7, 8, 9, 10, 11, 13, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, & 30 are belonged to invalid category.

Reliability

The reliability test results are carried out after the validity test. The items that categorized as valid items then tested for reliability. Based on the results of the validity test of grade X type A, there are 15 valid items, and in type B, there are 10 valid items. The results of the reliability test that belonged to dichotomy test are calculated using the KR - 20 formula. The KR - 20 formula is used because the level of difficulty of the items is heterogeneous that each question has a different level of difficulty. The high-reliability test results show that the level of trustworthiness or good consistency of the question even though it is used in different groups of students. The result of the reliability test of grade X type B showed that the reliability level is 0828, which means that a very high level of reliability. On the other hands, for the type B, the results are 0.708 belonged to a high level of reliability.

Index of Difficulty

Index of difficulty is the result of calculation from the numbers of students who answer the questions correctly divided by the total number of students whom taking the test. The test results of the index of difficulty type A there are 18 questions are classified as easy, 8 questions are moderate, and 4 questions belong to a difficult category. The results indicated that the questions used are dominated by easy category whereas most students are able to answer all the questions correctly. However, the category of moderate and difficult questions does not have a balanced portion with the category of easy questions. On the other side, the test for grade X type B consisted of 5 questions with difficult category, 15 with easy category, and 10 questions with a moderate category.

Index of Discrimination

Index of discrimination is an analysis that analyzed how the questions enable to distinguish groups of students who are capable and less capable at the end of the assessment. For the test of grade X type A, 23 items are categorized as poor category which means that the questions are not able to distinguish the ability of students because most students answer are similar whether it is all true or all wrong meanwhile the other 7 questions belong to the satisfactory category which shows that the questions have a moderate level to distinguish the students' ability. For type B, the test is not good enough to classify students' abilities between the upper, middle, and lower groups. A total of 28 questions are included in the poor or low category where the questions can be answered correctly both with the upper-class students or students with the lower groups meanwhile the other 2 questions belong to the satisfactory category where the questions are able to be answered correctly by the students who are classified in the upper ability group of students.

Efficiency of Distractors

The result of the distractor effectiveness test is used to check the quality of the answer choices given besides the answer key. For the grade X type A, questions no 1, 2, 5, 8, 9, 12, 13, 19, 20, 21, 24, 25, 26, & 29, the distractors do not work effectively because it is chosen by less than 5% of the total number of students. For questions number 3, 4, 6, 7, 10, 11, 14, 15, 16, 17, 18, 22, & 30, the choices are categorized as moderate because one of the options is chosen by more than 5% of a total number of students. Next, for questions no. 23, 27, and 28, the distractor is effective is because two options are chosen by more than 5% of the students. For type B, there are 11 questions where the three choices given are not functioned properly as it was not chosen by more than 5% of students in total. In addition, there are 7 questions where 1 option is chosen by more than 5% of the students. Lastly, the distractors of 9 questions are categorized as affective because two options are chosen by more than 5% of students.

3.2.2 *Items Analysis of Grade XI*

Validity

For the test of grade XI type A, there are 15 questions which are included in the valid category, and other 15 items are the invalid. The items that valid are the questions number 1, 6, 7, 11, 12, 13, 18, 19, 20, 21, 23, 28, and 30 and the invalid are no. 2, 3, 4, 5, 8, 14, 15, 16, 17, 22, 24, 25, 26, 27, and 29. For the type B questions number 3, 6, 8, 9, 10, 11, 12, 13, 15, 17, 18, 22, 23, 28, 29 & 30 belong to the category of valid questions. On the other hands, questions number 1, 2, 4, 5, 7, 14, 16, 19, 20, 21, 24, 25, 26, 27 are classified as invalid.

Reliability

For class XI packages A and B, there is the same number of valid question packages, which are 15 questions. For the UTS class XI package A problem has a very high level of reliability as well as the results of 0.836.
For the UTS class XI package B, the results show that the question is included in the very high-reliability category with the results of the quantitative calculation of 0.868.

Index of Difficulty

For the test of grade XI type A, the results of the analysis show that there are 18 easy questions, 9 moderate questions, and 3 difficult questions. The results of the index difficulty of grade XI test have similar results as class X that dominated by easy questions. For the type B test, 18 easy questions, 10 moderate questions, and 2 difficult questions.

Index of Discrimination

For type, A test, 25 questions are classified as poor, and 5 questions are in the satisfactory category. The poor or low category questions indicate that the related questions can be answered both by students with upper group abilities or students with lower group abilities. For type B, there are 24 questions that belong to a poor category, and 6 questions are classified as satisfactory. This is showed that the test is dominated by questions which are not good enough to distinguish groups of student abilities.

Efficiency of Distractor

The result of efficiency of distractor of test type A, questions no. 1, 2, 3, 4, 5, 7, 8, 9, 10, 11, 17, 18, 20, 26, 28, & 30, the choices given besides the answer key is not well-functioned as it is chosen less than 5% of the total number of students. Furthermore, for questions no. 6, 9, 12, 13, 14, 16, 19, 21, 22, 23, 24, & 29, there are two choices of answers besides the answer key hence the distractor level is moderate. For questions number 15 and 27, the three choices given as a distractor had functioned properly, because there two choices are chosen by more than 5% of students.

3.2.3 *Items Analysis of Grade XII*
Validity

For the test for grade XII type A there are 21 invalid questions and 9 others are valid. Questions that are classified as invalid are questions number 1, 2, 3, 4, 5, 6, 7, 8, 9, 12, 13, 14, 15, 16, 23, 24, 25, 26, 28, 29, and 30 For questions that are classified as valid are questions number 10, 11, 17, 18, 19, 20, 21, 22, & 27. For the type B, 15 questions are classified as invalid and 15 other questions are valid. Questions that are classified as invalid are questions no. 2, 3, 6, 8, 9, 14, 17, 19, 21, 22, 23, 24, 25, 28, & 30. As for the questions with valid categories are questions number 1, 4, 5, 7, 10, 11, 12, 13, 15, 16, 18, 20, 26, 27, 29, & 30.

Reliability

For the reliability result of the test grade XII type A, there are 9 questions classified as valid, and for type B, there are 15 questions valid. Therefore, the reliability of the type A test is 0.741 categorized as high. Moreover, for type B, the results of the reliability test indicate that the reliability level is 0.792 classified as a high level of reliability.

Index of Difficulty

For the grade XII type A test, questions with easy categories are 24, moderate categories are 5, and difficult category only 1 question. Henceforth, questions on the test are dominated by easy category. This result showed that the quality of the questions is unable to distinguish or classify the abilities of each student in the class. Nevertheless, for type B, 15 questions are easy, 12 questions are moderate, and 3 questions are difficult.

Index of Discrimination

For the test of grade XII type A, the results of the analysis showed that 28 questions belong to the poor category with 2 items having a minus (-) result which means that there are questions answered correctly by groups of lower ability students but answered incorrectly by upper ability student group. In addition, there are 2 questions categorized as satisfactory. For grade XII type B, 24 questions are classified as poor or not good enough to differentiate students in the class because this right answer is given equally by groups of students with upper and lower abilities. In addition, 6 questions are classified as satisfactory because it is relevant between the number of correct answers and the number of students with high ability to answer correctly.

Efficiency of Distractor

For grade XII type A, the distractors for questions number 1, 2, 3, 4, 5, 7, 8, 10, 11, 12, 17, 18, 20, 22, 26, 28 & 30 are not work effectively as the three distractors given are chosen less than 5% of students. Next, questions number 6, 9, 13, 14, 16, 19, 21, 22, 23, 24, 25, & 29 have distractors that the level of the efficiency is moderate. Lastly, 2 questions, number 15 & 27 have good function of the distractor because it is chosen by 5% more of a total number of students.

Conclusion

The result of this evaluative study divided into content validity and items analysis of English summative test for grade X, XI, and XII in vocational high school that developed by the teachers. The research design is a mixed method as the data gathered in this study required calculation and statistics, and for enriching and supporting the quantitative data, the researcher also conducted the qualitative study. The result showed that from the content analysis, the test of grade X and XI already in relevance with the syllabus that is developed by the Indonesian government. However, for the test of grade XII, there are 6 questions that are not in line with the material

required on the basic competence. For the item analysis result, according to validity, reliability, index of difficulty, index of discrimination, and efficiency of the distractor, the test for grade X, XI, dan XII are categorized as moderate.

Acknowledgments

References

Brown, H. D., (2004). *Language assessment: Principles and classroom practices*. White Plains, NY: Pearson Education

Dornyei, Z. (2007). *Research methods in applied linguistics: Quantitative, qualitative, and mixed methodologies*. New York: Oxford University Press.

Fadarwati, I. P. (2015). Penggunaan Teknik Evaluasi Non-tes dan Hambatannya pada Penilaian Pembelajaran PKn SD di DABIN IV Kecamatan Tonjong Kabupaten Brebes [Skripis]. Semarang (ID): Universitas Negeri Semarang.

Selamat, Suzanah, and Kaur Gurnam Sidhu. 2011. "Student Perceptions of Metacognitive Strategy Use in Lecture Listening Comprehension." *Language Education in Asia* 185-198. Accessed November 23, 2015. http://dx.doi.org/10.5746/LEiA/11/V2/12/A02/Selamat_Sidhu.

Suchitra, Nair, Yew Li Koo, and Abu Bakar Kesumawati. 2014. "Exploring the Listening Processes of Pre-university ESL Students." *Procedia Social and Behavioral Sciences* 118: 475-472. www.sciencedirect.com.

Robinson, Martin, Evelina D Galaczi, Coreen Docherty, Anthony King, and Hanan Khalifa. 2014. "Supporting national education reform: The Cambridge Malaysia Baseline Project." *Cambridge English: Research Notes*, November: 40-44. Accessed November 8, 2016. www.cambridgeenglish.org/research-notes.

2010-2015. "Official Portal Malaysian Examination Council." *STPM and MUET Examination Reports*. Accessed May 1, 2016. portal.mpm.edu.my.

Mehrabian, A. 1981. *Silent Messages: Implicit Communication of Emotions and Attitudes*. Wadsworth: Belmont.

McDevitt, T.M., E.P. Sheenan, and N McMenamin. 1991. "Self-reports of academic listening activities by traditional and non-traditional college students." *College Student Journal* 25: 478-489.

Brown, J.D. 2005. *Testing in language programs: A comprehensive guide to English language assessment*. New York: Mc Graw-Hill.

Vivien, Berry, and Barry O'Sullivan. 2014. "Assessing General Language Proficiency." *Introducing Language Assessment*. London: British Council Digital Services. Accessed November 15, 2016. https://www.britishcouncil.org/exam/aptis/research/project/assessment-literacy/general-language-proficiency.

Taylor, Lynda, and Ardeshir Geranpayeh. 2011. "Assessing listening for academic purposes: Defining and operationalising the test construct." *Journal of English for Academic Purposes* (Elsevier Ltd) (10): 89-101. doi:10.1016/j.jeap.2011.03.002.

Buck, Gary. 2001. *Assessing Listening*. Cambridge Language Assessment Series. Edited by J.Charles Anderson and Lyle F Bachman. Cambridge: Cambridge University Press.

English Language Standards and Quality Council. 2015. *English Language Education Reform in Malaysia: The Roadmap 2015-2025*. Ministry of Education Malaysia.

Weir. 2005. *Language Testing and Validation An Evidence-Based Approach*. Hampshire: Palgrave Macmillan.

North, Brian; Ortega, Angeles; Sheehan, Susan;. 2010. *A Core Inventory for General English*. British Councils / EQUALS. Accessed February https://englishagenda.britishcouncil.org, 2017.

Mehrens, William A, and Irvin J Lehmann. 1991. *Measurement and Evaluation in Education and Psychology*. 4th. Belmont, CA: Wadsworth Thomson Learning.

Field, John. 2008. *Listening in the Language Classroom*. Cambridge: Cambridge University Press.

Vandergriff, Larry. 2007. "Listening: theory and practice in modern foreign language competence." *Subject Centre for Languages, Linguistics and Area Studies Guide to Good Practice*. February 22. Accessed January 3, 2016. http://www.llas.ac.uk/resources/gpg/67#toc_1.

Mendelsohn, David. 2001. "Listening Comprehension: We've come a long way but..." *Research Symposium*, Fall: 33-37. Accessed February 16, 2016. http://www.teslontario.net/publications/researchsympossium/ResearchSympossium2001.pdf.

Rost, Michael. 2002. *Teaching & Researching Listening.* London: Longman.

D.Wolvin, Andrew, ed. n.d. *Listening and Human Communication in the 21st Century.* 2010: Wiley-Blackwell.

2018. "DepEd vision, mission, core values and goals." *Department of Education.* October 30. www.deped.gov.ph.

2018. "K to 12 Curriculum Guide in Science." *DepEd Tambayan.* October 30. https://depedtambayan.blogspot.com.

2018. "Creating Learning Objectives." *Convergence Training.* October 30. https://www.convergencetraining.com.

Lucas, Maria Rita D., and Brenda B. Corpuz. 2014. *Facilitating Learning : Metacognitive Process.* Quezon City, Metro Manila: Lorimar Publishing, Inc.

Mizbani, Maryam, and Azizeh Chalak. 2017. "Analyzing Listening and Speaking Activities of Iranian EFL Textbook Prospect 3 Through Bloom's Revised Taxonomy." *Advances in Language and Literacy Studies* 1-6.

Zareian, Gholamreza, Mohammad Davoudi, Zahra Heshmatifar, and Javad Rahimi. 2015. "An Evaluation of Questions in Two ESP Coursebooks Based on Bloom's New Taxonomy of Cognitive Learning Domain." *International Journal of Education and Research* 1-14.

Mizbani, Maryam, and Azizeh Chalak. 2017. "Analyzing Reading and Writing Activities of Iranian EFL Textbook Prospect 3 Based on Bloom's Revised Taxonomy." *Journal of Applied Linguistics and Language Research* 1-15.

Assaly, Ibtihal R., and Oqlah M Smadi. 2015. "Using Bloom's Taxonomy to Evaluate the Cognitive Levels of Master Class Textbook's Questions." *English Language Teaching* 1-11.

Olimat, Mohammad. 2015. "Analyzing Action Pack Textbooks' Questions according to Revised Taxonomy." *Journal of Education and Practice* 1-8.

Al-hasanat, Hasan AbdRabbeh Ali. 2016. "Analyzing Assessment Questions in an Arabic Textbook (Communication skills) for Eight Grade in Jordan According to Bloom's Taxonomy of Levels of Knowledge Aims." *World Journal of Education* 1-12.

Rahpeyma, Ayoub. 2015. "The Analysis of Learning Objectives in Iranian Junior High School English Textbooks based on Bloom's Revised Taxonomy." *International Journal of Education and Literacy Studies* 1-12.

Abdi, Heidar, and Mohammad Mohammadi. 2014. "Textbook Evaluation: A Case Study." *Procedia Social and Behavioral Sciences* 1-8.

2018. "Effective Use of Performance OBjectives for Learning and Assessment." *Teacher and Educational Development.* September 26.

Bigcas, Jimayma. 2016. "A Mini Critique of K-12 Basi Education Curriculum." *ResearchGate* 1-3.

Wilson, Leslie Owen. 2018. "Anderson and Krathwol Bloom's Taxonomy Revised." *The Second Principle.* October 30. https://thesecondprinciple.com.

2018. "Revised Bloom's Taxonomy ." October 30. http://www.kurwongbss.qld.edu.au/thinking/Bloom/blooms.htm.

2018. "Revised Bloom's Taxonomy Action Verbs." October 30. https://www.apu.edu.

Cherry, Kendra. 2018. "The 4 stages of Cognitive Development by Jean Piaget." *very well mind.* November 12. https://www.verywellmind.com.

n.d. *National Book Development Board.* Accessed November 21, 2018. books.philippines.gov.ph.

Abistado, Jonna M., Meliza P. Valdoz, Marites D. Aquino, and Mary Anne T. Bascara. 2014. *Science Links 9.* Quezon City: REX Printing Company Inc.

Alvarez, Liza A., Dave G. Angeles, Hernan L. Apurada, Ma. Pillar P. Carmona, Oliver A. Lahorra, Judith f. Marcaida, Ma. Regaele A. Olarte, et al. 2014. *Science Learner's Module 9.* Pasig city: FEP Printing Corporation.

Deauna, Melecio C. 1996. *Elementary Statistics for Basic Education.* Quezon City: Phoenix Publishing House, Inc.

Harmer, Jeremy. 2007. *The practice of English language teaching.* England: Pearson Education Limited.

Selamat, Suzanah, dan Kaur Gurnam Sidhu. 2011. "Student Perceptions of Metacognitive Strategy Use in Lecture Listening Comprehension." *Language Education in Asia* 185-198. Diakses November 23, 2015. http://dx.doi.org/10.5746/LEiA/11/V2/12/A02/Selamat_Sidhu.

Suchitra, Nair, Yew Li Koo, dan Abu Bakar Kesumawati. 2014. "Exploring the Listening Processes of Pre-university ESL Students." *Procedia Social and Behavioral Sciences* 118: 475-472. www.sciencedirect.com.

Robinson, Martin, Evelina D Galaczi, Coreen Docherty, Anthony King, dan Hanan Khalifa. 2014. "Supporting national education reform: The Cambridge Malaysia Baseline Project." *Cambridge English: Research Notes*, November: 40-44. Diakses November 8, 2016. www.cambridgeenglish.org/research-notes.

2010-2015. "Official Portal Malaysian Examination Council." *STPM and MUET Examination Reports.* Diakses May 1, 2016. portal.mpm.edu.my.

Mehrabian, A. 1981. *Silent Messages: Implicit Communication of Emotions and Attitudes.* Wadsworth: Belmont.

McDevitt, T.M., E.P. Sheenan, dan N McMenamin. 1991. "Self-reports of academic listening activities by traditional and non-traditional college students." *College Student Journal* 25: 478-489.

Brown, J.D. 2005. *Testing in language programns: A comprehensive guide to English language assessment.* New York: Mc Graw-Hill.

Vivien, Berry, dan Barry O'Sullivan. 2014. "Assessing General Language Proficiency." *Introducing Language Assessment.* London: British Council Digital Services. Diakses November 15, 2016. https://www.britishcouncil.org/exam/aptis/research/project/assessment-literacy/general-language-proficiency.

Taylor, Lynda, dan Ardeshir Geranpayeh. 2011. "Assessing listening for academic purposes: Defining and operationalising the test construct." *Journal of English for Academic Purposes* (Elsevier Ltd) (10): 89-101. doi:10.1016/j.jeap.2011.03.002.

Buck, Gary. 2001. *Assessing Listening.* Cambridge Language Assessment Series. Disunting oleh J.Charles Anderson dan Lyle F Bachman. Cambdrige: Cambdrige University Press.

English Language Standards and Quality Council. 2015. *English Language Education Reform in Malaysia: The Roadmap 2015-2025.* Ministry of Education Malaysia.

Weir. 2005. *Language Testing and Validation An Evidence-Based Approach.* Hampshire: Palgrave Macmillan.

North, Brian; Ortega, Angeles; Sheehan, Susan;. 2010. *A Core Inventory for General English.* British Councils / EQUALS. Diakses February https://englishagenda.britishcouncil.org, 2017.

Mehrens, William A, dan Irvin J Lehmann. 1991. *Measurement and Evaluation in Education and Psychology.* 4th. Belmont, CA: Wadsworth Thomson Learning.

Field, John. 2008. *Listening in the Language Classroom.* Cambridge: Cambridge University Press.

Vandergriff, Larry. 2007. "Listening: theory and practice in modern foreign language competence." *Subject Centre for Languages, Linguistics and Area Studies Guide to Good Practice.* 22 February. Diakses January 3, 2016. http://www.llas.ac.uk/resources/gpg/67#toc_1.

Mendelsohn, David. 2001. "Listening Comprehension: We've come a long way but..." *Research Sympossium*, Fall: 33-37. Diakses February 16, 2016. http://www.teslontario.net/publications/researchsympossium/ResearchSympossium2001.pdf.

Rost, Michael. 2002. *Teaching & Researching Listening.* London: Longman.

D.Wolvin, Andrew, penyunt. t.thn. *Listening and Human Communication in the 21st Century.* 2010: Wiley-Blackwell.

2018. "DepEd vision, mission, core values and goals." *Department of Education.* 30 October. www.deped.gov.ph.

2018. "K to 12 Curriculum Guide in Science." *DepEd Tambayan.* 30 October. https://depedtambayan.blogspot.com.

2018. "Creating Learning Objectives." *Convergence Training.* 30 October. https://www.convergencetraining.com.

Lucas, Maria Rita D., dan Brenda B. Corpuz. 2014. *Facilitating Learning : Metacognitive Process.* Quezon City, Metro Manila: Lorimar Publishing, Inc.

Mizbani, Maryam, and Azizeh Chalak. 2017. "Analyzing Listening and Speaking Activities of Iranian EFL Textbook Prospect 3 Through Bloom's Revised Taxonomy." *Advances in Language and Literacy Studies* 1-6.

Zareian, Gholamreza, Mohammad Davoudi, Zahra Heshmatifar, dan Javad Rahimi. 2015. "An Evaluation of Questions in Two ESP Coursebooks Based on Bloom's New Taxonomy of Cognitive Learning Domain." *International Journal of Education and Research* 1-14.

Mizbani, Maryam, dan Azizeh Chalak. 2017. "Analyzing Reading and Writing Activities of Iranian EFL Textbook Prospect 3 Based on Bloom's Revised Taxonomy." *Journal of Applied Linguistic and Language Research* 1-15.

Assaly, Ibtihal R., dan Oqlah M Smadi. 2015. "Usisng Bloom's Taxonomy to Evaluate the Cognitive Levels of Master Class Textbook's Questions." *English Language Teaching* 1-11.

Olimat, Mohammad. 2015. "Analyzing Action Pack Textbooks' Questions according to Revised Taxonomy." *Journal of Education and Practice* 1-8.

Al-hasanat, Hasan AbdRabbeh Ali. 2016. "Analyzing Assessment Questions in an Arabic Textbook (Communication skills) for Eight Grade in Jordan According to Bloom's Taxonomy of Levels of Knowledge Aims." *World Journal of Education* 1-12.

Rahpeyma, Ayoub. 2015. "The Analysis of Learning Objectives in Iranian Junior High School English Text books based on Bloom's Revised Taxonomy." *International Journal of Education and Literacy Studies* 1-12.

Abdi, Heidar, dan Mohammad Mohammadi. 2014. "Textbook Evaluation: A Case Study." *Procedia Social and Behavioral Scciences* 1-8.

2018. "Effective Use of Performance OBjectives for Learning and Assessment." *Teacher and Educational Development.* 26 September.

Bigcas, Jimayma. 2016. "A Mini Critique of K-12 Basi Education Curriculum." *ResearchGate* 1-3.

Wilson, Leslie Owen. 2018. "Anderson and Krathwol Bloom's Taxonomy Revised." *The Second Principle.* 30 October. https://thesecondprinciple.com.

2018. "Revised Bloom's Taxonomy ." 30 October. http://www.kurwongbss.qld.edu.au/thinking/Bloom/blooms.htm.

2018. "Revised Bloom's Taxonomy Action Verbs." 30 October. https://www.apu.edu.

Cherry, Kendra. 2018. "The 4 stages of Cognitive Development by Jean Piaget." *verywell mind.* 12 November. https://www.verywellmind.com.

t.thn. *National Book Development Board.* Diakses November 21, 2018. books.philippines.gov.ph.

Abistado, Jonna M., Meliza P. Valdoz, Marites D. Aquino, dan Mary Anne T. Bascara. 2014. *Science Links 9.* Quezon City: REX Printing Company Inc.

Alvarez, Liza A., Dave G. Angeles, Hernan L. Apurada, Ma. Pillar P. Carmona, Oliver A. Lahorra, Judith f. Marcaida, Ma. Regaele A. Olarte, et al. 2014. *Science Learner's Module 9.* Pasig city: FEP Printing Corporation.

Deauna, Melecio C. 1996. *Elementary Statistics for Basic Education.* Quezon City: Phoenix Publishing House, Inc.

Harmer, Jeremy. 2007. *The practice of English language teaching.* England: Pearson Education Limited.

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Present and Future Benefits for Adult Inmate Trainees in Greek Prisons

Vasiliki Papaioannou[1], Evaggelos Anagnou[2]

[1] Hellenic Open Univercity, Patra, Greece

Corresponding Author: Vasiliki Papaioannou, Hellenic Open Univercity, Patra, Greece. Postal address: Tmolou 35, Vyron, Greece. ZC 16233.Tel: 00306906216026. E-mail: vanpap2008@gmail.com

Abstract

Correctional education aims at challenging the illiteracy, which often leads to delinquency and recidivism. In Greece, little interest had been shown regarding the education of adult inmates, but with the establishment of Second Chance Schools (SCS) inside prisons, a more systematic and integrated effort was made for the overall development of trainees. Many studies have been conducted regarding the work that SCS provides. For this reason, a systematic review of the relevant bibliography and a compilation of the findings of the studies realized between 2006-2018, regarding the benefits of inmates participating in the educational programs, was considered appropriate. The results demonstrate that there are benefits at the personal, educational, and social levels during confinement. After release, the expected benefits are analogous, with the addition of the expectations of the trainees' expectations for social reintegration and professional rehabilitation.

Keywords: Correctional Education, Benefits, Personal Development, Professional Rehabilitation, Social Integration

1.Introduction

Most inmates have a low educational level, which makes it difficult for them to reintegrate into society. Surveys conducted in many countries demonstrate the above finding (Vacca, 2004; Theophilou, 2004; Spinelli, 2009). In Greece, it was found in a survey conducted in 1983 by the National Center for Social Research that 69% of respondents had not completed basic education (Varvatakos, 2010). In addition to lower levels of education, detainees are often deprived of professional skills and stable employment, which is a major challenge for people returning from prison to local communities. Furthermore, the stigma of conviction is a major barrier to post-release employment.

This research aims to thoroughly review the relevant scientific literature and carry out a systematic review in order to synthesize the findings from multiple studies on the effectiveness of prison education programs in Greece, as recorded by detainees participants in them. In order to prepare the systematic review, we first conducted a comprehensive literature search for published and unpublished studies between 10/1/2018 and 20/12/2018. Altogether from our search, twenty four (24) investigations arose on this particular issue.

2. The characteristics and educational background of inmates

Inmates have particular characteristics associated with pre-confinement situations and their current state, resulting in them "playing" roles that are necessary to meet their needs and adopt specific behaviors and attitudes such as violence, isolation, inactivity (Gassuka, n.d.).

Due to the problems they faced prior to their imprisonment (unemployment, poverty, low educational level, etc.) and those faced during imprisonment (institutionalization, de-socialization, lack of human contact, sexual relations, work, communication failure, as Gassouka [n.d.] reports), detainees adopt a bad image about themselves and about their potential to cope with their problems and set goals, resulting in their lack of self-confidence and self-esteem. At the same time, due to the traumatic experience of confinement, inmates have difficulty creating a meaningful relationship with the trainer, whom they may doubt as to their methods and effectiveness. All the above elements affect their decision to take part in an educational program.

The low educational level creates a vicious circle of deficiencies, professional and personal development, and is partly related to delinquency. It is a reality independent of time and place, which is confirmed by all the surveys that have dealt with this subject and by the official statistics of each country. Most inmates are found not to have completed basic education and do not have professional qualifications (Vacca, 2004; Theophilou, 2004).

In a research in 136 prisons in England and Wales, it was found that 80% of detainees had writing skills equivalent to those of an 11-year-old or even younger, and 50% had reading skills similar to 11-year-old or younger (Spinelli, 2009).

In Greece, the official statistics of the Hellenic Statistical Authority confirm that: For 2007, 31% of the detainees had finished Primary School, 5% knew reading and writing, while 14% were illiterate, meaning that 50% had not even received basic education. For 2006, 15% of the detainees were illiterate, and 60% were elementary education graduates. The corresponding percentages for previous years of convicts with non-existent or elementary education in relation to the total are 72.6% (2005), 78% (2001), 78% (2000), 73% (1999) and 75.4% (1998) (Varvatakos, 2010).

3. Educational programs in prisons

A variety of training programs implemented within prisons serve their targeting since whatever training the inmates choose, the benefits are many both for the period of his imprisonment and for the subsequent course of their lives away from prison. Throughout the world, whether developed or developing, opportunities are offered to educate inmates hoping for a reversal of their pathogenic situation.

3.1 SCS in Greek prisons
In November 1995, the White Paper of the European Commission referred to the proposal for the implementation of the "Second Chance School" program (SCS). Altogether, 11 SCS are currently operating in Greek prisons. The choice of the Greek State to establish SCS in prisons, in line with the corresponding European Action Plan, clearly shows the need to provide holistic education to inmates, aiming at the overall development of trainees and their fullest participation in the economic, social and cultural world, and their more effective participation in the workplace. They are an institution of social justice and offer a second opportunity to the inmates to make a fresh start, change their way of thinking and action, and make a new course in their lives by adopting the right choices.

The training provided in the SCS is systematic and continuous and leads to the acquisition of a degree equivalent to the Gymnasium certificate. The total duration of the course is 18 months, namely two training years. The curriculum is designed to follow "... pedagogical approaches that focus on learners' individual needs, interests and abilities" (MR 1861/2014, article 3.3.b).

The cornerstone of the education offered is a multilingual network aiming at the acquisition of modern knowledge, skills and attitudes that will help learners in social, economic integration and development and includes Greek and English linguistic literacy, numerical, informational, environmental, scientific, social and aesthetic Literacy (Hondolidou, 2003).

4. The value of education in prison

Prison training is seen as one of the means to promote re-socialization so that inmates can build a better future for themselves after release, improving their quality of life and acquiring something useful (skills, knowledge, understanding, social attitudes and behaviors) that will go beyond prison and can lead to employment or further training. As Muñoz (2009) points out, prisons should be an environment for those held to allow positive change and human development.

The value attributed to education in a free society, as in prison, is strong. For example, Welch (1996) argues that prison education programs continue to draw citizens' support because, in essence, education itself is positively valued in our society. These educational and professional programs do not only focus on developing practical skills, but also respond to the idea that every person has the right to be educated. Many detainees believe that taking part in prison education has a second chance in education and life. Lejins (1971) writes:

Since education is a good indication of the likelihood of a person's success in modern society, it seems necessary to improve prison training programs in order for inmates to acquire the academic skills necessary to have a realistic second chance to become creative members of life of the community. (p.26)

In addition, education helps to instill the feeling among trainee inmates that they remain part of the wider community and reminds them, as reported by Eikeland, Manger and Asbjørnsen (2009, p. 11), that they will be members of society after their release and, since alienation from society is a crime factor, the democratic and inclusive nature of education is vital. Because by acquiring skills and re-thinking their place in society, these people can become active in their local economies and communities, from which former detainees can be found blocked, and overcome the stigma of their criminal engagement.

According to Putnam (2000), education and vocational training help to develop social capital. Also, through the participation in educational programs, the inmates strengthen their self-esteem, improve their social skills (Parker, 1990) and feel content because they are given the opportunity to highlight the positive aspects of their personality (Kett, 1995).

Although we cannot claim that education in prison can cure all the suffering of crime and criminals, it is very important for both the individual and the community. Inmates who participate in an educational program during their imprisonment set the foundations for a normal life after their release and at the same time have many benefits during their imprisonment as their participation in a training program removes many of the "suffering of the imprisonment."

4.1 Benefits during confinement
The benefits accruing to inmates by virtue of the training provided to them in prison are indeed many. The feeling of boredom and loneliness is diminishing, and inmates are a strong learning community, resulting in them feeling less marginalized as they realize that they fully retain the right of education, like any free citizen. Also, as reported by Grizou, Mpanos, Rogdaki, Tsolakopoulou (2008), the ample time available to inmates, a time of inactivity, is an anxiety factor for the inmates, which in turn creates emotional tensions that make it hard for human interaction. By participating in an educational program, "dead time" turns into a pleasant break from the recurring prison routine, reduces the unbearable boredom that the inmates feel every day and prevents intellectual degeneration as well as the (self) destructive moments that the boredom implies (Varvatakos, 2010). The detainees themselves, according to a survey conducted in prisons in Denmark, Finland, Iceland, Sweden, and Norway, saw that by participating in educational programs they could "spend time doing something sensible

and useful" (Eikeland et al., 2009). On the other hand, day-to-day schooling works as a simulation of the transition to a free life. Detainees experience this positively and negatively. Positively because school within the prison, even for a few hours, is a small oasis of freedom and negatively because it strengthens the feeling of imprisonment (Grizou et al., 2008). But that's how they perceive more strongly the value of freedom.

At the same time, the sense of diversity experienced by inmates, as they are treated as inferior beings, is transformed, thanks to education, into a difference that separates them from the rest of inmates and unleashes them from the prison subculture.

4.2 Benefits after confinement

According to the bibliography, the debate about whether or not the prison education is beneficial divides the scholars. Numerous surveys have been conducted, particularly in America, on the usefulness of prison education. The majority of these demonstrate the strong link between education and reduction of recidivism while increasing the possibility of social and professional reintegration. Of course, there are also skeptics who argue that in many cases, prison education produces nothing more than "better educated criminals" (Gaes, 2008).

4.2.1 Education and recidivism

The relationship of education in prison and the reduction of recidivism has been studied by many scholars. Some consider that education achieves its purpose (Anderson, 1981, 1991; Matisoff, 1974; Porporino and Robinson 1992, as cited in Ubah, 2005), while others believe it does not work (Kettering, 1965 ; Martinson, 1974; Sullivan , 1990, 1992 ; Schumacker et al., 1990 as cited in Ubah, 2005). The key question is how education can cope with recidivism. Responses can be several: The person builds a more moral character, acquires self-esteem, feel that they are opening up a new perspective in life by redirecting their actions, acquires new interests and know-how that can act as a credential in society and the labor market.

Surveys in the United States have shown that recidivism rates are significantly higher for those who have not completed high school studies (Harrer, 1994) and an analysis of 60 different studies concluded that those inmates who did not have a degree of the High School and participated in a training program in prisons had lower rates of relapse (Flanagan, 1994). Esperian (2010) reports statistics from the "Congressional Leaders" 1; Education Newsletter (2010), such as study by Steurer, Smith, and Tracy (1997) in Maryland, Minnesota and Ohio showing recidivism rates of 3.4%, a study in Colorado (2007) that show recidivism rates of 5% and the results of a survey conducted in Florida, Maryland, Massachusetts, New York, Ohio, Texas, Utah and Virginia in 2002 where it was found that educational programs helped reduce recidivism from 49% to 20%. In a recent meta-analysis of the effectiveness of prisons training to reduce recidivism carried out by Rand Corporation (2013), the main finding was that prison training reduces recidivism after release and is cost-effective. In addition, the study found that prison training can increase the chances of employment after liberation.

Of course, there are other empirical criminological researches (Baumann, 1984, pp. 31-36, as cited in Papathanasiou, 2010) investigating the impact of school and vocational education on recidivism, which state that only vocational education reduces recidivism (12-15%), while the impact of school education is negligible in reducing recidivism. The interpretation of this differentiation consists in the fact that vocational training can more easily secure a job, which in turn ensures a decent standard of living, freedom from the prisoner's position and a smoother social reintegration.

4.2.2 Education and professional rehabilitation

Access to education and employment has been reported by many studies as two of the most important aspects contributing to the successful reintegration of ex-offenders into society. Through education, they acquire knowledge and skills, necessary to claim a job in the labor market. It is proved that ex offenders have a high risk of unemployment and there is a correlation between unemployment and recidivism (Farrington, Gallagher, Morley, St. Ledger and West, 1986; Finn, 1998; May 1999; Motiuk, 1996).

The Rand Corporation (2013) survey also shows a positive correlation between prison education and post-release employment. In particular, post-release employment was found to be 13% higher among detainees

participating in academic or vocational training programs than among those who had not participated. The findings of this study are in line with those of the Wilson, Gallagher, and MacKenzie (2000), which also found improved chances of employment after release for those who had participated in correctional education.

The Rand Corporation (2013) study also investigated the relationship between vocational training versus academic education in prison and post-release employment, and the results show that VET programs have a greater impact than academic programs on a person's probability of obtaining employment after release.

4.2.3 Education and personal development

Participating in educational programs can be a source of optimism for detainees, awaken them and release creativity, which, as Piche points out (2008, p. 10), is therapeutic and capable of helping to rehabilitate. Darkenwald and Merriam (1982), approaching adult education holistically, identify as its essential function the help it provides adult learners to increase their skills and successfully negotiate transitions into their social roles (worker, parent, prisoner, etc.).

Therefore, education offers inmates opportunities for personal development, and the ability to change their perceptions of themselves and others, perceptions that determine their attitudes and behavior. In addition, "it may be the first ray of hope that they can escape the cycles of poverty and violence that dominated their lives" (Erisman and Contardo, 2005, p. 316). Strengthening self-confidence and self-esteem are counted towards the positive assessment of education in personal development. It is established on the basis of the literature that the release of prison education from serving the purposes of sentencing is in the right direction and it is up to the judgment and the needs of each prisoner to choose a training program for vocational training or general education.

5. Methodology oh the research

The present work is a systematic review in the field of prison education. Initially, a search for sources of the material collection was conducted. Since this systematic review concerns the training of adult inmates in Greece, we searched in national databases and search engines, article references, abstracts of papers in conference proceedings, databases of doctoral and postgraduate dissertations. More specifically, Google Scholar, online libraries of Greek universities - including the Hellenic Open University - and the National Documentation Center were used. In cases where the material was not available electronically with open access, the file was searched for in the libraries' premises, or the full text order service was used wherever possible. Also, articles published in scientific journals, such as "Adult Education," the "Aretha" Scientific Yearbook, or on scientific websites such as the Adult Education Network of Crete have been searched for. Finally, there was a personal communication with a researcher to locate research that could not be retrieved in any other way.

The systematic review was conducted between 10th January 2018 and 20th December 2018. The search resulted in 50 titles in Greek (4 doctoral theses, 42 postgraduate dissertations, and 4 articles). At the initial screening, 47 of them were identified as potentially relevant, requiring a full text review in order to select the review studies. After being studied systematically, the researches which converged on the research question were selected. Thus, we resulted in 24 studies, in which students' perceptions of the value of education addressed to inmates were investigated. 22 of these are postgraduate diploma theses, and 2 are articles.

Key elements of the identity of the analyzed researches are illustrated in the following Table:

Table 1. The identity of the researches

Author	Time	Place	Sample	Methodology
Papadaki	2006	Women's Prison of Korydallos	10 M	Qualitative
Vergidis, Asimaki, Tzintzidis	2007		37 (18M-19F)	Quantitative

Gravalou	2010	Larissa SCS	32 M (22/10)	Quantitative and Qualitative
Papathanasiou, N.	2010	Judicial Prison of Diavata	52 M	Quantitative
Petsas	2010	Korydallos SCS	10 M	Quantitative
Iliopoulou	2011	Domokos SCS and Eleonas SCS	16 (8 M – 8 F)	Qualitative
Kouimtzi	2011	3rd SCS of Thessaloniki	11 M	Qualitative
Orlis	2013	Diavata SCS and Korydallos SCS	57 (55 M – 2F)	Qualitative
Panteleri	2014	Diavata SCS	10 M	Qualitative
Papathanasiou, H.	2014	Larissa SCS	83 M(80/3)	Quantitative and Qualitative
Papaioannou	2015	Korydallos SCS	18 M	Qualitative
Chrysikopoulou	2015	Women's Prison of Elaiona	20 F	Quantitative
Sakka	2015	Korydallos SCS	7 M	Qualitative
Korella	2016	Grevena SCS	14 F	Qualitative
Mousiou	2016	Korydallos SCS	72 M	Qualitative
Mparmpakos	2016	Korydallos SCS and Grevena SCS	32 M (16+16)	Qualitative
Stouri	2016	Korydallos SCS	28 M	Qualitative
Touloumi	2016	Eleonas SCS	15 F	Qualitative
Vergopoulou	2017	Eleonas SCS	20 F	Qualitative
Kofini	2017	3rd SCS of Thessaloniki	10 M	Qualitative
Mplioumi	2017	Larissa SCS	2 M	Qualitative
Drillia	2018	Korydallos SCS	77 M (60/17)	Quantitative and qualitative
Papadionysiou	2018	Eleonas SCS	9 F	Qualitative
Stergiou	2018	Judicial Prison of Chania	10 M	Qualitative

Note: M= Men, F= Female.

As shown in Table 1, out of a total of twenty two surveys, one is of 2006, and one is of 2007, three of 2010, two of 2011, one of 2013, two of 2014, three of 2015, five of 2016, three of 2017 and three of 2018. The total sample of trainees in the systematic review is 652 inmates, of which 545 are men and 107 are women. Of the twenty four surveys, the seventeen were developed with qualitative methodology, the four with quantitative, while the three with mixed (quantitative and qualitative).

On the basis of the above methodological approaches, as listed in Table 1, they were grouped together. The surveys in which the research tool used was a questionnaire with closed-ended questions were classified as quantitative. If a questionnaire with open questions was used, they were classified as qualitative. Specifically, the analysis of the data for quantitative approach surveys was as follows: Responses were entered as a whole on a spreadsheet of the Microsoft Office Excel 2007 software.

For qualitative surveys, content analysis was selected as a data processing method. We chose to make the following distinction in qualitative surveys: a) purely qualitative, b) quantified qualitative.

6. Results

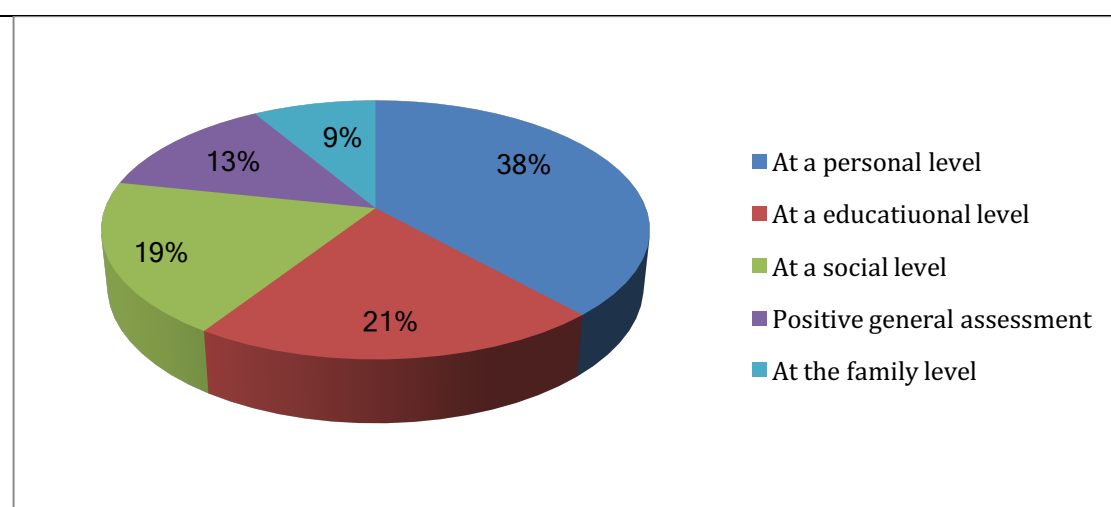### 6.1 Benefits of attendance of educational programs during confinement
The following procedure was followed in the recording of the results: Initially, the individual results of the quantitative surveys are presented, then the results of the quantified qualitative and, finally, of the purely qualitative ones.

6.1.1 Results of quantitative surveys

The total of quantitative surveys in which the benefits were investigated are 7: (Vergidis, Asimaki, Tzintzidis, 2007; Gravalou, 2010; Papathanasiou N., 2010; Petsas, 2010; Papathanasiou I., 2014; Hrysikopoulou, 2015; Drillia, 2018) and the total sample of trainees in these surveys is 291 inmates. Following are the results (Table 2 and Graph 1).

Table 2: Benefits of attendance of educational programs during imprisonment (Results of quantitative surveys)

CATEGORIES/SUBCATEGORIES	NUMBER OF TRAINEES
1. AT A PERSONAL LEVEL	
1.1 PSYCHOLOGICAL SUPPORT AND PERSONAL IMPROVEMENT	**97 (93 Μ και 4 F)**
1.2 ETHICAL EMPOWERING	**25**
1.3 IMPROVEMENT OF QUALITY OF LIFE	**23**
1.4 WIDENING OF HORIZONS	**23**
1.5 ESCAPE FROM IMPRISONMENT SUFFERING	**19 (18 Μ και 1 F)**
1.6 USEFUL EXPERIENCES	**7 (3 Μ και 4 F)**
2. AT AN EDUCATIONAL LEVEL	
2.1 KNOWLEDGE	**56 (33 Μ και 23 F)**
2.2 SKILLS	**25**
2.2 CERTIFICATE ACQUISITION	**19 (15 Μ και 4 F)**
3. AT A SOCIAL LEVEL	
3.1 EASIER PROBLEM SOLVING	**39 (1 F)**
3.2 SELECTIVITY IN COMPANIONSHIP	**34**
3.3 IMPROVEMENT INTRAPERSONAL RELATIONSHIPS	**18**
3.4 CONTACT WITH PEOPLE OUTSIDE PRISON	**1Γ**
4. POSITIVE GENERAL ASSESSMENT	**63 (56 Μ ΚΑΙ 7 F)**
5. AT THE FAMILY LEVEL (IMPROVEMENT OF FAMILY RELATIONSHIPS)	**50**

N=291 (252 Μ και 39 F) (Note that some trainees reported more than one category/subcategory)

Graph 2: Benefits of attendance of educational programs during imprisonment
(Results of quantitative surveys)

The greatest benefit that the inmate trainees consider they get from their participation in educational programs concerns their personal improvement and development in the percentage of 38%. More specifically, they

mention that they have been psychologically supported, have obtained useful experiences, have acquired the ability to solve the rising problems more easily, have become more selective in companionship, have been ethically empowered, have opened new horizons in their life and have improved its quality, escaping at the same time the suffering of imprisonment. The benefit in the field of education is recorded at 21%, with a predominant focus on the acquisition of the High School degree and the acquired basic and new knowledge of Greek, Maths, IT and English. The improvement in both the social and the family field (19% and 9%, respectively) is obvious. The inmates report that they solve their problems more easily, have improved their interpersonal relationships, and have come into contact with the outside world due to daily contact with their educators. A rate of 13% positively assesses the education without specific references.

6.1.2 Results of quantified quantitative surveys

The total of quantified quantitative surveys in which the benefits were investigated are 9 (Kouimtzi, 2011; Orlis, 2013; Panteleri, 2014; Papathanasiou I., 2014; Papaioannou, 2015; Mparmpakos, 2016; Vergopoulou, 2017; Mplioumi, 2017; Papadonysiou, 2018) and the total sample in these surveys is 162 trainees. Following are the results (Table 3 and Graph 2).

Table 3: Benefits of attendance of educational programs during imprisonment (quantified quantitative surveys)

CATEGORIES/SUBCATEGORIES	NUMBER OF TRAINEES
1. AT A PERSONAL LEVEL	
1.1 PERSONAL IMPROVEMENT	**76 (55 M και 21 F)**
1.2 ESCAPE FROM THE SUFFERING OF IMPRISONMENT	**48 (39 M και 9 F)**
1.3 PSYCHOLOGICAL SUPPORT	**34 (24 M και 10 F)**
1.4 POSITIVE EXPECTATIONS FOR FUTURE	**2**
1.5 CREATIVITY	**1**
1.6 CONFIDENCE	**1**
2. AT AN EDUCATIONAL LEVEL	
2.1 KNOWLEDGE ACQUISITION	**112 (98 M και 14F)**
2.2 DEGREE ACQUISITION	**4**
3. AT A SOCIAL LEVEL	
3.1 IMPROVEMENT OF RELATIONS WITH OTHER INMATES	**20**
3.2 ACQUISITION OF SOCIAL SKILLS	**19 (16 M και 3 F)**
3.3 ADOPTION OF DIFFERENT BEHAVIOR IN THE SCHOOL	**9**
3.4 ACQUISITION OF TEAM SPIRIT	**2**
4. AT THE FAMILY LEVEL (IMPROVEMENT OF FAMILY RELATIONSHIPS)	**14**
N=162 (148 M και 31 F) (Note that some trainees reported more than one category/subcategory	
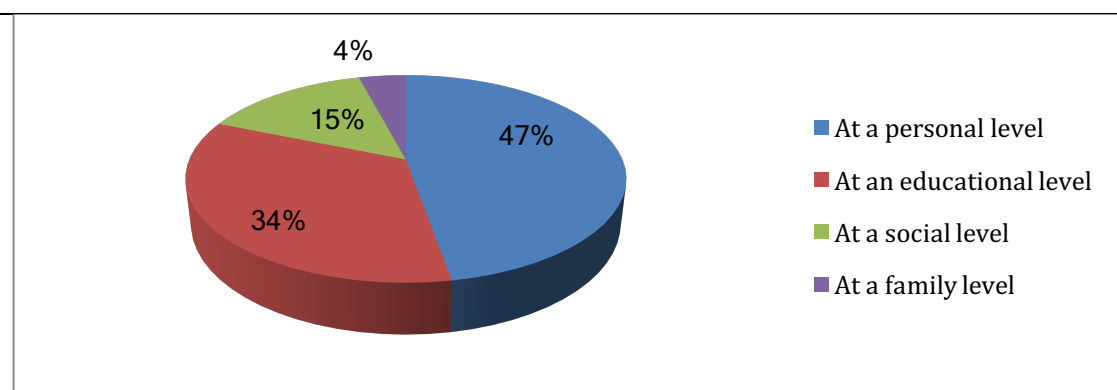
Graph 3: Benefits of attendance of educational programs during imprisonment
(Results of quantified quantitative surveys)

From the composition of the answers result in the following: in the majority, the inmate's trainees (47%) state that they have benefited mainly on a personal level. The answers concerning the personal improvement vary: plenty of references for the satisfaction of deeper inner needs, different perspectives towards life, self-confidence, self-awareness, moral empowerment, behavioral improvement, change of thinking, expression of their creative nature. Personal benefits also include escape from the suffering of imprisonment: the trainees report the use of "dead" time, employing the mind in a positive way, curbing of sick feelings and the sense that the school within the suffocating prison environment is an oasis of freedom. There are also many references for the psychological support that they receive from participating in educational programs, resulting in feeling more calmer and more peaceful, more optimistic while developing positive expectations for their future. The benefits gained in the cognitive field are reported by 34% of inmate trainees. The learning the Greek, Maths, foreign language (English) and IT fills them with confidence, and this knowledge extends and becomes emancipation as they see their spiritual horizons broaden. They also realize that they have more active participation in the lessons, they can express their opinions more comfortably and finally gain respect from everyone, which strengthens their self-image. In addition, they consider the acquisition of the High School degree as a benefit, as they hope it will be useful in the future. In the social field, 15% of the inmates realize that behavior improves due to self-improvement, and this has a positive effect on their relationships with the other inmates, they become more social, more cooperative, they adopt the rules of social life, preparing for adaptation in society after their release. Finally, a small percentage of 4% of the trainees reports that there is an improvement in their relationships with their families, which works supportively at the psychological level in the difficult phase of imprisonment.

6.1.3. Results of qualitative surveys

The total of qualitative surveys in which the benefits were investigated are 8 (Papadaki, 2006; Gravalou, 2010; Iliopoulou, 2011; Korella, 2016; Touloumi, 2016; Kofini (2017), Drillia (2018); Stergiou (2018) and the total sample of trainees in these surveys is 102 trainees (73 M and 29 F). Following are the results (Table 4).

Table 4. Benefits of attendance of educational programs during imprisonment (results of qualitative surveys)

	1	2	3	4	5	6	7	8
At a personal level	•	•	•	•	•	•	•	•
Escape from the suffering of imprisonment	√	√	√	√	√	√		√
Positive thinking		√						
Acquisition of critical judgment		√			√			
Taking on initiatives		√						
Feeling of freedom		√						
Personal change			√			√		√
Psychological support			√	√	√		√	
Self-awareness					√			
Confidence / Self-esteem					√			
Positive expectations for the future						√		
At a social level			•	•	•		•	•
School as a form of social reintegration			√	√	√		√	√
Correct choice of people		√			√		√	
At an educational level	•	•	•	•	•	•	•	•
Knowledge acquisition	√	√	√	√	√	√	√	√
Degree acquisition		√						
Contact with culture					√			

Note: Numbers 1, 2, 3, 4, 5, 6, 7, 8 correspond to the surveys in the order mentioned above.

In these surveys dominate the personal benefit of correctional education, as well. In seven of the eight studies, the positive opinions of the inmate trainees are recorded, focusing mainly on escaping from the suffering of

imprisonment, while there are important references to psychological support, to their ability to choose the right people to socialize, positive thinking and acquisition of critical judgment. Taking on initiatives, feeling of freedom, personal change, self-awareness, confidence/self-esteem, positive expectations for the future are also some of the benefits of training in prison from the trainees' angle. In addition, the trainees consider the benefit at the educational level is most important, due to the acquired knowledge, the degree acquisition, and the possibility to get in touch with culture. The social sector also shows improvement, as the majority of trainees in these surveys report that education is a vehicle for their social reintegration.

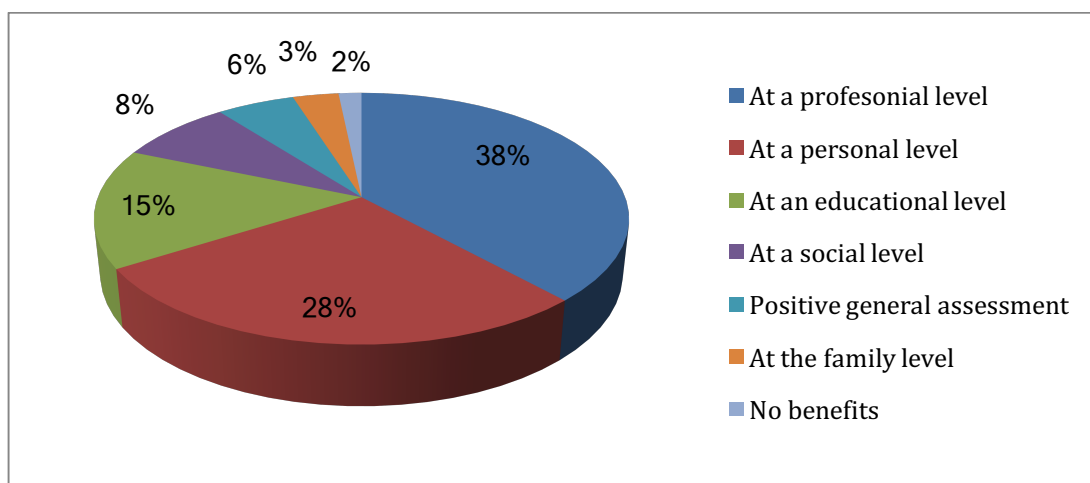*6.2 Expected benefits of attending educational programs after release*
The inmate trainees believe that the benefits of the training will accompany them outside of prison, as well. In this way, they develop positive expectations for their future, which they perceive as a normal life where they will seek the best for themselves, either at the personal, professional, or social level.

6.2.1 Results of quantitative surveys
The total of quantitative surveys in which the benefits were investigated are 7: (Vergidis et al. 2007; Gravalou, 2010; Papathanasiou N., 2010; Petsas, 2010; Papathanasiou I., 2014; Hrysikopoulou, 2015; Drillia, 2018) and the total sample of trainees in these surveys is 281 inmates. Following are the results (Table 5 and Graph 3).

Table 5: Expected benefits of attending educational programs after release (Results of quantitative surveys)

CATEGORIES / SUBCATEGORIES	NUMBER OF TRAINEES
1. AT PROFESSIONAL LEVEL / NEW PERSPECTIVES	**117 (105 M και 12 F)**
2. AT PERSONAL LEVEL	
2.1 AVOIDANCE OF ILLEGAL CONDUCT	**43**
2.2. LIFE IMPROVEMENT	**42(1 F)**
3. AT EDUCATIONAL LEVEL (Continuing Studies)	**53 (49 M και 4 F)**
4. AT SOCIAL LEVEL	
4.1 BETTER ADAPTATION IN THE COUNTRY (FOR FOREIGNERS)	**19 (17 M και 2 F)**
4.2 SOCIAL REINTEGRATION	**6 (3 M και 3 F)**
5. POSITIVE GENERAL ASSESSMENT	**17**
6. AT THE FAMILY LEVEL	
6.1 HELPING CHILDREN WITH HOMEWORK	**8**
6.2 BETTER PARENTING	**1 F**
6.3 FAMILY SUPPORT IN GENERAL	**1**
7. NO BENEFITS	**5**
N=291 (252 M και 39 F) (Note that some trainees reported more than one category/ subcategory**)**	

Graph3: Expected benefits of attending educational programs after release
(Results of quantitative surveys)

Inmate trainees in a very large percentage (38%) tranmute the benefits they consider to have acquired from their participation in educational programs to expectations of professional rehabilitation after their release. Also, there are many (28%) that believe that the personal improvement they perceive in prison not recidivism will be the basis upon which they will rely after their release in order to avoid delinquent acts and. At the same time, they hope to improve their personal life in an attempt to eliminate the prisoner's stigma. A figure of 15%, which is indeed an interesting element, wishes to continue their studies. Also, 8 out of 100 inmates believe that social reintegration will be easier, while foreigners (whose proportion is quite large in Greek prisons) believe that their adaptation to the country will be easier. Finally, 4% believe that they will transmute the benefits of their education to the family environment, either as support for children with the homework as an attempt of correct parenting or as support for the family in general. However, 2% of trainees feel they will not benefit from their release. The negative answer was given by trainees aged over 40.
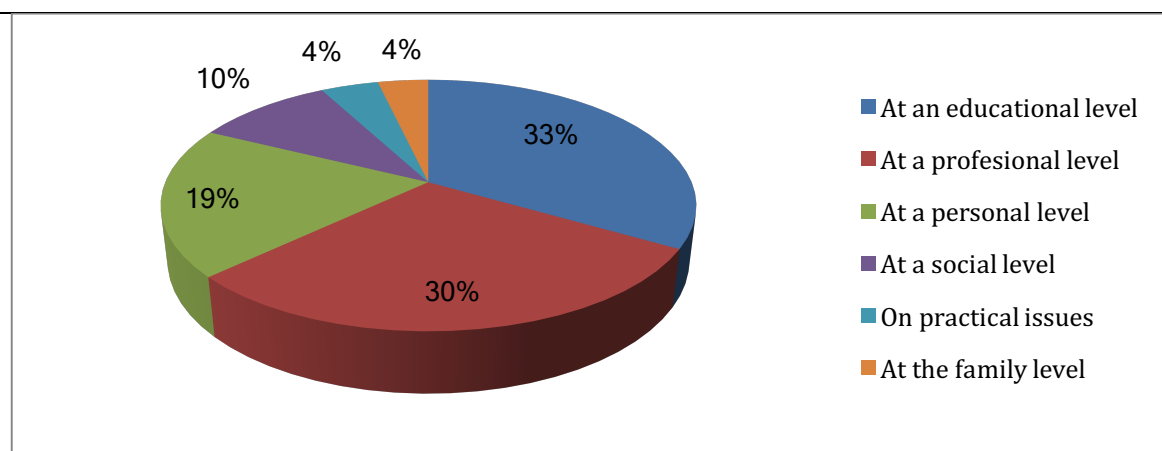
6.2.2 Results of quantitative, qualitative surveys
The total of quantified quantitative surveys in which the expected benefits were investigated are 10 (Kouimtzi, 2011; Orlis, 2013; Panteleri, 2014; Papathanasiou, 2014; Papaioannou, 2015; Sakka, 2015; Mparmpakos, 2016; Vergopoulou, 2017; Mplioumi,2017; Papadionysiou, 2018) and the total sample of trainees in these surveys is 169 trainees. Following are the results (Table 6 and Graph 4).

Table 6: Expected benefits of attending educational programs after release (Results of quantitative, qualitative surveys)

CATEGORIES / SUBCATEGORIES	NUMBER OF TRAINEES
1. AT A EDUCATIONAL LEVEL (Continuing Studies)	64
2. AT A PROFESSIONAL LEVEL / NEW PERSPECTIVES	57
3. AT A PERSONAL LEVEL	
3.1 LIFE IMPROVEMENT	32
3.2. POSITIVE POSITION ADOPTION	5
4. AT SOCIAL LEVEL (Social reintegration)	19
5. ON PRACTICAL ISSUES	
5.1 OBTAINING A DRIVING LICENSE	4
5.2 RESIDENCE PERMIT	4
6. AT THE FAMILY LEVEL	
6.1 EXAMPLE OF MISSING FOR CHILDREN	5
6.2 GOOD RELATIONSHIPS WITH THE FAMILY	1

CATEGORIES / SUBCATEGORIES	NUMBER OF TRAINEES
6.3 SUPPORT OF CHILDREN	1

N=171 (140 M και 31 F) (Note that some trainees reported more than one category/subcategory)

Graph 4: Expected benefits of attending educational programs after release
(Results of quantitative, qualitative surveys)

Expectations at the level of education compete on an equal footing with those at the professional level. It is an extremely interesting finding that trainee prisoners spontaneously report in their interviews their desire to continue their studies at 33%. The professional sector also employs trainees, who, 30%, believe that the knowledge and skills they have acquired from attending the training programs will be transformed into improvement or employment after their release. Personal improvement is not only a benefit for their present but also for the future, as personal change and a positive attitude towards life are believing that they will keep them away from delinquency and empower them at every step of their free life (19%). In addition, 10% of trainees believe that their social reintegration will be easier. And the expected benefits continue as trainees also report on practical issues (4%), such as driving license and residence permit (for foreigners). The same percentage of trainees (4%) thinks there will be a benefit in family relationships (family support, proper education, and support for children).

6.2.3 Results of qualitative surveys
The total of qualitative surveys in which the expected benefits were investigated are 7 (Gravalou, 2010; Iliopoulou, 2011; Korella, 2016; Touloumi, 2016; Kofini, 2017), Drillia, 2018); Stergiou, 2018) and the total sample of trainees in these surveys is 92 trainees (63 M and 29 F). Following are the results (Table 7).

Table 7. Expected benefits of attending educational programs after release (results of qualitative surveys)

	1	2	3	4	5	6	7
At a professional level		•	•			•	•
Professional rehabilitation		√	√			√	√
At an educational level	•	•		•	•		
Continuing Studies	√	√		√	√		
At a personal level			•		•		•
Correction			√		√		√
At asocial level		•			•		•
Social reintegration		√			√		√
At the family level		•	•				•
Support of children		√					√
Improvement of family relationships			√				

Note: Numbers 1, 2, 3, 4, 5, 6, 7 correspond to the surveys in the order mentioned above.

These surveys confirm the findings of other surveys: the majority of the trainee inmates report their ability and desire to continue their studies as a main benefit and professional rehabilitation is thought to be achieved through the attendance of the training program. Correction that will remove them from delinquency, social reintegration, and improved family relationships with particular emphasis on their children are included in the reports of trainee inmates.

7. Discussion – Conclusions

The results obtained from all surveys (whether quantitative or qualitative) are in full harmony with each other. At the same time, they are also supported by the relevant references. Regarding the benefits during the confinement, the following main conclusions were reached: **Personal Improvement**: Trainee inmates find that they are changing due to the attendance of the training program. A multipurpose matrix weaved with, psychological support, moral empowerment, escape from the embarrassment of suffering, has been built in the prison school and opens up new horizons. The positive and constructive experiences of trainees and the knowledge that choices determine life are transformed into adopting a healthy attitude towards life. Developing the ability to come in contact with themselves, to understand and to evaluate positively or negatively their different aspects and to adapt them leads to a deeper knowledge of themselves and is indissolubly linked to the appreciation of themselves. Thus, as stated by Dimitrouli (2016), the transformational dimension of the education provided in prison is highlighted, which "involves the exploration, understanding, and alternative view of previous dysfunctional assumptions."

Knowledge and skills: The knowledge and skills gained from their participation in educational programs run through all the reports of trainee inmates. The literacy taught corresponds to the development of basic skills or functional skills. The trainee inmates know that as they attempt to change, the knowledge and new skills they acquire are suitable for their new way of life. All their knowledge, skills, and experience are now defined as "human capital" (Fokiali, n.d. as cited in Dimitrouli, 2016).

Social benefit: Social interaction with the right people is seen as a benefit by many trainees, as they obviously perceive that bad relationships have been a cause of their delinquency, so seeking contact with healthy standards is important to them for the additional reason that it acts as an antidote to contact with the prison subculture. In addition, the improvement of relations with their retainers, the fact that they can manage and resolve the problems that arise within the interpersonal relationships, working together in a social interaction (Makryniotis, 2001, p.45) active self, able to intervene by changing the social conditions and the structure of interaction (Dimitrouli, 2016) to their advantage.

Regarding the expected benefits after the imprisonment, the following main conclusions were reached:

New perspectives in the professional field: Trainee inmates directly associate the knowledge and skills they acquire from their training with their professional rehabilitation. They know that even after release, they will be accompanied by the prisoner's mark. They also know that this is a hindrance to finding a job. Who wants a former prisoner in his job? However, trainees hope to have a second chance to improve their working life conditions by completing their studies at the prison school. They appear to be empowered mainly by the power given by the knowledge of knowledge. The findings of the present surveys on the expected benefits in the professional field are in line with those of many real-life investigations after release. An example is the study by Wilson, Gallagher, and MacKenzie (2000), which found improved post-prison employment probability of inmates participating in correctional education.

Continuing studies: It is indeed a surprising finding that the "difficult" task of joining real life involves the decision to continue and complete studies and is linked to the vision of vocational rehabilitation. We do not know how many will realize their dream. However, they see their studies as the key to success, to unleash from the "vicious circle" of life. It is their chance to prove they are capable, and they can achieve a great goal, feel

equal to others, negotiate fear and insecurity for the future. They have structured the perspective of their lives based on their studies (Dimitrouli, 2016).

Social reintegration: According to the 2009 Epanodos (Legal Representative for the trainning and rehabilitation of inmates and the released) Report, the released inmates face family, social, reintegration and prejudice problems from the community. Education is directly linked to social reintegration. Trainee inmates advocate this view. Removing from delinquent behavior is the foundation of social reintegration. This is what the trainees know, and after seeing their personal change and the adoption of a new attitude of life and behaviors acceptable to the community, they expect their social reintegration to be easier. Education gives them opportunities to use and acquire social capital (Farrall, 2004, as reported in Farrall et al., 2010).

This systematic review has attempted to obtain a more holistic picture of the benefits of adult inmates trained in Greece in their participation in educational programs. The methodological limitation is that we have looked at surveys that have been developed in Greece and are in databases. We believe, however, that it is a useful contribution to future adult inmate researchers, as well as a better understanding of the field so that the relevant education policy can be more effectively defined. Of particular interest is research into the contribution of inmates to educational programs in their reintegration after their release.

References

Commission of the European Communities (1995). *Teaching and Learning. Towards the Learning Society.* White Paper of Education and Training. Brussels. Publication Office of European Union.

Darkenwald, G. G. & Merriam, S. B. (1982). *Adult Education. Foundations of practice.* New York: Harper and Row.

Dimitrouli, K., (2016). *Exploring the perceptions of released inmates for the role of education, during and after their persecution, to their initial change and social reintegration. The case of the released inmates supported by the Epanodos.* Master's Thesis. Patras: Hellenic Open University (In Greek).

Drillia, U. (2108). *Second Chance Schools trainees in prisons: Case study: Expectations, Barriers, Transformations. Based on trainees - prisoners view from prison of Korydallos area.* Master's Thesis. Patras: Hellenic Open University (In Greek).

Eikeland, O.-J., Manger, T. & Asbjørnsen, A. (2009). *Education in Nordic Prisons. Prisoners' educational background, preferences and motivation.* Copenhagen: Nordic Council of Ministers. Retrieved from http://www.norden.org/en/publications/publications/2009-508.

Erisman, W. & Contardo J. (2005). *Learning to Reduce Recidivism*: A 50-State Analysis of Postsecondary Correctional Education Policy. The Institute for Higher Education Policy.

Esperian, J. (2010). The Effect of Prison Education Programs on Recidivism. *The Journal of Correctional Education 61 (4),* pp.316-334

Farrall, A., Bottoms, S., & Shapland, J. (2010). Social Structures and Desistance from Crime. *European Journal of Criminology, 7 (6),* 546–570**. https://doi.org/10.1177/1477370810376574**

Farrington, D, Gallagher, B, Morley, L, St. Ledger, R &West, D. (1986). Unemployment, school leaving and crime. *British Journal of Criminology, 26,* pp. 335-356. https://doi.org/10.1093/oxfordjournals.bjc.a047626

Finn, P. (1998). Job Placement for Offenders in Relation to Recidivism. *Journal of Offender Rehabilitation. 28(1/2)*, pp. 89–106. http://dx.doi.org/10.1300/J076v28n01_06

Flanagan, T. (1994). *Prison Education Research Project Final Report.* Criminal Justice Center, Sam Houston State University.

Gaes, G. (2008). *The Impact of Prison Education Programs on Post-Release Outcomes.* Reentry Roundtable on Education.

Gassuka, M. (n.d.). *Educational techniques for inmates and released inmates. Educators' Training Program - Educational Program for the Theoretical Training Trainers, Volume II.* Athens: EkePis. (In Greek)

Gravalou, A. (2010). *Investigating the views of adult trainee inmates on the teaching techniques applied at Second Chance School in Judicial Prisons of Larissa.* Master's Thesis. Patras: Hellenic Open University. (In Greek).

Grizou, M., Mpanos, V., Rogdaki, A., Tsolakopoulou, I., (2008). *Correctional education - The Greek version of a European idea.* Dialogue for the 8th Educational Conference of OLME. Retrieved from http://dialogos-8osynedrio-olme.com/2008/05/blog-post06.html (In Greek).

Harer, M. (1994). *Recidivism Among Federal Prisoners Released in 1987*. Washington, DC: Federal Bureau of Prisons.

Hiliopoulou, V. (2011). *Motives for participation and attitudes of trainees in SCS Central Greece prisons*. Master's Thesis. Library Hellenic Open University (In Greek).

Hondolidou, E. (2003). The concept of literacy in Second Chance Schools. In: Vekris, L. - Hondolidou, E. (eds.) *Study Specifications for Second Chance Schools*. Athens: YPEPTH, GSGE, IDEKE, pp. 35-46 (In Greek).

Hrysikopoulou, E. (2015). *The implementation and use of participatory-active adult education training techniques in Second Chance Schools.Views of trainees attending the SCS of Eleonas women's prison in Thiva*. Master's Thesis. Patras: Hellenic Open University (In Greek).

Kett, M. (1995). *Survey of prisoners' attitudes to education*. Wheatfield Place of Detention. Unpublished report.

Kofini, E. (2017). *Facing the social exclusion of prisoners through their participation in Second Chance Schools*. Master's Thesis. Library Hellenic Open University (In Greek).

Korella, A. (2016). *Motives for participation and perceptions of trainees in the 1st SCS (Prison) of Grevena* Master's Thesis. Patras: Hellenic Open University (In Greek).

Kouimtzi, K.(2011).*Investigation of motivation, intentions and trainees-inmates expectations within the General Detention Center of Thessaloniki - 3rd Second Chance School of Thessaloniki*. Master's Thesis. Library Hellenic Open University (In Greek).

Lejins, P. P. (1971). *Sourcebook on Prison Education: Past, Present, and Future*. Springfield Ill., Thomas

Makriniotis, D. (2001).Social stigmatization of the self and the body. In K. Livieratos (Ed.), D. Makrinioti (trans.), *Position: notes on the managing a damaged identity*, pp 9-58. Athens: Publications Alexandria (In Greek).

May, C. (1999). *Explaining reconviction following a community sentence: the role of social factors*. Home Office Research Study No. 192. London: Home Office.

Motiuk, L. (1996). *Targeting employment patterns to reduce offender risk and need*. Forum on Corrections Research, 8(1).

Mparmpakos, A. (2016). *Educational Needs and Barriers to Learning in Second Chance Schools (SCS) of Correctional Centers of Larissa and Grevena*. Master's Thesis. Patras: Hellenic Open University (In Greek).

Mplioumi, T. (2017). *Lyceum education for vulnerable social groups: The case of detainees in the judicial prison in Larissa*. Master's Thesis. Patras: Hellenic Open University (In Greek).

Muñoz, V. (2009) *The Right to education of persons in detention*. Report of the special rapporteur on the right to education, Human Rights. Council, UN.

Orlis, S. (2013). *The needs for career counseling of vulnerable social groups: the case of SCS trainees in Diavata and Korydallos Correctional Centers* Master's Thesis. Patras: Hellenic Open University (In Greek).

Panteleri, A. (2014). *The views of vulnerable social groups on their education programs: The case of Second Chance School in Diavata Prison*. Master's Thesis. Patras: Hellenic Open University (In Greek).

Papadaki, V. (2006). *Study on the education, training and employment of prisoners in the context of their social reintegration. The case of the Central Prisoner of Korydallos*. Master's Thesis. Library Hellenic Open University (In Greek).

Papaioannou, V. (2015). *The views of inmates in Korydallos prison for their education at the Second Chance School*. Master's Thesis. Patras: Hellenic Open University (In Greek).

Parker, E.A. (1990). The Social-Psychological Impact of a College Education on the Prison Inmate. *Journal of Correctional Education*, 41(3), pp. 140-146.

Papadionysiou, D. (2018). *Investigating views of trainee women inmates for their education at the Second Chance School at Eleona prison in Thiva*. Master'sThesis. Hellenic Open University (In Greek).

Papathanasiou, I. (2015). *Investigating views of trainee inmates on attendance at the Second Chance School. A Case Study: The Second Chance School of the Prison of Larissa*. Master's Thesis. Patras: Hellenic Open University (In Greek).

Papathanasiou, N. (2010). *Correctional education. The example of the Second Chance School Diavata Thessaloniki*. Master's Thesis. Aristotle University of Thessaloniki (In Greek).

Petsas G. (2010). Inmates Training: The Second Chance School in Korydallos prison. *Adult Education, V.34, pp. 31-41.* (In Greek).

Piche, J. (2008). Barriers to Knowledge Inside: Education in Prisons and Education on Prisons. *Journal of Prisoners on Prisons*, Vol. 17, No. 1.

Putnam, R. (2000). *Bowling alone: The collapse and revival of American community*. Simon and Schuster. http://dx.doi.org/10.1145/358916.361990

Rand Corporation (2013). *Evaluating the Effectiveness of Correctional Education: A Meta-Analysis of Programs That Provide Education to Incarcerated Adults*. Retrieved from https://www.rand.org/pubs/research_reports/RR266.html

Rigoutsou, H. (2005). *Inmates Councelling*. Athens: IDEKE. Ministry of Education, EPEAEK 2,   Measure 1.1. Act 1.1.2., Act 1.1.2V. Retrieved from http://repository.edulll.gr/132 (In Greek).

Sakka, V. D. (2015). *The Right to Prison Training: Case Study in the Close Prison in Patra*. Master's Thesis. Athens: University of Athens, School of Education, *Department of Early Childhood Education* & University College London,   Institute of Education. Joint program postgraduate studies "Education and Human Rights" (In Greek).

Spinelli, K. (2009). The inter-institutional training counteracts the risk factors for redicivism? Proceedings of the conference presentation on: *The education in prisons: Rehabilitation Lever*. Athens 05/09/2009. Retrieved from http://www.epea.org/epeahellas (In Greek).

Stergiou, A. (2018). *The expansion of the training needs of the persons in custody (prisoners). The case of the Detention Center of Chania*. Master's Thesis. Patras: Hellenic Open University (In Greek).

Stouri, V. (2016). *Career counseling for adult prisoners*. Master's Thesis. Patras: Hellenic Open University (In Greek).

Theophilou, P. (2004). *The professional preparation and integration of people at risk of social   exclusion: young ex-prisoners*. Unpublished Master's Thesis. Athens: Panteion University (In Greek).

Touloumi, A. (2016). *Education in prison: learning motives, barriers and the role of adult trainer in prisons. The case of inmates in SCS at Eleonas women's prison in Thiva*. Master's Thesis. Library Hellenic Open University (In Greek).

Ubah, C. (2005). An Examination of Academic, Policy and Social Considerations of Correctional Education and Offender Recidivism: Lessons for 21st Century Criminology, *2*, No2 *Justice   Policy Journal*. Retrieved from *http://www.antoniocasella.eu/nume/Ubah_2005.pdf*

Vacca, J. S. (2004). Educated Prisoners are less likely to Return to Prison. *The Journal of Correctional Education*, 55(4) pp. 297-305.

Varvatakos, N. (2010). Correctional education. Magazine *As if... a prisoner*. March-April - May 2010, pp. 4-6 (In Greek).

Vergidis, D., Asimaki, A., Tzintzidis, A. (2007). *Correctional education. The Second Chance   School of Korydallos Prison*. Arethas Scientific Yearbook, Volume IV, 61-93. Patras: University of Patras, School of Humanities and Social Sciences, Primary Education, pp. 61-89 (In Greek).

Vergopoulou, P. (2017). *Correctional education. Inmates' hope for a new start. The case of inmates at Eleonas prison in Thiva*. Master's Thesis. Patras: Hellenic Open University (In Greek).

Welch, M. (1996*). Corrections: A Critical Approach*. New York: The McGraw- Hall.

Wilson, D. B., Gallagher, C. A., & MacKenzie, D. L. (2000). A meta-analysis of corrections-based education, vocation and work programs for adult offenders. *Journal of Research in Crime and Delinquency*, *37(4)*, pp. 347-368. http://dx.doi.org/10.1177/0022427800037004001

Leading Special Education Teachers to Envision Evidence-based Metacognitivist Instructional Strategies in Inclusive Education Schools

Zaid N. Al-Shammari, Ph.D.[1]

[1] College of Education, Kuwait University. Email: zaid.alshammari@ku.edu.kw

Abstract

The present study intends to inspire special education teachers to envision ways in which to use evidence-based metacognitivist instructional strategies with a higher effect size than 0.4 in inclusive education schools. These evidence-based instructional strategies included: study skills, concept mapping, and reciprocal teaching. Recommendations are presented to address intensive professional development and workshops for special education teachers.

Keywords: Evidence-Based Metacognitivist, Instructional Strategies, Inclusive Education

Evidence-based instructional strategies have become a new trend in the education of students with special educational needs and disability (SEND). Studies (see, e.g., Hattie, 2009-2017) have shown that these instructional strategies have positive influences on student learning and achievement. Hattie (2017) provided an effect size (Cohen's d) for each evidence-based instructional strategy in education. Specifically, Hornby (2014) determined the effect size (Cohen's d>0.4) for each evidence-based cognitivist instructional strategy that could be most effectively implemented in inclusive education classrooms when teaching students with SEND. These evidence-based cognitivist instructional strategies with effect sizes include: study skills, concept mapping, and reciprocal teaching (Hornby, 2014, 2018; Al-Shammari, 2019A, 2019B). Each is described below.

Study Skills

Study skills are a teaching strategy that provides students with useful techniques for learning new materials. Research (see, e.g., Cornford, 2002) has indicated that students who use of study skills strategy develop self-regulatory and procedural skills, which positively influences their achievement. Other research (see, e.g., Al-Shammari, 2019B) has shown that special education teachers who teach students with SEND in inclusive education schools practiced study skills, including note-taking and representation, at a high level when following evidence-based metacognitivist instructional strategies. According to Chang and Ku (2015), the three essential components of note-taking are: quantity, quality, and representation. The quantity of notes has a direct correlation with higher test scores. The quality of notes taken reflects an understanding of the material. Representation is one way in which students can summarize information and even create concepts maps. All in

all, the study skills strategy enables students not only to define, organize, and retrieve concepts, but also facilitates their understanding of how to draw lines and images to convey abstract concepts relating to complex definitions (Terry, 2003). In addition, the study skills strategy enhances students' in-depth learning, performance, achievement, competence, participation, and interaction in learning activities, and memorization (Al-Shammari, 2019B, p68).

Implementation of the study skills strategy varies among inclusive education schools. Students can start by engaging in note-taking, highlighting information, creating a "to do" list, following a schedule, and setting aside time to study/work (Chang & Ku, 2015). For instance, students who are being taught how to take notes in class should learn to condense the original information and extract concepts using critical thinking skills. They should also learn to summarize and use concept mapping to reorganize information. Students who engage in these processes will improve their comprehension and understanding through information integration. In teaching these strategies, special education teachers should first use explicit instruction when teaching study skills and then model ways to engage in note-taking, such as using index cards or concepts maps. Other methods of successfully practicing the study skills strategy in the classroom include: learning study skills (e.g., note-taking, highlighting, and summarizing), and gaining the ability to intensively summarize, extract, and gather original ideas and concepts from the content being studied (Al-Shammari, 2019B, p69).

Concept Mapping

Concept mapping is a teaching strategy that involves the graphic depiction of the structure of complex concepts. Research by Shukry-Balaa and El-Hassan (2018) showed that concept mapping helps to improve students' performance and achievement. In addition, the concept mapping strategy is helpful in assisting students in forming connections between concepts, organize a hierarchy of concepts, gain facility in creative thinking, learn, organize abstract thoughts, and develop critical thinking skills (see, e.g., Al-Shammari, 2019B, p72-74). Specifically, students who receive instruction on the concept mapping strategy gain the ability to visualize and organize their ideas (Teo, Shaw, Chen, & Wang, 2016). According to Al-Shammari (2019A), the five components of concept mapping are: brainstorming, organizing concepts, developing relationships between concepts, linking connections among concepts, and reviewing concept mapping.

Implementation of the concept mapping strategy varies among inclusive education schools. For instance, students must learn to organize information graphically. The important components of concept mapping are the main ideas enclosed in boxes or circles, flowing from top to bottom in a hierarchical diagram. Typical concept mapping conventions include having the core concepts listed at the top of the diagram, with associated concepts linked to them. Arrows are then drawn to connect the boxes, showing relationships among concepts. Special education teachers who are introducing concept mapping to students with SEND must first provide an overview and then give examples. Next, the students receive a topic and are guided through the concept mapping process, learning to focus on the main ideas, and how to determine the important concepts that stem from them. The concept map should be well organized and follow typical map conventions, with short and clear concepts (Birbili, 2006)**.** Other steps in successfully practicing the concept mapping strategy in the classroom include: brainstorming, organization of ideas and concepts, designing a hierarchy shape to systematically connect ideas and concepts, connecting ideas and concepts based on the relationships among them, and reviewing the concept map to make sure ideas and concepts are addressed correctly (see, e.g., Al-Shammari, 2019B, p78-80).

Reciprocal Teaching

Reciprocal teaching is a strategy that guides both teachers in modeling lessons and students in leading learning and group discussions. Specifically, reciprocal teaching is "an instructional procedure designed to enhance students' comprehension of text" (Oktarina, 2019, p 62), and provides students with four specific strategies: predicting, questioning, clarifying, and summarizing (Oczkus, 2003). Lederer (2000) explained that reciprocal teaching is a good technique to use with students with learning disabilities because it fosters independent reading skills. In addition, the use of the reciprocal teaching strategy by special education teachers has shown positive effects in inclusion classrooms (Al-Shammari, 2019C). Research (King and Johnson, 1999; Kelly, Moore, and

Tuck, 1994) has demonstrated that the strategy improves student comprehension and assists students in learning four skills: predicting, clarifying, questioning, and summarizing.

Implementation varies among inclusive education schools. For instance, the acquisition of strategies is a joint responsibility shared by the special education teacher and students with SEND; although the teacher initially assumes primary responsibility for the instruction and modeling of strategies, this responsibility is gradually transferred to the students with SEND, with all students expected to participate in the discussion. The special education teacher enables this participation by providing scaffolds in the form of supporting statements and prompts or altering the demands on students with SEND. Finally, these students are continually reminded that the strategies are useful methods for improving their comprehension of texts. In continually trying to construct meaning from the text, students come to realize that reading requires not only the ability to decode words but also metacognitive strategies that facilitate constructive and evaluative activities (Allen, 2003, p324; Palinscar and Brown, 1984). Other procedures linked to the four steps in reciprocal teaching that are necessary to successful implementation and practice in the classroom include: (1) summarizing—the teacher guides students in summarizing the contents through keywords and ideas, so they can visualize the big picture and main essential components and elements; (2) questioning—the teacher asks students to ask themselves a few questions after gaining a comprehension of the content, enabling students to absorb important knowledge and gain the skills needed to ask and write questions; (3) clarifying—the teacher provides a question and feedback based on a discussion with all students on what they learned from the content being taught, so the students can correct or reinforce their answers; and (4) predicting—the teacher asks the students to take time to read the content again and then think about it and anticipate next steps so that the students can form expectations and make connections among ideas in order to focus on them (see, e.g., Al-Shammari, 2019B, p84-88).

Recommendations for Special Education Teachers

The recommendations offered here have been developed according to the research perspective.

First, special education teachers should attend workshops and professional development (PD) programs focused on evidence-based teaching and learning strategies, where they can gain knowledge and skills and be exposed to the most up-to-date research on teaching. These PD programs should be planned, presented, and practiced following a microteaching practice method in which special education teachers work in groups to develop and present a series of instructional materials. This recommendation is supported by research (i.e., see Al-Shammari, 2019A, 2019B; Kiewra, 2002).

Second, those special education teachers whose educational qualifications are not in special education should receive intensive professional development programs and workshops to fill the gaps in their teacher education preparation. Further, recruitment and hiring policies in the special education teaching profession should focus on hiring teachers who specialize in teaching students with disabilities and have special educational needs. This recommendation is supported by research (i.e., see Al-Shammari, 2019C).

Last, special education teachers should be encouraged to examine their own teaching performance in order to evaluate their effectiveness in student learning and learning outcomes. Findings can aid special education teachers in assessing their teaching strengths and weaknesses and gaining insights into student learning and learning outcomes. With this information, special education teachers can plan instructional changes and implement them to measure how they may or may not improve student learning and learning outcomes. This recommendation is supported by research (i.e., see Al-Shammari, 2012, 2018).

References

Allen, S., (2003). 'An analytic comparison of three models of reading strategy instruction,' *International Review of Applied Linguistics in Language*, 41(4), p319–339.

Al-Shammari, Z., (2012). 'Using AMLO to improve the quality of teacher education outcomes,' *Educational Research Quarterly,* 36(1), p48–62.

Al-Shammari, Z., (2018). 'Inclusive and special education teachers can improve teaching and learning outcomes using AMLO in Kuwait's inclusive education schools,' In *International conference on education quality (ICEQ 2018) abstract book* (p3). Agadir, Morocco: Ibn Zohr University.

Al-Shammari, Z. (2019A). 'How well effective evidence-based cognitivism instructional strategies practiced by inclusion classroom teachers in Kuwait?', *Saudi Journal of Special Education*.

Al-Shammari, Z. (2019B). *Evidence-based teaching strategies with the effect size for all levels of education*, 1st ed. Kuwait, Hawally: Islamic Zamzam Library.

Al-Shammari, Z. (2019C). 'Effects of special education teachers' specialization and teaching experience on using evidence-based cognitivist instructional strategies in inclusion classrooms,' Conference: 2nd International Conference on Research in Education, Teaching and Learning. ISBN: 978-609-8239-39-3. p41-45. France, Paris: 19-21 April 2019.

Birbili, M., (2006). 'Mapping knowledge: Concept maps in early childhood education,' Available at: http://ecrp.uiuc.edu/v8n2/birbili.html.

Chang, W., and Ku, Y. (2015). 'The effects of note-taking skills instruction on elementary students' reading,' *Journal of Educational Research*, 108(4), p278–291.

Cornford, I. (2002). 'Learning-to-learn strategies as a basis for effective lifelong learning,' *International Journal of Lifelong Education,* 21(4), p357–368. doi:10.1080/02601370210141020

Hattie, J.A. (2009) *Visible learning: A synthesis of 800+ meta-analyses on achievement*. Abingdon: Routledge.

Hattie, J.A., (2011). 'The argument: Visible teaching and visible learning,' *Visible Learning for Teachers*, p22–38.

Hattie, J.A., (2015). 'The applicability of visible learning to higher education,' *Scholarship of Teaching and Learning in Psychology,* 1(1), p79.

Hattie, J.A., (2017). 'Updated list of factors influencing student achievement,' Available at: http://www.evidencebasedteaching.org.au/hatties-2017-updated-list/ (Accessed 11 September 2017)

Hornby, G., (2014). *Inclusive special education: Evidence-based practices for children with special needs and disabilities*. New York: Springer

Hornby, G., (2018). 'Eight key evidence-based teaching strategies for all levels of education,' *Australian Educational Leader,* 40(4), p28–31.

Kelly, M., Moore, D., and Tuck, B. (1994). 'Reciprocal teaching in a regular primary school classroom,' *Journal of Educational Research*, 88(1), p53–62.

Kiewra, K.A., (2002). 'How classroom teachers can help students learn and teach them how to learn,' *Theory into Practice,* 41(2), p71–80. doi: 10.1207/s15430421tip4102_3

King, C., and Johnson, L. (1999). 'Constructing meaning via reciprocal teaching,' *Reading Research and Instruction*, 38(3), p169–186.

Lederer, J., (2000). 'Reciprocal teaching of social studies in inclusive elementary classrooms,' *Journal of Learning Disabilities*, 33(1), p91–107.

Oczkus, L. D., (2003). *Reciprocal teaching at work: Strategies for improving reading comprehension*, Newark, DE: International Reading Association.

Oktarina, P.S. (2018). 'Innovative teaching strategies for teaching reading: Reciprocal teaching strategy and face story strategy,' *Yavana Bhāshā: Journal of English Language Education*, 1(1), 58-68.

Palinscar, A.S., and Brown, A.L. (1984). 'Reciprocal teaching of comprehension fostering and comprehension monitoring activities,' *Cognition and Instruction*, 1, p117–175.

Shukry-Balaa, R., and El-Hassan, K. (2018). 'The effect of brain-compatible strategies on problem solving performance of grade 4 and 5 Lebanese students', *European Scientific Journal,* 14(19), p149.

Terry, W.S., (2003). *Learning and memory: Basic principles, processes, and procedures*, 2nd ed. Boston: Allyn and Bacon.

The Challenges of the Inmates' Adult Educator. A Greek Case Study

Petros Tzatsis[1], Evaggelos Anagnou[1], Efthymios Valkanos[1,2], Iosif Fragkoulis[1]

[1] School of Humanities, Hellenic Open University, Patra, Greece
[2] Department of Educational and Social Policy, University of Macedonia, Thessaloniki, Greece

Correspondence: Petros Tzatsis, Hellenic Open University, Patra, Greece. Postal address: Galatas, Chania, ZC 73100, Greece. Tel: 30-694-593-8297. E-mail: ptzatsis@yahoo.gr

Abstract

The inmates' adult educator implements the principles of adult education in the enclosed prison environment and makes efforts to reintegrate them socially. In Greece, inmates' adult educators mainly work in Second Chance Schools (SCS) operating in prisons. The purpose of this paper is to investigate the challenges encountered by inmates' adult educators at the Second Chance School of Chania Prison. The qualitative method was used in this research. According to the results of the survey, the inmates' adult educators of the SCS of Chania Prison believe the challenges they encounter derive mainly from the conditions of imprisonment and the inelastic way of prison operation. In addition, they consider that several barriers arise from the particular characteristics of the prisoners and from the deficiencies of the inmates' adult educators themselves.

Keywords: Barriers in Prison Education, Challenges of Inmates' Adult Educator, Second Chance Schools in Prisons

1. Introduction

Inmate's education is intended to change prisoners' behavior so that they can live in harmony with other prisoners and later with the wider community, with the ultimate purpose of "breaking the cycle of crime" (The Pew Charitable Trusts, 2010, p. 23). Thus, the idea that inmates' adult education plays a crucial reforming role and contributes to the successful social reintegration of prisoners is commonly accepted (EC, 2011).

Nevertheless, many prison systems are in crisis, have the insufficient infrastructure and are crowded with prisoners, with the result that prison management becomes more and more difficult (Muñoz, 2009). Additionally, in the last decade of the 20th century, prison education programs in the USA and European countries have been reduced in part, due to the rapid development of prisons, the frequent transfer of prisoners from one prison to another and the reduced state funding (Lawrence, Mears, Dubin, & Travis, 2002; Spangenberg, 2004; EC, 2011; Rand Corporation, 2014).

2. Barriers in prison education

This section refers to the barriers that arise in inmates' adult education, as well as to the challenges encountered by inmates' adult educators, according to the relevant bibliography.

2.1 Educational inequalities as a barrier to prison education

Many barriers arise in prison education from pre-existing educational inequalities experienced by prisoners as students in the formal education system (Vergidis, 2014). These have their starting point in the socio-economic level of prisoners (Social Inequality, n.d.), but also in the education system itself (Reducing inequalities, 2015). In other words, many of the barriers that arise in inmates' adult education are directly related to the inmates' negative experiences in the education system (Vergidis, 2014).

2.2 Incarceration conditions as a barrier to the inmates' education

Many barriers arise in the inmates' education from the prison conditions themselves (Tsimboukli & Phillips, 2010; Papaioannou, Anagnou, & Vergidis, 2016) and derive from the structure of prison. A fundamental challenge, then, is to reconcile the objectives of a "punitive" criminal system with the objectives of education (Bayliss, Brimecombe, Brimecombe & Pomeroy, 2008).

Muñoz (2009) identifies barriers to inmates' education in internal-dispositional or external (institutional-situational). Internal-dispositional barriers are related to the negative experiences of inmates before and during imprisonments, such as the effects of a disadvantaged childhood, previous educational failures, low self-esteem, drug, and alcohol abuse and learning disabilities. External barriers are related to the interruption of education due to prison administrators' decisions, or the abrupt transfer of inmates from one prison to another, to the lack of infrastructure (libraries, educators and educational material), lack access to information and internet technologies and to inadequate funding. Certainly, according to Chr Breivik (2010, as cited in Linardatou & Manousou, 2014), access to and use of the Internet in prisons is considered essential.

The European Commission (2011) also considers as the main barrier to the inmates' education the transfer of inmates between institutions, as well as the fact that the long duration of the sentence affects the inmates' educational path. Another inhibitory factor in the inmates' education is the pressure exerted on inmates wishing to attend a program by other inmates who consider that inmates' education is of no value (Brosens, De Donder, Vanwing, Dury, & Verté, 2013; Dixon and Mentor, 2005, as cited in Kabeta, 2017).

Other factors that impede the learning process in prisons, according to Kabeta (2017) are a) bureaucratic procedures of the prison, b) prison regulations, which do not allow the educators to bring the educational material they want within the prison area (c) prison regulations, which restrict the educators to take appropriate measures against inmates who are late in the course or interrupt it, (d) bad behavior and disobedience of the inmates and (e) harassment of woman educators.

2.3 The challenges of the work of the inmates' adult educator

The profession of inmates' educator is becoming more and more difficult (Carr, 2000) and indeed, the inmates' educator does not enjoy special professional recognition (Sayko, 2005). Carr (2001) mentions that the legal reality for inmates' educators in prisons is a risk factor for their lives but also for their careers.

Obviously, the challenges faced by inmates' adult educators stem from the barriers that the prison education itself has to overcome. Thus, pre-existing social and educational inequalities (Tsimboukli, 2008), which were mentioned in the previous chapter, create additional barriers to the effective implementation of the work of inmates' adult educators. Similarly, the internal-dispositional or external (institutional-situational) barriers (Muñoz, 2009), that are also mentioned in the previous chapter, directly concern inmates' adult educators.

In addition to the above barriers, the inmates' adult educator is called upon to overcome challenges due to his professional status and identity within the adversities of the dipole of correction and education. The research, therefore, highlights three types of barriers faced by inmates' educators: (a) barriers related to the Cultural Shock experienced in the prison environment, (b) barriers related to the educators' deficiencies in their knowledge and skills and (c) barriers resulting from the existential and philosophical crises the educators experience (DelliCarpini, 2008; Jurich, Casper & Hull, 2001).

As far as the Cultural Shock is concerned, according to Wright (2005a), inmates' adult educators are not trained and prepared for the Cultural Shock that they will experience within the prison environment. This Cultural Shock arises a) from the wrong perception of the educators themselves and the whole society of prisons and b)

from the management of the sub-culture of prisoners and prison staff, which is usually opposed to any different culture (of educators) trying to change the balance in the prison area (Patrie, 2017). Consequently, the challenge for inmates' adult educators to manage this Culture Shock seems to be fairly major.

Concerning the challenges of the work of inmates' adult educators, which result from the lack of knowledge and skills, Patrie (2017) states that these arise from the fact that the inmates' population is characterized by great heterogeneity. Thus, Patrie (2017) includes a list of the most significant deficiencies in knowledge and skills, those of communication, understanding of human behavior, and specialized teaching techniques. In addition, many educators are both unprepared and unskilled to cope with the education of inmates with learning disabilities, behavioral problems and physical disabilities (Kvarfordt, Purcell & Shannon, 2004, as cited in Ely, 2011). Inmates' adult educators also have difficulty in their work because they use established educational practices that are not effective in the context of prison education (Gehring & Wright, 2006; Desir & Whitehead, 2010). Furthermore, Ely (2011) underlines the need for training of inmates' educators, since many of them are not certified and even teach cognitive subjects without being trained in them.

Regarding existential and philosophical crises, Patrie (2017) highlights the challenge of inmates' adult educator to manage with both correctional and educational system. Therefore, inmates' adult educators should familiarize themselves with the system, which they do not know well, namely the correctional and they should have time to reflect on their practice and share it with other educators so that they can understand their experiences. Surveys also show that communication with other inmates' educators (DelliCarpini, 2008) and educational guidance by experienced mentor educators (Hurkmans & Gillijns, 2012) may seem quite useful.

Wright (2004) refers that inmates' educators usually suffer from an identity crisis due to the fact that they have to cope with a double role, that of the educator and that of the reformer of prisoners. Indeed, he states that the common burnout of inmates' educators is rooted in this internal ideological struggle that they experience, but also in the toxic culture of the prison itself (Wright, 2005b). In other words, the most important challenge of inmates' educators is to cope with the contradiction they experience in prison. This contradiction concerns the fact that the debilitating nature of the prison conflicts with the empowering role of educators (Nahmad-Williams, 2011; Shethar, 1993, as cited in WVAdultED Program, 2018).

In addition, educators face the personal problems of their inmates, such as problems in their relationships, divorce, immigration, loss of loved ones, court issues, child custody, etc. (Wright & Gehring, 2008, as cited in Patrie, 2017).

Another challenge faced by inmates' adult educators is the evaluation of their work based on the rates of recidivism of their inmates (WVAdultED Program, 2018). The fact that the concept of crime recidivism is indirect, very simple and has not been conceptually clarified, makes the rate of recidivism inappropriate to be an evaluating indicator for the work of the inmates' educator (WVAdultED Program, 2018).

3. Second Chance Schools in Greek Prisons

There are currently 11 SCS in Greek prisons. More specifically, in 2004, the innovative institution of SCS was also introduced in prisons, and the first school operated in the Judicial Prisons of Larissa. Since 2005, SCS has been established in several prisons in the country, such as: Korydallos Attikis, Grevena, Trikala, Nigrita Serres, Diavata Thessaloniki, Patras, Eleonas Thebes, Domokos Fthiotida and Malandrino Fokidas. From 2016, the 2nd SCS of Chania city has been operated in the Agia prison (Crete).

Nevertheless, according to Anagnou and Vergidis (2008), although theoretically all SCS (inside and outside prisons) should be included in the strategy of social and professional development and social exclusion, this happens only with the case of SCS in prisons.

3.1 The SCS of Chania Prison

The SCS of Chania Prison is the 2nd SCS of Chania city and operates from 2016 at the General Detention Department "Crete I" in Agia town (Chania). Due to the recent startup of the school, the data for educators and inmates is not much. Thus, the students in the school year 2017-2018 were about 42 inmates in the two cycles of studies. Their age ranged from 19 to 60 years. Inmates of Chania Prison often transfer to Korydallos Prison in Athens.

4. Research methodology

This section presents the research methodology.

4.1 Research question

The research question was: What challenges do the inmates' adult educators of the SCS of Chania Prison encounter in their work?

4.2 Research Method - Strategy - Research Tool

The data collection method was qualitative, because the purpose of the research is to investigate and understand a central theme (Creswell, 2011). The research strategy followed is a case study, since it concerns the inmates of a particular SCS, that of Chania Prison during the school years 2016-2017 and 2017-2018. According to Robson (2010), a case study is more a research strategy than a research method and focuses on a phenomenon in its context. This strategy was chosen, because the SCS educational framework and the prison environment are very important and also difficult to be accessed by the researcher (Yin, 2003).

According to Mason (2003), the data collection technique or better the data production technique was the semi-structured interview, a tool that enables the sequence of questions to be modified (Cohen & Manion, 1994), the choice of emphasis in the most essential aspects of each respondent (Fylan, 2005; Robson, 2010), but requires critical communication skills from the interviewer (Galletta, 2013). Therefore, this tool has been chosen as the most appropriate to highlight the views of the participants.

4.3 The participants in the survey

The participants of the survey were the inmates' adult educators of the SCS of Chania Prison during the school years 2016-2017 and 2017-2018. All participants (convenience sampling) were 12 inmates' adult educators, 4 of whom worked in the SCS of Chania Prison during the school year 2016-2017, while 8 worked in the school year 2017-2018. These include the SCS Director and the Career Advisor. With regard to the work situation of the inmates' adult educators, 4 were permanent educators, 4 were hourly paid, and the rest 4 were volunteers. As for gender, 3 educators were men and 9 women. The age of the participants ranged from 33 to 58. Undoubtedly, the participants in this survey do not represent the entire population of adult inmates of SCS in Greece, and consequently, the research results are not generalizable.

4.4 Data analysis method

Content analysis was used as the method of analyzing the data resulting from interviews. In the thematic analysis, the focus is on concepts, meanings, or themes, which refer to the phenomenon under study and how it is perceived by the participants in the research (Tzani, 2005). Also, the content analysis includes the process of locating, coding, and categorizing complex and often contradictory data (Papanastasiou & Papanastasiou, 2014). Furthermore, the thematic content analysis allows quantification of the results (Trowler, 1996; Vamvoukas, 2002), which was attempted in this research.

5. Results

This section presents the results of the survey. The following Table summarizes the main challenges faced by educators and the frequency of their reports.

Table 1. The main challenges encountered by the educators of the Second Chance School in Chania Prison (school years 2016-2017 and 2017-2018)

Challenge Category	Frequency of reports
Incarceration	9
Practical issues	6
Handling psychologically impaired individuals	3
Motivation of inmates-trainees	3
Heterogeneity of the inmates group	3
Lack of experience of inmates' educators	3

Handling behavior of inmates	2
Incorrect / "old" perceptions of inmates for education	2
Conflicts between inmates	2
Learning disabilities	1
Balance between education and prison system	1

N=12

The most common reference to the main challenges faced by educators is generally related to the context of prison and the situation of imprisonment. Typical is the Inmates' Educator 4 (IE4) response, which describes the context of the prison as a battleground and absolute survival: *"[..] the people are prisoners. They live in a combat environment within the radius. [...] So [...] in the radius they live in a regime of terror, exploitation, bullying. Essentially, it is the ultimate survival. This, prisoner, will bring it to school and try to take advantage of it.* "

Other major challenges encountered by the educators of the Second Chance School of Chania Prison concern practical issues which can be categorized in: a) the restrictions on the use of materials, b) the prohibition of the use of the Internet, c) the lack of infrastructure, d) the filming of the lesson for safety reasons and e) the way of organizing life of inmates. As regards restrictions on the use of materials, IE1 stresses that: " *Materials are missing infrastructure is missing [..].*" Similarly, the IE12 underlines that: "*Most things are not allowed, we must take special licenses to bring various objects that are useful.*" Regarding the use of the Internet, the IE9 states that: "*The lack of technology makes things difficult. [..]*". Regarding the lack of infrastructure, the IE4 states that: "*There is a need for separate facilities for a school in prison.*" For IE10, a major barrier is the existence of cameras within the school space. Finally, for IE5: "*The way of life of the prisoners makes learning very difficult, [...] they cannot wake up in the morning because they sleep late at night for their own reasons.*"

Furthermore, IE4 mentions that the main challenge is to manage his psychologically impaired students *"... the handling you are doing to a person who is already depressed, especially psychologically, to take him with you.*" In addition, the burden on the educators themselves arising from the prison context is also very important. As the IE10 says: "[..] *It is a beautiful school, but I had to go through ten locked iron doors with rails. It is depressing the landscape of the prison.*" At the same time, the IE5 states that: "*You are afraid that [...] they will steal a pen, [...] an object that we do not know how they are going to use it [..]*".

Also, the IE6 considers that: "*The majority goes to school because there are wages, that is, reducing the penalty as an incentive for all.*" The IE6 states that: " *[...] the most problematic is the interview given by the inmates to be chosen as students.*"

Another important barrier to the proper conduct of the educational process is the failure to keep the limits. Typical is the IE3 response: "*It is about overcoming the limits. [..] The limits are important because mainly the inmates can overcome them, they can manipulate us a little [...]*".

In addition, IE4 states that " *[..] as you understand that you are dealing with people who may be from very poor ... or very young people.*" Indeed, the IE8 also underlines the heterogeneity of language use and nationality: "*Another challenge is the language itself, as these guys are not educated in many cases or they are foreign people.*".

Further barriers arise for the inmates' adult educators of the SCS of Chania Prison from the incorrect or "old" perceptions of their students about the model of the educator and about the school itself. The IE5 clarifies that: " *The challenges are the resistance that prisoners themselves have in relation to school [...] in their earlier perceptions of school and of all.*"

Additional challenges mentioned by the educators concern the conflicts between inmates and the inability of educators to manage them. Thus, IE10 refers to the prison hierarchy: "*The Cretan Greeks are the dominant group. There are the Albanians. There are some…, who are ... hierarchically lower. [...] There are hierarchies inside.* "

Also, one educator (IE11) refers to the learning disabilities of the inmates "*they have many learning disabilities, often undetected [..]*" and only one educator (IE4) points out the challenge that educators of the SCS of Chania Prison every day encounter to balance between the education and the prison system "*from the one hand [..]it is*

the prison [...] where people are in constraint as a consequence of their actions [..] On the other hand there has to be teaching, [..] There, in prison, this is a problem, because the balance is delicate. ".

Finally, IE2 states that: "*Anyone should attend seminars, that is, even about how to stand. A man, for example, in women's prisons or a woman respectively in men's prisons [..]* ".

Below are the conclusions of the survey.

6. Conclusions

This section summarizes the main findings of the survey.

The challenges encountered by inmates' adult educators of the SCS of Chania Prison derive mainly from:

a) The context of the prison and the situation of imprisonment (9 out of 12),
b) Practical issues that can be categorized in:
  b.1. The restrictions on the use of materials,
  b.2. The prohibition of the use of the Internet,
  b.3. The lack of infrastructure,
  b.4. The filming of the course for safety reasons,
  b.5. The way of organizing the life of inmates (6 out of 12),
c) Handling psychologically impaired individuals (3 out of 12),
d) The motivation of the inmates-trainees for their attendance in the Second Chance School of Chania Prison (3 out of 12),
e) The heterogeneity of the prison population (3 out of 12),
f) The lack of experience and training of educators (3 out of 12).

Less often, challenges are encountered concerning a) the behavior of the inmates-trainees, b) the incorrect or "old" perceptions of the inmates-trainees about the model of the educator and about the school itself, c) the conflicts between inmates-trainees, d) learning disabilities of inmates-trainees and e) the difficulty of maintaining the balance between the education and the prison system.

In conclusion, the challenges encountered by inmates' adult educators of the SCS of Chania Prison can be categorized into challenges arising from:

a) The restrictive environment of the prison at a psychological level. These have been highlighted by many other researchers (Wright, 2004; DelliCarpini, 2008; Muñoz, 2009; Tsimboukli & Phillips, 2010; Lekaditi, 2012; Zygogianni, 2014; Touloumi, 2016; Papaioannou, Anagnou, & Vergidis, 2016),
b) The restrictive environment of the prison at a practical level. These mainly correspond to the external (institutional-situational) barriers (Muñoz, 2009) and many challenges have been identified in restrictions on the use of materials, the prohibition of the internet use and the lack of infrastructure (Lekaditi, 2012),
c) The group of inmates-trainees (motivation / interviewing process, not keeping the limits, heterogeneity, attitudes towards school, conflicts, learning disabilities). These correspond to Muñoz's internal-dispositional barriers (2009), to the previous negative educational experiences of the inmates (Vergidis, 2014) and to the challenge of inmates' management by the educators (Patrie, 2017). Such barriers have also been identified and confirmed by the surveys of Lekaditi (2012), Zygogianni (2014), Touloumi (2016) and Papaioannou, Anagnou, and Vergidis (2016),
d) The characteristics of educators (lack of experience, lack of training). These focus on the inmates' adult educators of the SCS of Chania Prison and their deficiencies. These have already been reported by researchers (Jurich, Casper & Hull, 2001; Gehring & Wright, 2006; DelliCarpini, 2008; Lekaditi, 2012; Patrie, 2017).

It is worth mentioning that the challenge of inmates' adult educators to manage the two systems, the correctional and the educational, which has been found by several researchers (Wright, 2004; Nahmad-Williams, 2011; Patrie, 2017; Shethar, as cited in WVAdultED Program, 2018) was recorded only by one participant in the present survey. Still, no educator was referred to the professional burnout, as a barrier, as reported by Wright (2005b). Finally, the educators of the SCS of Chania Prison did not report challenges arising from the evaluation of their work based on the rates of crime recidivism (WVAdultED Program, 2018), probably because there was

no such evaluation in Greek Second Chance Schools operating in prisons. The inmates' adult education is a complex, demanding, and challenging task for the inmates' educators. The very careful design of both relevant programs and the education of their educators is a prerequisite for its effective implementation.

References

Anagnou, E., & Vergidis, D. (2008). The strategies of action of Second Chance Schools. The institutional framework and the contribution of directors. *Adult Education, 13,* pp. 11-19. Retrieved from http://www.adulteduc.gr/images/TEYXOS_13.2_1.pdf on 3/12/2017. (In Greek)

Bayliss, P., Brimecombe, C., Brimecombe, K., & Pomeroy, V. (2008*). Attitudes of staff working in prisons towards Initial Teacher Training.* Retrieved from http://www6.plymouth.ac.uk/files/extranet/docs/EDU/CETT%20Project6.pdf on 4/12/2017.

Brosens, D., De Donder, L., Vanwing, T., Dury, S., & Verté, D. (2013). Lifelong learning programs in prison: the influence of social networks on participation. *Procedia - Social and Behavioral Sciences, 116*, 518-523. doi: 10.1016/j.sbspro.2014.01.251

Carr, B. A. (2000, April). *Behind the fences: Case study of a literacy teacher in a prison classroom.* Paper presented at the Annual Meeting of the American Educational Research Association, New Orleans, LA. Retrieved from file:///C:/Users/%CE%99%CF%89%CE%B1%CE%BD%CE%BD%CE%B1/Downloads/31295017220764%20(1).pdf on 16/12/2017.

Carr, B. A. (2001). *Behind the fences: A phenomenological study of the lived experience of a prison classroom teacher* (Doctoral dissertation, Texas Tech University). Retrieved from https://ttu-ir.tdl.org/ttu-ir/handle/2346/18311 on 16/12/2017.

Cohen, L., & Manion, L. (1994). *Methodology of educational research* (tr. Ch. Mitsopoulou, & M. Filopoulou). Athens: Ekfrasi. (In Greek)

Creswell, J.W., (2011). *Research in education. Planning, conducting and evaluating quantitative and qualitative research* (tr. N. Kouvarakou) (Ed. Ch. Tzorbatzoudis). Athens: Ion/Ellin. (In Greek)

DelliCarpini, M. (2008). Creating communities of professional practice in the correctional education classroom. *Journal of Correctional Education, 59*(3), 219-230.

Desir, E., & Whitehead, C. L. (2010). Motivational strategies for correctional practitioners. In M. S. Plakhotnik, S. M. Nielsen, & D. M. Pane (Eds.), *Proceedings of the Ninth Annual College of Education & GSN Research Conference* (pp. 12-17). Miami: Florida International University. Retrieved from https://education.fiu.edu/research_conference/docs/proceedings/COERC%202010%20Proceedings.pdf on 16/12/2017.

Ely, J.D. (2011). *Education on an island: Oklahoma correctional educators' views of internal teacher traits and successful learning environments on incarcerated adult students in an institutional setting* (Doctoral dissertation, Oklahoma State University). Retrieved from https://shareok.org/bitstream/handle/11244/7385/School%20of%20Teaching%20and%20Curriculum%20Leadership_097.pdf?sequence=1 on 6/1/2018.

European Commission, Directorate General for Education and Culture (2011). *Prison education and training in Europe - a review and commentary of existing literature, analysis and evaluation.* Retrieved from http://ec.europa.eu/justice/news/consulting_public/0012/Fullreport_en.pdf on 3/12/2017.

Fylan, F. (2005). Semi-structured interviewing. In J. Miles, & P. Gilbert (Eds.). *A handbook of research methods for clinical and health psychology* (pp. 65-78). New York: Oxford University Press.

Galletta, A. (2013). *Mastering the semi-structured interview and beyond*. New York: New York University Press.

Gehring, T., & Wright, R. (2006). The case for reflective practice in alternative and correctional education. *Wisdom in Education, 2*(1). Retrieved from http://scholarworks.lib.csusb.edu/wie/vol2/iss1/9 on 4/12/2017.

Hurkmans, G., & Gillijns, E. (2012). Mentoring teachers in prison education – Experiences in three correctional facilities in Belgium. *Procedia - Social and Behavioral Sciences, 69*, 2215 – 2218. doi: 10.1016/j.sbspro.2012.12.188

Jurich, S., Casper, M., & Hull, K.A. (2001). Training correctional educators: A needs assessment study. *Journal of Correctional Education, 52*(1)

Kabeta, G. G. (2017). *Assessing the practices of prison education in selected prisons of Amhara National Regional State, Ethiopia* (Doctoral dissertation, University of South Africa). Retrieved from http://uir.unisa.ac.za/bitstream/handle/10500/23166/thesis_genet_gelana_kabeta.pdf?sequence=1&isAllowed=y on 3/12/2017.

Lawrence, S., Mears, D. P., Dubin, G., & Travis, J. (2002). *The practice and promise of prison programming.* Washington: Urban Institute, Justice Policy Center. Retrieved from http://webarchive.urban.org/UploadedPDF/410493_PrisonProgramming.pdf on 3/12/2017.

Lekaditi, V. (2012). *The investigation of the educational needs of teachers who serve in Second Chance Schools των detention institutes in Greece.* (Thesis, Hellenic Open University). Retrieved from https://apothesis.eap.gr/handle/repo/25420 on 1/5/2018. (In Greek)

Linardatou, Ch., & Manousou, E. (2014). Open and Distance Education in socially excluded people such as prisoners. Case study: Education to prisoners in Open University UK *Open Education: The Journal for Open and Distance Education and Educational Technology 10*, 49-68. Retrieved from http://dx.doi.org/10.12681/jode.9811 on 2/12/2017. (In Greek)

Mason, J. (2003). *Qualitative Researching* (tr. E. Dimitriadou). (Ed. N. Kyriazi). Athens: Ellinika Grammata. (In Greek)

Muñoz, V. (2009). *The right to education of persons in detention. Report of the special rapporteur on the right to education.* Human Rights Council, UN. Retrieved from http://www2.ohchr.org/english/bodies/hrcouncil/docs/11session/A.HRC.11.8_en.pdf on 22/12/2017.

Nahmad-Williams, L. D. (2011). *'The Cinderella service': Teaching in prisons and young offender institutions in England and Wales* (Thesis Doctoral, University of Leicester). Retrieved from http://hdl.handle.net/2381/10055 on 4/12/2017.

Papaioannou, V., Anagnou, E., & Vergidis, D. (2016). Inmates' adult education in Greece - A case study. *International Education Studies, 9*(10), 70-82. doi:10.5539/ies.v9n10p70

Papanastasiou, E.K., & Papanastasiou, K. (2014). *Methodology of educational research* (2nd ed.). Nicosia. (In Greek)

Patrie, N. (2017). Learning to be a prison educator. *Journal of Prison Education and Reentry, 4*(1), 17-23. Retrieved from https://jper.uib.no/index.php/jper/article/view/1045/1052 on 5/12/2017.

Rand Corporation (2014). *How effective is correctional education, and where do we go from here? The results of a comprehensive evaluation* (Lois M. Davis, Jennifer L. Steele, Robert Bozick, Malcolm V. Williams, Susan Turner, Jeremy N. V. Miles, Jessica Saunders, Paul S. Steinberg). Retrieved from https://www.rand.org/content/dam/rand/pubs/research_reports/RR500/RR564/RAND_RR564.pdf on 3/12/2017.

Reducing inequalities. (2015). Retrieved from http://www.oecd.org/education/reducing-inequalities-and-financing-education-remain-key-challenges.htm on 29/12/2017.

Robson, C. (2010). *Real world research (2nd ed.)* (tr. V. P. Dalakou, & K. Vasilikou). Athens: Gutenberg. (In Greek)

Sayko, E. Á. (2005). *The making of a prison teacher: A phenomenological journey through lived experiences of correctional educators* (Doctoral dissertation, University of Maryland).Retrieved from https://drum.lib.umd.edu/handle/1903/2481 on 16/12/2017.

Social Inequality. (n.d.). Retrieved from https://www.russellsage.org/research/social-inequality/social-inequality-and-educational-disadvantage on 29/12/2017.

Spangenberg, G. (2004). *Current issues in correctional education: A compilation & discussion.* New York: Council for Advancement of Adult Literacy. Retrieved from http://www.caalusa.org/correct_ed_paper.pdf on 3/12/2017.

The Pew Charitable Trusts (2010). *Collateral Costs: Incarceration's Effect on Economic Mobility.* Washington, DC: The Pew Charitable Trusts Retrieved from http://www.pewtrusts.org/~/media/legacy/uploadedfiles/pcs_assets/2010/collateralcosts1pdf.pdf on 16/12/2017.

Touloumi, A. (2016). *Education in prison: motives for learning, obstacles and the role of the Adult Educator in prison environments. The case of SCS female prison of Eleona in Thiva* (Thesis, Hellenic Open University). Retrieved from https://apothesis.eap.gr/handle/repo/33283 on 5/1/2018. (In Greek)

Trowler, P. (1996). *Investigating Mass Media.* London: Collins Educational.

Tsimboukli, A. & Fillips, N. (2010). Adult educator training. 100 hours distance training program. 2nd teaching unit. Team process - Education and support for socially vulnerable groups. Athens: Ministry of National Education, Lifelong Learning & Religious Affairs. General Secretariat for Lifelong Learning Institute of Continuing Adult Education. Retrieved from https://www.scribd.com/document/191696512/ENOTHTA-2 on 9/12/2017. (In Greek)

Tsimboukli, A. (2008). Education of Special Groups (Ch. 6). In D. Vaikousi, I. Valakas, E. Giannakopoulou, I. Giastas, A. Kokkos, & A. Tsimboukli (Ed.), *Introduction in Adult Education. Volume D´ Educational Methods – Trainees' Group* (pp. 279-298). Patras: Hellenic Open University. (In Greek)

Tzani, M. (2005). *Methodology of Social Sciences Research* (Course Notes). Athens: National and Kapodistrian University of Athens. (In Greek)

Vamvoukas, M.I. (2002). *Introduction to Psycho-pedagogical Research and Methodology.* Athens: Grigoris. (In Greek)

Vergidis, D. (2014). Lifelong learning and educational inequalities. In A. Kyridis (Ed.), *Vulnerable social groups and lifelong learning* (pp. 121-150). Athens: Gutenberg. (In Greek) Cohen, L., & Manion, L. (1994). *Methodology of educational research* (tr. Ch. Mitsopoulou, & M. Filopoulou). Athens: Ekfrasi. (In Greek)

West Virginia Adult Education (WVAdultEd) Program (2018). *WVAdultEd Instructor Handbook Section 15 Teaching adults in a correctional facility.* West Virginia: Adult Education (AdultEd) Program Office of Adult Education and Workforce Development, Department of Education. Retrieved from https://wvde.state.wv.us/abe/tcher_handbook_pdf/section15.pdf on 16/12/2017.

Wright, R. (2005a). Going to teach in prisons: Culture shock. *Journal of Correctional Education,* 56 (1), 19-38. Retrieved from http://www.jstor.org/stable/23282781?seq=1#page_scan_tab_contents on 17/12/2017.

Wright, R. (2005b). Teacher burnout and toxic cultures in alternative school prison settings. *The journal of juvenile court, community, and alternative school administrators of California, 18*, 44-54. Retrieved from http://ccsesa.org/wp-content/uploads/2016/05/JCCASAC-Journal-2005.pdf on 16/12/2017.

Wright, R. L. (2004). You were hired to teach! Ideological struggle, education, and teacher burnout at the new prison for women. *The Qualitative Report 9*(4), 630- 651. Retrieved from http://www.nova.edu/ssss/QR/QR9-4/wright.pdf on 17/12/2017.

Yin, R. (2003). *Case study research: Design and methods* (3rd ed.). California: SAGE.

Zygogianni, S. (2014). *Views of educators and trainees on the role of adult educator in training programs for migrant prisoners: the case of the Greek language program "Odysseus" in Eleona, Thiva.* (Thesis, Hellenic Open University). Retrieved from https://apothesis.eap.gr/handle/repo/25420 on 2/4/2018. (In Greek)

Bullying Intervention and Solution-Focused Brief Therapy: A Review of the Literature

Sonia Carbone[1], Ebinepre A. Cocodia[1]

[1] School of Arts & Sciences, University of Notre Dame Australia, Sydney, Australia

Correspondence: Ebinepre A. Cocodia, School of Arts & Sciences, University of Notre Dame Australia, Sydney, NSW, 2007, Australia. Tel: +61 2 82044103. E-mail: ebinepre.cocodia@nd.edu.au

Abstract

This paper provides a review of the literature on bullying in school settings. The role of Solution-Focused Brief Therapy (SFBT) is explored as a possible intervention approach. Clear gaps in the literature indicate that further studies are recommended on the effectiveness of SFBT on bullying at schools.

Keywords: Bullying, Victim of Bullying, Bullying Intervention, Solution-Focused Brief Therapy

1. Introduction

1.1 The Problem

There has been considerable focus on anti-bullying programmes and bullying intervention in schools throughout the world. Bullying can be identified as a subtype of aggressive behaviour and described as being repetitive in nature and involving an imbalance of power (Salmivalli, 2010; Salmivalli, Poskiparta, Ahtolo, & Haataja, 2013). The victim of bullying may repeatedly be attacked, humiliated and excluded by an individual or group of people (Salmivalli, 2010). Within school settings, "A student is being bullied or victimised when he or she is exposed, repeatedly and over time to negative actions on the part of one or more other students" (Oleweus, 1993, p. 9).

Key questions to guide this literature review are:

1. What is the role of the school counsellor in the intervention of bullying in secondary schools?
2. What impact can the implementation of SFBT have on bullying intervention in schools?

School counsellors or therapists can find that counselling referrals may include the victims of bullying who are sometimes labelled as having the problem. The perpetrators of bullying, who may also have been subjected to bullying in the past themselves, can also benefit from counselling to address issues such as aggression.

Solution-Focused Brief Therapy by its very nature does not focus on the problem but rather on the desired future of the client and the behaviour that needs to occur to achieve the desired outcomes (Young & Holdorf, 2003).

Therefore, this paper reviews the literature on bullying in school settings and the role of solution-focused brief therapy (SFBT).

2. Method

This investigation began by seeking out scholarly articles via electronic databases which are relevant to the discipline of counselling. The literature search strategy included a search for research output between the periods of 1980 to present due to the introduction of SFBT in the 1980s. These searches included: Academic Search Premier, EBSCO host, Education source, PsycARTICLES, Psychology and Behavioural Sciences Collection and PsycINFO. Studies were identified that evaluated the use of SFBT in schools and as a bullying intervention, and in general for behavioural and educational issues.

2.1 **Research on Bullying in Schools**

2.1.1 **Prevalence of Bullying**
According to Rigby (2010), 15% of students in Australian schools indicate being victims of bullying on a weekly basis, and 5% report a daily occurrence of victimisation. Experiencing bullying on a regular basis may result in long-term psychological effects (Rigby, 2010). Likewise, half of bullying perpetrators surveyed indicate that they are also victims of bullying themselves and therefore, it is important to break the bullying cycle (De Winter et al., 2005).

2.1.2 **The Effects of Bullying**
Being a victim of bullying at school may result in the development of significant emotional and psychological issues (Rigby, 2010). A qualitative study on 8 victims of bullying in the United Kingdom aged between 13 and 15 years, found that the daily functioning of the life of the victims was affected (Johnson & Side, 2014). The victimised students reported being fearful of attending school and difficulty eating, sleeping or going to school at all (Johnson & Side, 2014). Thus, being a victim of bullying may result in significant effects on the daily lives and health of students, and this is due in part to a lack of sleep and poor nutrition (Johnson & Side, 2014). Likewise, the academic progress of victims of bullying may also be affected due to anxiety issues and school absence (Rigby, 2010). Therefore, intervention for students suffering as victims of bullying is imperative, and bullying prevention is fundamental to breaking the cycle.

There are also long-term psychological effects for victims of severe bullying in childhood. Testified effects of being a victim of bullying during school years include anxiety, depression, low self-esteem, suicidal thoughts, and suicide (Rigby, 2010). A study conducted in Finland investigated the effects of bullying in the long term on 2713, 8-year-old victims of repeated bullying (Rigby, 2013). The students were followed up 10 to 15 years after leaving school because of national service registration (Rigby, 2013). The men who had been victims of bullying in childhood were three times more likely than those who were not victims of bullying to be declined by the national service, due to depression, anxiety, and personality disorder (Rigby, 2013). Thus, bullying prevention and intervention programmes in schools are crucial for the future well being of victims.

Likewise, perpetrators of bullying are at risk of long-term effects due to exhibiting bullying behaviour. If there is no intervention to assist school perpetrators of bullying with aggression issues, they are at an increased risk of delinquency, crime and alcohol abuse (Rigby, 2010; De Winter et al., 2005). Students who exhibit bullying behaviour can become a danger to society after school years, and therefore, school bullying prevention initiatives are not only imperative for the victims of bullying but also for the perpetrators.

2.1.3 **The Characteristics of Victims and Perpetrators of Bullying**
When examining why some youth become victims or perpetrators of bullying, it is important to note the features, which are common to victims and bullies. The characteristics of a victim or perpetrator of bullying can enable a profile of a bully or a victim to be established, which could assist in the identification of students at risk. Research indicates that students who present as bullies tend to be impulsive, antisocial and exhibit aggressive behaviours (De Winter et al., 2005). Victims of bullying may suffer from mental health issues such as anxiety,

low self-esteem, and depression, and often exhibit physical traits such as being small in size (Carey & Dowling, 2013; De Winter et al., 2005).

When investigating the prevention of bullying in schools, pupils who exhibit characteristics consistent with the profile of a bully or victim could be identified by school personnel and referred to the school counsellor. The counsellor could assist students who present as exhibiting characteristics of a victim of bullying by working on social skills, anxiety issues, and self-esteem issues. Therapeutic intervention for depression could also be the role of the school counsellor. Similarly, students who could potentially become perpetrators of bullying could benefit from counselling to deal with aggression issues and to develop social skills. Therefore, counsellor intervention may be a preventative means of ensuring the decrease in bullying acts.

Likewise, there is a link between parenting styles and aspects of family life to the likelihood of a child becoming a victim of bullying. Research indicates that there is an association between parents who are overprotective and their child being a victim of bullying (De Winter et al., 2005). In particular, parents who do not give children the opportunity to socialise with others outside the family may be putting children at risk of becoming victims of bullying (De Winter et al., 2005). Therefore, parenting programmes, which educate parents on effective parenting styles and forms of discipline, could be beneficial in the prevention of children becoming victims of bullying.

Students, who bully, according to research, come from homes where physical punishment is the favoured means of discipline and aggressive behaviour by children is not discouraged (De Winter et al., 2005). In addition, there is an association between childhood exposure to authoritarian or highly permissive styles of parenting, and being a perpetrator of bullying (Rigby, 2013). Parental support and education programs on parenting styles and forms of discipline are an important consideration in the prevention of children becoming involved in the perpetration of bullying behaviour. School counsellors could implement parenting programmes in schools, or they could refer parents to services in the wider community.

2.1.4 **Bullying and Gender Differences**
There are gender differences in the roles that students play in the bullying relationship and these are important considerations when investigating the prevention of bullying in schools. A study conducted by Mele-Taylor, and Nickerson (2014) on students aged between 10 and 15 years, found that males were more likely to be defenders of the victims of bullying than females. Conversely, Correia and Dalbert (2008) found that girls exhibit more empathy than boys, and thus, were involved in defending victims of bullying more often than males. The study included 187 Portuguese school students aged between 12 and 18 years of age (Correia & Dalbert, 2008).

De Winter et al. (2005) concludes that boys are more likely to bully others and to be victimised by bullies. The study comprised a large population of pre-adolescent boys and girls. Therefore, the findings raise the question about differences in bullying patterns between pre and post-adolescent populations (De Winter et al., 2005). Thus, there is a need for further research on pre-adolescent versus adolescent populations regarding gender differences and bullying and defending behaviours. Comparative research on adolescent samples is necessary to assess the impact of puberty on bullying behaviours.

2.1.5 **Empathy and Bullying**
Empathy can be described as: "the combined ability to interpret the emotional states of others and experience resultant, related emotions" (Coan et al., 2009, p. 1210). Mele-Taylor and Nickerson (2014) researched 262 students from 6 different middle schools in the United States and found that students who were involved in the defending of victims of bullying displayed more empathy than the students who took part in outsider or bullying roles, as these students exhibited lower levels of empathy. Mele-Taylor and Nickerson (2014) conclude that empathic awareness has a significant connection with defending behaviour and empathy training may be an effective bullying prevention or intervention strategy in schools. The increase of defending behaviours of bystanders of bullying may occur through the implementation of whole school empathy training programmes. Thus, by undergoing empathy training provided by school counsellors, bystanders could decrease bullying in schools by defending victims.

When examining the prevention of bullying in schools, empathy training would be a significant endeavour to improve defending behaviour. According to Gerdes, Segal, Jackson, and Mullins, (2011) "Lack of empathy underlies the worst things human beings can do to one another; high empathy underlies the best " (p.109). Therefore, the behaviour of bullies and how children treat each other emphasises the importance of empathy development to prevent the victimisation of others. Hence, the ability for empathy to be developed or improved is important, as there is an association between low levels of empathy and bullies. Research indicates that a person observing the emotions of another, experiences activation of the brain in similar areas to the individual who is experiencing the feelings (Gerdes et al., 2011). The brain activation in the observer's brain is the same brain activation as a person who is going through the emotions (Gerdes et al., 2011). Therefore, the research indicates that empathy training may enhance low levels of empathy.

Furthermore, neurologists have witnessed the phenomenon of subjects who have been able to repair damage to brain function (Gerdes et al., 2011). Neuroplasticity or the repairing of the brain is a positive result for those people who have an impaired synaptic function. Some techniques can be used in therapy to teach empathy to those who have had impairment in the development of the brain synapses (Gerdes et al., 2011). Approaches such as; "Gestalt therapy, psychodrama, art therapy, imitative play, and mindfulness." have been identified as effective in the development of empathy (Gerdes et al., 2011, p. 119).

2.1.6 The Social Construct of Bullying

In the bullying peer-group relationship, there are differing roles that students can play. Salmivalli (2010) outlines the role of the assistant, reinforcer, outsider and defender in the bullying social group. "Assistants are those who join the bully; reinforcers provide feedback to bullies by laughing, for example, or cheering. Outsiders withdraw from bullying situations, and defenders take sides with the victims, comforting and supporting them" (p. 114). Due to the dynamic of the social group, it can be difficult for peers to intervene in bullying because the perpetrator is viewed as being popular and powerful (Salmivalli, 2010). Consequently, the potential defenders are fearful of being associated with the victim, who can be seen as being unpopular (Salmivalli, 2010). Nevertheless, an increase in empathy in students within the whole school population may result in a diminishment of fear and an increase in defending behaviour may take place. Additional research into the role of the bystander in bullying

intervention is an area for further development. If inactive bystanders can be encouraged to become active defenders of victims of bullies, then bullying incidences may be decreased. The role of the bystander in bullying intervention is, therefore, an area for further development.

2.1.7 School Bullying Intervention Programmes

A bullying intervention is defined as: "An act or series of acts designed to deal with a case of bullying behaviour and to prevent its continuation. Intervention can take place with the assistance of a counsellor or teacher which act as single practitioners or a team of practitioners" (Rigby, 2010, p. 25). Multiple school bullying intervention programmes have been implemented worldwide to combat bullying. Two well-documented and evaluated whole school bullying interventions include the 'Olewus Bullying Prevention Programme' developed in Norway and the 'Kiusaamista Vastaan' (KiVA) programme' from Finland (Finger, Craven, Marsh, & Parada, 2005).

The Olewus Bullying Prevention Programme (OBPP) was implemented nation-wide in Norwegian schools in 1983 because of the suicide deaths of three adolescent boys due to what was believed to be severe peer bullying (Oleweus, 1993). The OBPP is a whole school intervention that aims to not only reduce bullying in schools but also has a bullying preventative focus (Oleweus et al., 2007). The OBPP focuses on reorganising the school environment to improve the sense of community amongst students and staff and to limit the opportunities for bullying incidences. The OBPP has four essential principles that have remained consistent with small changes made over a number of years to accommodate different cultural school environments. The four core principles include: - "1) Show warmth and positive interest in students; 2) Set firm limits to unacceptable behaviour; 3)

Use consistent non-physical, non-hostile negative consequences when rules are broken; and 4) function as authorities and positive role models" (Oleweus, 1993, p. 126; Oleweus et al., 2007).

There has been a large-scale evaluation of the Oleweus Bullying Prevention Programme over a period of twenty years. The initial longitudinal study of the OBPP in 1983 to 1985 examined 2,500 school students over a period of 2.5 years (Oleweus & Limber, 2010). Since the initial study, there has been an evaluation of more than 150 Norwegian schools involving over 20,000 students. Based on the longitudinal studies in Norway, more than 2,000 Norwegian students escaped regular bullying due to the OBPP (Oleweus & Limber, 2010). There have also been several studies conducted on the implementation of OBPP in the United States in diverse settings. The result of the research from the United States is inconsistent; however, the conclusions indicate that OBPP has had a positive effect on the self-reporting of bullying behaviour and bullying acts (Oleweus & Limber, 2010).

Similarly, the KiVa programme in Finland is a large scale bullying intervention programme. KiVa involves the intervention by teachers on a whole school level and by counsellors on an individual basis, through the counselling of bullies and victims. "KiVa is an acronym for 'Kiusaamista Vastaan,' which means against bullying. KiVa places concerted emphasis on enhancing the empathy, self-efficacy, and anti bullying attitudes of onlookers, who are neither bullies nor victims." (Kaljonen et al., 2011, p. 313). The KiVa programme includes peer bystanders having a critical part in preventing bullying and involves approximately 20 hours of lessons, which are taught by classroom teachers to the whole school community (Kaljonen et al., 2011). KiVa is implemented in primary and secondary schools commencing from age 7 to the age of 15. The KiVa lessons aim to firstly, draw the students attention to the roles that exist in the bullying social group and to gain an understanding of how these roles can promote bullying. Secondly, the lessons aim to increase empathy toward victims and lastly, the programme seeks to give students who are bystanders of bullying practical examples of how to assist victims in the bullying situation. Included in the KiVa programme classroom lessons are role-play exercises, discussion questions, group work activities, short films about bullying, and computer games (Kaljonen et al., 2011, p. 313).

The KiVa programme involves an additional component to the lessons taught to all students in classes. In all schools, there is a team of 3 staff who may be teachers, counsellors or other staff members who along with the classroom teacher, deal with each case of disclosed bullying. The bullying cases are resolved through the implementation of discussions with the victims and bullies both individually and in small groups (Kaljonen et al., 2011). Lastly, classmates who are considered to be 'prosocial' and 'high status' members of the class support the victims of bullying. The class teacher works with these identified students and assists them with helping the victim (Kaljonen et al., 2011).

Findings indicate that the KiVa programme reduces bullying, and results in increased levels of empathy for the victims of bullying. The bystanders of bullying not only develop empathy towards the victims, but they also gain skills that enable the engagement in defending behaviour (Salmivalli et al., 2013). There was a nationwide implementation of the KiVa programme in Finland in 2013, involving approximately 2,500 schools. Evaluation of the programme took place after 9 months of implementation and involved the questioning of 150,000 students via an online survey (Salmivalli et al., 2013). Reported decline in bullying and victimisation was about 20% during the trial and 15% during the full rollout (Salmivalli et al., 2013). The sample size was significant, as it was a national roll out, and thus, validating the findings of the investigation on the KiVa model. Significantly, this method uses both a whole-school approach and then intervention with the bully, victim, and support of the victim by peers. It is also important to note that the KiVa programme has been shown to be more effective in primary schools than in secondary grades (Salmivalli et al., 2013). There is therefore a need to investigate the effectiveness of bullying interventions in secondary education.

A whole-school approach to date is considered the most efficient way of decreasing bullying within schools; however, Finger et al. (2005), argue that only marginal to moderate reductions in bullying have been experienced using a whole-school approach. The identified reasons for the limited effectiveness of whole school interventions include the fact that whole school approaches have not effectively involved the entire community (Finger et al., 2005). Similarly, there are other issues that schools aim to fix at the same time as the bullying,

such as behavioural problems and motivating students to study. Finger et al. (2005) also acknowledge the importance of working with the individual in the intervention of bullying.

Hence, the need to work with the individual in bullying intervention validates the role of the school counsellor in the intervention of bullying. Lund, Blake, Ewing and Banks, (2011) surveyed 560 school psychologists and counsellors to determine the bullying interventions utilised. The study found that a majority of counsellors, responded to bullying, by talking to the child experiencing bullying, followed by conducting individual therapy with the bully or victim. Respondents also stated that they were less likely to conduct group therapy with victims or perpetrators, which is often the approach in whole school interventions (Lund et al., 2011). The study, however, did not ask respondents to specify the modality of counselling intervention and therefore, the study lacks detail on the effectiveness of different therapeutic interventions.

3. Research on Solution-Focused Brief Therapy

3.1 Overview of Solution Focused Brief Therapy

The introduction of Solution-Focused Brief Therapy (SFBT) was in the early 1980's at the Family Therapy Centre in Milwaukee, USA by Steve de Shazer and Insoo Kim Berg (Kim & Franklin, 2009). Steve de Shazer and Insoo Kim Berg were two social workers that were interested in studying the techniques to help clients change. The premise of SFBT as described by De Shazer and Berg is that it is more efficient to deliberately and skillfully focus attention on solutions rather than focus on the problem (Young & Holdorf, 2003). Likewise, the solution is not always related to the problem (Young & Holdorf, 2003). Solution-Focused Brief Therapy focuses on 3 main areas, firstly, past successes and exceptions to the problem, secondly, existing skills and positive personal qualities and lastly, the preferred future (Young & Holdorf, 2003).

A SFBT session begins with a therapist determining the 'best hopes' of the client or how the client will know that the session has been helpful or the client's hopes for the difference in their lives as a result of the counselling relationship (Durrant, 2016). Solution-Focused Brief Therapy clinicians often employ the miracle question, which is a technique used to determine where the client would like to be or what is their preferred outcome (Lethem, 2002). The miracle question asks clients to imagine that while they are sleeping a miracle occurs and the problem that has brought them to counselling is gone (Lethem, 2002). The SFBT therapist then elicits the changes in the clients' life that arise when the miracle occurs, and the clients desired future is established (Lethem, 2002). Examining the past successes of the client and exceptions to the problems assists the client to determine the skills that they have that indicate that they have been able to achieve parts of the miracle or the preferred future (Durrant, 2016). Likewise, scaling questions are another SFBT strategy used to move the client from the miracle to a specific goal. Scaling questions involve the therapist proposing to the client from a scale of 0 to 10 where are you today concerning the desired outcome (Lethem, 2002).

3.2 Solution-Focused Brief Therapy in Schools

Within school settings, the aim of using SFBT is to assist the student in changing future behaviour through the awareness of present solutions, and the change can be achieved by moving the student's focus from "one of despair and deficiency to one of hope and potential" (Newsome, 2005, p. 84). A study by Young and Holdorf (2003), investigated the effectiveness of interventions using SFBT at a Special Education Needs Support service with an Anti-Bullying Project in the United Kingdom. This U.K. study examined 134 referrals in the year 2000 to 2001 (Young & Holdorf, 2003). Before trialing the Solution-Focused approach, the anti-bullying project implemented the 'support group' approach (Young & Holdorf, 2003). The support group approach was the most utilised approach to combatting bullying and was an essential technique recommended in the U.K. government's anti-bullying pack (Young & Holdorf, 2003).

The support group approach involves the victims of bullying identifying bullies, bystanders and friends and a subsequent support group formed that focuses on ways to help the victim (Young & Holdorf, 2003). The support group bullying intervention has shown more success with primary school intervention than with

secondary school intervention. One of the main reasons for the lack of success of the support group approach to bullying intervention in secondary school is the opposition of victims towards involving the wider peer group (Young & Holdorf, 2003). Consequently, individual SFBT was used as a technique in the anti-bullying project in particular with secondary school victims. The 96 subjects were secondary school-aged students and 38 were primary school pupils. The study comprised 57 girls and 77 boys undertaking an average of 2.8 sessions of SFBT (Young & Holdorf, 2003).

The anti-bullying coordinator utilised SFBT techniques including, non-problem talk, scaling questions, exceptions, miracle questions, and compliments (Young & Holdorf, 2003).

The study by Young and Holdorf (2003) concludes that; "SFBT for individuals can be trusted as effective strategies that work quickly when a pupil needs help in a bullying situation. What is more these strategies work quickly because they do not take sides" (p. 281). Therefore, Young and Holdorf's (2003) study emphasises the effectiveness of SFBT as a bullying intervention due to the impartiality of the solution-focused counsellor in regards to the perpetrator of bullying. Young and Holdorf's (2003) study also validates the use of individual interventions with secondary school students as opposed to the whole school approach to bullying intervention. However, the study did not specify the number of subjects who were victims of bullying as opposed to perpetrators and therefore, it is difficult to establish a comparison of the effectiveness of SFBT with offenders versus victims.

A scan of the literature indicates limited studies on the effectiveness of SFBT with perpetrators of bullying. There are, however, studies on the effectiveness of SFBT with behavioural issues with students in schools. Therefore, investigating if SFBT is effective with behavioural issues in schools may assist in determining the effectiveness of SFBT for perpetrators of bullying as bullying is a behavioural issue. Research by Franklin, Moore, and Hopson (2008) evaluated the effectiveness of SFBT with 10 to 12-year-old children who have classroom-related behavior problems. The researchers identified 67 students in schools in Texas in the United States who had more than one referral from a class teacher (Franklin et al., 2008). Thirty students undertook five to seven SFBT counselling sessions. Twenty-nine students were in the comparison group. Students in both the experimental and comparison groups completed a pre-test, post-test and follow-up testing (Franklin et al., 2008). Each student in the SFBT experimental group participated in five to seven, weekly SFBT individual sessions of 30 to 45 minutes each.

Franklin et al. (2008) found that the 30 students who participated in the SFBT experimental group showed significant improvement in behavioural issues over the 29 students in the comparison group. However, the age range of the subjects in the study was between 10 and 12 years, and therefore, the results cannot determine effectiveness of the SFBT counselling intervention for secondary school students.

Likewise, Gingerich & Wabeke, (2001) reviewed studies on SFBT in schools and found SFBT has been used effectively for behavioural problems such as Attention Deficit Hyperactivity Disorder and Oppositional Defiance Disorder for students in year 1 to year 5. Gingerich and Wabeke's, (2001) research also indicated that SFBT has been useful in the intervention of anxiety and depression. However, Gingerich & Wabeke, (2001) conclude that more rigorous studies are needed to determine specific conditions and age groups as the study only focused on primary school students.

Similarly, Kim & Franklin (2009) conducted a review of published studies to determine the effectiveness of SFBT in a school setting and found mixed results that prevent exact deductions to be established. The findings of the study, however, did conclude that: "Positive outcomes suggested that solution-focused therapy can be beneficial in helping students reduce the intensity of their negative feelings, manage their conduct problems, improve academic outcomes like credits earned, and positively impact externalizing behavioral problems and substance use" (Kim & Franklin, 2008, p 468). It was recommended that further research on the effectiveness of SFBT with school students is needed but conclude that it can be useful for a variety of academic and behavioural issues in schools (Kim & Franklin, 2008).

4. Conclusion and future directions

A review of the literature emphasizes the importance the examination of the issues around bullying intervention approaches. The research shows that whole school bullying interventions have been found to be more effective with primary school populations than with secondary school students. Therefore, there has been a shift to individual counselling intervention with victims and perpetrators of bullying from a whole school or support group approach to bullying intervention. Hence, reports indicates that Solution-Focused Brief Therapy (SFBT) is a useful intervention for individual counselling and bullying interventions; however, there is limited research on the effectiveness of SFBT with bullying perpetrators. SFBT has been evaluated as an intervention with some behavioural issues in schools, but the findings have been limited to mainly primary school populations. Thus future directions may include assessing whether this therapeutic approach is suitable within this context.

References

Carey, T.A., & Dowling, M.J. (2013) Victims of bullying: Whom they seek help From and why: An Australian sample. *Psychology in the schools, 50(8),* 798-809.

Coan, J.A., Davidson, R.J., Frye, C., Hill Goldsmith, H., Light, S.N., & Zahn-Waxler, C. (2009) Empathy is associated with dynamic change in prefrontal Brain electrical activity during positive emotion in children. *Child Development. 80*(4), 1210-1231.

Correia, I., & Dalbert, C. (2008). School bullying: Belief in a personal just world of bullies, victims and defenders. *European Psychologist, 13*(4), 248-254.

De Winter, A.F., Lindenberg, S., Oldehinkel, A.J., Ormel, J., Veenstra, R., & Verhulst, F.C. (2005). Bullying and victimization in elementary schools: A comparison of bullies, victims, bully/victims, and uninvolved preadolescents. *Developmental Psychology, 41*(4), 672-682.

Durrant, M. (2016). Confessions of an unashamed Solution-Focused purist: What is (and isn't) Solution-Focused? *Journal of Solution-Focused Brief Therapy, 2*(1), 40-49.

Finger, L.R., Craven, R., Marsh, H. W., & Parada, R. H. (2005). Characteristics of Effective Anti-Bullying Intervention: What Research Says. Paper presented at the Australian Association for Research in Education Annual Conference 2005, Sydney.

Franklin, C., Moore, K., & Hopson, L. (2008). Effectiveness of Solution-Focused Brief Therapy in a School Setting. *Children and Schools, 30*(1), *15-26.*

Gerdes, Karen E., Segal, Elizabeth A., Jackson, Kelly F., Mullins, Jennifer L. (2011). Teaching empathy: A framework rooted in social cognitive neuroscience and social justice. *Journal of Social Work Education, 47(1),*

Gingerich, W.J., & Wabeke, T. (2001). A Solution-Focused Approach to Mental Health Intervention in School Settings. *Children & Schools, 23*(1), 33-47.

Johnson, B., & Side, J. (2014) Bullying in schools: Why it happens, how it makes young people feel and what we can do about it. *Educational Psychology in Practice, 3*0(3), 217-231.

Kaljonen, A., Kärnä, A., Little, T.D., Poskiparta, E., Salmivalli, C., & Voeten, M. (2011). A large-scale evaluation of the KiVa antibullying program Grades 4-6. *Child Development, 82(1)*, 311-330

Kim, S., & Franklin, C. (2008). Solution-focused brief therapy in schools: A review of the outcome literature. *Children and Youth Services Review, 31*, 464-470.

Lethem, J. (2002). Brief Solution Focused Therapy. *Child and Adolescent Mental Health, 7*(4), 189-192.

Lund, E.M., Blake, J.J., Ewing, H.K., & Banks, C.S., (2012). School Counselors' and School Psychologists' Bullying Prevention and Intervention strategies: A Look into Real-World Practices. *Journal of School Violence, 11*, 246-265.

Mele-Taylor, D., & Nickerson, A.B. (2014). Empathetic responsiveness, group norms, and prosocial affiliations in bullying roles. *School Psychology Quarterly, 29(1),* 99-109.

Olweus, D. (1993). *Bullying at school: What we know and what we can do.* Oxford, UK: Blackwell.

Olweus, D., Limber, S. P., Flerx, V., Mullin, N., Riese, J., & Snyder, M. (2007). *Olweus Bullying Prevention Program: Schoolwide guide*. Center City, MN: Hazelden.

Olweus, D., & Limber, S.P. (2010). Bullying in School: Evaluation and Dissemination of the Olweus Bullying Prevention Program. *American Journal of Orthopsychiatry, (80)*1, 124-134.

Rigby, K. (2010). *Bullying interventions in schools: Six basic approaches.* Victoria: ACER Press.

Rigby, K. (2013). Bullying in schools and its relation to parenting and family Life. *Family Matters, 92,* 61-67.

Salmivalli, C. (2010). Bullying and the Peer Group: A review. *Aggression and Violent Behaviour, 15,* 112-120.

Salmivalli, C., Poskiparta, E., Ahtola, A., & Haataja, A. (2013). The Implementation and Effectiveness of the KiVa Antibullying Program in Finland. *European Psychologist, 18*(2), 79-88.

Young, S., & Holdorf, G. (2003). Using Solution Focused Brief Therapy in Individual Referrals for Bullying. *Educational Psychology in Practice, 19*(4), 271-282.

The Flipped Classroom

Vali Ilie[1]

[1] Department of Teacher Training, University of Craiova, Romania, Tel: 0040742353116. E-mail: Brainstorming71@yahoo.com

Abstract

The knowledge society requires greater connectivity between individuals and communities. Becoming indispensable for the development of all human activities, the new information and communication technologies are increasingly encountered in the educational practice. Essentially, "flipping the classroom" means that the students are initially exposed to new materials outside the classroom, usually by presenting informational content or videos and then use their time in the classroom to do the harder work, assimilating this knowledge by solving problems, discussions or debates. Starting from the specificity of the flipped classroom, we have proposed to test the views of the students enrolled in the Department of Teacher Training of the University of Craiova, on this subject. By applying an opinion questionnaire, we obtained information about two indicators we referred to: the extent to which the students know the characteristics of the flipped classroom and their attitude regarding the implementation of this approach. For a better "radiography," we turned to the SWOT Analysis and disseminated the resulted information in order to implement this form of mixed learning in the activities with the students of the Faculty of Sciences, enrolled in the module of psycho-pedagogical training.

Keywords: Flipped Classroom, Just-in-Time Teaching, Peer Instruction, Technology, Constructivism

1. Introduction

Education is constantly adapting to meet the needs of the students. Communication Technologies (ICT) are meant to support learning and teaching: universities started providing free wireless access to the internet, students are communicating with teachers via e-mail, bringing their laptops to classes to conduct on-going research and perform tasks. The use of technology allows lectures to be pre-recorded and made available to students outside the classroom. The phrase "New Information and Communication Technologies" (NICT) refers to the tools and resources needed to store, organize, process and present information and includes a computer, multimedia systems, and the Internet. They influence how education and training are delivered and generate a range of educational platforms.

An attempt to define eLearning from a technological point of view is the one to analyze the relations between eLearning and certain correlative concepts: Internet learning, Web-based learning, online learning, computer learning, etc. If e-Learning is based on collaborative learning, m-Learning is based on situational learning. M-Learning learners can choose the moment they want to connect and access educational resources. The Digital Teaching Platform is a new set of educational products designed to operate in a teacher-led classroom that provides solutions to technologize the learning process and to manage educational learning. For example, the Perusall Social Learning Platform, developed at Harvard University, allows learners to annotate their readings

and respond to the comments and questions of the other students about the texts presented. Perusal is expanding the collective experience, by allowing students to get immediate answers to their questions, to learn more, to interact and prepare at their own pace. They engage, become proactive, and the teachers provide customized guidance, easily succeeding in motivating the entire class/ group. Online courses are often conducted through the course management systems such as Blackboard or Moodle that provide a customizable access gate. Learning management systems, such as Massive Open Online Courses (MOOCs), are increasingly sought after. A massively open online course is an online course aimed at the participation and wide access of learners from different geographic areas, through web and interactive methods.

The flipped classroom has common elements with the *virtual class*, both using technology. For example, mobile devices can support learning in a university context, in a flexible manner and in a variety of educational. *Hybrid courses* that are met in university and postgraduate education are becoming more and more common. *Blended Learning* is an effective combination of face-to-face education and online education. It should be noted that this is not limited to the implementation of technology in the use of old content. It is, in fact, a "fundamental reconceptualization and reorganization of the teaching and learning dynamics, starting with various specific contextual needs and contingencies (e.g., discipline, developmental level, and resources)" (Garrison & Kanuka, 2004). As blended learning does, *the flipped classroom* capitalizes on the constructivist principles. Flipped Learning transforms the time spent in the classroom into an individualized experience. The learners work at their own pace or in small groups in order to apply their knowledge in practical situations, and this allows, as a whole, a more diverse experience. The "flipped" concept is based on the theory of constructivist learning and offers the active learning environment additional benefits because teachers can use modern technology to engage in the learning process of the students.

The idea of flipped classrooms appeared in a 1993 publication by researcher A. King called "From Sage on the Stage to Guide on the Side." Although the author does not directly illustrate the concept of "flipping" a classroom, he emphasizes the importance of using the time available in the classroom to construct meaning, rather than to transmit knowledge: "Essentially, the professor's role is to facilitate the students' interaction with the classroom material and with one another in their knowledge-producing endeavor. In the constructivist model, the student is like a carpenter (or sculptor) who uses new information and prior knowledge and experience, along with previously learned cognitive tools (such as learning strategies, algorithms, and critical thinking skills) to build new knowledge structures and rearrange the already existing knowledge" (King, 1993).

Since the founding of the Khan Academy, the flipped classroom has been paid increasing attention. The US professor S. Khan set up in 2006 a video channel where he published videos to help students in the learning process. In accordance with this model, he set up the Khan Academy which, for some, has become synonymous with the flipped classroom. More and more universities are turning to recording their lectures, broadcasting them in closed networks and distributing them on the Internet. This is encouraged by the fact that many students have personal computers, notebooks, tablets as well as mobile phones or other portable devices for viewing them.
In the flipped classroom other tools such as "Nearpod" (a tool that allows engaging in interactive activities - surveys, questionnaires, collaborative counseling), "Playposit" (an interactive video tool – more effective than the standard video - focusing on an uninterrupted workflow, student engagement, performance tracking), "BrainPOP" (an animated learning site for students that can be used as a support for teaching a variety of fun animated topics).

Podcasting is a method of distributing files on the Internet as multimedia (audio and video) through Web-Feed technology and specific content formats. This involves downloading a series of audio (files) to a digital media player via a computer for a few weeks. Public acceptance of podcasts is reflected in recent grants and reflects the desire to modernize the training act. Although there is little research on the use of video podcasts in education, the interest is growing. You can observe that "new portals such as the Khan Academy, exclusively designed to distribute work-example video podcasts, have been extensively used" (Kay, 2014, p. 21).

The American professors J. Bergman and A. Sams have realized that sick students, who can not attend classes because of this, do not have the opportunity to get curriculum material. In 2007, they began recording lessons and turned teaching (lectures, readings) into videos. Then they began to use the material in classrooms, calling it "pre-broadcast." On this algorithm, the flipped classroom model was officially used in 2010 at Clintondale High School in Michigan, where the dropout rate was very high. All of this lead us to the idea that the flipped classroom is one of the latest trends in education. In this mixed learning approach, face-to-face interaction is combined with independent study with the help of technology.

2.   Literature Review

2.1   *Opportunities to valorize technology in education*

The generation of digital natives is distinguished by its own identity. The Net Generation is unique in that its representatives feel very comfortable with technology, thanks to their early familiarization with it and its intensive use: "Our students today are all *native speakers* of the digital language of computers, video games and the Internet" (Prensky, 2001, p. 1). This reconsiders the way the training is done and invites to reflection and search for new pedagogical solutions that would take into account the specifics of the present society. In the field of education, intelligent technology supports constructivist and student-centered learning. Web-based learning technologies offer powerful opportunities for learning activities in the classroom and outside the classroom.

There are several differences between *traditional learning* and *e-learning*. The first relates to a linear and predefined organization of the pedagogical path and has no immediate link with the operational activities; the second is aimed at an adaptive progression for each one, depending on the situation and which is integrated with the operational activities (Marinescu, 2007, p. 78). In traditional learning, the results are the ones that matter, while in e-Learning, the interaction process is considered more important than the results (Dillenbourg, 1999; Mercer & Howe, 2012). The first encourages more competition; the second is more collaborative, supported by mobile technologies and tools (e.g., Moodle). If aspects of planning, monitoring, and evaluation are the teacher's attribute in traditional learning, in e-Learning these include the student, too, and can be seen as part of their socio-emotional development (Volet, Summers, M., & Thurman, 2009). If the content was important before, it is now a pretext for training.

In the postmodern view of pedagogy, the constructivist approach is a paradigm that is gaining more and more ground. Being open to postmodernity, to renewing, but also to deconstruction and reconstruction, pedagogy entered – also through constructivism – a new stage. *Constructivism* activates innate curiosity, engaging in experimenting with concrete situations of life, reflecting on reality and drawing out partial and general conclusions. It is appreciated that if from a behavioral perspective the objective of education is "to ensure the survival of the human species, societies and individuals", the constructivist position states that "learning is a process of building meaning; this is how people give sense to their experience" (Merriam & Caffarella, 1999, pp. 252-260). *Constructionism* complements constructivism by emphasizing the relationship between the mental dimension of knowledge and the material dimension. The mental one ensures the understanding of the problem, the situation, and the material one concretises a representation of the model built internally, abstractly, in the form of an artifact product, which gives a relative, artificial image or a description of the mental construction.

Education takes place in a climate that encourages, presses, or requires teachers to change their teaching styles and even their fundamental beliefs about effective teaching. Beyond the obstacles encountered in the practical use of constructivist strategies (there is no resort to stimulating effort, attaining higher levels, often finding resistance from teachers and/ or students, requiring training time and a flexible, modular instructional design, etc.), they teach students "how to learn." Experiments, research projects, excursions, debates, case studies, modeling, computer-aided instruction give meaning to learning experiences and attract students, helping them to become active subjects of their own training. The constructivist methodology includes, as a stage, in the spiral of knowledge and in the rethinking, restructuring, remodeling according to different criteria, sometimes other than the ones that the cognitive construction followed. Even though the technology used in the adaptive learning

process is still young, the interest in adapting technology to the training needs is increasing. The learning methods are at the heart of each adaptive education system as one of its most important elements. Open learner models (OLMs) are accessed by learners on the basis of modern technology, and they allow the adaptation to the individual, according to their current learning needs.

In 2009, Intel realized that the employees are using their own devices, such as laptops, smartphones, tablets, connecting to the corporate network, which increases productivity and reduces costs. Since then, the BYOD approach has gained popularity in the business world in other areas such as education, too. In the context of education, *M-learning* and *Bring Your Own Device* (BYOD) are conceptually similar, but each has a different percentage in terms of availability. BYOD focuses primarily on the use of a personally owned mobile device and its associated technology to facilitate personalized learning (Afreen, 2014; Kong & Song 2015; Lai et al. 2013, apud Cheng, 2016, p. 1).

Adaptive learning – or adaptive teaching – is the delivery of custom learning experiences that address the unique needs of an individual through just-in-time feedback, pathways, and resources (rather than providing a one-size-fits-all learning experience). Adaptive learning involves adapting to different situations to bring about a permanent change in behavior. Adaptive learning or smart guidance has its origins in the artificial intelligence movement and gained popularity in the 1970s. Introduced at the end of 2012 by the World School Council (London), adaptive learning was rapidly deployed in various educational systems such as intelligent tutoring systems and computerized adaptive testing. Today, computers adapt the presentation of educational materials according to the students' learning needs. The adaptive learning systems were traditionally divided into separate components or "models" (e.g., the experts' model, the students' model, the training model, the instructional environment model). The learning materials or training courses designed to teach new concepts usually have a hierarchical structure, and adaptability can be introduced at different levels of this hierarchy. The adaptive training of the learning content requires more than just channeling traditional content into a single route.

Active learning involves approaching learning based on the students' engagement in learning. Active learning refers to a wide range of teaching strategies that turn students into active participants in their own learning during classes with their instructor. This is related to *collaborative learning* – a pedagogical approach that involves the active participation of the students and which allows the assumption of responsibility in learning, improving critical thinking skills, and encouraging reflection.

Lately, smartphones and tablets have become a catalyzer for creating an active learning technology. The interactive activities based on technology allow students to solve problems and engage in discussions, collaborating in an entertaining environment (Gee, 2005; Cullen, Harris, & Hill, 2012). Most students today are younger than Google and have developed their first school project on Wikipedia. That is why we believe that the current generation of students requires advanced interactive approaches based on the exploitation of technology. Because screens are the tools of everyday life, educators can turn them into learning tools.

Active engagement includes taking notes, gathering information, or highlighting key phrases. It combines with a constructive engagement (e.g., writing an essay or solving a problem independently) and with an interactive participation (e.g., solving a task with a tutor or co-building with a colleague). All these are based on the principles of constructivism, which do not give up the active role of the teacher but only modify it, involving students more in the instructive-educational activities.

The flipping pattern, for example, requires students to be active agents of their own learning, not to rely on the teacher's expertise exclusively. The students' participation is also essential when creating video podcasts with working examples. The students work more on issues where information is presented in a conversational manner (Beck, McKeown, Sandora, Kucan, & Worthy, 1996). Of course, there are a number of aspects that contribute to the positive impact a video can have: the length of the clip, the presence of explanations, the essentialization of the information presented, the provision of examples, applications, case studies, etc. Active learning is associated with the depth of learning, with the process during which the students develop a personal understanding of the material, rather than just keeping the knowledge.

2.2 The flipped classroom

Flipped Learning is a pedagogical approach in which direct instruction moves from the group learning space to the individual learning space, and the resulting group space is transformed into a dynamic, interactive learning environment where the educator guides students as they apply concepts and engage creatively in the subject matter. The conventional notion of learning is rethought so that students are familiar with the learning material before class interaction.

Classroom time is used to deepen understanding through discussion with colleagues and solving problems with the help of the teachers. The phrase "flipped learning" came into general use a decade ago. It was popularized by the chemistry teachers from a Colorado high school, who offered sick students the opportunity to watch recorded lectures and participate in video conferences (Bergmann & Sams, 2012).

The Flipped Classroom is a mixed form of learning where students learn the content online by watching video lessons, usually at home, and homework is being held in the classroom, with the teachers and students discussing and solving problems. The teachers' interaction with students is more personalized, with guidance instead of teaching. The term "flipped classroom" was used by a group of economics professors at the University of Miami (Ohio) to describe the use of the technique (Lage, Platt, & Treglia, 2000). In the flipped classroom, the students are given the opportunity to negotiate and build meaning.

There are several ways of "flipping" the classroom. For example, through its structure, JiTT is closely linked to the flipped classroom method, according to which the learning activities that traditionally take place within the classroom are taught outside. *Just-in-time teaching* (JiTT) is a pedagogical strategy that encourages students to prepare for classes and allows instructors to set up the classroom activities to best meet the students' needs. JiTT differs from "reading quizzes" in that students do not use the classroom time, the learning tasks are solved online with open and challenging questions. JiTT was originally developed at Indiana Purdue Indianapolis University (IUPUI) and the US Air Force Academy to help the students and the faculty of physics. Developed by G. Novak and colleagues, JiTT is based on a feedback loop between the web and classroom learning materials (Novak, Patterson, Gavrin, & Christian, 1999).

Peer Instruction is peer education. E. Mazur invented the term "peer education" to describe a particular technology-centered pedagogy. A professor of Physics at Harvard University and a pioneer of the flipped classroom, he encouraged his colleagues to rethink the evaluation and lead it to a higher level. In the 1990s, he developed a model of "peer education," in which he offered material for the students to prepare and reflect before the course and then use courses to encourage deeper cognitive thinking. He called this path of learning "just in time teaching" (Crouch & Mazur 2001). At present, the method is a subject of continuous training at summer schools that are organized and carried out around the world.

The flipped classroom is similar to other methods that encourage learning outside the classroom. In the team learning process developed by L. Michaelsen, the students receive reading tasks before the course, and then they are faced in the class with individual tests, group tests, and finally with case studies (Michaelsen 1992; Michaelsen, Knight, & Fink, 2002). The "Flipped Classroom" model uses student-centered teaching. The flipped classroom aims to reverse the roles. The active role is for the students, and the teacher becomes a guide, mentor, facilitator. The flipped classroom is a mixed learning model where traditional ideas about classroom activities and homework are "inverted" or "overturned." The principles of the flipped classroom have been successfully applied in several Universities (e.g., Vanderbilt University in the USA, the University of Queensland, Australia). C. Wieman and his colleagues also published evidence that the flipping of the classroom can produce significant learning gains (Deslauriers, Schelew E., & Wieman, 2011).

In a study by A. Kazlauskas and K. Robinson in 2012, nearly a fifth of the students preferred to attend the face-to-face conference. These students felt they could concentrate better, absorb more in face-to-face courses, and felt less isolated than they were when studying podcasts. These results tell us that we need to take into account the differences between learners in assessing different learning scenarios. We need to make

it clear that there is also some restraint in this mixed form of training. Some studies (Traphagan et al., 2010; O'Bannon et al., 2011; O'Callaghan et al., 2015; Giannakos and Vlamos, 2013) show ambiguous results. In a study by Traphagan et al. (2010), the students who had access to lecture-based conferences as well as to face-to-face lectures were not different from the achievements of the students who only had access to face-to-face lectures (apud Luttenberger et al., 2018). These studies are accompanied by others that observe the existence of some vulnerabilities: technical difficulties, the isolation feeling (Youngberg 2012), the skepticism and suspicion of teachers (Fulton, 2012), the resistance of the students to the assumption of increased responsibilities, cultural differences (Talbert, 2012), and others, the uncomfortable state that some students may experience in using the technology-based approach (Herreid & Schiller 2013).

In order to gain a more in-depth knowledge of the flipped classroom, we appeal to identifying the advantages and limitations of this mixed form of training that valorize the new technologies:

Table 1. Advantages and disadvantages of the flipped classroom

Advantages	*Disadvantages*
- All students are involved in the learning process; - The content of the information is kept permanently; - It improves the understanding of the learning process in students; - It combines direct teaching with constructivist learning; - Collaboration is encouraged, and the interaction between the students and the teacher increases; - Personalized learning is increased; - It allows learners to divide content into smaller and more manageable sequences, which can be repeated whenever it is desired; - It leads to better learning outcomes; - The teachers can quickly assess the understanding of how students learn; - The students assume responsibility for their own learning; - The students have the opportunity to run, rerun, interrupt and speed up the reading of the informational material; - They avoid remaining behind because information can be accessed online; - Their time in the classroom can be used more efficiently and creatively; - There is the possibility of asynchronous learning.	- Many parents accuse the excessive use of computers and the Internet; - The lack of motivation of the students to solve their tasks; - The dependence on the learner's skills in assessing and evaluating the learning content; - The lack of human interaction; - The increased time spent in front of the computer at a time when teenagers and young people spend too much time in front of electronic screens; - The teachers' resistance to change and to the new; - The lack of adequate evaluation strategies for this strategy; - The teachers' time load; - The failure of some learners to solve work tasks based on recorded content; - The lack of Internet access or poor Internet access outside the classroom; - The difficult assessment, given the fact that the students will approach the tests at different times, and some may even postpone the evaluation process; - The inappropriate use of technology; - The promotion of an environment voided of education.

Virtual reality is one of the latest innovations that requires the reconfiguration of the variables of the educational process. Beyond the uncertainty of the use of videos in education, the implementation of technology in school is inevitable and rethinks how teaching, learning, and evaluation are being achieved. The approach of capitalizing on the new information technologies begins with the awareness of their specificities, their advantages, and their limits. As technology advances, teachers become more creative, and the flipped classroom is an answer to the questions about the modernization of the instructive-educational process.

3. Methodology

In our observational research, we start from *the premise* that the instructive-educational process is influenced by new information technologies. *The purpose* of our investigation is to test the opinions of students enrolled in the Department of Teacher Training at the University of Craiova (DPPD) about the flipped classroom. The research took place at the University of Craiova, in the academic year 2018-2019, during the second semester.

The group of subjects was represented by students of the first year of the Bachelor's degree course, from the Faculty of Sciences of the University of Craiova. They were selected from among those who had shown willingness to participate in the research, but also interest and concern to improve their initial training, those who were able to capitalize on the advantages of modern technology.

Table 2. The number of subjects included in the research

Nr. of students/ Departments	*The Department of Mathematics*	*The Department of Informatics*	*The Department of Chemistry*	*The department of Physics*
134	38	23	42	31

The students who completed the questionnaire come from different living places: urban (93 – 69.40%) and rural (41 – 30.60%). We used the survey questionnaire as a *research tool* and took into account, in the SWOT Analysis, the answers of the students participating in the research. By wanting to know the students' views on this topic, we formulated the questionnaire items by reference to two variables: the extent to which the students know the characteristics of the flipped classroom and their attitude regarding the implementation of this approach.

The items of the questionnaire are the following:
1. Do you know the meaning of the flipped classroom?
a) Yes
b) No
2. In what context did you hear about the flipped classroom?
3. Have you participated in activities that are specific to the flipped classroom?
a) Yes
b) No
4. What are the main two advantages of teaching in a flipped classroom?
5. What disadvantages do you consider teaching to have in a flipped classroom?
6. The introduction of the flipped classroom in the instructional-educational approach is:
a) Totally inefficient
b) Inefficient
c) Quite efficient
d) Efficient
e) Very efficient.

At the same time, we conducted a needs analysis through which we sought to build the strengths, eliminate the weaknesses, exploit the opportunities, and remove the threats.

Table 3. The SWOT analysis of the flipped classroom in Romania

The SWOT analysis	Beneficial in accomplishing the objectives	Endanger the accomplishment of the objectives
	Strengths	*Weaknesses*
Internal Source	- The opening of the University to new science paradigms and educational approaches - Implement ICT in a modern, attractive and motivating climate for the students - Internet use in curricular and extracurricular activities - The experience of the DPPD members of the University of Craiova in the field of initial teacher education - Exchange of good practices, sharing of experience and successful practices (e.g., Le Projet ANGE – Ancrage du Numérique dans la Gouvernance des Établissements) - Experimenting active and participative training tools based on the principles of constructivism (e*.g.,* grant research project "Cognitivism and constructivism – new paradigms in education")	- Material resources and technical facilities needed to carry out the program at a high level in terms of quality - Insufficient internal and external financing - The competition of adjacent professional tasks - Time limitations for the projection of the activities, the content preparation, and the teaching tasks, as well as of the evaluation tools - The neutral attitude of the teaching staff regarding the implementation of the flipped classroom attributes - The lack of experience regarding the accomplishment of the didactic activity on the coordinates of the flipped classroom - Poor collaboration between teachers from different faculties and departments within the University of Craiova
	Opportunities	*Threats*
External Source	- The favorable national legislation, which stipulates the need for digital competence training - The preoccupation of teachers in pre-university education for the modernization of the instructive-educational act - The possibility to access new information and communication technologies (NTIC) - The international interest in the flipped learning and the flipped classroom - The existence of computer science laboratories in the pre-university education - Most students are familiar with the information and communication technologies (ICT) and can apply them easily	- The lack of research and pilot programs on the need to implement flipped learning and the flipped classroom in the Romanian university environment - The insufficient testing of the new technologies in obtaining a higher rating on learning in students - The insufficient access of the students from Romanian universities to multimedia systems - The low awareness of the local community regarding the role of digitization in education and the implementation of reform measures in education - The resistance to change of some teachers in the university education

After the application of the opinion questionnaire and the group discussions, we managed to outline a SWOT analysis useful for rethinking the initial training program for the students who are training to become teachers. We refer to the design and development of the didactic activities from the perspective of the flipped classroom, which is part of a larger system of measures which DPPD intends to implement. For example, in the 2018-2019 academic year, students were offered an extracurricular activity ("My Education in the Digital Age" – topics: The Flipped Classroom and the Debate). The activity is in collaboration with two other partner universities in Romania ("Ovidius" University of Constanta and the University of Pitesti).

4. Results

Further on, we are going to present the answers to the items of the applied questionnaire. For the first question, out of the 134 students enrolled in the study, only 61 of them (45.52%) answered affirmatively, which means that the rest of 73 (54.48%) do not know the meaning of the flipped classroom.
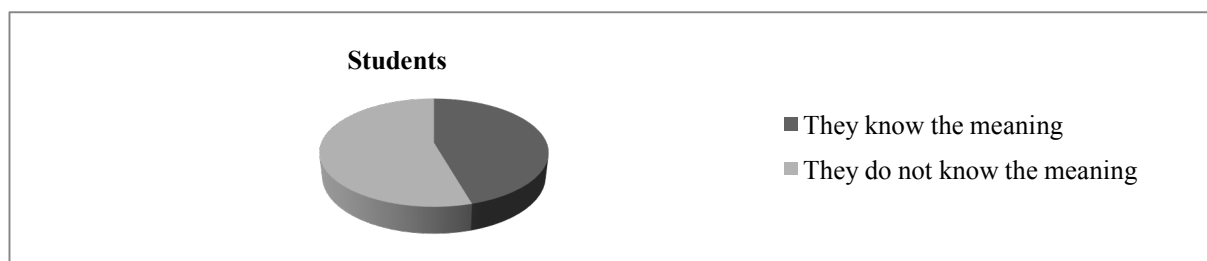
Figure 1. The distribution of the affirmative and negative answers for item 1

Item 2 aims at identifying the context in which the students have heard of the flipped classroom and addresses only those who have specified that they are aware of the flipped classroom. Out of the 134 students, only those who answered affirmatively to Item 1, that is, 61 students (Mathematics – 16, Informatics – 22, Chemistry – 9 and Physics – 14), filled in this item.

Table 4. The number of students who know the meaning of the inverted class

Specialization	*Mathematics*	*Informatics*	*Chemistry*	*Physics*
The no. of students who know the specificity of the flipped classroom	16	22	9	14

Most answers fall into the following patterns: I accidentally read about this topic (36 students - 59.01%), I talked to a teacher about this topic (11 students – 18.03%), I know from a college friend (5 students – 8.19%).
Item 3 aims to participate in the flipped classroom activities. Thus, out of 61 students who stated that they are aware of the specificity of the flipped classroom, only 13 say they have participated in activities carried out from this perspective.
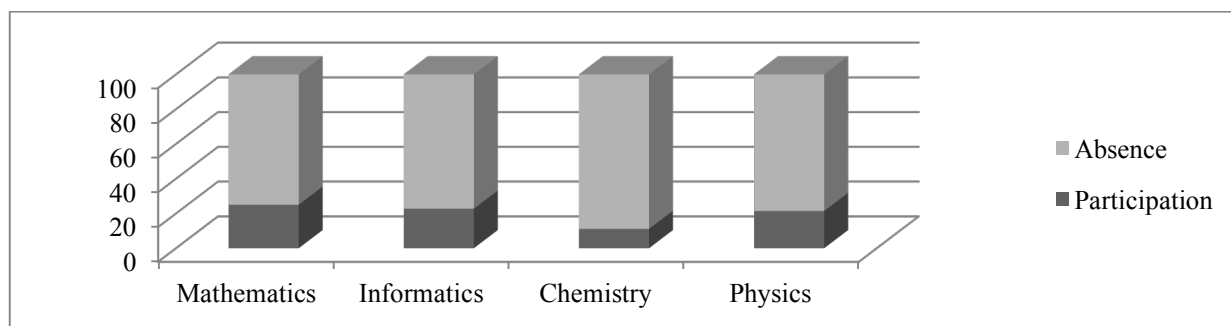
Figure 2. The percentage of participation in activities specific to the flipped classroom

Item 4 addresses the main benefits of training in the context of the flipped classroom. The most frequent answers refer to:

- The modernization of didactic act (9 students – 69.24%);
- The personalization of training (2 students – 15.38%);
- Other answers (2 students – 15.38%).

Item 5 aims to identify the disadvantages or limitations of training in the context of the flipped classroom, and the answers of the students are distributed as follows:

- The lack of necessary facilities and infrastructure (7 students – 5 .84%);
- The absence of the teacher's support (3 students – 23.08%);
- Other answers (3 students – 23.08%).

As for the introduction of the flipped classroom in the training of the future students (Item 6), we find the following:

Figure 3. The degree of efficiency found by the students in relation to the flipped classroom

Starting from these results, we interpreted the obtained answers and formulated some partial and general conclusions that will for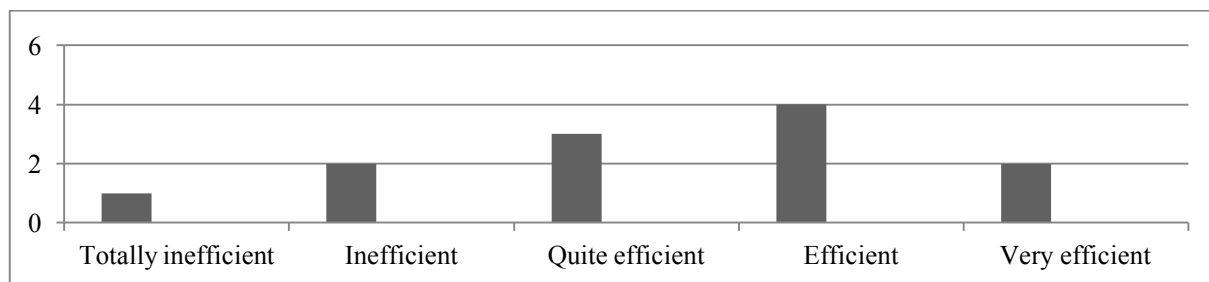m the basis of the decisions taken at DPPD level, regarding the projection and implementation of some didactic activities related to the initial training of the future teachers.

5. Discussions

The answers to the first item indicate the lack of knowledge or the insufficient knowledge of the students in relation to the specificity of the flipped classroom. The fact that over 50% of the interviewed students do not know the specifics of the flipped classroom, some of whom have never heard about this mixed form of training, suggest anchoring in the traditional practices, which, beyond the positive aspects they have perpetuated, are no longer capable of generating adequate responses to the labor market demands and the current lifestyles.

In Item 2, the students responded that they heard about the flipped classroom by accidentally reading about the subject or talking to a teacher or a colleague. The current generation of young people frequently access the internet, learning a lot about this alternative. This explains the high percentage (over 50%) of those who chose the Internet as a source of information on the topic in question. Without a teacher's guidance, few of them are specifically looking for this new form of instruction.

It is possible to discuss this topic in the computer science classes in pre-university education, but it is more important to implement the principles of the flipped classroom in training. In the Romanian school practice, there are more and more hybrid courses (as some "educational islands" for the capitalization of technology), but there is a need for better material supply and greater creativity on the part of the teachers.

The small percentage of students who stated that they had previously participated in training programs (13 students from 61 students who know the specifics of the flipped classroom – 21.31%) express the cantoning of the Romanian pre-university education system in classical techniques and already tested training courses. Referring to the number of students who have information about the characteristics of the flipped classroom (61 students), we mention that the number of those who participated in activities specific to the flipped classroom is quite small (4 out of 16 students from the Department of Mathematics – 25.00%; 5 out of 22 students from the Department of Informatics - 22.73%, 1 out of 9 students from the Department of Chemistry – 11.11%, 3 out of 14 students from the Department of Physics – 21.43%).

The advantages of training by reference to the flipped classroom are the content of Item 4. Among the most frequent answers are the modernization of the didactic act. Both the students and some teachers want a different approach to the instructional-educational process. The implementation of the new educational technologies brings a new breath, it capitalizes the students' technological abilities and rethinks the teacher-student relationship.

The disadvantages of training by reference to the flipped classroom are the content of Item 5. More than 50% of the students who answered the question on boundaries stress to the shortage of modern educational means. Equipping each class or laboratory with computers, video projectors, tablets, or other gadgets becomes a necessity. That is why we believe that this should be the priority of the current education reform. Of course, the modernization of the teaching technology is achieved after all schools – from both urban and rural areas – meet the basic material conditions (modern heating systems, lighting, sanitary facilities, transport means, etc.).

We were interested in learning whether the students think it important to implement the flipped classroom in their initial training as future teachers. By interpreting the students' answers to Item 6, we find that only 38.45% of the interviewed students (who participated in the research and who claimed to be familiar with the specificity of the flipped classroom) consider effective and very effective the introduction of the flipped classroom in the instructive-educational approach. This may be based on the previous limited experience of the students in this practice, but there are a number of other issues that we need to keep in mind.

Considering the weaknesses and threats specified in the SWOT Analysis, we find that:

• There is a need for adequate funding and equipping of classrooms;
• A proactive attitude of the teaching staff is required in relation to the new information and communication technologies used in the educational process;
• An authentic collaboration between faculties and departments within the University, between the University and the external partners with expertise in providing information and technology, between teachers and students;
• It is desirable to implement active and constructive strategies, based on change.

It is unrealistic to expect the existence of computers in schools to lead to transformative learning experiences without giving the teachers and students the support needed to implement the new strategies.

If we go from the positive points and the existing opportunities regarding the implementation of the flipped classroom in the training of the future teachers, we note the following:

• The possibility to develop high quality online or multimedia resources;
• The opening of the educational actors to the modernization of the didactic act;
• Interest in collaborating on this topic with students and professors from other Universities (both in the country and abroad);
• Access to projects that provide funding and allow the exchange of experience and good practice.

6. Conclusions

The flipped model has also been called the "mixed approach," "hybrid learning," or "inverted model." The flipped model was designed to blend and make full use of the available electronic technologies, which are then combined with face-to-face learning events. By flipping the traditional learning environment by providing training content, often online, outside the classroom, the flipped classroom is one of the new aspects that contribute to changing the paradigm and can reform educational practice. By using the video technology, the students "digest" content at their own pace and use their time in the classroom to discuss and solve difficult problems.

Delivering content can take different forms, but bringing the student to the spotlight and using the computer are the two basic elements. The students can watch the video presentations proposed by the teacher at any time of the day. Reading through videos adds, as an alternative, the inclusion of podcasts, e-instructions, e-demonstrations, site-specific explorations, or electronic versions. A course that uses the flipped classroom fully and correctly must be carefully designed, orchestrated, implemented, and evaluated.

The flipped learning method creates an environment in which students use their innovative skills, reflect on the knowledge they are presented and are encouraged to ask questions. However, there are benefits and limitations to be considered as a didactic format as in any didactic format. Our study has highlighted some positive aspects, but it is necessary to broaden the research sample and to carefully analyze the existing vulnerabilities.

Much of the attractiveness and strength of the model refers to the availability of all types of video and audio capture formats. Important are the new technologies, programs, and information sites that are designed to help implement the flipped classroom concept. Included in the constructivist instructional paradigm, the flipped classroom is a model that has potential and is currently used by the teachers who embrace the principles of constructivist training.

References

Beck, I., McKeown, M. G., Sandora, C., Kucan L., & Worthy, J. (1996). Questioning the author: A year-long classroom implementation to engage students in text. *Elementary School Journal, 96* (4), 385-414.

Bergmann, J., & Sams, A., (2012). Flip Your Classroom: Reach Every Student in Every Class Every Day. Washington, DC: International Society for Technology in Education.

Cheng, G. (2016). An empirical study towards understanding user acceptance of bring your own device (BYOD) in higher education. *Australasian Journal of Educational Technology, 32* (4), 1-17.

Crouch, C. H., & Mazur, E. (2001). Peer instruction: Ten years of experience and results. *American Journal of Physics, 69*, 970-977.

Cullen R., Harris M, & Hill, R. (2012). *The Learner-Centered Curriculum: Design and Implementation.* San Francisco, CA: Jossey-Bass.

Deslauriers L., Schelew E., & Wieman, C. (2011). Improved learning in a large-enrollment physics class. *Science, 332*, 862-864.

Dillenbourg, P. (1999). What do you mean by collaborative learning? In Dillenbourg, P. (ed.), *Collaborative-Learning: Cognitive and Computational Approaches* (pp. 1–19). Oxford: Elsevier

Fulton, K. (2012). Upside down and inside out: Flip Your Classroom to Improve Student Learning. *Learning & Leading with Technology, 39* (8), 12-17.

Garrison, D., & Kanuka, H. (2004). Blended learning: Uncovering its transformative potential in higher education. *Internet and Higher Education, 7*, 95-105.

Gee, J. P. (2005). Pleasure, learning, video games, and life: the projective stance. *E-Learn, 2* (3), 211.

Herreid, C., & Schiller, N. (2013). Case Studies and the Flipped Classroom. *Journal of College Science Teaching*, 42(5), 62-66. http://www.jstor.org/stable/43631584. Accessed February 25.

Kazlauskas, A., & Robinson, K. (2012). Podcasts are not for everyone. *British Journal of Educational Technology, 43* (2). 321-330.

Kay, R. H. (2014). Developing a Framework for Creating Effective Instructional Video Podcasts. *International Journal of Emerging Technologies in Learning, 9* (1), 22-30.

King, A. (1993). From Sage on the Stage to Guide on the Side. *College Teaching, 41* (1), 30-35.

Lage, M. J., Platt, G. J., & Treglia, M. (2000). Inverting the classroom: A gateway to creating an inclusive learning environment. *Journal of Economic Education, 31* (1), 30-43.

Luttenberger, S., Macher, D., Maidl, V., Rominger, C., Aydin, N., & Paechter, M. (2018). *Different patterns of university students' integration of lecture podcasts, learning materials, and lecture attendance in a psychology course, 23*, (1), 165–178.

Marinescu, M. (2007). *Trends and orientations in modern didactics*, Bucureşti: EDP.

Mercer, N., & Howe, C. (2012). Explaining the dialogic processes of teaching and learning: The value and potential of sociocultural theory. *Learning, Culture, and Social Interaction*, *1* (1), 12–21.

Merriam, S. B., & Caffarella, R. S. (1999). *Learning in adulthood: A comprehensive guide*. (2nd ed.). San Francisco, CA: Jossey-Bass.

Michaelsen, L. K. (1992). Team learning: A comprehensive approach for harnessing the power of small groups in higher education. *To Improve the Academy*, *11*, 107-122.

Michaelsen, L. K., Knight, A., & Fink, L. D. (2002). *Team-based learning: A transformative use of small groups*. Westport, CT: Praeger.

Novak, G., Patterson, E.T., Gavrin, A.D., & Christian, W. (1999). *Just-In-Time Teaching: Blending Active Learning with Web Technology*, Upper Saddle River, NJ: Prentice Hall.

Prensky, M. (2001). *Digital Natives, Digital Immigrants*. https://www.marcprensky.com/writing/Prensky%20-%20Digital%20Natives,%20Digital%20Immigrants%20-%20Part1.pdf. Accessed April 17.

Talbert, R. (2012). Inverted classroom. *Colleagues, 9* (1), 1-3.

Volet, S., Summers, M., & Thurman, J. (2009). High-level co-regulation in collaborative learning: How does it emerge and how is it sustained? *Learning and Instruction, 19* (2), 128–143.

Youngberg, D. (2012). Why Online Education Won't Replace College-Yet. *Chronicle of Higher Education*. http://chronicle.com/article/Why-Online-Education-Wont/133531/. Accessed February 11.

Theories-based Inclusive Education Practices

Zaid Al-Shammari, Ph.D.[1], Paula E. Faulkner, Ph.D.[2], Chris Forlin, Ph.D.[3]

[1] Kuwait University
[2] North Carolina Agricultural and Technical State University
[3] International Consultant

Abstract

This review paper examines the theories of behaviourism, cognitivism, and constructivism that are considered to underpin the theory and practice of inclusive education. We argue that education practices related to the inclusion of students with special educational needs can be derived from each of the three theoretical perspectives. By adopting an eclectic approach to the use of theory-driven inclusive education, we suggest that inclusive education practices best serve the needs of all students, including those with special needs.

Keywords: Inclusive Education, Behaviourism, Cognitivism, Constructivism

Introduction

The United Nations Educational, Scientific and Cultural Organization (UNESCO) has played an influential role in the consolidation of the idea of inclusive education for children with special educational needs in schools (UNESCO, 1994). Inclusive education has been adopted to ensure the quality of and right to education for all learners and is now a contemporary educational approach recognized globally (Subotić & Anđić, 2014; United Nations Convention on the Rights of Persons with Disabilities, 2016). While inclusive education has been enacted from a rights-based philosophy, implementation requires a change in the mindset of school principals and teachers. Although, overall, teachers are said to support inclusion, the inclusion of different groups of children, especially those with social, emotional or behavioral difficulties, continues to be considered as problematic (Hornby, 2014). Issues faced concerning teaching staff include the practical feasibility of inclusion, classroom teacher demands, the quality of support for students, and the degree of knowledge, understanding, and expertise required by classroom teachers (Botha & Kourkoutas, 2016). The demands of working with other agencies and issues relating to decision-making and the roles of parents, students, and other professionals is also challenging for regular education teachers (Mowat, 2010). The uncertainty and time-consuming nature of identifying different approaches when providing support, the place of alternative settings and services for the inclusion of students with special needs have also received criticism from some educators (Hulgin & Drake, 2011).

According to Mowat, '… inclusion is an elusive and much-contested concept.' (2010, p. 631). It is highly complex, and in order for schools to become truly inclusive in their practice, any known conflicting imperatives may need to be addressed. Individuals generally advocate for inclusive efforts because of the benefits, not only those being included but for those in the school community as a whole, on the basis that it should promote tolerance, understanding, and respect for diversity. Inclusive schools, nonetheless, require fundamentally

different approaches compared to traditional education. Participatory decision making is required, and there is an increased social responsibility of all staff with both educators and students considered to have an active and transformational role in the process.

The purpose of this paper is two-fold: (1) to review the literature related to the foundations of the theoretical perspective of behaviourism, cognitivism, and constructivism for supporting inclusive education; and (2) to suggest applications of theories-based inclusive education practices.

Inclusive Education: Theory to Practice

Inclusive education is understood to refer to the placement of students with special educational needs in mainstream settings, along with other students without disabilities (Artiles, Dorn, & Christensen, 2006). Inclusive education determines appropriate educational practices used in general education schools by offering a variety of educational services to help all students with special needs best learn according to their abilities and needs (McLeskey, Hoppey, Williamson, & Rentz, 2004). Salend (2011) defines inclusive education as a philosophy that brings stakeholders together to create a school environment based on acceptance and belonging within the school and the community.

Theoretical perspectives, as the principle theories supporting inclusive education practices, are the focus of this paper. The focus is to emphasize that the transition from theory to practice relates to the application of important aspects of learning theories to optimize instructional actions (Ertmer & Newby, 2013). Ertmer and Newby note that learning theories provide curriculum designers with instructional strategies and techniques verified to facilitate learning in classrooms, which includes the need to implement inclusive education practices for students with special educational needs, especially in general education settings. These instructional strategies and techniques include modifications of curricula and instructional design, the development of structures, and the use of evidence-based practices. Three major theories are considered to underpin inclusive education theory. Effective inclusive education practices should incorporate ideas from each of these theories so that teachers can successfully make curricular and instructional decisions for each student. Therefore, each of the theories underpinning inclusive education practice is theoretically and practically detailed as follows.

Behaviourism-based Inclusive Education Practices

Theoretically, behaviourism is one of the classical theories of learning and also recognized as the oldest (Nalliah & Idris, 2014). Behaviorism is known as a predominant psychological model (Harold & Corcoran, 2013), as suggested by the metaphor for, 'learning as the acquisition of stimulus-response pairs' (Doolittle, 2014). Behaviourists 'believe the objective of the theory is to impart to the learner the knowledge of reality' (Hickey, 2014, p. 17). Behaviourism occurs when consequences are associated with the stimulus or response that is followed by reinforcement to be maintained (Ertmer & Newby, 2013). Even though behaviourism has been heavily criticized over the years, the behaviourist approach is "still vital and is considered a scientific enterprise" (Abramson, 2013, p. 56). To summarize, the key principles of behaviourism that support education are: behaviour is learned, behaviour is governed by the setting in which it occurs, teaching does not occur without learning, learning equates to changing behaviour, behaviour is governed by what follows actions, and there needs to be a focus on the observable (Harold & Corcoran, 2013).

Practically, behaviourism-based inclusive education practices include the application of behaviourism in inclusive education settings, which clearly appears in the emphasis on student behaviour and performance in manipulating stimulus materials (Ertmer & Newby, 2013). Examples of behaviourism-based inclusive education practices are included in well-known instructional approaches such as explicit or direct instruction (Al-Shammari, 2019A; Steele, 2005). The method has shown positive research results with students with special needs in general education classrooms (Al-Shammari, Al-Sharoufi, & Yawkey, 2008). Practices based on explicit or direct instruction are systematic, involving a step-by-step process provided by a teacher and followed by students during instruction (Zhang et al., 2016). In addition, explicit or direct instruction-based practices that

break down tasks into their smallest elements are widely used for teaching students with special educational needs in inclusive education classrooms (Steele, 2005).

During the instructional process, Behaviourists assess learners to determine at what point to begin instruction and which reinforcers are most effective. The teacher's role during the process is to: (1) determine which cues can elicit the students' desired responses; (2) arrange practices where prompts are paired with the target stimuli which are expected to elicit the responses in the 'natural' setting; and (3) arrange environmental conditions so that students can make the correct responses in the presence of those target stimuli and receive reinforcement for those responses (Ertmer & Newby, 2013).

Basic assumptions and characteristics of behaviourism are embedded in many current instructional practices. For instance, some of the best interventions for students with special needs in inclusive education settings include: direct instruction, functional behavioural analysis, and assessment, evaluation, and feedback (Hattie, 2008). Direct instruction is commonly delivered in a teacher-led environment during which the teacher facilitates student learning through targeted lessons. For example, the teacher introduces a lesson, teaches a structured lesson, monitors student understanding, and receives student feedback to ensure understanding. Functional behavioural analysis categorizes and targets specific behaviours and their antecedents to change disruptive behaviours in the classroom, and encourage positive behaviour changes. A functional behavioural analysis of a student would involve using a chart with specific targeted behaviours monitored for frequency, time of day, antecedents, and consequences. Formative assessment, evaluation, and feedback assess the progression of learning and examine the gaps where remediation or even enrichment is necessary. An example of this in a behaviouristic classroom is the use of "Exit slips" which involves questions posed by teachers and students answer before leaving the classroom for the day including: "things I learned," "things I found interesting," and "questions I still have."

It is therefore considered that the Behaviouristic theory is related to several of the best practices in inclusive education. Direct instruction is the primary delivery of instruction in behaviourism within a teacher-centred environment in which the teacher designs and delivers lessons based on the objectives of the students. The behaviouristic classroom environment focuses upon conditioned responses, which is the basis of functional behavioural analysis. Since the behaviouristic classroom focuses upon condition-responses, assessment, evaluation, and feedback, all are considered ideal methods for testing the transfer and generalization of knowledge gained.

Cognitivism-based Inclusive Education Practices

Theoretically, cognitivism essentially focuses on the attributes of one's thinking, memory, self-reflection, and motivation to learn. Piaget argued that "during each developmental stage, the ability to learn and the process of learning is different" (Evgeniou & Loizou, 2012, p. 666). The cognitive approach focuses on the mental activities of the learner that influence responses and acknowledges the processes of mental planning, goal-setting, and organizational strategies. Cognitive theories place emphasis on making knowledge meaningful and helping learners be more organized and able to relate new information to existing knowledge stored. In addition, cognitivist approaches emphasize thought processes and their importance in learning, including memory, thinking, reflection, abstraction, and metacognition, which are all needed in the learning process (Petersen, 2014). Therefore, cognitivist instruction "must be based on a student's existing mental structures or schema to be effective" (Ertmer & Newby, 2013, p. 60).

Practically, cognitivism-based inclusive education practices involve the applications of cognitivism in inclusive education settings, which clearly appears in the emphasis of mental information processing and interactions in guiding student learning (Ertmer & Newby, 2013). Students are encouraged to express and connect their prior knowledge, learning experiences, and abilities to learn new information being provided to them. For instance, instructional strategies such as framing, outlining, mnemonics, concept mapping, and advance organizers should be specifically used to support the cognitive needs of students with special educational needs (West, Farmer, & Wolff, 1991).

Specific assumptions or principles that have direct relevance to instructional design practices include: (1) emphasis on the active involvement of the learner in the learning process (i.e. self-planning, monitoring, and revising techniques); (2) use of hierarchical analyses to identify and illustrate prerequisite relationships (i.e., cognitive task analysis procedure); (3) emphasis on structuring, organizing and sequencing information to facilitate optimal processing (i.e., use of cognitive strategies such as outlining, summaries, synthesizers, advance organizers); and (4) creation of learning environments that allow and encourage students to make connections with previously learned material (i.e., recall of prerequisite skills, use of relevant examples, analogies) (Tunmer, Chapman, Greatney, & Prochnow, 2002).

Cognitivism-based inclusive education practices are implemented by applying different instructional approaches focused on learning activities, such as note-taking (Boyle & Rivera, 2012), underlining (Swanson, Orosco, & Lussier, 2014), summarizing (Wittrock & Alesandrini, 1990), writing to learn, outlining and mapping, and use of the PQ4R method (Slavin, 2009). The use of these instructional approaches has shown positive results among students with special needs in general education classrooms. Other practices used, based on cognitivism, for students with special needs in inclusive education classrooms are various metacognitive strategies, which are evidence-based such as study skills, concept mapping, and reciprocal teaching (Al-Shammari, 2019B; Hornby, 2014). In line with Hornby, Hattie (2008) also offers specific best practice interventions best used for students with special needs in cognitivism-based inclusive education settings, which include metacognitive strategies. Metacognitive strategies teach students to understand the way they think. Through targeted study skills, concept mapping, and reciprocal teaching, students can plan, organize, and communicate information and learning. Another example of a metacognitive strategy in a cognitivism-based classroom is a flow chart used to organize information. Thus, cognitivism can be related to the key components of the best practices in inclusive education by helping students to assimilate and accommodate information

Constructivism-based Inclusive Education Practices

Theoretically, constructivism focuses on creating cognitive tools that reflect the wisdom of the culture in which they are used as well as the insights and experiences of learning. Constructivism involves a person understanding the importance of the social dimension during the learning process through observation, treatment, interpretation, and adaptation of information on building a cognitive structure. Vygotsky (1962) emphasized the social role of learning because of its impact on cognitive development through learning and interaction between children and their peers, parents, and teachers. Constructivism equates to learning that involves constructing, creating, and inventing, basically for individuals to develop their own knowledge and meaning. Constructivists believe that an understanding of the brain informs teaching (Lenjani, 2016). Akpan and Beard state, "constructivism is the best paradigm for teaching all learners, but particularly students with special educational needs" (2016, p. 393).

Teachers are essentially considered facilitators, providing essential information, and organizing activities for students to discover their own learning (Liu & Ju, 2010). Lenjani (2016) details the main guiding principles of constructivism as: 1) learning is searching for meaning; 2) meaning requires the understanding of the whole as well as the individual parts; 3) teachers should have an understanding of the mental models that learners use to perceive their world and assumptions that they make in order to support their models; and 4) the purpose of learning is that an individual constructs his or her own meaning and does not include simply memorizing information for the correct answers or repeating merely what someone else has stated. The key to constructivism is that learning should include learner-centred, task-based, hands-on and minds-on activities (Shi, 2013) while also being meaningful and closely related to practical and real-life experiences (Lenjani, 2016). In addition, constructivist-based classroom activities should provide internal and external scaffolding strategies for all learners, which is essential for students with special educational needs (Shi, 2013).

Practically, constructivism-based inclusive education practices are the applications of constructivism in inclusive education settings, which would involve instructional methods and strategies to assist learners to explore complex topics actively. Possible strategies for exploring these topics include: situating tasks in real-world contexts and using real-life examples, utilizing cognitive apprenticeships (i.e. modelling and coaching),

presenting multiple perspectives (i.e. collaborative learning to develop and share alternative views), including social negotiations (i.e. debate, discussion), encouraging reflective awareness, and providing considerable guidance on the use of constructive processes (Ertmer & Newby, 2013).

The focus on key ideas and relationships between these tools are stressed as opposed to disconnected pieces of knowledge (Lenjani, 2016). For students with special needs, the most important facts or information related to key ideas under discussion should be prioritized by teachers, thereby not overwhelming them with the need for memorization. Graphic organizers and self-monitoring have been suggested as useful strategies for teaching content subjects encouraging confidence and success, accomplishments and, indeed, errors (Lenjani, 2016).

According to Hulgin and Drake, "Inclusive education requires a constructivist approach to teaching and learning" (2011, p. 395). Making this fundamental shift involves an explicit critique of assumptions, practices, and structures associated with a positivist approach. Hulgin and Drake also commented that constructivism 'rejects the notion that there are instructional strategies that are effective, regardless of context, including students' backgrounds and interests' but that, '…it acknowledges and respects the wholeness and particularity of learning as situationally constructed'. An example of constructivism-based inclusive education practices is active learning (Steele, 2005). Steele suggested that practices such as "teaching students to summarize, paraphrase, predict, and use visual images, helps students with learning disabilities understand and remember" (2005, p. 2). Some practices such as summarizing, predicting, and using visuals have also been found to have high to medium effects on students with special needs (Hattie, 2008).

By adopting a constructivist perspective Botha and Kourkoutas (2016) traced the support that children with behavioural difficulties receive and the development and implementation of innovative practices that support these children. The authors commented that children with behavioural difficulties might often develop varying degrees of psychological symptoms, including social withdrawal, learning difficulties, lack of motivation, and disengagement from school. Botha and Kourkoutas argue, therefore, for an inclusive model of teaching children with behavioral difficulties in order to address their antisocial behaviours and establish constructive relationships with peers and teachers, since anti-social behaviour also makes them prone to exclusion, isolation or rejection from others within and outside of the school setting. Ineffective teacher training in managing children with behavioural difficulties is reported by Botha and Kourkoutas as a reason why teachers tend to refer students for external support. Additionally, ineffective inclusive education training is reported as a reason teachers lack an understanding of the range of inclusive approaches and the need for effective collaboration with professionals, such as psychologists and counselors. Such collaborations are considered as being a prerequisite for inclusive education, therefore, a community of practice using a constructivist approach 'embraces social engagement in practices that are directly related to the role of schools, families, and communities. It also provides opportunities to enhance the social integration of children, including those with behavioural difficulties in schools. Additionally, it allows for students to co-construct knowledge gained, which includes ways of supporting these children in their immediate contexts in their communities (Botha & Kourkoutas, 2016).

Students in a constructivistic inclusive education setting would benefit most from the following best practices as reported by Hattie (2008) such as peer tutoring and cooperative learning. Through peer tutoring and cooperative learning, students can interact with each other and actively learn in a real-world setting. Cooperative learning groups, for example, may be formal or informal. Formal groups may be organized by student ability or interest, whereas informal groups may be spontaneous within which students are asked to pair and brainstorm on topics. In the constructivistic inclusive classroom, the belief is that students learn from experience and real-life application.

Conclusion

In this paper, the researchers have considered the role of three key theories related to student learning. It is evident that each theory brings a specific focus on strategies for supporting students with special educational

needs, but we would argue that by adopting only one of these theories it is not possible to provide an effective and inclusive education for the diverse range of students in general education classes.

Behaviourism-based inclusive education practices focus on how to provide instruction and on which reinforcers are effective for particular students with special needs in general education classrooms. The most critical factor for students with special needs is the arrangement of stimuli and consequences that will be implemented within the environment. We propose that the application of behavioural approaches is particularly pertinent when supporting learners with social and behavioural difficulties and even more so when these applications co-exist with learning difficulties. Cognitivism-based inclusive education practices are specifically the applications of cognitivism in inclusion settings, which involves the emphasis on mental information processing and interactions to guide student learning. We argue that these are essential as they provide the main guidance and structural processes for teaching that students with special needs require in order to access the regular class curriculum. Constructivism-based inclusive education practices emphasise making learning more meaningful and using real-life experiences. We propose that while this approach alone would be insufficient for providing the support needed for students with special needs to succeed in general classes, its use complements that of the other theories.

We suggest that inclusive education practices will be best served by adopting an eclectic approach to the use of theory-driven curricula and instructional strategies and by using a combination of behaviourism, cognitivism, and constructivism. Decisions need to be based on the needs of the individual child, the task, and the context, rather than adopting a single theoretical approach. What is of key importance is that all teachers must be equipped with a good understanding of the approaches that can be adopted to support students with special educational needs who are included in regular schools and classes. From a review of the research on using these different theoretical perspectives, it is clear that there is no one theory that should be espoused to the exclusion of the others. All theories contribute approaches that are useful to the inclusion of students with special needs, and by embracing a range of best practices from each of these to meet a child's individual needs, inclusive education can best meet the needs of all children.

Disclosure Statement
The authors have no conflicts of interest to declare.

References

Abramson, C. I. (2013). Problems of teaching the behaviorist perspective in the cognitive revolution. *Behavioral Sciences, 3*(1), 55–71. doi:10.3390/bs3010055.

Akpan, J. P. & Beard, L. A. (2016). Using constructivist teaching strategies to enhance academic outcomes of students with special needs. *Universal Journal of Educational Research, 4*(2), 392–398. doi:10.13189/ujer.2016.040211.

Al-Shammari, Z. (2019A). Using evidence-based behaviorism instructional strategies with effect size in inclusive elementary schools in Kuwait. *International Journal for Research in Education.*

Al-Shammari, Z. (2019B). Using evidence-based cognitive teaching strategies with effect size in inclusion classrooms in Kuwait. *Saudi Journal of Special Education, 10.*

Al-Shammari, Z., Al-Sharoufi, H., & Yawkey, T. D. (2008). The effectiveness of direct instruction in teaching English subject in the elementary public education school in Kuwait: A case study. *Education, 129*(3), 80–90.

Artiles, A. J., Dorn, S., & Christensen, C. (2006). Learning in inclusive education research: Re-mediating theory and methods with a transformative agenda. *Review of Research in Education, 30*(1), 65–108. doi:10.3102/0091732X030001065.

Botha, J. & Kourkoutas, E. (2016). A community of practice as an inclusive model to support children with social, emotional, and behavioural difficulties in school contexts. *International Journal of Inclusive Education, 20*(7), 784–799. doi:10.1080/13603116.2015.1111448.

Boyle, J. R. & Rivera, T. Z. (2012). Note-taking techniques for students with disabilities: A systematic review of the research. *Learning Disability Quarterly, 35*(3), 131–143. doi:10.1177/0731948711435794.

Doolittle, P. E. (2014). Complex constructivism: A theoretical model of complexity and cognition. *International Journal of Teaching and Learning in Higher Education*, *26*(3), 485–498.

Ertmer, P. A. & Newby, T. J. (2013). Behaviorism, cognitivism, constructivism: Comparing critical features from an instructional design perspective. *Performance Improvement Quarterly, 26*(2), 43–71. doi:10.1002/piq.21143.

Evgeniou, E. & Loizou, P. (2012). The theoretical base of e-learning and its role in surgical education. *Journal of Surgical Education, 69*(5), 665–669. doi:10.1016/j.jsurg.2012.06.005.

Harold, V. L. & Corcoran, T. (2013). Discourses on behaviour: A role for restorative justice? *International Journal on School Disaffection, 10*(2), 45–61. doi:10.18546/IJSD.10.2.03.

Hattie, J. (2008). *Visible learning: A synthesis of over 800 meta-analyses relating to achievement*. New York, NY: Routledge.

Hickey, G. (2014). The importance of learning philosophies on technology selection in education. *Journal of Learning Design, 7*(3), 16–22. doi:10.5204/jld.v7i3.184.

Hornby, G. (2014). *Inclusive special education: Evidence-based practices for children with special needs and disabilities*. New York: Springer.

Hulgin, K. M. & Drake, B. M. (2011). Inclusive education and the No Child Left Behind Act: Resisting entrenchment. *International Journal of Inclusive Education, 15*(4), 389–404. doi:10.1080/13603110903030105.

Lenjani, I. (2016). Constructivism and behaviorism methodologies on special needs education. *European Journal of Special Education Research*, *1*(1), 17–24. doi:10.6084/m9.figshare.2769586.

Liu, C. C. & Ju, I. (2010). Evolution of constructivism. *Contemporary Issues in Education Research*, *3*(4), 63–66. doi:10.19030/cier.v3i4.199.

McLeskey, J., Hoppey, D., Williamson, P., & Rentz, T. (2004). Is inclusion an illusion? An examination of national and state trends toward the education of students with learning disabilities in general education classrooms. *Learning Disabilities Research & Practice*, *19*(2), 109–115.

Mowat, J. G. (2010). Inclusion of pupils perceived as experiencing Social and Emotional Behavioural Difficulties (SEBD): Affordances and constraints. *International Journal of Inclusive Education, 14*(6), 631–648. doi:10.1080/13603110802626599.

Nalliah, S. & Idris, N. (2014). Applying the learning theories to medical education: A commentary. *International E-Journal of Science, Medicine & Education*, *8*(1), 50–57.

Petersen, K. B. (2014). Learning theories and skills in online second language teaching and learning: Dilemmas and challenges. *Journal of the International Society for Teacher Education*, *18*(2), 41–51.

Salend, S. J. (2011). *Creating inclusive classrooms: Effective and reflective practices* (seventh edition). Boston, MA: Pearson.

Shi, J. (2013). The application of constructivism: Activities for enlivening comprehensive English class. *English language Teaching, 6*(2), 63–70. doi:10.5539/elt.v6n2p63

Slavin, R. E. (2009). *Educational psychology: Theory and practice* (9th edition). Upper Saddle River, NJ: Pearson Education.

Steele, M. M. (2005). Teaching students with learning disabilities: Constructivism or behaviorism? *Current Issues in Education, 8*(10), 1–5.

Subotić, S., & Anđić, B. (2014). The decline in socialization at the transition from class to subject teaching in the inclusion. *Specijalna edukacija i rehabilitacija*, *13*(3), 293-309.

Swanson, H. L., Orosco, M. J., & Lussier, C. M. (2014). The effects of mathematics strategy instruction for children with serious problem-solving difficulties. *Exceptional Children, 80*(2), 149–168. doi:10.1177/001440291408000202.

Tunmer, W., Chapman, J., Greatney, K., & Prochnow, J. (2002). The contribution of educational psychology to intervention research and practice. *International Journal of Disability, Development and Education, 49*(1), 11–29.

UNESCO. (1994). *The Salamanca statement and framework on special needs education*. Paris: UNESCO.

United Nations Convention on the Rights of Persons with Disabilities. (2016). General Comment No. 4 - Article 24: Right to Inclusive Education, Retrieved from: http://www.refworld.org/docid/57c977e34.html

Vygotsky, L. (1962). *Thought and language*. Cambridge, MA: Harvard University Press.

West, C. K., Farmer, J. A., & Wolff, P. M. (1991). *Instructional design: Implications from cognitive science*. Upper Saddle River, NJ: Prentice Hall PTR.

Wittrock, M. C. & Alesandrini, K. (1990). Generation of summaries and analogies and analytic and holistic abilities. *American Educational Research Journal*, *27*(3), 489–502. doi:10.3102/00028312027003489.

Zhang, X., Anderson, R. C., Morris, J., Miller, B., Nguyen-Jahiel, K. T., Lin, T. J. & Latawiec, B. (2016). Improving children's competence as decision makers: Contrasting effects of collaborative interaction and direct instruction. *American Educational Research Journal*, *53*(1), 194–223. doi:10.3102/0002831215618663.

Decolonization, Early Childhood Education, and Human Rights-Based Approach: Regenerating New Cultures, Perspectives, and Actors

Max Regus[1]

[1] Lecturer at the Indonesian Catholic University of St. Paul Ruteng, Flores; External Fellow at Graduate School of Humanities, Tilburg University, Netherland (2018-2020) and External Postdoctoral Fellow at the Institute of Missiology Aachen, Germany (2018-2020).

Abstract

This paper critically argues that education is considered one of the strategic tools in slicing up the colonial legacy, mentality, and 'the neo-colonialism governance.' This comes from a reflection on a supra-domination showed by the liberal countries to the developing countries specifically relating to the practice of early childhood education (ECE) under the shadow of a colonial atmosphere. Thus, this paper is aimed to propose a decolonization and human rights as perspectives in 'regenerating' a new model of ECE in the non-Western world that presents new triangle aspects: *cultures, perspectives*, and *actors*.

Keywords: Education, ECE, Decolonization, Human Rights, Third World

Introduction

This article argues that efforts to link educational and human rights discourses have been considered widely as one of the challenging academic and political avenues in making the decolonization process of ECE closer to more diverse and particular contexts worldwide. The main issue that relates to the project and process of strengthening ECE deals with a deconstruction process of culture and perspective of education under the shadow and hegemony of colonialism (Davis, 2014).

Besides this issue, this article intends specifically to look at the trend that the educational perspective of ECE has been continually built through the interest of globalization. In this respect, global development, including education, has also been marked as an arena monopolized by the colonial power. Moving from the mood of this thinking, thus there is a fundamental need in searching and developing a framework for accommodating children, not as a second class citizens but becoming the main subject of overall educational process including ECE (Hägglund, and Samuelsson, 2009).

In this term, the idea of human rights has been promoted as a core basis for creatively and constructively rethinking ECE. Based on an ongoing global step, children and young people have been included as a central

concern of the educational system, strategies, and policies around the world (Tikly, 2001). Thus it is believed that human rights principles are considered as one of the main entry points in pushing for a comprehensive necessary to consider children at the central position of education and ECE process.

This article focuses on the main elements that form a solid understanding of the importance of providing human rights theory as a substantive standpoint in creating decolonization of ECE relating to its policy strategy and practices. This article is based on a review on wide-ranging previous studies and publications about ECE. By looking critically at the existing research on the issue, this article attempts to provide a scientific elaboration that may bring significant impact on the policy and strategy arrangement of ECE.

Moreover, this article contains four important elements. This article opens with a short introductory section. Following the session, this article explains education as a space for imperialism action and culture. After shortly showing the intersection between education and imperialism, this paper moves further into a crucial issue relating to the decolonization process of education and ECE. This article then elaborates one of the key elements of the discussion by introducing human rights as a *vital* perspective in seriously taking attention to the decolonization of ECE. Regarding this focus, this article identifies a human rights-based approach (HRBA) as a prospective framework for the making of ECE in the light of the decolonization project.

Education as a New Imperialism Tool

The connection between education and new colonialism has been agreed as a critical issue in contemporary academic inquiries. Theoretically, by comparing the old colonialism and imperialism model which is associated with the European imperialism in what so-called a colonial law and a new imperialism which is referred to the United State of America's (USA) position as a symbol of what is called the 'new regime of global governance', a fresh academic assumption has emerged widely that education is dominated and practiced under the hegemony of new colonial powers (Tikly, 1999; 2004).

Some studies link colonialism with what is called the "West." In this term, development becomes a mean for the West. The "West" treated development as an instrument for understanding and then controlling what so-called the "non-West." In the line of new colonialism and imperialism actions, education has been intensely engrossed as a key strategy and area for multilateral (global) development, global economic agencies, and neo-colonial institutions (Tikly, 2004; Chimni, 2017)). Politically, new imperialism power tries to undertake and corporate populations from between what is called the 'second' and 'third world' into the global government regime (Barrow, 2005).

In this matter, education has been accepted as a central interest of imperialistic power where multilateral actors and institutions consider this issue as a key aspect of their vision and operation at a global development space (Tikly, 2004, p. 173). Moving from this global scene, we are now witnessing the transformation of the legacies of the old imperialism at the global scale which also, in fact, comes into a massive contact with new forms of the Western imperialism (Young, 2016).

Some scholars put forward central concerns of their opinion and criticism by linking education and development. According to them, both education and development have been practiced in the pattern of a 'dominant and sub-dominant relationship.' This is obviously happening when development becomes a medium for the imperialistic powers in building rationality and dominant language through the development policies and the practices of education (Chabbott, 2013; Escobar, 1984).

Moreover, a number of studies on international politics and global development that specialize in a new model of colonialism also propose major conclusions by understanding new colonialism as a space for inventing dominant actions of the ruling countries. In this term, strategy and political aspects are based on what is referred briefly to as 'power' which is broadly not only privatized but also dominated by the political power existing at the imperialistic spectrum (Harvey, 2003; Keller, 2017).

In the context of new colonial operations, a scientific breakthrough should be initiated that focuses on how we should construct education as a part of a new 'anti-colonial and imperial politics.' Those initiatives should advocate a systematic mechanism in 're-building' a resistance to new imperialistic development. This can also be seen as an urgent reference that relates to the academic creativity of the 'third world countries' for moving away from the hegemonic mechanism strengthened by the Western countries in the shadow of what is called the 'super powers' states.

Decolonizing ECE

Decolonization has been known as one of the most prospective fields to study. One of the important phase of decolonization related to the formulation of what so-called the 'Third World'. The 'Third World' term itself is derived from the Bandung (Indonesia) Conference of Asia and Africa Countries in 1955. This event also is known as a 'non-bloc' movement position that defines a critical response to the post world war global politic clash—neither joining on a 'Soviet-Communist block' nor the USA 'North Atlantic Treaty Organization/NATO bloc.' One of the central points of decolonization struggle and challenge to new imperialism position is that significant 'cultural diversity' affects what knowledge and values gain in "Non-Western Countries." This movement enlightens and inspires the development of a new culture of ECE practices worldwide by supposing the diversity (Buckingham, 2013).

Decolonizing ECE means a decisive mechanism in cutting off colonial legacies in various landscapes. One sample of Klose's (2010) study helps us in understanding how colonial power establishes its influences into social and political spaces. He spends the main focus on the colonial violence and the historical fact of the British attempts at legitimizing their brutal violence. Through his book, he describes the anti-colonial movement when he spells out the birth of what is called the 'Third World.' In the light of Klose's argument and Eckel's (2010) opinion, it is argued that decolonization brings a significant impact on the shaping or reshaping international politics. According to them, a political emancipation is to shape international politics profoundly. Based on the above insightful academic exploration, ECE needs a strong principle of children emancipation in the entire non-violent practice of education (Hart, 2013)

Furthermore, this challenge to colonialism and imperialism has emerged from different corners such as Asia and other parts of this world. Each of these challenges is independent, but they have raised similar major questions concerning a dominant and hegemonic character of imperialism on 'cross-cultural cases' and hence its legitimacy over the plurality of values and cultures in the world Some thinkers argue that prioritizing individual liberty as immanent element of the "Western culture" could destroy 'communitarian values' as a core value of the "non-West" world. Thus, the essential and revolutionary question is whether claims to the practice of ECE based on various settings and cultures can also be justified as a "Non-Western World" or whether they are merely exercised in the "Western model" (Charlesworth, 2002; Dallmayr, 2002).

Between 1950 and 1979, the process of decolonization transformed the UN and the shape of many discourses on global agenda, including human rights discussion. Before this stage, the Asian, African, and Arab States that coalesced into the self-conscious "The Third World" brought a powerful new set of voices to those of 1948. In the light of this criticism, ECE can be re-understood and re-constructed through the strengthening of multicultural feeling and framework in its whole curriculum. It is argued that based on a 'de-colonial' process, ECE can be potentially more inclusive in providing a wider open space for diverse and various kind of capitals, actors, institutions that serve the need of children themselves.

It is worthy to discuss three interconnected responses to colonial legacies in term of introducing decolonization of ECE. The first response focuses on the deconstruction of inequality. This issue refers to a proportional increase in the number of students from marginalized races and economically low incomes. Another aspect that is also added in this response was starting to initiate a curriculum with a "non-Western perspective." Another goal of this first response is to increase a solidarity and diversity in a relation to manifestations of a wider recognition of the capacity of ECE participants (Gaztambide-Fernández, 2012).

The second response to colonial atmosphere departs from a knowledge and awareness of the creation of inequalities characterized by the epistemological hegemony in ECE. This response can be achieved by a systemic analysis of the dangers of racialization and colonization regarding the structure, curriculum, and institutional logic of ECE which supports consistently racial and economic hierarchies (Di Tomasso, 2012). One crucial side to be considered in this context is a critical resistance to the institutionalization of the exploitation of ECE students into the trap of the curriculum and the dominant perspective of their teachers.

This decolonial process is primarily directed at the deconstruction of the hegemonic illusion in which modernity is used as a space to hide the non-third domination of world context and countries. The third response to the colonial culture of ECE should be based on the awareness and knowledge of the ontological hegemony that drives education as a symbolic framework of violent practices. In this line, colonization work more thoroughly both in the structure, curriculum, culture, and ECE actors. This response must link with the most fundamental challenge that the sustainability of educational institutions in general and ECE, in particular, can only be done through the decolonial approach (Cannella & Viruru, 2003).

All the previous understanding can inspire the practice of ECE in the non-Western World. Here, we should point out the need to build an alternative knowledge in existing ECE culture based on a comprehensive approach to the decolonial process of education. It is hoped that the process can bring constructive impact on culture, perspective, and involved actors in the entire process of ECE. As one sample, this does not only involve educators and government officials in ECE practices but also mainly open a space for other related potential actors that refer to the children's community and families.

More generally, movements arise to the extent that it may be possible to decolonize institutions and culture from ECE. In this context, there is one image that is not less important about whether ECE can function as a space where decolonization projects should be incorporated through the process of decolonized education. This idea departs from the assumption that if education, as well as ECE, are specifically created and adapted to support the order of colonial knowledge and then influence our existing social system, thus the extent to which education and ECE can be changed in the order of the decolonial process. As previously explained, human rights have been examined as a key element in the entire discourse on decolonization of education and ECE (Cannella & Viruru, 2003: Abdi, 2012).

Human Rights, Education, and ECE

Some thinkers argue that children's rights are generally understood as a specification of human rights principles (Arce, 2012; Nussbaum, 2017). Nonetheless, there is a sharp criticism that the convention on the rights of children does not actually reflect the differences in comparison to the 1948 Universal Declaration on Human Rights (UDHR). With that, we really need a greater investment of decisive actions and serious efforts to provide guidance or framework for childhood education. This should be highlighted as a political strategy for winning decolonization of ECE when the struggle for human rights becomes one of the main markers of this important process (Bell & Adams, 2016).

At a global scope, the right to education has been recognized as a basic human rights. Article 26 of the 1948 UDHR states that *"...Everyone has the right to education. Education shall be free, at least in the elementary and fundamental stages. Elementary education shall be compulsory."* For the childhood education, the 1959 Declaration of the Rights of the Child also affirmed: *'...mankind owes to the child the best it has to give', including education…"* (UNICEF, 2003). In addition, Articles 13 and 14 of the 1966 International Covenant on Economic, Social, and Cultural Rights (ICESCR) also recognizes a right to free, compulsory primary education for all, an obligation to develop secondary education accessible to all.

Regarding this main problem, human rights provide fundamental insight in restoring ECE as an impact and focus of the decolonization process at an educational level. In 1993, the Vienna Declaration and Program of Action, Human Rights, affirmed that *"...States are duty-bound. . . to ensure that education is a human rights and fundamental freedoms [and that]. . . this should be integrated into the educational policies at the national as*

well as international levels…" (the 1993 United Nations General Assembly, Part I, para 33). It is well argued that this declaration inspires strongly the rise of new models and approaches of education as well as ECE.

Furthermore, since General Assembly of the United Nations (UN) proclaimed a resolution on the World Programme for Human Rights Education (2005-ongoing) number 59/113 on December 2004, children have been linked closely and more detail with a human rights discourse and movement. It aims to advance the implementation of human rights education programmes in all sectors. Through this programme, UN emphasizes strongly that children and young people must have equal access to human rights education (HRE). Children should be entitled to the practice of ECE (Sen, 2005).

As also elaborated by some researchers, human rights are the tool for the empowerment process in the policy, agenda, and curriculum of education (Spring, 2016; Tilbury, 1995). However, before this process can be carried out as a philosophical stance of the educational practice, another compulsory effort that must be built is to make the concept of children's rights moves away from the domination of government, educators, and parents' understanding, perspective, interest, and intention. In this regard, when human rights discourse assumes three basic aspects, including human free will, agency, and autonomy, children themselves should be placed as educational resources.

All these principles offer a fundamental idea that interlinks three main issues, including human rights, children's rights, and education. Based on this standpoint, mainstreaming children's rights in educational policies and practices is becoming a core target, on the one hand, and also should refer to the development of the children's emancipatory atmosphere, on the other hand (Moss, 2007; Arce, 2012). This can be respected as an advanced movement than just partial action and strategy in which children are still treated merely as objects of ECE policy and practice.

Moreover, in the light of *subaltern class* theory (Spivak, 1988)—that is considered as one of the important point of views in the process of decolonization—a social transformation can only occur when the voices of the sub-alternates calls get a significant accentuation in the space for the formation of public policy (Mohanty, 1989; North, 2006). In this perspective, children might be perceived as a symbol of the subaltern call. Therefore, it should also be taken into account other fundamental aspects of how children's voices are accepted as an important foundation for the decolonization of ECE policy (Gupta, 2014).

Based on this view, the whole process of ECE, which is carried out in the context of the decolonization process, refers basically to a big idea of *"opening up the silence of hegemony discourse*." Breaking up a dominant power on education at global and national systems created by the new imperialism global development and their 'comprador' actors at national levels should be a central target of the decolonization project (Acre, 2012). Human rights provide inspiration for this process.

One of the main references of the idea of ECE from a human rights perspective is on what is called the United Nations Convention on the Rights of the Child (UNCRC). This international convention was ratified and accessed by General Assembly Resolution 44/25 of 20 November 1989. More importantly, the convention offers a solid basis for the main idea that children's education always faces a destructive tendency, produced or is conducted through the marginalization process of children. Marginalization is one of the most obvious forms of colonialism. In this point of view, children tend to be the target of the objectification, where education to be one of the main engines of colonialism (OHCHR, 1989).

It has been widely agreed that human rights perspective, regardless over ongoing debates on that discourse, is a key issue at a global development agenda. Human rights have also been used as a standpoint of constructing resistance against new imperialism platform at international development and relation. This study intends to analyze the 'role of post-colonial' (de-colonial) perspective and struggle including human rights movement in introducing a negotiation process on a non-hegemonic accommodation related to the policies and practices of ECE (Miles & Singal, 2010).

ECE and Human Rights Based Approach (HRBA)

As previously presented, decolonization is also related to the human rights movement. For many victims of political oppression, social tyranny, civil brutality, ethnic murder, and vulnerable groups such as children and women, the human-rights framework has ironically been narrowed down and restricted to a political consideration and power relations (Mutua, 2013). As human rights education is a core focus of this study, this section aims to discuss human rights-based approach as a new perspective in the development of ECE.

The importance of HRBA has been determined by Rene Cassin. He was one of the 18 members of the Commission on Human Rights was made up from various political, cultural and religious backgrounds. During *the drafting process of the 1948 UDHR,* he reminded the member states of United Nations that HRBA is about taking human rights from purely legal instruments into effective policies, practices, and practical realities (United Nations, History of Document, NA). Human rights principles and standards provide guidance about what should be done to achieve freedom and dignity for all.

This situation reminds us on the importance of HRBA in dealing with the gap between fundamental claims of human rights on the one hand and the implementation of the principles on the other hand (McCowan, 2010; Shonkoff, Richter, van der Gaag & Bhutta, 2012). However, HRBA does not only relates to this goal but also mainly connects to a wider purpose in building a strong mechanism to protect vulnerable individuals and groups. The purpose of this section is also to elucidate the pertinence of HRBA in connection with ECE. It should be stated that a discussion on HRBA persistently helps this study to look at the way of incorporating effectively fundamental values of human rights to protect and fulfill children's rights as human beings in the practice of ECE. The international human rights require countries to domesticise such international treaties and conventions and integrate them into the national legal and policy as well as the framework of ECE (Rehman, 2002).

> The universalistic nature of human rights requires a set of legal and normative standards for the entire mankind as the people across the world are eligible to enjoy certain rights irrespective of their ethnic, cultural, religious, linguistic and other identities (Bagchi & Das, 2013, p. 1).

The UN 2005 World Summit Outcome was a 'milestone' towards the global adoption of an HRBA (Frankovits, 2006). It was the first time that the Member States in the General Assembly resolved mainstream human rights into their national policies while endorsing former Secretary-General Kofi Annan's reform agenda to integrate human rights throughout the UN system (United Nations - the General Assembly Resolution, 2005). The Summit resolution affirmed a strengthened role for all UN bodies and agencies within their respective sectors and mandate areas in order to assist the Member States to mainstream human rights in their national policies (UNFPA, 2010, p. 28).

A human rights approach to policy is a policy that is informed by the need to progressively implement and construct the system and culture of ECE that decisively maintaining a wider space for children. It might be said that that HRBA identifies the level of commitment in implementing a human rights framework in ECE policy and curriculum and this then can possibly close the gap between the theory and practice of ECE and end a dominative element of ECE (Smith, 2008).

Taking HRBA is about using international and national human rights standards to ensure that children's rights are put at the very center of ECE policies and strategies. HRBA will empower, on the one hand, children to know and claim their rights and on the other hand to increase the ability of organizations, public bodies, and businesses to fulfill their obligations in supporting ECE. And, it also creates solid accountability so children, people, families can seek remedies when children's rights are violated in the practice of ECE.

A discussion on HRBA has also been expanded into a discussion of some of its fundamental characteristics (Haule, 2006). First, a pragmatic approach can closely define the step of action in every concrete situation and experience. This approach needs a strong and progressive humanitarian act, political, and also legal responses of the state and other actors/ institutions. In the context of ECE, this approach focuses on making it easy for

children, groups, families, community, relevant actors of ECE to claim their rights and the state's obligation (Elliott, 2006).

Second, a semantic approach to human rights connects with using many terms of the human rights theory and concept. This specifically concerns the case of the nuances and resonances when some elements of the human rights concept need to be applied in the legal arrangement or state-policy of ECE. This approach greatly deals with the human rights' terminologies in legal and political discourses.

Third, a normative approach to human rights can be considered as the foundation of the two other approaches. This approach mainly requires a comprehensive understanding of the philosophical and moral foundation of human rights in ECE policies and practices. This approach gives an 'ethical root' for semantic and pragmatic approaches to ECE based on human rights principles. When human rights should be implemented into humanitarian action or policy framework on ECE, the foundation of this implementation becomes the first concern of the approach. The normative approach provides a valuable consideration in building pragmatic and semantic approaches to the protection of child's rights (Bissell, Boyden, Cook & Myers, 2006).

Many global and national organizations stand beside the process, which is regarded primarily as a political step to implement the fundamental values of the international declaration. *"The PANEL principles"* are one way of breaking down what the HRBA means in practice that includes some elements (Scottish Human Rights Commission; a) Participation—people should be involved in decisions that affect their rights; b) Accountability—there should be monitoring of how people's rights are being affected, as well as remedies when things go wrong; c) Non-Discrimination—nobody should be treated unfairly because of their age, gender, ethnicity, disability, religion or belief, sexual orientation or gender identity; d) Empowerment—everyone should understand their rights, and be fully supported to take part in developing policy and practices which affect their lives; e) Legality—approaches should be grounded in the legal rights that are set out in domestic and/or international law (Landsdown, 2011).

In a discourse on ECE, an approach like 'the *'PANEL Principles'* is somehow about moving beyond the minimum legal requirements and mainstreaming human rights in services, policies, and practice to make them run better for children. It can be argued that this process motivates public policy around the world to create better access for many vulnerable children groups at what is called a 'low-level economic capacity' countries to enjoy an inclusive ECE (Tikly, 2011). This demands national bodies for expanding the human rights approach into a very particular focus regarding with the policy and practice of ECE.

Furthermore, another example of the national effort to expand the human rights approach is the Scotland Human Rights Commission (SHRC) attempt to involve and to integrate it into policy framework that promotes awareness, understanding, and respect for human rights at a national level. The process covers SHRC's activities and programs in education, training, awareness raising, impact assessment development, and promotion of best practice.

The Scotland Human Rights Commission (SHRC) has sought to implement and practice fundamental principles behind HRBA through the development and adoption of what they called *"the FAIR methodological framework"* (Scotland's National Action Plan for Human Rights, NA). This operational framework includes: a) Facts—what are the important facts to understand; b) Analysis—what are the human rights or issues at stake? c) Identifying Shared Responsibilities—what changes are necessary? Who has responsibilities for helping to make the necessary changes? d) Recall—over time, have the necessary changes occurred? If not, who is to be held accountable? Using the national methodological framework throughout the HRBA has allowed human rights bodies in many levels of governmental institutions to identify the facts and then to provide a common framework for the fulfillment of human rights principles in ECE.

HRBA needs the necessary platform for those actors and institutions to work together with others to identify and to strengthen the shared responsibilities through the development of various national and global action plans for interlinking ECE and human rights and to monitor progress and recall over time in order to see if the necessary

changes have happened. From this position, then, there are several key benefits of implementing an HRBA through ECE (UNPF & HSPHP, 2010): First, promoting realization of human rights and helps government partners achieve their human rights commitments; Second, increasing and strengthening the participation of the local community; Third, improving transparency; Fourth, promoting results (and aligns with Results-Based Management); Fifth, increasing accountability; Sixth, reducing vulnerabilities by focusing on the most marginalized and excluded in society (Weerelt, NA) More likely to lead to sustained change as human rights-based programmes have greater impact on norms and values, structures, policy and practice of ECE (Care International UK & DFID, 2005-2006).

Closing Reflection

This paper focuses on the human rights perspective in decolonizing ECE. As accepted widely, this study also argues that a discourse on human rights basically links with a wide-ranging kind of human being daily life. Definitely, human rights reflect the quality of the social relationship between people and communities. In some senses, human rights have also been used as a fundamental standard in measuring the policy efficacy that relates to education as well as ECE. In many countries, human rights determine the focus and substance of ECE culture, perspective, and actors.

What is recommended in this process is an educational organizing effort that has an anti-colonial character. This effort refers to the creation of what is called an "autonomous ecology, caring for ECE by learning from the ECE system and culture of the past that moves under the shadow of colonialism. Decolonization produces and strengthens a new perspective in arranging ECE at a "non-Western World." It can be said that education and ECE becomes a just, inclusive, peaceful, and parallel arena for children.

This study justifies that decolonization brings significant impacts to the shaping or reshaping of international politics and development that directly influences ECE in the Third World. It is also said that decolonization—based on the interest of the concept which is always connected with a debate on the trajectory of interrelated domination, inequality, and injustice—can be seen as a *new culture* for constructing the policy and practice of ECE in a 'non-Western World.'

At this point, ECE proposes a response that led to and demanded the elimination of exclusion as a legacy of colonialism. In the context of ECE, decolonial means the systematization of the deconstruction movement of colonial heritage, which is still connected to ECE politics. Decolonialism, in the context of ECE politics, necessarily relates to efforts to fight individual and institutional biases from racism into the culture and atmosphere of ECE itself. At this stage, decolonialism also refers to the process of building an ECE that is inclusive and fair for children.

In this term, children are becoming the subject as well as the main actors of ECE practices. As a consequence, many related actors such as teachers and educators, government, private sectors should adapt their role and position in this new transformation of culture and perspective. In other forms of response to colonialism, ECE also deals with the dimensions of violence, capitalism, racism, patriarchy, heteronormativity. This can be understood as a part of outmoded ECE culture. The process under decolonization emphasizes ECE institutional transformation, which is significantly demonstrated in the redistribution of resources for the empowerment children from the poor communities.

In this insightful meaning of decolonization spirit, ECE must be put in place and should be incorporated into the children's mindset themselves—not a reality as a result of the fabrication of the thoughts of their parents, educators, and government (Dahlberg, Moss, & Pence, 1999). This idea is understood as an important foundation for re-planning an appropriate and effective ECE in empowering children. This is based on a kind of awareness; then, children's rights will provide an accurate inspiration for ECE. Children themselves are being the main actor of ECE. HRBA can be applied as a new perspective and approach in strengthening ECE as a platform of raising and developing the capacity and freedom of children and respecting children's dignity in school. HRBA can provide a guarantee that children can enjoy the expression of their own interest and needs in

educational practices. They can be the first and primary source of education policies and curriculum (Covell, Howe & McNeil, 2010).

References

Abdi, A. A. (2012). Decolonizing philosophies of education. In *Decolonizing philosophies of education* (pp. 1-13). SensePublishers.

Arce, M.C. Towards an Emancipatory Discourse of Children's Rights. *International Journal of Children's Rights 20 (2012) 365–42*

Australian Human Rights Commission. Link. https://www.humanrights.gov.au/human-rights-based-approaches Accessed on June 22, 2016.

Bagchi, S. S. & Das, A. (Ed.). 2013. Human Rights and the Third World: Issue and Discourses. Lexington Books: Lanham. Boulder. New York. Toronto. Plymouth, Uk.

Barrow, C. W. (2005). The return of the state: globalization, state theory, and the new imperialism. *New Political Science*, *27*(2), 123-145.

Bell, L. A., & Adams, M. (2016). Theoretical foundations for social justice education. In *Teaching for diversity and social justice* (pp. 21-44). Routledge.

Bissell, S., Boyden, J., Cook, P., & Myers, W. (2006). Rethinking child protection from a rights perspective: Some observations for discussion. *Draft paper). The International Institute for Child Rights and Development*.

Buckingham, D. (2013). *Beyond technology: Children's learning in the age of digital culture*. John Wiley & Sons.

Burke, R. (2011). *Decolonization and the evolution of international human rights*. Pennsylvania, USA: University of Pennsylvania Press.

Cannella, G. S., & Viruru, R. (2003). *Childhood and post-colonization: Power, education, and contemporary practice*. Routledge.

CARE International reached this conclusion in a study that compared rights-based programmes to non rights based programmes in 2006. Care International UK and DFID Programme Partnership Agreement: Annual Report, 2005-2006.

Charlesworth, H. (2002). International law: a discipline of crisis. *The Modern Law Review*, *65*(3), 377-392.

Chabbott, C. (2013). *Constructing education for development: International organizations and education for all*. Routledge.

Chimni, B. S. (2017). International institutions today: an imperial global state in the making. In *Globalization and International Organizations* (pp. 41-78). Routledge.

Covell, K., Howe, R. B., & McNeil, J. K. (2010). Implementing children's human rights education in schools. *Improving Schools*, *13*(2), 117-132.

Dahlberg, G., Moss, P., & Pence, A. R. (1999). *Beyond quality in early childhood education and care: Postmodern perspectives*. Psychology Press.

Dallmayr, F. (2002). "Asian values" and global human rights. *Philosophy East and West*, 173-189.

Davis, J. (2014). Examining early childhood education through the lens of education for sustainability: Revisioning rights. In *Research in early childhood education for sustainability* (pp. 37-53). Routledge.

Di Tomasso, L. (2012). *Engaging with early childhood educators' encounters with race: an exploration of the discursive, material, and affective dimensions of whiteness and processes of racialization* (Doctoral dissertation).

Elliott, A. (2006). Early childhood education: Pathways to quality and equity for all children.

Escobar, A. (1984). Discourse and power in development: Michel Foucault and the relevance of his work to the Third World. *Alternatives*, *10*(3), 377-400.

Frankovits, A. (2006). *The Human Rights-Based approach and the United Nations System.* UNESCO- Social and Human Sciences Sector. Paris, p. 15. Source: Link. http://unesdoc.unesco.org/images/0014/001469/146999e.pdf Accessed on July 11, 2016.

Gaztambide-Fernández, R. A. (2012). Decolonization and the pedagogy of solidarity. *Decolonization: Indigeneity, Education & Society*, *1*(1).

Goedde, P. (2011). Reviewed Work: *Decolonization and the Evolution of International Human Rights* by Roland Burke *Human Rights Quarterly* Vol. 33, No. 2, pp. 563-566.

Gupta, A. (2014). *Diverse early childhood education policies and practices: Voices and images from five countries in Asia*. Routledge.

Hägglund, S., & Samuelsson, I. P. (2009). Early childhood education and learning for sustainable development and citizenship. *International Journal of Early Childhood*, *41*(2), 49.

Hart, R. A. (2013). *Children's participation: The theory and practice of involving young citizens in community development and environmental care*. Routledge.

Harvey, D. (2003). *The new imperialism*. OUP Oxford.

Haule, R.R. *(2006).* Some Reflections on the Foundation of Human Rights – Are Human Rights an Alternative to Moral Values? In von Bogdandy, A and Wolfrum, R (eds.). *Max Planck Yearbook of United Nations Law, Volume 10*, pp. 367-395. Netherlands: Koninklijke Brill N.V.

Human Rights Office of the Higher Commission (1989) Convention on the Rights of the Child Adopted and opened for signature, ratification, and accession by General Assembly resolution 44/25 of 20 November 1989 entry into force 2 September 1990, in accordance with article 49. Link. https://www.ohchr.org/en/professionalinterest/pages/crc.aspx

Ignatieff, M. (2001). The Attack on Human Rights**.** *Foreign Affairs, Vol. 80*, No. 6 (November—December 2001), 102–116

Ignatieff, M. (2003). *Human rights as politics and idolatry*. Princeton, UK: Princeton University Press. Retrieved February 23, 2015, from http://www.carnegiecouncil.org/studio/multimedia/20011102/index.html/:pf_printable/

Keller, S. (2017). *Beyond the ruling class: strategic elites in modern society*. Routledge.

Klose, F. (2013). *Human Rights in the Shadow of Colonial Violence: The Wars of Independence in Kenya and Algeria (translated by Dona Geyer).* Pennsylvania, USA: Pennsylvania University Press.

Landsdown, G. (2011), Every Child's Right To Be Heard. UNICEF and UK Save Children. Link. https://www.unicef.org/adolescence/files/Every_Childs_Right_to_be_Heard.pdf

McCowan, T. (2010). Reframing the universal right to education. *Comparative Education*, *46*(4), 509-525.

McDougal, M. S., Lasswell, H. D., & Chen, L. C. (2018). *Human rights and world public order: the basic policies of an international law of human dignity*. Oxford University Press.

Miles, S., & Singal, N. (2010). The Education for All and inclusive education debate: conflict, contradiction or opportunity?. *International journal of inclusive education*, *14*(1), 1-15.

Mohanty, C. T. (1989). On race and voice: Challenges for liberal education in the 1990s. *Cultural Critique*, (14), 179-208.

Moss, P. (2007). Bringing politics into the nursery: Early childhood education as a democratic practice. *European Early Childhood Education Research Journal*, *15*(1), 5-20.

Mutua, M. (2013). *Human rights: A political and cultural critique*. University of Pennsylvania Press.

North, C. E. (2006). More than words? Delving into the substantive meaning (s) of "social justice" in education. *Review of Educational Research*, *76*(4), 507-535.

Rehman, J., Ed (2002). *International Human Rights Law: A Practical Approach*. Edinburg, UK: Pearson Education.

Scotland's National Action Plan for Human Rights – Scottish Human Rights Commission…Link. http://www.scottishhumanrights.com/actionplan/researchmethodology/ Accessed on June 20, 2016.

Sen, A. (2005). Human rights and capabilities. *Journal of human development*, *6*(2), 151-166.

Shonkoff, J. P., Richter, L., van der Gaag, J., & Bhutta, Z. A. (2012). An integrated scientific framework for child survival and early childhood development. *Pediatrics*, peds-2011.

Smith, A. B. (2008). *Children's rights and early childhood education*.

Spivak, G. C. (1988). Can the subaltern speak?. *Can the subaltern speak? Reflections on the history of an idea*, 21-78.

Spring, J. (2016). *Deculturalization and the struggle for equality: A brief history of the education of dominated cultures in the United States*. Routledge.

The *United Nations International Children's Emergency Fund* (UNICEF) Declaration of the Right of the Child in 1959. https://www.unicef.org/malaysia/1959-Declaration-of-the-Rights-of-the-Child.pdf Accessed on February 15, 2019.

Tilbury, D. (1995). Environmental education for sustainability: Defining the new focus of environmental education in the 1990s. *Environmental education research*, *1*(2), 195-212.

Tikly, L. (1999). Postcolonialism and comparative education. In *Education, equity and transformation* (pp. 603-621). Springer, Dordrecht.

Tikly, L. (2001). Globalisation and education in the postcolonial world: Towards a conceptual framework. *Comparative education*, *37*(2), 151-171.

Tikly, L. (2004). Education and the new imperialism. *Comparative education*, *40*(2), 173-198.

Tikly, L. (2011). Towards a framework for researching the quality of education in low-income countries. *Comparative Education*, *47*(1), 1-23.

United Nations, History of Document. Source: Link. http://www.un.org/en/sections/universal-declaration/history-document/ Accessed on June 28, 2016.

United Nation Population Fund (UNPF) & Harvard School and Public Health-Program on International Health and Human Rights (2010). A HUMAN RIGHTS-BASED APPROACH TO PROGRAMMING: Practical

Implementation Manual and Training Materials, New York, p.15.United Nations - the General Aseembly Resolution adopted by the General Assembly [without reference to a Main Committee (A/60/L.1)] 60/1. 2005 World Summit Outcome. Sixtieth session Agenda items 46 and 120, 8th plenary meeting, 16 September 2005. Source: http://www.un.org/womenwatch/ods/A-RES-60-1-E.pdf Accesed on June 29, 2016.vanWeerelt, P, A Human Rights-based Approach to Development Programming in UNDP – Adding the Missing Link, UNDP.

Young, R. J. (2016). *Postcolonialism: An historical introduction*. John Wiley & Sons.

Poor Municipal Waste Management and Its Health Implication: A Case Study of Kabul City

Azizullah Yosufi[1]

[1] Department of Chemistry, Faculty of Natural Science, Bamyan University, Bamyan Afghanistan2018、 Email:yosofi88@gmail.com

Abstract
A detailed study of the ongoing situation shows that the solid waste management in Kabul is not appropriate and a set of challenges exists in a different part of the system, local people have more concern with solid waste, but from another side, they devote less attention to them. Most of them do not have knowledge about the impact of hazardous waste and how to separate and recyclable. Management of municipal solid waste in Kabul has travailed neglect from government and the general public. These negligence lead to several health issues such as direct injuries from a contaminated sharp object, water contamination by excreta and effect of heavy metal components of municipal solid waste as well as flood resulting from drain occlusion. All these flowers in the possibilities for the transition of food and waterborne zoonozes, and the emergence and re-emergence of new zoonozes. To ensure environmental protection and opportunity to the public health, more effort is required by the government, environmental agencies, and the general public. The whole system needs a behavioral change from the public site and better waste management practice on the local government side. Solid waste management practices are not adequate and show very common constraint in collection, management, and disposal of solid waste. The problem such as access to the proper facilities lack of treatment program lack of infrastructure planning and technical leadership and lack of knowledge. These efforts should be geared toward public enlightenment and enforcement of policies and legislation on sanitation, improvement of founding, development of recycling, and landfill to improve the standard solid waste management in Kabul.

Keywords: Municipal Waste Management, Kabul, Zoonoses, Heavy Metal, Public Health

1. Introduction

At the start of the twenty-first century, mankind is facing a global environmental problem, and the industrial sector is required to take the initiative in the establishment of recycling society for efficient utilization of natural resources. With an increase in the global population and the rising demand for food and other essential, there has been a rise in the amount of waste being generated daily by each household. This waste is ultimately thrown into municipal waste collection centers from where it is collected by the area municipalities to be further thrown into the landfills and dumps. However, either due to resource crunch or inefficient infrastructure, not all of these waste gets collected and transported to the final dumpsites. If at this stage, the management and disposal are

improperly done, it can cause serious impacts on human health. Waste that is not properly managed especially excreta and other liquid and solid waste from the household and the community are serious health hazardous and lead to the spread of infectious diseases. Municipal solid waste, commonly known as garbage, is refuse a waste type consisting of every day that is discarded by the public with variation from country to country. The management of this waste is gradually becoming a major challenge in developing countries like ours as a result of urbanization and the increasing of the human population. Municipal solid waste change considerably with time and may include durable good, and non- durable goods, packaging, container, food waste and yard trimming and miscellaneous inorganic waste with a different type. Four hierarchy ranking strategies have been developed by the united state of America for municipal solid waste management for environmental fraternity from the most preferred methods. These include; source reduction and reuse, recycling or composting, energy recovery as well as treatment and disposal [18].

The management of these waste becoming a major challenge in a developing country like Afghanistan, as results of urbanization and the increasing human populations. Now it is a serious concern in Kabul city. An increasing amount of waste which is not adequately managed in Kabul, resulting in the contamination of air, water, and soil. These environmental contaminations pose serious health threats. Economic development, increase in population, and urban growth are all the factors influencing an issue. After 2001, the intervention of the international community the geopolitical dynamics and its subsequent business opportunities, rapid population increase, and urban growth, triggered the planning and management of Kabul urban area. From the last three decades, Afghanistan has witnessed rapid urban growth and a huge number of rural-urban migrant due to the wars and conflicts (Hernandez and Gebremedhin, 2007). This migration caused huge pressure on the housing demand, and it leads to a high number of informal developments. Kabul municipality lack adequate solid waste management system, and this huge informal settlement have made it more difficult for them. The poor management of wastes will lead to lots of environmental and health impact. The responsibility of Kabul municipality is to manage the waste generated and reduce it's without technologically methods made negative impacts on environmental and human health. Waste management in Kabul is a loss for reasons related to the negligence from environmental stakeholder resulting in poor founding of municipality and oversight of national environmental protection of Afghanistan (NEPA). According to UNEP (2003), the average total solid waste generated in Kabul was 1080 tons/day. Per capita, SW generation in Kabul was estimated at 0.4 kg/day by Visvanathan (2006). According to the study by the (CIA, 2107), the total population in Kabul city 2015-2016 was 4.6 million and the range of solid waste produced during that time is reported 1840 tons/day and 0.4kg/capita/day.

The solid waste characterization data demonstrate that the solid waste stream in the Kabul city, although similar to the other developing countries in Asia, especially to south Asian countries, is unique in composition and it is generation rate. The solid waste stream was characterized with a huge part of the solid waste consist of the organic component of approximately 70% and a specific weight of 413 ± 52 kg/m^3. The estimated solid waste generation rate ranged between 0.31 and 0.43 kg/capita/day (Forouher and Hristovsky, 2012).

The implication of poor waste management on human health such as contamination of air, lands, and water. This environmental pollution may results in the emergence specially on food -borne zoonozes, injuries from sharp hospital equipment and its dump in that sites also expose children, waste worker and adults scavenger to infectious diseases such as human immune -deficiency virus , tetanus, hematite B and C. this review will be aimed identifying possible public health implication in Kabul city and offer possible ways of reducing and overcoming these challenges.

Objective of the study

The mine aim of this study is to find out the waste management challenge in Kabul municipality and related governmental organization and receipt of essential point about poor waste management and find out the various disease due to the solid waste in the study area.

Study area

Kabul city is the capital of Afghanistan and is located 1791 meter above sea level. Situated in the eastern part of the country, Kabul is located between 34-31° North and longitude 69-12° East. The Kabul territory is about 1008.7 Km^2 until 20018 it was divided into 22 districts. District 19 has the largest area of $130Km^2$. Kabul city has Bothe formal and informal settlement, with formal leading the number at 67%(JICA 2011) of the total land area. The Kabul urban agglomeration- an agglomeration that located in all part of the city cover an area of more than $60Km^2$. There was no specific attention paid to solid waste management during this time anyway.

Fig. 1: location map of the study area
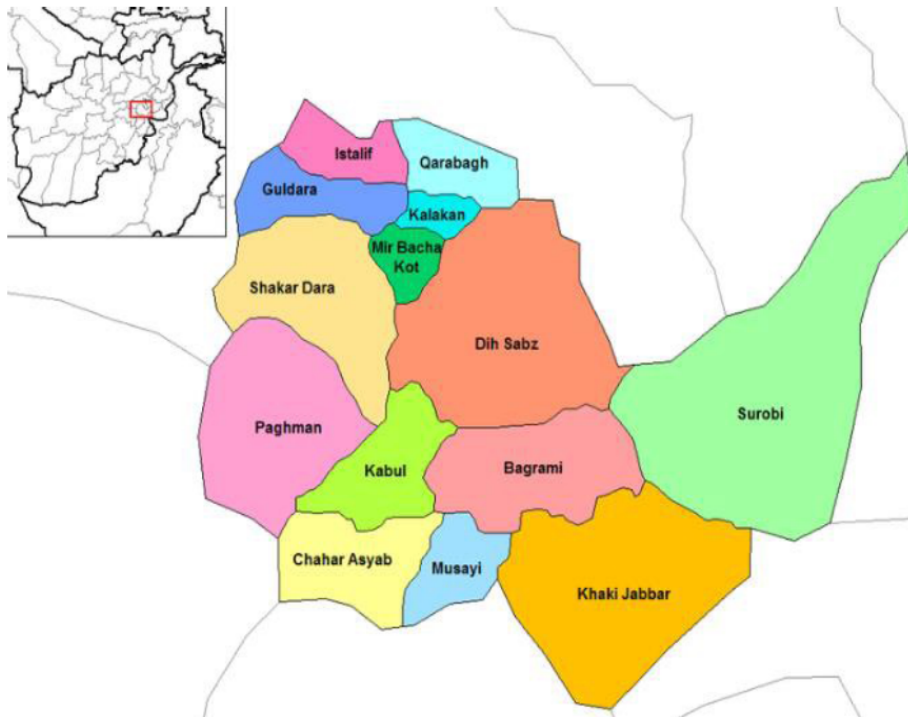
Fig. 2: The districts of Kabul city
Source: haidari and Lukumwena (2013).
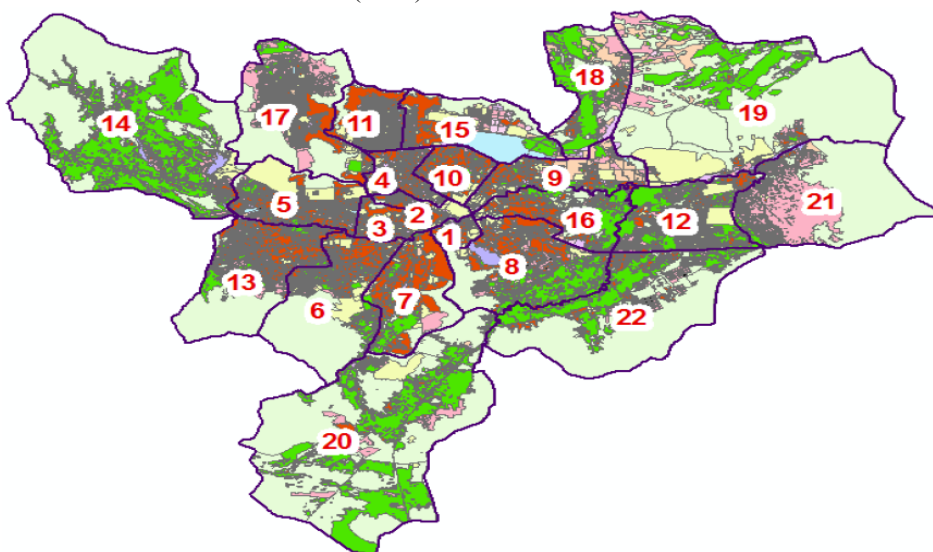
Methods

This scoping review described acute poor waste management as a serious concern in Kabul city, and it becomes a big challenge to the Kabul residents. Because Kabul city is facing a serious of significant environmental problems. Air pollution, water pollution, the existence of huge quantities of solid waste, and lack of proper management, investigate the perception of household on public health, and relation to the dumpsite. If at this stage, the management and disposal are improperly done, it can cause serious impacts on human health. Waste that is not properly managed especially excreta and other liquid and solid waste from the household and the community are a serious health hazard and lead to the spread of infectious diseases. The case study design was adopted for the research. Case study research enabled the researcher to examine the phenomenon in a specific context Zainal (2007) argues that in most cases a geographical area and a specific number of individual as the subjects of inquiry are needed for case study research. Baxter and Jack (2008), also state that a case study is a research approach that facilitates exploration of phenomena within it is context by using a variety of data sources. The case study approach was used because the research concerned a specific- context situation the Kabul city, and also the problem was studied within the framework of a contemporary issue.

Municipal Solid waste generation

Municipal solid waste (MSW) is the abridgment of the waste generated from domestic, commercial, and construction activities by natural person that is collected and treated by municipalities. The exponential growth of population and urbanization, and the development of social economy, coupled with the improvement of living standard, have resulted in an increase in the amount of MSW generation throughout the world (Tanmoy Karak, R. MBhagat, 2012). Based on the solid waste management policy, three types of solid waste generated in Kabul: municipal solid waste, hazardous waste, and clinical wastes. Solid waste is the remaining materials derived as the results of production and consumption. The amount of solid waste generated mostly depend on the economic situation of a society, so the countries with lower GDP generate less solid waste (Shekdar, 2009). And also the solid waste generation rate is related to the population of an area. Getting information about the generation rate of SW is very important to describe the ongoing situation. Kabul is the fifth fastest growing city in the world (Citymayors.com, 2009). According to the UNEP, the average total solid waste generated in Kabul was 1080tons/day. Per capita, SW generation in Kabul was estimated at 0.4kg/day (Visvanathn, 2006) in developing countries, and the average generation rate was estimated to be between 0.3 to 0.5 kg/c/d (Tam, 1983). According to the study by JICA in 2007-2008 and the Central Statistical Agency (CSA), the total population in Kabul city was 3.1 million and the total solid waste produced during that time is reported 1603 tons/day and after simple calculation per capita waste generation was 0.51kg/C/Day, which was very higher than normal case 0.4kg/C/Day generation rate. The total amount of waste in 2015-2016 was 1840tons/ day at a total population of 4.6 million (CIA,2017).

Type of solid waste

Hazardous waste
Hazardous waste is appropriately identified and hand safely to protect human health and the environment. The generator of hazardous waste is regulated based on the amount of hazardous waste they generate in a calendar month, not the size of their business or facility(emsenv.com 2018).

Characteristic hazardous waste is material that are known are tested to exhibit one or more of the following hazardous traits:
- Ignitability
- Reactivity
- Corrosively
- Toxicity

There is no facility for treatment of hazardous in the Kabul city. Toxic and municipal waste are dumped in the same dump site. There was tow incinerator working on hazardous wastes, but due to the air pollution, these were

closed. All the hospital's wastes are considered as hazardous waste, and the ministry of public health (MoPH) has introduced hazardous waste separation at the major or hospitals, but still, the practice is not performed at 100% in all hospitals.

clinical wastes

MoPH is the responsible authority for the management of clinical or medical wastes. Clinical wastes are most hazardous and can face people with dangerous diseases. These are wastes which need special attention during collection, transportation, and disposal even if the amount is not too great. In the countryside, there is no special policy or procedure for the treatment of clinical wastes. Almost all the clinical wastes are collected and transferred to the landfill together with other municipal wastes. There area few hospitals which have incinerator and burns the clinical waste. In the dump site, there are scavengers and informal group of people who collect reusable items. According to (Bashaar, 2017), in 2008, about 1.6 million by-products of vaccination against polio were discarded in municipal wastes, and this caused many infectious injuries to the reusable collectors (Harhay, 2009). Added that more than 60 hospitals in Kabul do not have incineration facilities. A JICA study team estimated the volume of medical waste at around 3.7 tons/day from all facilities.

Characteristic of solid waste

Waste characteristics are different in developing and developed countries. The daily solid waste generated in Kabul city is estimated to be 0.3Kg/capita/day-0.43Kg/C/D (froher, 2015). Since Kabul is not completely an industrialized city, the huge part of the solid waste consists of organic waste (70%, while plastic, paper, and glass content are 3.8 %, 5.5%, and 2.2% respectively. Metal demolition waste and textiles respectively add of 1.2%, 15%, and 1.2%. According to chemical and environmental study, all the solid waste divides into four categories:

- Corrosive: these are waste that includes acids or bases that are capable of according mental containers, e.g., tanks [3] Pervez alam
- Ignitability: this is waste that can create fires under certain condition, e.g., waste oils and solvents
- Reactive: these are unstable in nature, they cause explosions, toxic fume when heated.
- Toxicity: waste which is harmful or fatal when ingested or absorbed.

Impact of solid waste on Human health

The group at risk from the unscientific disposal of solid waste include the population the area where there is no proper waste disposal method, especially the pre-School children; waste worker and worker in facilities producing toxic and infectious materials. Other high-risk groups includes the population living close to the waste dump and those, whose water supply has become contaminated either due to waste dumping or leakage from landfill sites. Uncollected solid waste also increases the risk of injury and infection. Exposure to hazardous waste can affect human health, children being more vulnerable to this pollutants. In fact, direct exposure can lead to disease through chemical exposure as the release of chemical waste into the environment lead to chemical poisoning.

The direct effect of poor waste management on public health

Sharp objects such as syringes, scalpels, and razor blades disposed at waste dumping sites can cause serious injuries to children and municipal worker visiting these sites either to defecate or play as it is very common in Kabul. Municipal waste management workers and waste scavengers are also at risk of injuries caused by these sharp objects. This object can also pose serious health risks to these groups of people if contaminated with infectious pathogens. Because contaminated syringes caused hematite B, C virus, and human immune-deficiency virus infections[18]. This risk is particularly higher in developing countries where scavenging at waste disposal sites and manual sorting of hazardous waste from the health-care establishment is common. Another direct effect may include environmental pollution associated with the decaying of the long-standing wastes.

Indirect effects of plastic and municipal waste on public health

Contamination of underground water is vital to life, and quality of life of the people living in a region depend on access to clean water. Groundwater is a crucial link in the hydrologic cycle because it is the source of most of the water in rivers, lack, and wells which are usually the municipal source of water. Contamination of groundwater often results from poor municipal waste management. A study by karija et al. [4]. Showed that drinking water contaminated by municipal solid waste contained fecal coliform count ranging between 15.52 MPN/100ml of water against the recommended of 0 MPN/100ml of water [12]. This may be a confirmation that human and animal excreta are component of municipal solid waste in developing countries as was earlier reported [18].

Heavy metal, including lead, cadmium, mercury, and arsenic from municipal solid waste are also washed into surface and groundwater posing serious public health threats. Common sources of these heavy metal in waste may include point containers and other lead coated containers for lead, cadmium batteries and cigarette stumps for cadmium, broken mercury thermometers and barometer for mercury and containers of arsenic pesticides and wood preservatives for arsenic. This substance is not recycled in Kabul and are frequently dumped with household waste ending in the contamination of drinking water sources for human. Generally, the health effect of heavy metal can be life-threatening and may range from headache, irritability, memory deterioration, diminished intellectual capacity, kidney damage (39,21,44solomon), liver diseases (14) and bioaccumulation that lead to cancer (10,35)

One of the public health implication of dumping waste within human settlements is the risk of transmission of food and waterborne endemic zoonoses. These endemic zoonotic pathogens which are usually associated with human and animal excreta on waste dumping site are usually washed by rains into surface or groundwater, contaminating these sources of water for human and animal, resulting in illness. In addition, food animal serving as vertebrate intermediate hosts can feed on human excreta, acquiring, infections which are later transmitted to human causing serious health problems. Common sanitary food and waterborne endemic zoonoses documented developing countries.

Due to the use of chemical additive during plastic production, plastic has potentially harmful effects that could prove to be carcinogenic or promote endocrine disruption. Some of the additives are used as phthalate plasticizer and brominated flame retardants. Through biomonitoring, chemicals in plastic, such as BPA and phthalate, have been identified in the human population. A human can be exposed to these chemicals through the nose, mouth, or skin. Among the phthalate plasticizer, the most hazardous ones, i.e., BBP, DEHP, and DBP, are classified as toxic for reproduction. BBP is also very toxic to an aquatic organism with long-lasting effects. In addition, this phthalate, as well as DEP (diethyl phthalate) and DCHP (dicyclohexyl phthalate), are being evaluated for the endocrine disrupting properties (Groshart and Okkerman, 2000; Okkerman and van der Putt, 2002). The lead compounds used in heat stabilizer are classified as toxic for reproduction and the aquatic environment with long-lasting effects (both acute and chronic) and may also cause damage to organs.

According to the report in 2019, the prolific use of plastic continues in Kabul, and this city has turned into a trash can. People have no choice and must give plastic bags by every shopping, whether they buy small things. Kabul resident does not take care and to not indiscriminately throw out garbage and to take care of their environment.

The slow violence of pollution and municipal solid waste in Kabul

Beside developing country, less attention has been focused on the health and environment risks from poor waste management in Kabul. Yet now estimates indicate that it is killing thousands each year. The latest report from the health effect Global Air project estimate that hazardous waste cause 51600 death in Afghanistan in 2016. A review by UNHABITAT (2015), laid bar the enormous challenge facing municipalities in Afghanistan. Adequately dealing with Kabul's annual 653557 tons of waste would require 41% of the city's entire budget; for some regional cities, the cost would be two or three time their annual income. Thus, Kabul becomes most notorious for poor waste management and air quality. While the climate and geographical factors play a role in influencing air movements in the city, these are exacerbated by a high level of manmade emission. These include

the use of leaded and poor quality fuels in the vehicle and domestic generators, light industrial sources, and the burning of waste plastic, coal, and rubber. Growth, coupled with inadequate urban planning, the challenge of waste management and the limited provision of green spaces. The problem is particularly acute during the winter when resident relies on wood and coal for heating, especially burning waste plastic and rubber by poor residents because of diseconomy.

Possible intervention strategies

In Afghanistan, the executive board and legislation have failed to implement law and regulation (Outlook, 2015) according to the outlook news social practices are not in accordance with the law most of the time, and people consider their own interest instead of other's right. Afghanistan has environmental law and strategy for solid waste management, but this is not comprehensive, and implementation is often not considered. Enactment and enforcement of policy and legislation will serve as useful strategies in improving solid waste management in developing countries. As poor solid waste management was associated with weakness of policy enforcement and implementation. The legislative arm of Afghanistan government at the local state such as Kabul and general level encouraged to take up their responsibility by enacting new law and policies that will govern the management of municipal waste in Kabul to ensure the protection of the general public from the hazards associated with this menace. With legislation in place, the general public will have an understanding of what is required of them by the law and will abide by them. This can be achieved through the formulation of sanitary committees at the local, state, and national legislators who would sponsor and support all sanitation bills.

Ministry of education on the principle and effect of waste minimization and recycling is also a critical part of the waste management process. Afghanistan public should be enlightened on the risk of allowing children to scavenge and defecate on refuse dumping sites. Lack of knowledge and poor education about solid waste management among residents have caused problems in the system. The awareness of resident needs to be improved through the education program.

Another major challenge associated with poor waste management in Kabul is the poor founding of agencies coordinating sanitation. Kabul municipality has tow kind of revenue, one is the budget from the ministry of finance and the second type is related to their own revenue collected through taxes, according to community scorecard (SCA, 2016). Joseph (2007) proposed to the participation of the private sector to overcome problem generated from lack of budget and technical capacity. A drop of found allocations will be, of course, poor waste management. And so, ensuring a healthy environment in Kabul requires proper founding of municipality to be able to carry out this responsibility effectively. Founding may be done by the government at the national level as well as non- governmental organization.

Figure 3: refuse dumping site within a residential location in Kabul with a human waste scavenger and explore.

Figure 4: refuse dumping site within the human settlement in Kabul with a boy dumping refuse and scavenging animals.

Conclusions

This article carried out a literature survey to review poor municipal solid waste management in Kabul. Health hazards attendant by insufficiency of municipal solid waste management and cause serious public health problems ranging from the transmission endemic zoonoses to the emergence and re-emergence arising from the direct and indirect influence of poor waste management. The impact of these dangerous health risk can be reduced and achievement to minimum level through public education and awareness program for resident regarding the impact and value of solid waste. Enactment and re-enforcement of policies and legislation, private sector involvement in environmental sanitation and municipal solid waste management was encouraged (25). Establishment of appropriate law and regulation which give clear information on the responsibilities of Kabul municipality, Ministry of Public Health and National Environmental Protection Agency (NEPA) and other related organization. Improvement of funding for financial support and management of the related agencies for better ability to propose an appropriate method for Monitoring, supervision, and development of landfill, recycling waste, among others. It is pertinent that all human settlement regardless of their size and location to develop landfill for proper waste management, which will preserve the environment and promote well being of the Kabul resident.

References

Adebayo, A (2000). Environmental sanitation and waste management policies at the local level in Nigeria, Geo studies forum, 1(1&2): 30-35.
Afghanistan National Development strategy (2014) Retrieved from
http://www.af.undp.org/content/dam/afghanistan/docs/ANDS_Full_Eng.pdf
Agarwal, A., Singhmar, A., Kulshrestha, M., & Mittal, A. K. (2005).
Municipal solid waste recycling and associated markets in Delhi, India. *Resources, Conservation and Recycling*, *44*(1), 73-90
Addo, I.B, Adie, D and Acheampong, E.O, (2015). Solid Waste Management and it is Health Implication on the Dwellers of Kumasi Metropolis, Ghana, Current Research Journal of Social Science 7(3): pp, 81-93.
Biu, A.A, and ljudai, J. (2012). Prevalence and morphometric studies on porcine cysticercosis in adamava state, Nigeria sokoto journal of veterinary Science, 10(1): 28-32
Barr, S., Ford, N. J., &Gilg, A. W. (2003). Attitudes towards recycling household waste in Exeter, Devon: quantitative and qualitative approaches. *Local Environment*, *8*(4), 407-412
Bashaar, M., Thawani, V., Hassali, M. A., &Saleem, F. (2017). Disposal practices of unused and expired pharmaceuticals among general public in Kabul. *BMC public health*, *17*(1), 45.
Chandrappa, R., & Brown, J. (2012). *Solid waste management: Principles and practice*. New York: Springer Science & Business Media

Chu, Z., Wang, W., Wang, B., & Zhuang, J. (2016). Research on factors influencing municipal household solid waste separate collection: Bayesian belief networks. Sustainability 8(2). 152.

Carraher Jr CE., Polymer chemistry. 7th edition. Boka Raton: CRC press, francis Group, LLC; 2007.

EEA (Europian Environment Agency), 2013. Managing Municipal Solid Waste: A Review of Achievement in 32 European Countries. EEA Report No. 2/2013. Pp 1-36. DOI: 10.2800/71424.

Fafioye OO. John -Dewol OO. A critical assessment of waste management problems in Ibadan southwest local government area Nigeria, greener journal of Environmental and Management Studies. 2013, 2: 60-6.

Fietkua and Kessel, 1981 *Umweltlernen*: *Veraenderungsmoeglichkeite n desUmweltbewusstseins. Modell-Erfahrungen* (Koenigstein, Hain).

Gupta, A. & Shah, A. (2014). Bronchial anthracofibrosis: an emerging pulmonary disease due to biomass fuel exposure [Review article]. int.J.Tuberc. Lung. Dis 19, 613-621.

Hines et al., 1986. Analysis and synthesis of research on responsible pro-environmental behavior: A meta analysis, the journal of environmental education 18(2),pp.1-7.

Haidaree, G. H., & Lukumwena, N. (2017). Solid Waste Management Challenges and Possible Solution in Kabul City. *World Academy of Science, Engineering, and Technology, International Journal of Environmetal, Chemical, Ecological, Geological and Geophysical Engineering, 11(3), 248-252.*

Hameedullah, N (2017). Solid waste management in kabul city: current practices and proposed improvements, Ritsumikan Asia Pacific University, 6(2) 7- 45.

JICA. (2009). The Study for the Development of the Master Plan for the Kabul Metropolitan Area in The Islamic Republic of Afghanistan. Report 6: Solid Waste Management. retrieved from:http://open_jicareport.jica.go.jp/pdf/11965191.pdf

Karshima, S.N (2016). Public health implication of poor municipal waste management, Vom journal of veterinary science, Pp 143-144.

KMA and WMD, 2010. Data for Purpose of Planning Waste Management Intervention Programes, Waste Management Department, Kumasi.

Matsunaga, K. O., & Themelis, N. J. (2002). Effects of affluence and population density on waste generation and disposal of municipal solid waste. Earth Engineering, *Center Report*, 1-28.

Nabegu, A. B., & Mustapha, A. (2014). Enhancing awareness and participation of municipal solid waste management in Kano Metropolis, Nigeria, *World Scientific, News*, *5*, 46-53.

NEPA. (2010). *National Waste Management Policy*

Nazire, H., Kita, M., Okyere, S. A., & Matsubara, S. (2016). Effects of Informal Settlement Upgrading in Kabul City, Afghanistan: A Case Study of afshar Area. *Current Urban Studies*, *4*(04), 476.

Rushton, L. (2003). Health Hazardous and Waste Management, British Medical Buulletin, pp 183-197.

Singh Pragya, November-2013. Impact of Solid Waste on Human Health: A Case Study of Varanacyi City, international Journal of Scientific & Engineering Research 4(11): p 1840.

Suzanne M. Simkovich, Dina Goodman, Roa, C, Marry E. Crocker, Gonzalo E. Bruce J. Kirenga, Robert A. Wise & William Checkley, (2019). The Health and Social Implication of Household air Pollution and Respiratory diseases, npj Primary Care Respiratory Medicine.

Shomoye, F.B, Kabir Russell (2016). Health Effect of Solid Waste Disposal at dumpsite on the Surrounding Human Settlement, Journal of Public Health in Developing Countries, 2(3): pp.268-275.

Zaman, A.U. (2010). Comparative study of municipal solid waste treatment technologies using life cycle assessment method. Int.J. Environ. Sci. Tecnol. 7(2), pp 225-234.

Zia, H. (2015). Good Legislation but Poor Implementation of Law. Retrieved from http://outlookafghanistan.net/topics.php?post_id=13688

An Educational Intervention to Increase Efficacy and Interdependence in Group Work

Eva Hammar Chiriac[1,3], Michael Rosander[1,3], Karin Forslund Frykedal[1,2,3]

[1] Department of Behavioural Sciences and Learning Linköping University
[2] Department of Social and Behavioural Studies, University West

Correspondence: Eva Hammar Chiriac, PhD, Associate Professor of Psychology, Linköping University, Dept. of Behavioural Sciences and Learning, Division of Psychology, SE-581 83 Linköping, Sweden. +46 (0)13 285735, eva.hammar.chiriac@liu.se. ORCID 0000-0002-7117-5620

Abstract
This study investigated whether an intervention, in the form of short educational sessions, influenced pupils' experiences of group work or cooperative learning (CL). The hypothesis tested was that an intervention for teachers and pupils would lead to pupils' increased (a) collective efficacy, (b) self-efficacy and, (c) positive interdependence, as well as (d) less negative interdependence. The participants were pupils from years 5 and 8 in three compulsory schools in Sweden, working in 22 groups divided into one intervention group and one control group (11 work groups in each condition). Data were collected through a questionnaire before and after participation in the study and analysed using a repeated measure ANOVA and 2×2 ANOVA. The results showed an increased collective efficacy, self-efficacy and positive interdependence and a reduction of negative interdependence. The conclusion is that the intervention provided for teachers and pupils did have an effect, thus promoting successful working as a group.

Keywords: Cooperative Learning, Collective Efficacy, Interdependence, Group Work, Self-Efficacy

[3]**Eva Hammar Chiriac,** PhD, Associate Professor of Psychology at the Department of Behavioural Sciences and Learning, Division of Psychology at Linköping University, Sweden. Her scientific activity lies within the social psychological research field with a strong focus on group research, mainly connected to groups, cooperative learning (CL), group processes, learning and education. She is currently the project manager for a research project concerning assessment of knowledge and skills in group work and CL.

Michael Rosander, PhD, Associate Professor of Psychology at the Department of Behavioural Sciences and Learning, Division of Psychology at Linköping University, Sweden. His research focusses mainly on workplace bullying from a group and organizational perspective, but also on leadership and group processes in small educational groups.

Karin Forslund Frykedal, PhD, Associate Professor of Education at the Department of Behavioural Sciences and Learning, Division of Education, Teaching and Learning at Linköping University, Sweden. Further she works as a Professor of Education at the Department of Social and Behavioural Studies, University West. Her scientific activity lies within educational research with a focus on leadership, group processes and learning in small educational groups.

1. Introduction

There is strong scientific support for group work and cooperative learning (CL) as ways to promote learning and socialisation in education (Baines, Blatchford, & Chowne, 2007; Gillies, 2016; Gillies & Boyle, 2010, 2013; Hammar Chiriac, 2014, Johnson & Johnson, 2002, 2004; Johnson, Maruyama, Johnson, Nelson, & Skon, 1981; Roseth, Johnson & Johnson, 2008; Slavin, 1989,1996). Group work and CL are pedagogical methods for organising classroom activity, where pupils are allotted into groups and given a group assignment from the teacher, which they are supposed to work on jointly to reach a common goal. Group work is customarily defined as 'pupils working together as a group or a team' (Blatchford, Kutnick, Baines, & Galton, 2003, p. 155) or just 'pupils working together in small groups' (Lumpe & Haney, 1998, p. 123). CL is a specific interactional educational approach to group work where cooperation/collaboration with clear structures, enhanced pupil activity and common goals are the basic prerequisite for learning (Gillies, 2007). Research has not yet unequivocally found what creates high-quality group work facilitating the possibilities of pupils' appropriating positive experiences from cooperative situations. The processes within group work probably have a great impact on the results of the groups, the quality of learning and pupils' conception of what constitutes 'good' group work and what does not (Forslund Frykedal & Hammar Chiriac, 2018; Hammar Chiriac, 2014; Hammar Chiriac & Granström, 2012). By focusing on university students' experiences of group work Hammar Chiriac (2014) noted three important factors that either facilitated or hampered students learning in and experience of group work: *learning* (e.g. academic, group knowledge, conflicts)' *study-social function* (e.g. affiliation, support, motivation, group climate), and *organisation* (e.g. group composition, group structure, working mode).

In a classic Australian study, Gillies and Ashman (Ashman & Gillies, 1997; Gillies & Ashman, 1996) examined whether efficiency and productivity in group work in compulsory school improved through interventions. They investigated whether teaching pupils how to work in a group could improve pupils' ability to use the group's potential, as well as pupils' experiences of CL. Half of the class (pupils 11–12 years) received an educational intervention, while the other half served as a control group. The intervention consisted of two lessons in which the pupils were taught more about how to work in groups and how to relate to each other (in terms of attitude) during a group project. The results indicated that a relatively small educational intervention could yield a positive outcome in both the efficiency and productivity of group work, as well as causing a more democratic approach when working in cooperative settings. The study concluded that a relatively simple effort (i.e. two lessons about that working in groups) could give positive effects for efficiency and productivity, as well as providing a more positive experience overall.

In a British study, Black, Harrison, Lee, Marshall, and William (2003) investigated a different educational intervention. They studied changes in teachers' attitudes when implementing formative assessment (i.e. on-going information about the pupils' progress with the purpose of supporting continuous learning) and whether an intervention promoted students' learning and goal achievement. The study was conducted in cooperation between researchers and teachers from different schools. The teachers, together with the researchers, created a project team to develop strategies for the implementation of formative assessment. A focus in the study was on if and how researchers, together with teachers, could develop and implement practically applicable strategies for formative assessment using an intervention consisting of education in formative assessment. The intervention yielded positive outcomes in terms of significant improvement in students' achievements, and the teachers became convinced of the benefits of formative assessment. One interpretation is that the cooperation between researchers and teachers was a necessary prerequisite for these changes.

Intervention studies in connection with CL have primarily focused on implementing CL in specific modules and/or courses and have studied the effects on skills development (Healy, Doran, & McCutcheon, 2018). A key purpose of the research has been to identify factors explaining why some group work turns out successfully, while other group work does not. Research on CL has reported positive outcomes in several aspects (see e.g. Gillies, 2016; Gillies & Boyle, 2010, 2013; Johnson & Johnson, 1994, 2002; Roseth et al., 2008). Comparing groups who received an intervention with control groups showed that CL as a pedagogical approach could: a) promote academic knowledge, skills and understanding (Gillies, 2016; Johnson & Johnson, 1994, 2002; Slavin,

1989, 1996); b) enhance students' achievement, socialisation, motivation and personal development (Roseth, Johnson & Johnson, 2008; Slavin, 1989, 1996); and c) increase cooperative learning achievement compared to individualistic and competitive learning (Johnson et al., 1981; Johnson & Johnson 1994, 2002).

Although most studies on CL have emphasised the positive outcomes from employing CL, there is also research highlighting disagreements on or criticism about CL as an application and/or method (Opdecam & Everaert, 2018). Low-quality group work and negative experiences of cooperative situations may come from students' and teachers' perceptions of and beliefs about CL. If students, for instance, think that CL and peer assessment is used foremost to reduce the teacher's grading time or that negative group processes are inevitable, learning based on cooperation will not occur. Further, it may also be problematic if teachers believe that assigning students into groups will automatically lead to learning based on cooperation, peer assessment solves the group work assessment problem, or CL is easy to organise and guide.

2. Theoretical framework

2.1 Social Interdependence Theory

Social Interdependence Theory (SIT), one of the dominant influences on CL (Deutsch, 1949; Johnson & Johnson, 2002, 2013; Lewin, 1948), was the theoretical framework for this study. According to this theory, group members develop a degree of *interdependence* when it occurs to them that working together on an assignment can enhance the probability that they will achieve their joint goals. The interdependence can be *positive,* which creates opportunities for cooperation and encourages group members to help each other. Positive interdependence also causes conditions for increased individual accountability (see below). The interdependence might also be *negative,* which creates competition with the others in the group. Negative interdependence also creates conditions for lowered individual accountability and can lead to a pupil's lowered perception of responsibility for his/her share of the workload, as well as decreased willingness to help the group fulfil its task. There might also be an *absence* of interdependence, signifying that individuals may reach their goals independently of others in the group, which does not provide opportunities for interaction and cooperation between the group members or a means for CL (Johnson & Johnson, 2002, 2013). We argue that the different types of interdependence should be considered as different constructs and not as a continuum of the same concept, nor can positive and negative interdependence be perceived at the same time. Johnson and Johnson (2002, 2013) proposed the following five elements necessary to maximise the cooperative potential of groups:
  1. *Positive interdependence* is the perception of being linked to other group members and the psychological realisation that is achieved through the pursuit of common goals and joint rewards.
  2. *Individual accountability* is when each group member is responsible for his or her share of the work and is willing to help other group members. Individual accountability can also be seen as a precondition for creating positive interdependence.
  3. *Promotive interaction* is when group members encourage each other's efforts through discussions and explanations and, in general, show a willingness to throw in their lot with their peers.
  4. *Interpersonal and small group skills* are the skills that enhance the degree of trust among group members and improve their communication skills and their ability to resolve conflicts when differences occur.
  5. *Group processing* involves group members discussing and evaluating their work; this is crucial for promoting, affirming and maintaining effective working relationships among group members.

2.2 Self-Efficacy and Collective Efficacy

In addition to SIT, self- and collective efficacy are used as theoretical concepts in this study. *Self-efficacy* (Bandura, 1982) is the individual belief that one possesses the necessary resources and abilities to accomplish a given task, and it plays an important part in shaping the perception of behavioural control (Ajzen, 1991) and can be related to students' ability to perform a task in the group work. While self-efficacy may explain individual contributions in group work, it might not be sufficient to explain the group's performance (Katz-Navon & Erez, 2005). *Collective efficacy* is the corresponding construct on a group level (Bandura, 1982), and a shift from 'what I think' to what 'we think about us' (Katz-Navon & Erez, 2005, p. 440). According to Parker (1994), self-efficacy and collective efficacy should be considered independent but related constructs. The group level of the

concept is relevant in terms of getting optimal cooperative learning in groups. Success in group work will then depend on the group's confidence that they collectively have the resources and abilities to perform the task (Bandura 1982, 2000, 2002). Both self- and collective efficacy are influenced by past experiences, for example, but can also be influenced by other important factors, particularly if a significant part of one's self-definition depends on being part of an important group (Terry, Hogg, & White, 1999).

Previous research in educational settings has shown that both pupils' and teachers' self-efficacy beliefs have an effect on pupils' achievements and behaviours (see e.g. Bandura, 1997; Betoret, 2009; Klassen, Tze, Betts, & Gordon, 2011; Tschannen-Moran & Barr, 2004). Khong, Liem and Klassen (2017) have shown that collective efficacy beliefs in pupil work groups were a better predictor of performance than self-efficacy, although self-efficacy and type of task moderated the relationship. A reasonable interpretation would be that both self-efficacy (an individual construct) and collective efficacy (a group-level construct) might be useful for understanding the essence behind successful group work and working as a group.

2.3 Working in a Group or Working as a Group
Additional important concepts regarding approaches to group work include working *in a* group and working *as a* group (Hammar Chiriac & Granström, 2012; Hammar Chiriac & Hempel, 2013; Underwood, 2003). Although group work is often defined as 'pupils working together as a group or a team' (Blatchford et al., 2003, p. 155), it is important to differentiate between these two concepts. *Working in a group* describes situations where pupils are sitting together in a group, but mostly working individually on separate parts of a group assignment, without using the potential of the group. This is not an uncommon situation within an educational setting. At the end of the group work, pupils put their separate contributions together into a joint product. Learning is an effect of social facilitation rather than cooperation. *Working as a group* is often referred to as 'real group work' or 'meaningful group work' (Bennet & Dunne, 1992; Galton & Williamson, 1992; Hammar Chiriac & Granström, 2012; Steiner, 1972, 1976; Webb & Palincsar, 1996), and presupposes cooperation and utilisation of group members' competence, knowledge and abilities: this is characterised by interdependence and joint efforts to achieve a common goal. Working as a group is a more uncommon activity in an educational setting. Learning is, in this case, an effect of cooperation.

The aim of this study was to add to the current knowledge and understanding of what contributes to successful group work in compulsory school. We examined whether an intervention in the form of a short educational session could yield a positive outcome; that is, if the intervention could influence pupils' perception of collective efficacy, self-efficacy and interdependence. To our knowledge this has not been a focus in previous studies. Based on the presented theoretical framework and the research on educational interventions, we have reason to assume that an intervention in the form of a short educational session could influence pupils' beliefs regarding efficacy and interdependence. We therefore proposed the following hypothesis:

> *H1. An intervention with teachers and pupils will lead to pupils' increased (a) collective efficacy, (b) self-efficacy and (c) positive interdependence, as well as less (d) negative interdependence.*

3. Method

The hypothesis was investigated through questionnaires distributed to all pupils before and after participating in the study. This included pupils from years 5 and 8 from three different schools in Sweden. The study included an intervention in the form of a short educational session, which was randomly assigned to the classes included in the study. All groups worked on the same task.

3.1 Context of the Study
This study is part of a larger research project entitled, *Assessment of knowledge and skills in group work – an intervention study in the classroom everyday practice* (Hammar Chiriac & Forslund Frykedal, 2018). The

overarching objective of the research project was to increase knowledge concerning teachers' and pupils' assessment practices in connection with group work and/or CL in education.

3.2 Participants

The participants were from either year 5 or year 8 in compulsory school. There were four classes from three schools in different parts of Sweden. Two classes were randomly selected to receive an intervention and two were the control group. In total there were 22 work groups (i.e. groups of pupils working together on the same assignment), where 11 groups received the intervention and 11 were part of the control group. In most cases, there were three to four pupils in each work group. In Table 1, the frequencies of answers before and after, as well as for gender, year and study condition are presented. Because of limitations based on the research ethics for this study, we were not allowed to track information for individuals between measurements (before and after the intervention), only which work group he or she was part of. This allowed for repeated measures only on a group level.

Table 1. Frequency of Answers from Girls/Boys, Years 5/8, and Intervention/Control Group.

	Before	After	Girls	Boys	Year 5	Year 8	Total
Girls	42	39	–	–	–	–	81
Boys	44	45	–	–	–	–	89
Year 5	38	36	39	35	–	–	74
Year 8	48	48	42	54	–	–	96
Intervention	43	38	46	43	40	49	89
Control	43	46	35	46	34	47	81

3.3 Intervention

An intervention in the form of a short educational session and a workshop was directed at both teachers and pupils. For the teachers, the intervention consisted of education and training on how to work in groups and how to make assessments suitable for cooperative situations. This part of the intervention took place at the university for two days. The first day was devoted to the theoretical aspects of the teacher's role and tasks regarding group work and group work assessment. Some aspects of group work before (e.g. the task, organising group work, group contract), during (e.g. information, proactive and reactive roles, formative assessment), and after (e.g. summative assessment, self- and peer assessment, documentation) were problematised. The second day was more of an 'applied workshop day'; where the teachers together produced common materials for the forthcoming group work (e.g. creating the task description and matrices for group contracts) and group work assessment (e.g. matrices for observations, different types of teacher assessments, as well as self- and peer assessment and related tests). The teachers belonging to the control groups received the same training after the project was completed.

The intervention for the pupils addressed how to work in groups and consisted of a two-hour lecture/workshop led by the researchers. Based on a short film clip, cooperation, helping behaviour, participation, contribution, accountability and conflicts were discussed. After a short break, the pupils tried out matrices for a group contract, oral assessment and written self- and peer assessment, which alternated with the discussion of each matrix. All groups included in the study—whether they received an intervention or belonged to the control group—used the same set-up for accomplishing the group work, as well as the same group task. All groups worked with the task the teachers jointly produced during the intervention, so the control group received and used a predetermined design and task for the cooperative assignment.

3.4 The Questionnaire

The questionnaire constructed for this study was divided into the following four areas: (a) own effort during group work, (b) working with others, (c) feelings of being graded with others and (d) the importance of the group work. The wording of the questions was slightly altered for comparing the before and after items, but the content remained the same (e.g. 'When thinking about being graded, as a group I feel frustrated' and 'Being graded as a group made me feel frustrated'). Although there was a theoretical idea behind the construction, a factor analysis was conducted to identify empirical factors to be used in further analyses. Four items were

removed from this analysis: three, because the wording before and after differed too greatly, making them separate questions focussing on different things before and after; and one item because its content was so different from all of the other items. A principal axis factor analysis conducted on the remaining 30 items resulted in five factors, explaining 55.4% of the variation. The five factors represented the simplest and most interpretable content of the factors. In Table 2, the factor solution with factor loadings and measures of internal consistency (Cronbach's alpha) is presented. The internal consistency for all factors was high (.78–.92). The analysis also resulted in factors corresponding to the theoretical framework, indicating good content validity.

Table 2. Principal Axis Factor Analysis, Factors, Factor Loadings, and Internal Consistency.

F1. Collective efficacy ($\alpha = .922$)				
The group is good at writing	.868			
Together we did a good job	.852			
The group is good at searching for information	.808			
Together we studied enough for a good assessment	.722			
The group is good at presenting our results	.705			
Together we planned and used out time well enough for a good assessment	.630			
F2. Negative interdependence ($\alpha = .784$)				
I changed things in the group report without clearing it with the others		.730		
I felt desperate about being assessed with others in the group		.702		
I did not join the others in the group when they worked on the task		.686		
I did things my own way even though it was clear no one else agreed		.655		
I felt frustrated about being assessed with others in the group		.628		
I did a lot of the group work alone		.487		
I felt nervous about being assessed with others in the group		.458		
F3. Positive interdependence ($\alpha = .822$)				
I felt relieved about being assessed with others in the group			.777	
I felt joy about being assessed with others in the group			.729	
I felt hopeful being assessed with others in the group			.683	
I feel dependent on others for a good assessment			.662	
I felt [negative – positive] being assessed with others in the group			.457	
The assessment was dependent on the others in the group			.379	
F4. Self-efficacy ($\alpha = .835$)				
I'm good at writing			−.823	
I'm good at presenting results			−.812	
I did a good job			−.595	
I planned my own time and used my time well enough for a good assessment			−.569	
I'm good at searching for information			−.588	
I could lead the group work			−.507	−.341
I could influence others			−.385	−.337
Even if working alone I could get a good assessment			−.387	−.364
I could influence the group work			−.362	
F5. Importance of a good assessment and grade ($\alpha = .809$)				
It is important to me to get an assessment I am satisfied with	.433			−.626
It is important to me to get a good grade			−.312	−.481

Note. Loadings < 0.30 are not presented for clarity.

Collective efficacy. The items of the first factor all concerned the beliefs of the group and what the group collectively was capable of doing when working with tasks: that is, collective efficacy beliefs. The internal consistency of the factor was very high ($\alpha = .922$).

Negative interdependence. The content of this factor dealt with negative issues concerning working in a group (e.g. feeling frustrated by having to be assessed as a group and doing things on one's own with no regard to group decisions). The internal consistency of this factor was adequate (α = .784).

Positive interdependence. The third factor involved feelings of positive interdependence resulting from working together as a group. Being assessed as a group was looked upon as something positive. The internal consistency of the factor was high (α = .822).

Self-efficacy. In opposition to the first factor, this factor focused on individual beliefs about what one as an individual was capable of when working on the tasks: that is, self-efficacy beliefs. The internal consistency of the factor was high (α = .835).

The fifth factor will not be used in the coming analyses, as it did not help in testing the hypothesis presented above. The factor concerned the importance for the individual of getting a good assessment and grade.

3.5 Data Collection

The empirical material was collected through structured questionnaires answered before and after participating in the study. The 'before' questionnaire was administered as the absolutely first thing that happened for pupils participating in the study. The pupils in the intervention group received the intervention and, in the 3–6 weeks that followed, all pupils (intervention and control groups) worked with a study-specific task in work groups formed for this study. The 'after' questionnaire was distributed as the last activity of the study. At both times the questionnaires were distributed by one of the researchers in the classroom at ordinary lecture time (40–60 minutes). During the whole time the pupils answered the questionnaires, both the teacher and the researcher stayed in the classroom to be able to clarify the interpretation and meaning of some of the words in the questionnaires. The questionnaires were completed in 20–30 minutes and all pupils were finished before the lecture ended. The researchers collected all questionnaires in the classroom. As the pupils finished the questionnaires, they turned to an ordinary task assigned by the teachers while waiting for the rest of the group to complete the questionnaires.

All pupils in the classes answered the questionnaires, so as not to risk singling out pupils who had declined to participate in the study. The non-participating pupils were requested to put an X in the upper corner on the first page of the questionnaire. After all of the questionnaires were collected, the researcher omitted the non-participant questionnaires and they were not used further.

3.6 Analyses

Data analyses were performed using IBM SPSS version 24. As we were not allowed to follow individuals before and after the intervention, the next best thing was to follow groups and use the group means for the factors as the unit of analysis: that is, the mean of individual perceptions of the variables of the study within each work group. A repeated measures ANOVA was used for the 22 groups for which this dependence was established. As this procedure reduced the data considerably, we also used the individual scores with an ordinary 2×2 ANOVA, comparing before and after scores; for this analysis, each individual was treated as a representative for her or his condition (i.e. control or intervention). In the analysis, gender, year and proportion of boys and girls in the groups were used as covariates to control for their effect.

3.7 Ethics

The ethical principles provided by the British Psychological Society guidelines (BPS, 2014), which emphasise concern for participants' interests, have been applied throughout the study.

All participating teachers and pupils in the study gave their written informed consent to be involved in the study. All pupils partook in answering the questionnaires, but the researcher omitted the five non-participant questionnaires (as described above), which were not used further. The study was approved by the regional Research and Ethics Committee at Linköping University, Sweden (Dnr 2013/401-31 & Dnr 2014/134-32**)**.

4. Results

Using repeated measures analysis on the group level data, there were significant or close-to-significant interactions for all four factors. In Table 3, the test statistics for the four factors are presented. In the analysis, year and proportion boys and girls in each group were added as covariates.

Table 3. Repeated Measures ANOVA for the Interaction and Time × Intervention for the Four Factors.

		Before	**After**	**Interaction**	
		Mean (SD)	**Mean (SD)**	**F**	**P**
Collective efficacy	*Control*	5.59 (0.58)	5.61 (0.75)	5.170	.035
	Intervention	5.04 (0.47)	5.85 (0.79)		
Self-efficacy	*Control*	5.14 (0.47)	5.11 (0.69)	4.563	.047
	Intervention	4.42 (0.37)	5.17 (0.57)		
Negative interdependence	*Control*	2.36 (0.49)	2.19 (0.43)	2.622	.123
	Intervention	2.57 (0.53)	2.06 (0.63)		
Positive interdependence	*Control*	3.94 (0.94)	3.65 (0.60)	3.183	.091
	Intervention	3.84 (0.48)	4.01 (0.71)		

There was a significant interaction for both collective efficacy and self-efficacy when comparing the control and interaction group before and after the intervention. In both cases, the direction of the changes was positive, supporting Hypotheses 1a and 1b. For the two other factors, the interactions were not significant, but the direction of the changes for the intervention group was in the expected direction, in line with Hypotheses 1c and 1d, with an increase in positive interdependence and a reduction in negative interdependence. In Figure 1, the differences between the groups for the four factors are presented.
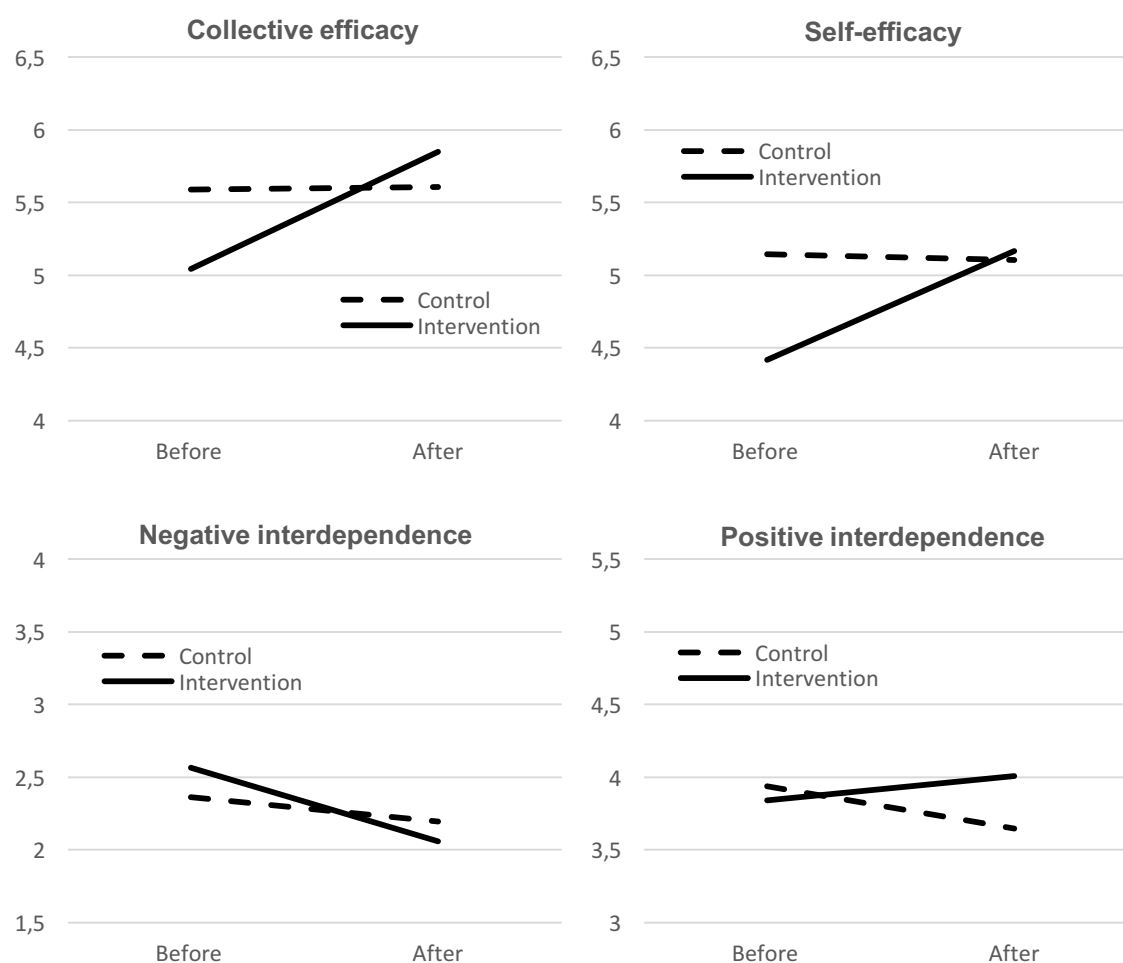
Figure 1. Differences between control and intervention groups before and after the intervention for the four factors.

When comparing control and intervention groups before and after using individual level data, in which each pupil is a representative of her or his condition (i.e. control or intervention and before or after measures), a similar pattern is apparent. The only interaction that was significant is for self-efficacy, and there was a close-to-significant interaction for collective efficacy. The direction of the changes for all four factors was in the expected direction, as in the repeated measures analysis. In Table 4, the results from the 2×2 ANOVA are presented. In the analysis, gender, year and the proportion boys and girls in each group were added as covariates.

Table 4. Results for the Interaction and Time × Intervention for the Four Factors, Showing Mean, SD, F and p-values.

			Before		After	Interaction	
		n	**Mean (SD)**	**n**	**Mean (SD)**	**F**	**p**
Collective efficacy	*Control*	41	5.60 (0.87)	46	5.70 (1.28)	3.863	.051
	Intervention	43	5.00 (1.12)	38	5.77 (1.25)		
Self-efficacy	*Control*	41	5.15 (0.97)	46	5.17 (0.93)	5.561	.020
	Intervention	43	4.39 (1.00)	38	5.14 (1.20)		
Negative interdependence	*Control*	41	2.44 (0.76)	46	2.21 (0.94)	0.309	.579
	Intervention	41	2.57 (1.28)	38	2.14 (1.29)		
Positive interdependence	*Control*	41	3.93 (1.18)	46	3.79 (1.16)	1.281	.259
	Intervention	42	4.10 (1.32)	38	4.391.32)		

5. **Discussion**

Previous research has shown that using educational interventions to enhance or implement pedagogical changes in the classroom can produce a positive outcome, including, for example, students' productivity, experience and goal achievement in group work (Ashman & Gillies, 1997; Black et al., 2003; Gillies & Ashman, 1996) and teachers' attitudes towards using formative assessment (Black et al., 2003). Intervention studies focusing on group work in general and specifically on CL confirm this result (Gillies, 2016; Gillies & Boyle, 2010, 2013; Johnson & Johnson, 1994, 2002; Roseth et al., 2008). By comparing groups who participated in an intervention with control groups, a clear pattern of group work and CL as promoting both academic (Gillies, 2016; Johnson & Johnson, 1994, 2002; Slavin, 1989, 1996) and social skills (Roseth et al., 2008) emerges. Inspired by the research showing that an intervention can enhance group performance (e.g. Ashman & Gillies, 1997; Gillies & Ashman, 1996) and the theoretical framework including SIT (Johnson & Johnson, 2002, 2013), as well as the theoretical constructs of self-efficacy and collective-efficacy (Bandura, 1982, 2000, 2002) and working in or as a group (Hammar Chiriac & Granström, 2012; Underwood 2003), this study investigated whether an intervention could positively influence pupils' experience of group work. This study tested the hypothesis that an intervention in the form of a short educational session for teachers and pupils would lead to pupils' increased collective efficacy, self-efficacy and positive interdependence, as well as less negative interdependence.

The results supported Hypotheses 1a and 1b, while Hypotheses 1c and 1d were close to being significant and the changes between before and after for the intervention group were in the expected direction. The results are in line with previous research (Ashman & Gillies, 1997; Gillies, 2016; Gillies & Ashman, 1996; Gillies & Boyle, 2010, 2013; Johnson & Johnson, 1994, 2002; Roseth, Johnson & Johnson, 2008), suggesting that a short education session can yield a positive outcome for pupils' experience of group work and/or CL and promote working as a group (Hammar Chiriac & Granström, 2012; Hammar Chiriac & Hempel, 2013; Underwood, 2003). The close cooperation between researchers and teachers—and also between the participating teachers in this study—in creating and using the group work assignment to be carried out in their respective classrooms, was probably an important prerequisite for the positive outcome of the intervention (Black et al., 2003). Black and colleagues (2003) have also shown that an intervention for teachers could yield a significant improvement in the pupils' achievement. Another teacher feature that can influence pupils' accomplishment is teachers' efficacy beliefs (Bandura, 1997; Betoret, 2009; Klassen et al., 2011; Tschannen-Moran & Barr, 2004). Both teachers' individual (self-efficacy) and group-level (group efficacy) construct seemed to play a part in influencing pupils' achievements. The question remained, however: what about the pupils' efficacy beliefs?

The result of this study clearly indicated a significant interaction for pupils' collective efficacy and self-efficacy. Both were increased by participating in the intervention, presenting an enhanced belief in the group and the individual and thus promoting working as a group (Hammar Chiriac & Granström, 2012; Hammar Chiriac & Hempel, 2013; Underwood, 2003). The intervention strengthened both the individual student's belief in him- or herself (Ajzen, 1991) and the confidence in the group's potential (Spears, 2010) for having greater opportunities to succeed with the group task. The belief in the group as resource enhanced the preparedness for acting on difficulties and, if necessary, helped retain focus (Bandura, 1982). The experience of being in a select group together with classmates, getting attention and new tools for approaching group work during the intervention, could have strengthened group identification (Terry et al., 1999) and could be one probable explanation for the results. The same could be argued for the teachers' cooperation before, during and after the intervention was carried out (Black et al., 2003). Again, the importance of both individual and collective constructs might be useful for understanding the essence behind successful group work and working *as a* group.

Although the interaction for positive and negative interdependence was not significant, both were close to significance and were pointing in the expected direction. We proposed that the intervention enhanced positive interdependence and individual accountability and the perception of being linked to each other as something positive, while reducing negative interdependence. The result was in alignment with SIT, where interdependence and individual accountability was emphasised as essential for the cooperative potential of a group (Johnson & Johnson, 2002, 2013). Strengthening the individual and the group through the intervention promoted positive

interdependence, as well as individual accountability, and thereby promoted the effort to achieve both individual and common goals working as a group (Hammar Chiriac & Granström, 2012; Hammar Chiriac & Hempel, 2013; Underwood, 2003).

In sum, all group measures were in the expected direction for the intervention group, but not for the control group, which emphasised that the educational intervention increased efficacy and interdependence in group work.

5.1 Limitations
One limitation of this study was not having repeated measures data on an individual level. This limitation was due to a research ethics restriction for this particular study, but using the group level repeated measures data was possible. This did mean, however, a reduction in data from 170 individuals (in total before and after) to 22 groups. Another issue involved the random assignment of the control group, which led to a class from a high-performance school becoming the control. This could help explain the high initial levels of both collective and self-efficacy for the control group (see Figure 1). Relevant to this study, however, was that the control remained at the same level throughout the group work, while the intervention group improved.

6. Conclusion

The short intervention to teachers and pupils did have an effect on the groups. The pupils increased their collective efficacy, meaning they would be more likely to retain focus if difficulties arose and would have greater opportunities to succeed with their tasks. Self-efficacy was also increased, meaning each pupil felt strengthened by the intervention. Even if there were no direct relationship between well-functioning groups and the high self-efficacy of the group members, this could contribute to a group's ability to work. Although less clear, the results also indicated increased positive interdependence and individual accountability and a reduction of negative interdependence in the groups due to the intervention; thus, these appeared to be linked to each other as something positive. As all group measures were pointing in the expected direction, the conclusion is that the intervention provided to teachers and students enhanced the chances for well-functioning group work and working as a group.

Accordingly, the belief of having the capability—both on the individual and group levels (i.e. a high self- and collective efficacy)—to carry out an assignment with positive learning outcomes is probably an important prerequisite for what constitutes 'good' group work. The result of this intervention, consisting of an applied training session for the teachers and pupils in this study, shed new information on what creates high-quality group work that earlier research did not appear to have uncovered. Similarly, the result from the study of enhanced positive interdependence and decreased negative interdependence after participating in the intervention points in the same direction.

Declaration of Conflict Interests
The authors declare no potential conflict of interest with respect to the research, authorship and/or publication of this article.

References

Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50, 179–211. https://doi.org/10.1016/0749-5978(91)90020-T

Ashman, A. F., & Gillies, R. M. (1997). Children's co-operative behavior and interactions in trained and untrained work groups in regular classrooms. *Journal of School Psychology, 35,* 261–279. https://doi.org/10.1016/S0022-4405(97)00007-1

Bandura, A. (1982). Self-efficacy mechanism in human agency. *American Psychology, 37*, 122–147. https://doi.org/10.1037/0003-066X.37.2.122

Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York: Freeman

Bandura, Albert. 2000. Exercise of human agency through collective efficacy. Current Directions in Psychological Science 9 (3): 75–78. https://doi.org/10.1111/1467-8721.00064

Bandura, Albert. 2002. Social cognitive theory in cultural contexts. Applied Psychology: An International Review 51 (2): 269–290. https://doi.org/10.1111/1464-0597.00092

Baines, E., Blatchford, P., & Chowne, A. (2007). Improving the effectiveness of collaborative group work in primary schools: Effects on science attainment. *British Educational Research Journal, 33*, 663–680. doi:10.1080/01411920701582231

Bennet, N., & Dunne, E. (1992). *Managing classroom groups*. Hemel Hempstead: Simon & Schuster Education.

Betoret, F. D. (2009). Self-efficacy, school resources, job stressors and burnout among Spanish primary and secondary school teachers: A structural equation approach. *Educational Psychology, 29,* 45–68. https://doi.org/10.1080/01443410802459234

Black, P., Harrison, C., Lee, C., Marshall, B., & William, D. (2003). *Assessment for learning: Putting it into practice*. Buckingham: Open University Press.

Blatchford, P., Kutnick, P., Baines, E., & Galton, M. (2003). Toward a social pedagogy of classroom group work. *International Journal of Educational Research, 39*, 153–172. https://doi.org/10.1016/S0883-0355(03)00078-8

British Psychological Society (BPS). (2014). *Code of human research ethics*. Retrieved from https://www.bps.org.uk/news-and-policy/bps-code-human-research-ethics-2nd-edition-2014

Deutsch, M. (1949). A theory of cooperation and competition. *Human Relations, 2*, 129–152. https://doi.org/10.1177/001872674900200204

Forslund Frykedal, K. &, Hammar Chiriac, E. (2018). Student Collaboration in Group Work: Inclusion as Participation. *International Journal of Disability, Development and Education, 65,* 183–198. https://doi.org/10.1080/1034912X.2017.1363381

Galton, M., & Williamson, J. (1992). *Group work in the primary classroom*. London: Routledge.

Gillies, R. M. (2007). *Cooperative learning: Integrating theory and practice*. Los Angeles: Sage.

Gillies, R. M. (2016). Cooperative Learning: Review of Research and Practice. *Australian Journal of Teacher Education, 41,* 39 –54. https://doi.org/10.14221/ajte.2016v41n3.3

Gillies, R. M., & Ashman, A. F. (1996). Teaching collaborative skills to primary school children in classroom-based group work. *Learning and Instruction, 6*, 187–200. https://doi.org/10.1016/0959-4752(96)00002-3

Gillies, R. M., & Boyle, M. (2010) Teachers' reflections on cooperative learning: Issues of implementation. *Teaching and Teacher Education, 26*, 933–940. https://doi.org/10.1016/j.tate.2009.10.034

Gillies, R. M., & Boyle, M. (2013) Teachers' reflections on cooperative learning (CL): A two-year follow-up. *Teacher Education, 22*, 63–78. https://doi.org/10.1080/10476210.2010.538045

Hammar Chiriac, E. (2014). Group work as an incentive for learning – Students' experiences of group work. *Frontiers in Psychology, 5*, 558. https://doi.org/10.3389/fpsyg.2014.00558

Hammar Chiriac, E., & Forslund Frykedal, K. (2018, in submission). Assessment in group work – Method and implementation of an intervention study. Manuscript submitted for publication.

Hammar Chiriac, E., & Granström, K. (2012). Teachers' leadership and students' experience of group work. *Teachers and Teaching: Theory and Practice, 3*, 345–363. https://doi.org/10.1080/13540602.2012.629842

Hammar Chiriac, E., & Hempel, A. (eds.) (2013). *Handbok för grupparbete – att skapa fungerande grupparbeten i undervisning* [Handbook for group work – to establish functioning group work in education] (3rd ed.). Lund: Studentlitteratur.

Healy, M., Doran, J., & McCutcheon, M. (2018). Cooperative learning outcomes from cumulative experiences of group work: differences in student perceptions. *Accounting Education, 3,* 286–308. https://doi.org/10.1080/09639284.2018.1476893

Johnson, D. W., & Johnson, R. T. (1994). *Learning together and alone* (4th ed.). Boston: Allyn & Bacon.

Johnson, D. W., & Johnson, R. T. (2002). Learning together and alone: Overview and meta-analysis. *Asia Pacific Journal of Education, 22,* 995–1005. https://doi.org/10.1080/0218879020220110

Johnson, D. W., & Johnson, R. T. (2004). *Assessing students in groups: Promoting group responsibility and individual accountability*. Thousand Oaks, CA: Sage.

Johnson, D. W., & Johnson, F. P. (2013). *Joining together: Group theory and group skills* (11th ed.). Boston: Allyn and Bacon.

Johnson, D., Maruyama, G., Johnson, R., Nelson, D., & Skon, L. (1981). Effects of cooperative, competitive, and individualistic goal structures on achievement: A meta-analysis. *Psychological Bulletin, 89*, 47–62.

Katz-Navon, T. Y., & Erez, M. (2005). When collective- and self-efficacy affect team performance. The role of task interdependence. *Small Group Research, 36,* 437–465. https://doi.org/10.1177/1046496405275233

Khong, J. Z. N., Liem, G. A. D., & Klassen, R. M. (2017). Task performance in small group settings: The role of group members' self-efficacy and collective efficacy and group's characteristics. *Educational Psychology, 9,* 1082–1105. https://doi.org/10.1080/01443410.2017.1342767

Klassen, R. M., Tze, V. M. C., Betts, S. M., & Gordon K. A. (2011). Teacher efficacy research 1998–2009: Signs of progress or unfulfilled promise? *Educational Psychology Review, 23,* 21–43. https://doi.org/10.1007/s10648-010-9141-8

Lumpe, A. T., & Haney, J. J. (1998). Science teachers' beliefs and intentions regarding the use of cooperative learning. *School Science and Mathematics, 3*, 123–135. http://dx.doi.org/10.1111/j.1949-8594.1998.tb17405.x

Opdecam, E., & Everaert, P. (2018). Seven disagreements about cooperative learning. *Accounting Education, 3,* 223–233. https://doi.org/10.1080/09639284.2018.1477056

Parker, L.E. (1994). Working together: Perceived self- and collective-efficacy at the workplace. *Journal of Applied Social Psychology, 24*, 43–59. https://doi.org/10.1111/j.1559-1816.1994.tb00552.x

Roseth, C., Johnson, D., & Johnson, R. (2008). Promoting early adolescents' achievement and peer relationships: The effects of cooperative, competitive, and individualistic goal structures. *Psychological Bulletin, 134*, 223–246. https://doi.org/10.1037/0033-2909.134.2.223

Slavin, R. E. (1989). Cooperative learning and student achievement. In R. Slavin (Ed.), *School and classroom organization* (pp. 129–156). New Jersey: Lawrence Erlbaum.

Slavin, R. E. (1996). Research on cooperative learning and achievement: What we know, what we need to know. *Contemporary Educational Psychology, 21*, 43–69. https://doi.org/10.1006/ceps.1996.0004

Spears, R. (2010). Group rationale, collective sense: Beyond intergroup bias. *British Journal of Social Psychology, 49*, 1–20. https://doi.org/10.1348/014466609X481308

Steiner, I. D. (1972). *Group process and productivity*. New York, NY: Academic Press.

Steiner, I. D. (1976). Task-performing groups. In J. W. Thibaut, J. T. Spence, & R. C. Carson (Eds.), *Contemporary in social psychology* (pp. 393–422). Morristown, NJ: General Learning Press.

Tschannen-Moran, M., & Barr, M. (2004). Fostering student learning: The relationship of collective teacher efficacy and student achievement. *Leadership and Policy in Schools, 3*, 189–209. https://doi.org/10.1080/15700760490503706

Terry, D. J., Hogg, M. A., & White, K. M. (1999). The theory of planned behaviour: Self-identity, social identity and group norms. *British Journal of Social Psychology, 38,* 225–244. https://doi.org/10.1348/014466699164149

Underwood, J. D. M. (2003). Student attitudes towards socially acceptable and unacceptable group working practices. *British Journal of Psychology, 94*, 319–337. https://doi.org/10.1348/000712603767876253

Webb, N. M., & Palincsar, A. S. (1996). Group processes in the classroom. In D. C. Berliner & R. C. Calfee (Eds.), *Handbook of educational psychology* (pp. 841–873). New York, NY: Macmillan.

Path-Goal Theory and the Application in Educational Management and Leadership

Abdulrasheed Olowoselu[1], Mua'azam bin Mohamad[2], Shorouk Mohamed Farag Mohamed Aboudahr[3]

[1] Educational Management Unit, Department of Physical Sciences Education, Modibbo Adama University of Technology, Yola, Nigeria. Email: rasheedolowoselu@yahoo.com
[2] Universiti Utara Malaysia
[3] School of Education and Modern Languages, Universiti Utara Malaysia. Email: shrouq.aboudaher@gmail.com

Abstract

This study focuses on Path-Goal theory and application in educational management and leadership, which is categorized under contingency approach of leadership. The theory proposed that the behaviour of leaders' can be exercised through different approaches, times, and situations by the same leader. The purpose of this paper is to highlight path-goal leadership theory. An important aspect of this paper hinges on the application of path-goal theory in an educational institution using leadership approaches in terms of supportive, directive, achievement-oriented, and participative behaviour on subordinate in achieving task completion. It is concluded that education leaders should put in use the path-goal leadership approaches in their daily dealings with their subordinate in their various educational institution.

Keywords: Achievement Oriented, Directive, Leadership, Path-Goal Theory, Participative

Introduction

Leaders' competences are arguably key factor for establishing a successful educational institution in a competitive society. Thus, while enhancing leaders' ability to understand the internal and external dynamism of working environments, this is critical to the need of improving the competitiveness of the leaders, including their ways of thinking and how they do things. Leadership is discovered to be a very significant part in building an effective and successful educational institution. Due to the past complex challenges, education leaders should be able to act differently according to the societal demands (Sakiru, D'Silva, Othman, DaudSilong & Busayo, 2013). Leadership is posited on how a leader influences, encourages and leads the subordinates to contribute towards the effectiveness and success of the organisation of which they are member (McShane & Glinow, 2010). Leadership is more to a process where it influence motivates others to work for the institutional objectives. Hence, it is crucial for education managers and supervisors to know how to motivate their subordinates in achieving the stated goals (Malik, 2012). Leadership has significant influences on employees' working performance. Voon, Lo, Ngui, and Ayob (2011) revealed that a capable leader will provides direction for an institution and assists subordinate in accomplishing desired objectives. Effective leadership approach stands to control the subordinate behaviour towards their working input and output as well as influence their general

performance in task completion (Nwibere, 2013). In this context, there are various studies on leadership that have been conducted and found leadership to be significantly positive and important in the prediction of employee attitudes, motivation, and performance in an institution (Kelloway, Turner, Barling & Loughlin, 2012).

Kozak and Uca (2008) found that leadership style can improve positive relationships with employees, enhance service performance, and also assist in organizational climate improvement. Moreover, it can also be viewed as vital management tool. Essentially, practicing good leadership enhances job satisfaction, reduces absenteeism at work, and promote individual efficiency. However, path-goal theory proposes that when leaders employ behaviour that eliminates deficiencies and is instrumental to subordinate satisfaction, as well as individual working performance, it is likely to increase the satisfaction of their followers (House, 1996). Leaders who possess good leadership qualities will act as a role model to the employees, promote equality among staff, and plan towards development of the institution (Kamisan & King, 2013).

Conversely, according to Wen (2014), the ability of leaders to learn faster than their institutional standard stands as the only sustainable competitive advantage. Thus, it is leaders' responsibility to enhance the competitiveness of their institutions and their ability to compete in the competitive advance society. Basically, competences is defined as the extent to which leaders are willing to improve their personal leadership skills and knowledge to cover the gap between their current leadership competences and required ones. Education leaders should be able to face challenges accompanying developing process of their institutions (Word, Bacon, Mackie, 2003). In this process, the role of leadership is very important, and it can affect the input and output of their institutions, programmes, and employees. Effective leadership must be able to motivate their subordinates to do their best and exploit all their potentials in contributing to development of the institutions, as well as to achieve job satisfaction among the employees. Different leadership and management strategies should be employed to achieve and ensure job satisfaction based on different situations (Dixon & Hart, 2010). Employee's motivation and achieving job satisfaction are very essential to enhance the institutional competitiveness (Yeo, 2006). The objective of this paper is to conceptually highlight path-goal leadership theory and the application of path-goal leadership theory in an educational institution using leadership behaviour on subordinate in following dimensions such as supportive, directive, achievement-oriented, and participative behaviour.

Path-Goal Theory

Path-goal theory states that leaders have to adjust their leadership style based on the characteristics of followers and type of tasks that need to be completed. Path-goal theory attempts to increase the motivation and happiness of the followers in each situation (Northouse, 2016). A leader will increase the motivation and job satisfaction of followers by adding value to follower needs, while also making the goal clear to all followers. According to path-goal theory, a leader also needs to provide rewards to increase motivation and satisfaction. It is the responsibility of the leader in line with path-goal theory, to guide followers to completion of task using proper behaviours to increase motivation (Northouse 2016). Path-goal theory focuses on leadership behaviour, which is seen as source of influence that can change the attitude, motivation, and behaviour of subordinate (Malik et al., 2014). Path-goal leadership theory requires educational leaders, who are interested in spreading learning culture to adopt any of directive, supportive, participative, and achievement-oriented leadership behaviour. Certainly, leaders can adopt one of these leadership behaviours to achieve the goal of influencing subordinates' knowledge and experiences. Moreover, the adoption of appropriate approach is required to respond quickly to subordinates' expectations, needs, and wants.

According to DeCaro (2005), the adoption of appropriate behaviour depends on the change in situational factors like institutional culture, task uncertainty, and subordinates' characteristics. This suggests that educational leaders can adopt any of path-goal leadership approaches to motivate subordinates to fill learning gap and improve their learning abilities. The assumption of path-goal leadership theory by educational leaders allows influencing subordinates' attitudes through clarifying the path, removing obstacles, and allowing the goal of improvement to be achieved in the educational institution. The adoption of appropriate approaches will aid subordinates to satisfy their needs, and accomplished stated goals. According to DeCaro (2005), path-goal theory

emphases on leaders influencing subordinates' perceptions of their working objectives, personal goals, and paths toward goal attainment.

Figure 1.1: The Basic Idea of Path-Goal Theory

Source: Authors' construct based on Northouse (2007).

The illustrations above according to House and Mitchell (1974) cited in Northouse (2007) posited that leaders motivate their subordinates by removing obstacles from the path to success, as well as coaching and leading them to complete their tasks and achieve their goal.

Application of Path-Goal Theory

The interaction between leaders, subordinates, and institutional culture are essential to improve subordinates' skills and working knowledge. Similarly, the groundwork of path-goal theory was originally by House (1971) who focused on studying effect of leaders' behaviours such as supportive, directive, achievement-oriented, and participative behaviour on subordinates' motivation and performance at work. According to the theory, effectiveness of leadership depends on the behaviour of a leader through satisfaction of subordinates' performance. House (1971) further stressed that effects of leadership behaviour on subordinates' motivation and satisfaction are contingent in which each of the behaviours are likely to be effective or ineffective. Dixon and Hart (2010) posited path-goal theory as such flexible behaviours like clarification, direction, structure, and rewards. Conferring to the theory, adoption of path-goal leadership behaviour conferred leaders to "clarify and provide directions for followers, help remove obstacles, provide encouragement and rewards for goal achievement" (Dixon & Hart, 2010). Considering submissions of path-goal theory, this study argues that leaders act as facilitators, and adopt different behaviours to motivate subordinates towards success by removing obstacles and adopting an effective leadership behaviour. As mentioned above, this study adopted path-goal leadership behaviours for leaders' and their subordinates in educational institution as depicted below.

Figure 1.2: Major Components of Path-Goal Theory
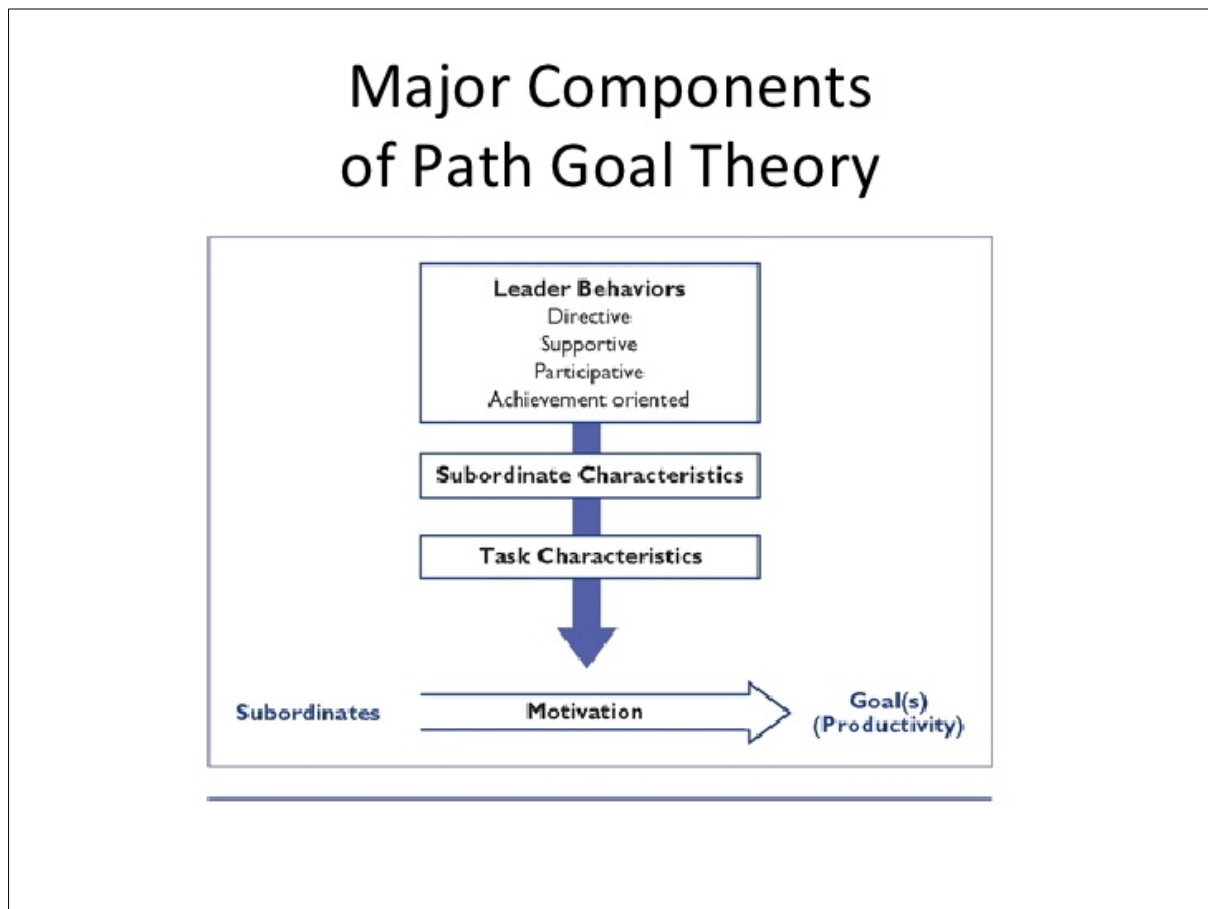
Source: Authors' construct based on Northouse (2007).

Illustrations above demonstrated main items of path-goal theory, which consist of behaviours of the leader, subordinate characteristics, task characteristics, as well as motivation. Path-goal theory proposes that every leader's behaviour has different influence on subordinates' motivation. The effectiveness of leader's motivation towards their subordinates is depends on subordinates as well as task characteristics (Northouse, 2007).

In this context, path-goal theory helps to identify outcome of leadership approach toward group cohesiveness (Aris & Kamarudin 2009). It is also used to define employees' loyalty to their leader based on leadership approaches (Polston-Murdoch, 2013). Besides, path-goal theory also helps to recognize the result of interaction among leadership approach and turnover intention (Dixon & Hart, 2010). According to House (1971), Path-goal leadership theory aims to clarify the practice of how leaders are able to assist their followers along the path to their objectives (as cited in Fukushige & Spicer, 2011). This theory includes four different approaches of leadership behaviour, which were directive, supportive, participative, and achievement-oriented leadership. According to Malik (2012), directive leadership provides psychological structure for employees. While supportive leadership is based on employees' satisfaction. Whereas participative leadership is when leader encourages employee to participate in decision making. While achievement-oriented leadership is the leadership behaviour that sets clear and achievable target or goal for employee to achieve. The four leadership behavioural approaches are fully discussed below.

Participative Leadership Approach

Participative approach is proposed as an approach for progressive movement of leaders within an educational institution. Participative behaviour is leaders' appreciation of their subordinates' suggestions and opinions. Participative approach was also explained by Linski (2014) who posited that employees at all levels are

encouraged to contribute ideas towards identifying and setting institutional goals, problem-solving, and other decisions that may directly affect them. This could be achieve by encouraging information and communication flow between leaders and subordinates at all levels. Additionally, using participation as an approach successfully requires subordinates to understand the purpose, benefits of sharing their working task and its effect on their institutions. The use of this approach by education leaders will encourage subordinates' inputs and feedback regardless of their position, rank, and interpersonal relationship. Ford (2006) claimed that participative approach promote open communication, which encourage power-sharing that enable both the leaders and subordinates to overcome challenges in their institutions. The participative leadership approach consented to sharing leadership and responsibilities among subordinates (Nahavandi, 2014). Meanwhile, Ford (2006) stressed that allowing subordinates to participate in decision making at work might enhance their satisfaction level, which might lead to performance enhancement. An Empirical study by Sarti (2014) has supported this statement and concluded that the adoption of participative approach has a positive effect on subordinates' satisfaction and performance. The application of this theory in educational institution is for education leaders to adopt participative leadership approach and geared it towards encouraging innovation and creativity through collection of new ideas, suggestions, and proffering solutions for institutional effectiveness.

Supportive Leadership Approach

Supportive leadership approach is an emotional support for subordinates. Supportive leaders show concern for employees' wellbeing and individual desires. Supportive leaders' normally postulated friendly behaviour, approachable as well as attend to the comfort and personal needs of the followers (Northhouse, 2016). Therefore, this leadership approach is adequate in situation where formal authority is weak, and subordinate lacks job satisfaction (Lussier & Achua, 2010). Supportive leaders' encourage friendly attitude by responding to subordinates needs. Empirically, research conducted by Rafferty and Griffin (2006) laid credence on supportive leadership approach with high preferences for followers' needs when making decisions. They also added that adopting supportive leadership behaviour has positive effect on subordinate job satisfaction at workplace. Jaramillo and Mulki (2008) conducted a study to examine how supportive leadership influences the effort of employees through mediator, which includes intrinsic motivation and self-efficacy that will directly influences their job performance. 572 survey packages that consist of questionnaire, letter signed by researchers and postage-paid envelope were posted to employees from large multinational institution in North America. The data collected from the survey were tested with regression analysis. The results of the research indicated that supportive leadership has significant influence on effort of employees, whereas their effort has positive relationship with job performance.

Moreso, Wendt, Euwema, and van Emmerik (2009) have examined the relationship between directive and supportive leadership and workgroup cohesiveness which apply in different social culture. The data was retrieved from a database where data were collected from 29,868 managers and 138,270 relevant team members in 80 countries. Hypotheses were tested with multilevel analysis and result revealed supportive leadership to be positive and show influences on team cohesiveness, whereby team cohesiveness will strongly enhance individual performance. Likewise, Lee and Ahmad (2009) investigated the association between moderating effect of organizational culture on leadership behaviour; organizational commitment as well job satisfaction and work performance. The leadership behaviours are directive, participative, and supportive. A total of 400 questionnaires were distributed through email and personally-administered to the part-time students and the working peers of researchers in University. The data were tested using correlation analyses and hierarchical multiple regression. The findings revealed that the leader's supportive behaviour was related to organizational commitment and job satisfaction. However, it has no relationship with employee performance, but supportive culture shows impacts on organizational commitment and job satisfaction.

The application of this theory in educational institution is for education leaders to motivate their subordinates through building strong emotional bond with them, supporting their working attitude, and improving trust relationship with them. This supportive approach can also increase subordinates' self-confidence in completing a given task. The use of supportive approach by education leaders' might reduce conflicts, dissatisfaction, and stress among subordinates.

Directive Leadership Approach

Northouse (2007) posited directive leadership approach as leaders' expectations regarding the subordinates' outcomes on a given task, directions, and instructions. The leader using directive approach will assigns precisely the task for subordinates and how the task should be completed. Besides that, he or she will explain the ways to complete the task and task schedules to subordinates. The leader will also provide performance standards and sets clear rules and regulations as well as provides explicit expectations of performance for subordinates (Northouse, 2016). Directive leadership behaviour is suitable when task assigned is complex or ambiguous, formal authority is strong, and the subordinates are satisfied with their current job (Lussier & Achua, 2010). This approach can be used when subordinates do not understand the working task and the process of achieving the task. Education leaders' can respond to subordinates needs through directive leadership approach by motivating subordinate through explaining the goal and procedures of the task, providing structures, and setting the standards they should follow to achieve the task completion. In supporting this, Belás (2013) found that the directive leadership approach is preferred by many managers and has been adopted regardless of its effect on subordinates' level of satisfaction and their performance. The application of this theory in educational institution is geared towards education leaders to use this approach in encouraging their subordinates working abilities through planning and organizing staff development activities in their various educational institutions.

Achievement-Oriented Leadership Approach

Achievement-oriented leadership approach provides understandable and challenging targets for followers. This leadership approach establishes high quality of target for followers and continue to seek for improvement (Northouse, 2007). Furthermore, the leader demonstrates high level of confidence towards followers (Northouse, 2016). Hence, achievement-oriented leadership is suitable when followers have external locus of control, when autocratic leadership is being accepted, and when their ability is high (Lussier & Achua, 2010). Northouse (2007) explained achievement-oriented approach as leaders' confidence regarding their subordinates' performance and excellent achievement. Empirically, Malik (2013) conducted a research to find out the relationship of path-goal leadership behaviours with employees' job satisfaction in Pakistan. There are four path-goal leadership behaviours, which are directive, supportive, participative, and achievement oriented. 200 questionnaires were distributed to middle, and first line managers and 165 questionnaires were returned. Data analyses were conducted using Pearson correlation analysis, linear regression, and multiple regression analysis in the statistical package for the Social Science (SPSS 16). The finding revealed path-goal leadership behaviours to have influenced employee job satisfaction, and the leader could enhance employee performance by choosing the right behaviour in accordance with the characteristics of followers along with their working environment. Ogbeide (2011) conducted a study to identify the leadership approach by examining the impact of supportive, directive, participative, and achievement-oriented leadership approaches on motivation of employees for work effectiveness that will enhance organizational performance. 273 employees from a public comprehensive university in the Midwestern part of United States were chosen to fill up the questionnaires. Hypotheses were tested with multiple regression analysis, and results showed that employees' motivation for work effectiveness has positively impacted on supportive leadership approach.

The application of this theory is that achievement-oriented leadership as an approach that can be used by education leaders' in the case of challenging subordinate activity in goal achievement. Leaders who want to achieve their challenge goals usually have high expectations and set high standards for subordinates. Leaders will motivate subordinates by sharing responsibility, removing obstacles, and pushing for achievement in the institution. In the case of existence of substantial pressure in the work environment, job satisfaction should be provided to the subordinates by the achievement-oriented leader in order to achieve effective performance. Education leaders' should be more supportive, especially if the institution system is clear and rigid. Based on the theory, clear path to goals of subordinate working task will be achieve through highly structured institution with role and clarity of task. Lastly, the leader should be interested in good working relationship with subordinates, supports their working morale, and decrease the task boredom.

Merits of Path-Goal Theory

The four main leader behaviors addressed in path-goal theory are directive, supportive, participative, and achievement oriented. Directive leadership behaviors include giving instructions about how job duties need to be completed, informing employees when the job needs to be completed and making performance expectations clear to all employees. Supportive leadership behaviors include showing compassion and concern for followers. Supportive leaders attempted to make tasks enjoyable and treat employees as they desire to be treated. Participative leadership behaviors include requesting insight from employees and using the suggestions of employees in the completion of job duties. Achievement-oriented leadership behaviors include behaviors where a leader instills high achievement goals and motivates employees to reach these goals consistently. A leader can exhibit more than one leadership behavior while interacting with followers.

The characteristics of subordinate and characteristics of tasks are just as important in path-goal theory as the behaviors of leaders are. Path-goal theory has focused on need for affiliation, preference for structure, desire for control, and self-perceived task ability. Task characteristics include design of the task, organizational hierarchal structure, and workgroup of subordinate. It is important for leaders to adjust their leadership behaviors based on characteristics of their subordinate and task that needs to be completed. Directive behaviors are preferable when subordinate need structure and are doing complicated task. Supportive behaviors are best when subordinate need to be treated well, and task is simple or difficult to them. Participative behaviors are best when subordinate need clear guidance to complete a task in different ways. Achievement oriented behaviors are preferable when subordinate want to do well, and task is difficult. Path-goal theory is the only leadership approach that employ leaders to recognize that there is need to motivate subordinate appropriately to get a task completed.

Conclusion

Path-goal theory is the common theoretical evolution from contingency theory to research in field of leadership, and this originated from the framework on prediction on motivation theory and main contributors to the recent theory development. The study explained behaviour of leaders' effect on subordinate' job satisfaction, motivation, and performance at work. The theory proposed that behaviour of leaders will be exercised in different circumstances and periods by the same leader. There are many evidence of empirical studies conducted which laid credence to path-goal theory with positive effect between education leaders' and their subordinate at workplace. Application of this theory might be a viable solution to leadership and subordinate challenges in the educational institution, respectively.

References

Aris, A., & Kamarudin, M. F. (2009). The impact of path-goal leadership behaviour on group cohesiveness: A Japanese electronic company and Singapore electronic company in Johor. *Journal of Human Capital Development, 2*(1), 1-12.

Belás, J. (2013). The leadership style and the productiveness of employees in the banking sector in Slovakia. *Journal of Competitiveness, 5*(1) doi:http://dx.doi.org/10.7441/joc.2013.01.03

DeCaro, N. E. (2005). An investigation of the relationship of initiating structure, consideration and gender perception: An examination of the path -goal theory. Retrieved from http://search.proquest.com/docview/305364782?accountid=130846

Dixon, M. L., & Hart, L. K. (2010). The impact of path-goal leadership styles on work group effectiveness and turnover intention. *Journal of Managerial Issues*, *22*(1), 52-69.

Ford, R. (2006). Organizational learning, change and power: Toward a practice-theory framework. *The Learning Organization, 13*(5), 495-524.

Fukushige, A., & Spicer, D. P. (2011). Leadership and followers' work goals: A comparison between Japan and the UK. *The International Journal of Human Resource Management*, *22*(10), 2110-2134.

House, R. J. (1971). A path goal theory of leader effectiveness. *Administrative Science   Quarterly, 16*(3), 321-338.

House, R. J. (1996). Path-goal theory of leadership: Lessons, legacy, and a reformulated   theory. *The Leadership Quarterly*, 7(3), 323-352.

House, R. J., & Mitchell, T. R. (1974). Path-goal theory of leadership. *Journal of Contemporary Business*, 3, 81-98.

Jaramillo, F. & Mulki, J. P. (2008). Sales effort: The intertwined roles of the leader, customers, and the salesperson. *Journal of Personal Selling & Sales Management*, 28(1). 37-51.

Kamisan, A. P., & King, B. E. M. (2013). Transactional and transformational leadership: A comparative study of the difference between Tony Fernandes (Airasia) and Idris Jala (Malaysia Airlines) leadership styles from 2005-2009. *International Journal of Business and Management, 8*(24), 107-116.

Kelloway, E. K., Turner, N., Barling, J., & Loughlin, C. (2012). Transformational leadership and employee psychological well-being: The mediating role of employee trust in leadership. *Work & Stress*, *26*(1), 39-55.

Kozak, M. A., & Uca, S. (2008). Effective factors in the constitution of leadership styles: A study of Turkish hotel managers. Anatolia: An International *Journal of Tourism and Hospitality Research, 19*(1), 117-134.

Lee, H. Y., & Ahmad, K. Z. (2009). The moderating effects of organizational culture on the relationships between leadership behavior and organizational commitment and job satisfaction and performance. *Leadership & Organization Development Journal, 30*(1), 53-86.

Levanoni, E. & Knoop, R. (1985). Does task structure moderate the leaders' behaviour and employees' satisfaction. *Psychological Reports. 57*(2): 611–23.

Linski III, C. M. (2014). Transitioning to participative management. *Organization Development Journal, 32*(3), 17-26.

Lussier, R. N., & Achua, C. F. (2010). *Leadership: Theory, application, and skill development* (4th ed.). USA: South-Western Cengage Learning.

Malik, S. H. (2012). A study of relationship between leader behaviours and subordinates job expectancies: A path goal approach. *Pakistan Journal of Commerce & Social Sciences, 6*(2), 357-371.

Malik, S. H. (2013). Relationship between leader behaviours and employees' job satisfaction: A path-goal approach. *Pakistan Journal of Commerce and Social Sciences, 7*(1), 209-222.

Malik, S. H., Aziz, S., & Hassan, H. (2014). Leadership behaviour and acceptance of leaders by subordinates: Application of path goal theory in telecom sector. *International Journal of Trade, Economics and Finance, 5*(2), 170-175.

McShane, S. L., & Glinow, M. A. V. (2010). *Organizational behavior* (5th ed.). New York: McGraw-Hill/Irwin.

Nahavandi, A. (2014). *The art and science of leadership*, (7th ed). USA: Prentice Hall.

Northouse, P.G. (2016). *Leadership: Theory and practice*, (7th ed). Thousand Oaks, CA: Sage Publishing, Inc.

Northouse, P. G. (2007). *Leadership: Theory and practice* (4th ed.). California: Sage Publications, Inc.

Nwibere, B. M. (2013). The influence of corporate culture on managerial leadership style: The Nigerian experience. *International Journal of Business and Public Administration, 10*(2), 166-187.

Ogbeide, G. A. (2011). Leadership styles for foodservice managers. *Journal of Culinary Science & Technology, 9*(3), 177-192.

Polston-Murdoch, L. (2013). An investigation of path-goal theory, relationship of leadership style, supervisor-related commitment, and gender. *Emerging Leadership Journal, 6*(1), 13-44.

Rafferty, A. E., & Griffin, M. A. (2006). Refining individualized consideration: Distinguishing developmental leadership and supportive leadership. *Journal of Occupational and Organizational Psychology*, 79, 37-61.

Sakiru, O. K., D'Silva, J. L., Othman, J., DaudSilong, A., & Busayo, A.T. (2013). Leadership styles and job satisfaction among employees in small and medium enterprises. *International Journal of Business and Management, 8*(13), 34-41.

Sarti, D. (2014). Leadership styles to engage employees: Evidence from human service organizations in Italy. *Journal of Workplace Learning*, 26(3), 202-216.

Voon, M. L., Lo, M. C., Ngui, K. S. & Ayob, N. B. (2011). The influence of leadership styles on employees' job satisfaction in public sector organizations in Malaysia. *International Journal of Business, Management and Social Sciences, 2*(1), 24-32.

Wen, H. (2014). The nature, characteristics and ten strategies of learning organization. *The International Journal of Educational Management*, 28(3), 289-298.

Wendt, H., Euwema, M. C. & van Emmerik, I. J. H. (2009). Leadership and team cohesiveness across cultures. *The Leadership Quarterly, 20*(3), 358-370.

Word, J. Bacon, A. & Mackie. R. (2003). *Inspiring Leadership: Staying afloat in turbulent times*. Derby: Thomson Learning.

Yeo, R. (2006). Developing Tomorrows' leaders: Why their worldviews of today matter? *Industrial and Commercial Training. 38*(2): 63–69.

The Contribution of Internal Assurance System to Increase Learning Quality

Sabar Budi Raharjo[1], Meni Handayani[2], Lia Yuliana[3], Idris Hm Noor[4]

[1,2,4] Research Centre, Office of Educational Research and Development, MOEC, Indonesia. Emails: raharjo2sbr@gmail.com, meni_handayani@yahoo.com, hmnooridris7@gmail.com
[3] Faculty of Education Sciences Yogyakarta State University. E-mail: lia_yuliana@uny.ac.id

Abstract

The National Standards of Education (NSE) plays an important role in controlling the quality of education because it contains some aspects for the educational system. The purpose of this research is to strengthen the implementation of the education quality assurance system. This study used a combination of a quantitative and qualitative approach. Data was 33.664 for quality report assessment at elementary schools in academic year 2016/2017 combined with the result of questionnaire and Focus Group Discussion (FGD) with teachers, the school principal, and school supervisors in Yogyakarta City and Tarakan City. The results of statistical analysis indicate only process standard, graduate competency standard, financing standard, and assessment standard that have already achieved the level of NSE 4. The lowest value achieved is the educator standards (3.18), which means that the qualifications of educators are still relatively low. Research also found out that the Internal Quality Assurance System (IQAS) gives a benefit to improve the learning quality while FGD shows that almost all standards affect the graduate competency standard.

Keywords: Education, Quality Assurance, Quality Report, Learning, Elementary School

Introduction

Every citizen has the same rights to obtain a quality education as it is stated in article 5 of Law No 20 Year 2003, where the government has an obligation in the implementation of quality education. Therefore, in realizing the quality education, the government issued a government regulation No. 19 year 2005 on National Standards of Education (NSE) that has undergone a change twice in year 2013. By applying curriculum 2013, then the government issued a government regulation of Republic of Indonesia number 32 year 2013 about changes to government Regulation number 19 year 2005 about NSE and in 2015 the government revises became Government regulation of the Republic of Indonesia number 13 year 2015 about NSE. The changes in the article provide improvements to the expected quality education. In line with this, the government also issued MOEC regulation No 28 of 2016 on the basic and secondary education quality assurance system. The quality improvement system aims to ensure the fulfillment of standards in the system of education, which is systemic, holistic, and sustainable. Therefore, quality cultures grow and develop in the unit of education independently.

Education quality assurance system as in the regulation consists of five cycles, namely 1) quality mapping, 2) preparation of the fulfillment plan, 3) implementation of the fulfillment plan, 4) evaluation/audit, implementation of the plan, and 5) determination the quality standards. (Director General of Primary and Secondary Education, MOEC, 2016). By implementing those entire cycles of internal quality assurance system independently and continuously, it is expected to develop a quality culture in the education unit.

In general, education quality assurance frameworks in schools have the following traits: 1) quality assurance is based on general, open and objective performance indicators formulated based on the statements, which serve as a quality assessment tool for education in schools. 2) quality assurance is done through a transparent and interactive process through self-assessment and quality assurance section. 3) quality assurance is conducted with respect to the strengths of various activities in the quality assurance process and management, as well as the traditional values and needs of the school to change. 4) quality assurance is carried out by maintaining a balance between support to the school through partnerships and pressures to schools through monitoring. 5) quality assurance's purpose is to achieve the quality of school education through development and accountability (Meirawan, 2010).

While it is undoubtedly stated that Quality Assurance (QA) is merely a supporting mechanism, or a series of mechanisms, designed to promote high success (Tovey, 1994:97). The achievement of education quality in education unit is one indicator of the achievement of eight national education standards (content standards, process standards, valuation standards, educators and education personnel standards, management standards, facilities and infrastructure standards, and financing standards). Therefore, the education quality assurance system is required in the education unit to control the achievement of national education standards (Ministerial regulation No 28 Year 2016 where each unit of education have to form Internal Quality Assurance System (IQAS).

In the implementation of IQAS in the unit of education, the success factor is certainly not separated from the role of 1) effective headmaster leadership, 2) the involvement of teachers and educational personnel, 3) commitment and consistency of school citizens. In achieving the quality of the school, the role of the headmaster is very dominant to determine the resulting achievement. This is because the headmaster as a manager has the responsibility for the execution of all components under his leadership. The school principal performs the functions of education management together with the school citizen, and the School Committee (Kemal and Hasibuan, 2017). However, most of the school principal have little capacity to develop their school management, particularly conducting academic supervision due to their lack of competence for leadership. Therefore, in developing school management, he/she is supported by the supervisors who have experience in managing school (ACDP, 2013).

Implementation of quality assurance system has become a common thing in education (Doherty, 2008:255, DuMond and Thomas, 2013:128) where at the managerial and the organization level aims to achieve the performance that has been passed. Of course, this performance achievement is efforts to compete with the educational institutions through monitoring and evaluation towards an effective and efficient organization.

Implementation of quality management depends on the synergy of the leaders of educational institutions, quality assurance teams, stakeholders, work units in the application of quality, communication and customer satisfaction (Murniati, et al. 2018:9). Olaru and Paunescu (2004) state that implementing this system follows the stage 1) identifying all processes that have an impact on the quality of "Product", such as teaching, learning, and research, 2) determining the interaction between the unit of the process actors and develop communication systems, 3) determining the amount of resources needed to create an effective and efficient organizational atmosphere, and 4) determining the objectives that are related to quality and set when the objectives will be achieved.

There are some definitions of quality. Quality is used to signify ' excellence 'of a product or service and is used to demonstrate the superiority of a fruitful product or service (Oakland, 1993:5) which means conformance to requirements (Macdonald, 1993:6) and the quality of the fit is a measure of how far a product meets the

requirements or quality specifications that have been set to demonstrate its ability to meet the needs, expectations, and customer satisfaction. (Tjiptono and Diana, 1995:2), perceived service quality is an important concept on the quality management field (Sumaedi and Bakti, 2011:81).

Numerous researchers have investigated the relationship between perceived service quality and customer's satisfaction to perceive service quality, which affects customer satisfaction. Many researchers have examined the relationship between perceived service quality and customer satisfaction and come up with service quality to perceive as influencing customer satisfaction. Quality in education includes the calculation of graduation and total student levels, the absorption rate of alumni in employment and wage rates, the level of placement of students in further education, test scores and standards, efficient use of resources, timely reporting and accountability, education accessibility for everyone, class size and teacher-to-student ratio, evaluation based on teaching, developing students' ability to apply new learning practices, encouragement and facilitation in lifelong learning, opportunity professional development for lecturers, the use of learning for students, the development of active skills and habits as citizens, the development of critical awareness, the creation of togetherness, an environment of mutual respect and mutual learning among students and teachers, and guaranteed freedom for discussion for students and teacher (Worthen Berry, 2002) and education challenges include changes in the educational environment, global competition, customer demands, economic demands, and social development (Kalolo, 2015).

The emergence of data on the quality of education in Indonesia is existing because of some reasons. The learning process that is not in line with expectations is one of the factors that contribute to the low quality of education. A reality faced by the world of education in formal education institutions today is the low managerial quality of learning both at the level of planning, implementation, and how to control it. Therefore, reconstruction of the management of learning programs is absolutely necessary to achieve the expected goals (Manopo, 2014: 187). Basically, the Internal Quality Assurance System (IQAS) refers to the standard setting cycle, standard implementation, standard evaluation, standard control, and standard improvement (Wasis and Andi, 2016: 1). However, for reasons of efficient QAS maintenance, QAS designers may prefer a standard system for all schools (Visscher, 2009).

Salgado et al. (2014: 357) argue that "Quality Management System (QMS) is designed to improve the performance of organizational goals to improve their seeking to overcome their results constantly. From the above opinion, it can be interpreted that the Quality Management System (QMS) is designed to continuously improve the performance of organizations that aim to improve their services, trying to overcome their results continuously. These change efforts are characterized by wave after wave of programs – education and training initiatives for all employees, continuous changes in structure, the development of mission and value statements, or initiatives such as re-engineering and total quality management (Locke (2009:541-542).

Okwiri & Mbeche (2014: 209) state that "ISO 9001: 2008 is as pro-mote process approach, a fundamental principle of quality management, and therefore, the expectation from certification would be to focus on products and processes of producing the products and services ". From the above opinion, it can be interpreted that ISO 9001: 2008 strives to promote process approach, the basic principles of quality management. Therefore, the expectations of certification will refocus far away from the product and for the process of producing products and services.

One characteristic of the 21st century is the increasingly direct and indirect interaction of the citizens of the world supported by the advancement of Information and Communication Technology. Then, the reflective question is: Have we selected and prepared our students to take on the role? Have we got students to think critically in response to various information, so the hoaxes are not affected or become successors to hoax information? The reluctance of thinking Chris raises an anecdote that the speed of movement of the thumb in the present exceeds the speed of the brain to think. It is easy for someone to pass on information (thanks to technology) without checking the truth of the information. The P21 organization (www.p21.org) in the United States is one of the developers of the 21st-century educational framework, and many have made it a reference. Three skills that must be possessed in the 21st century according to p21 are (1) life and career skills, (2) learning

and innovation skills, and (3) information media and technology skills. More specifically for learning and innovation skills, there are 4 competencies that must be possessed (known as 4C), namely: Communication, Collaboration, Critical Thinking, and Creativity. British Council introduces Core Skills (skills), namely skills that must be possessed in the 21st century, including skills: critical thinking and problem solving, creativity and imagination, leadership, digital literacy, collaboration and communication, and citizenship.

The World Economic Forum organization publishes that there have been major changes to the demands of skills in 2020 compared with 2015. The top rankings are (1) Complex Problem Solving; (2) Critical Thinking (ranked 4th in 2015), and (3) Creativity (ranked 10th in 2015). The source gives us an idea of what the community needs in the 21st century. Higher education and education instincts must respond to these needs through the adaptive curriculum and learning processes. The learning process is at the core of all school activities, manifested in the form of student-teacher interactions aimed at students having academic, economic, social, personal, and religious abilities. In the learning process, the main activity of students is learning, and the main activity of the teacher is teaching, so the dimensions of learning and teaching are the main focus in the School Quality Assurance (SQA). Based on the description above, the Office of Educational Research and Education Centre, MOEC reviews the actual issue of the education quality assurance system on its implementation in educational units. The purpose of this study is to develop policy recommendations for strengthening the education quality assurance system. The detailed purpose of this research is to analyze: 1) achievement of report cards/education quality maps on the readiness to meet the National Education Standards. 2) relationship of achievement of Graduates' Competency Standards with achievement of the learning process (standard content, process, assessment of learning), and supporting the learning process (Educator and education personnel, Facilities and infrastructure, Management, and Financing Standards), 3) obstacle and supporting factors in the implementation of quality assurance education. The scope/limitation of the study of the education quality assurance system is eight national standards of education at the elementary level. This is because the elementary school is in the level in which the data entered is bigger and complete, so this study concentrates on the elementary school level.

Method

This research used a quantitative and qualitative approach. Data used was secondary data from the results of the Directorate of Basic and Secondary Education (DBSE) about education quality assurance system. The primary data was collected through questionnaires and Focus Group Discussion (FGD) with school principals, teachers, school supervisors, and regional education offices in Yogyakarta City and Tarakan City. The analysis of the safety of eight national education standards was used to determine the extent of the quality report card which can contribute to the fulfillment of national education standards and to find out how the learning process by the teacher towards the achievement of the learning process as well as the supporting and inhibiting factors for the implementation of the education quality assurance system.

Results and Discussion

1. Achievement of National Standard Education Report/Quality Map for Accreditation Readiness.

a. Achievement of Quality Report Card on each standard

Analysis of the achievements of each national education standard needs to be done to prepare for the achievement of accreditation as an indicator of education quality. The achievements of each of standards were analyzed based on 2017 data from National Standards Agency of Standards Secondary School (NSASS), Ministry of Education and Culture MOEC). Data of the results of the quality report achievement 33,664 elementary schools was obtained from the results of the educational quality assurance system. The achievement of report cards for each NSE will be mapped based on the indicator values, as stated in the categories I – V.

b. Achievement of the QAS in the elementary school

From all the standards, the performance of education, which is related to the quality of education, especially the level of basic education, still does not show good quality yet. Based on data from QAS achievements per standard, a list of QAS achievements towards NSE is prepared at the elementary school level data for 2016-2017, as shown in Table 4.9 below.

Table 1, Achievement of QAS shows NSE at the level of elementary school data for 2016-2017.

Category	Indicator	Average value
I	To NSE 1	0 – 2,04
II	To NSE 2	2,05 – 3,70
III	To NSE 3	3,71 – 5,06
IV	To NSE 4	5,07 – 6,66
V	Meets NSE	6,67 – 7,00

Standard	Value	Category	M1	M2	M3	M4	NSE	Total
Content	5.54	****	51		6,491	26,361	-	33,664
Process	6.40	****	51	457		17,449	14,773	33,664
Graduate competency	5.96	****	101	560	866	27,203	4,934	33,664
Educators	3.18	**	1,236	26,470	5,958	-	-	33,664
Facilities and infrastructure	4.14	***	1,399	2,918	29,347	-	-	33,664
Management	5.62	****		1,270	4,781	27,411	-	33,664
Financing	5.70	****	32	1,085	3,525	28,515	507	33,664
Assessment	5.81	****	247	729	4,855	23,926	3,907	33,664

The data indicates that the standard has not fulfilled the NSE is content standard, educator and education personnel standard, facilities, and infrastructure standard and management standard. Some primary schools have already fulfilled the process standard, graduate competency standard, valuation standard, and financing standard. Nevertheless, most have not fulfilled the standard when viewed from the assessment of the quality report.

It is suspected that the assessment of quality reports is used to see the overall achievement of any standard from some respondents as diagnostic data. QAS instruments with viewing coverage 1) standard, 2) indicators, 3) Sub indicators, and 4) question items. QAS respondents are addressed to school supervisors, school principals, teachers, students, and parents' representatives. Standard measurements are conducted by NSASS for the achievement accreditation of each standard. Accreditation devices are organized by grid loading; 1) standard, 2) components, 3) aspects, 4) indicators, 5) question points, and 6) tennis instructions. Principal respondents, teachers, and more on the standard document-proof.

Therefore, the assessment result of the quality report can predict the lack of achievement on each standard, then the instrument or device needs to be done synchronization so the quality report data can be used as the basic accreditation of education units.

2. Graduate Competency Standard Achievement Relationship with learning process achievement (content, process, learning assessment), and supporting learning process (PTK, facilities and infrastructure, management, and financing)

In 2017, a team of Directorate of Basic and Secondary Education, MOEC has been collecting data about 52,976 school models and nonschool models. The data characteristics obtained from eight national standards of which each of the standard consists of indicators and sub-indicators, and this data is processed in aggregate of each national education standard.

Relationships between 8 NSE is also analyzed by using the assumption that the achievement of competency standards graduates are directly affected only by the access of the standard process, while the access to the process standards directly influenced by the achievement of six other standards. This model with 2 relationships between 8 standards is illustrated in the following image.
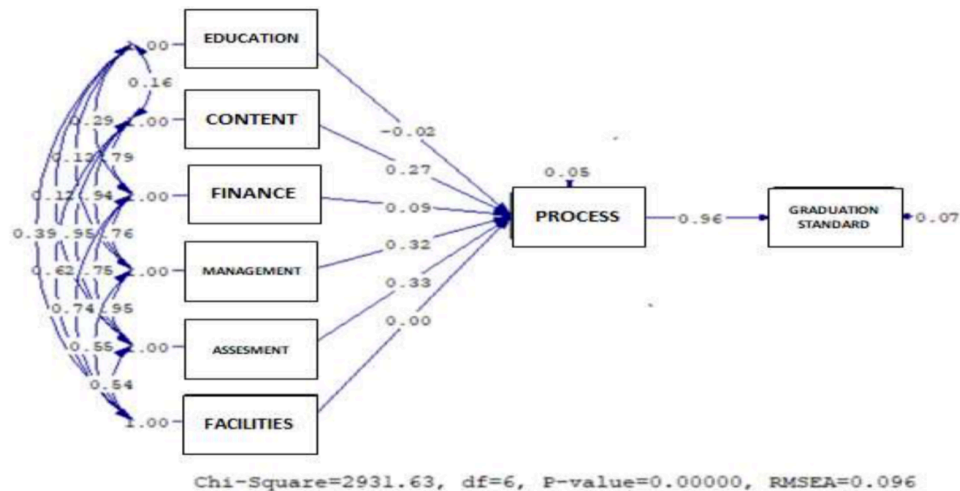
Figure IV-2: Model 2 relationships between eight national education standards
Standardize Solution (Factor Loading) (N = 52,976)

1. From six standards (educators, content, financing, management, appraisal, and facilities and infrastructure), only the facilities and infrastructure standard which does not have a significant effect on the process. The other five standards are statistically significant.
2. The model shows only the achievement of the standard process that has a significant and most are a meaningful influence on the achievement of the Graduation Standards (GS).

The model demonstrates that the standards of educators, content, financing, management, appraisal and facilities and infrastructure, have a small influence on the standard of the process. While the standard of the process has a significant influence on the graduate competency standards. This happens because the most major standard in influencing the graduate competency standard at the primary level is the process standard played by the teacher. This is in accordance with the development of the child that the child which are at the elementary school level still needs a lot of guidance directly portrayed by the teacher. Teachers in implementing the learning process become central figures to provide guidance to elementary school. The success of education at primary school level can be suspected influenced more if it is done by professional teachers. Teacher's participation in program induction, ICT training, and seminar /workshops that are significantly related to the quality of universal elementary education in the state of Lagos (Akpan and Ita, 2015). It is recommended that governments and related institutions need to intensify the provision efforts for the professional development of teachers through in-service education to improve the quality of the elementary school. Governments and related institutions should provide more opportunities for teachers to attend ICT training programs to enhance their instructional teaching activities.

Although six standards (educators, content, financing, management, assessment and facilities, and infrastructure) have a limited contribution to the progress of the learning process, however, those standards may still have the advantage to improve learning process when equipped with adequate means.

This idea is tested with a relationship model illustrated in the following figure, where the moderator variable, which is a multiplication between the educator variables and the supporting variables, is assumed to give additional influence on the achievement of the process standard.

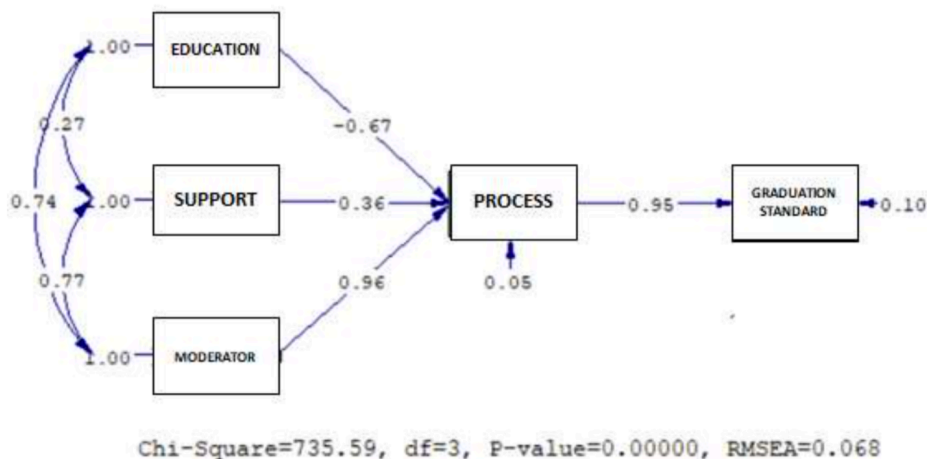Chi-Square=735.59, df=3, P-value=0.00000, RMSEA=0.068

Figure IV-3: Model 3 relationship eight national standards of education with variable moderators. standardize solution (loading factor)

Richardson, Bhuiya, Islam. Misuddin et al. (2018) explain that:

"All over the world, education systems are facing a big challenge to ensure all children have access to quality educators. In the context of Rangpur District, Bangladesh, it is very inspiring and notable that teachers have improved their pedagogical knowledge, classroom management, and assessment skills significantly, through their participation in the quality educators for every child project in Bangladesh. Nevertheless, findings indicate further areas for improvement to ensure quality educators not only for Bangladesh but also for similar regions of the world.

Throughout the world, the education system faces major challenges to ensure all children to have to access the qualified educators. In the context of Rangpur District, Bangladesh, it is very inspiring and noteworthy that teachers have increased significantly in pedagogical knowledge, classroom management, and their assessment skills, through their participation in the project quality educators for every child in Bangladesh. Nevertheless, the findings show further areas for improvement to ensure the quality of educators not only for Bangladesh but also for similar territories in the world.

From the statistical test results to this model obtain the following information.

Chi-Square=735.59, df=3, P-value=0.00000, RMSEA=0.068
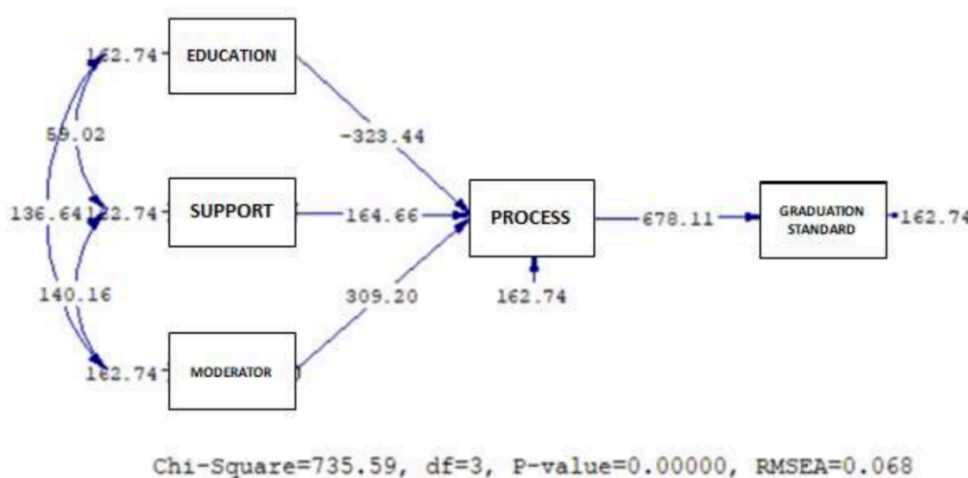
T-VALUES (significant)

    a.   The moderator variables (educator vs. supporters) have a positive and significant impact on achieving process standards. The influence of the achievement of the standards of educators on the learning process (content, process, assessment) proved to be strengthened by the achievement of supporting standards (facilities and infrastructure, management, financing).

    b.   The subsequent achievement of the standard process has a significant and positive influence on the achievement of graduation standards. The higher the achievement of the standard process, the higher the achievement of the graduate competency standard.

Based on this model test, the moderator variables which are the multiplication of the educator variables and the supporting variables (facilities and infrastructure, management, financing) jointly significantly affect the learning process (content, process, judgment). Similarly, the learning process variables significantly affect the competency standards of graduates. That is, the competency standards of the graduates in the elementary school level are strongly influenced by the implementation of the learning process and teacher role in the implementation of learning activities.

The results show that (1) the ability of Indonesian elementary school teachers in preparing instructional media still need to be maximized. Although the quantity of its existence has been in accordance with the provisions of the National Education Standards Agency, however, the quality can only reach an average of 9.78%; (2) the problems faced by elementary school teachers in preparing learning media, namely: (a) unclear technical guidelines for the preparation of the curriculum and syllabus; (b) lesson plan is developed limitedly in administrative needs; (c) learning materials did not analyze optimally; (d) instructional media did not designed properly; (e) the determination of evaluation tool and follow-up of learning was still very limited; (3) in designing learning devices, teachers need to understand some aspects, such as (a) the design of lesson plans, (b) the development of learning models and methods, (c) the development of media and teaching aids, (d) The development of learning implementation scenarios, and (e) the development of learning evaluation devices (La Ode, Turi, Ahiri, La Dunifa, Ardiansyah, 2017).

3. Implementation of an education quality assurance system

a. Teacher Analysis

    Changes occurring in the learning process after the Internal Quality Assurance System (IQAS)

    Tarakan City

    The discussion in this city came up with the conclusion that there is a change in the implementation of the learning process after IQAS. The change is in the form of the students who begin to understand the learning material. This easiness is gotten because the students are used to obtain the information through the internet. The teacher's perception shows that the school is better, better prepared, and more steady in handling problems in schools, so students 'learning outcomes improved although it still needs some improvement. The IQAS's motivates the teachers and students are able to interact better. Therefore, the school IQAS shows a change, especially in the implementation of the learning process performed by the teacher. This will affect the achievement of more effective learning outcomes.

    Cities in Yogyakarta

    There is a significant change in the elementary school of Timuran in the student-oriented learning process as the subject of the students ' character enhancement learning. In addition, at elementary school of Bayangkara with IQAS learning process becomes more directional in accordance with Learning Plan designed with the team of class teachers Subject Teacher Working Group (STWG) following school principal's instruction. Besides, it also happens at elementary school of Tegalmulyo which is a change in the learners, and they are increasingly passionate with activities to add to the children' quality in the field of morality and educational habits. This is influenced by the school program after IQAS. Then an elementary school of Muhammadiyah

Nitikan makes changes by making the learning process more conditioned and better organized, learning media are also better prepared so the teachers are ready in the process of teaching learning and will affect on achieving a more maximal outcome in students compared before. One very beneficial way of giving a fresh perspective on teaching is to undertake a 'teacher placement,' and it is vital that performance management is seen as an opportunity to analyze their progress, to identify training needs and to have them met (Donnelly, 2002:80-81).

b. Principal

The role of the school principal in filling instruments of Education Quality Assurance System (QAS). Direct involvement of the principal in the filling of QAS instruments is not the same between schools. Most of the fulfillment is done by the assigned team. The team consists of teachers and employees of the administration staff, which primarily handle the fulfilment of the eight NSE. The benefits of mapping the quality of Education Quality Assurance System (QAS) on the improvement of Compliance eight standards, according to the principal.

- Content Standard
  Measurement results can be used as a guide for teachers to improve the material that will be presented to students. From the results of measurements, the description of what has been and is not fulfilled can be used as an evaluation material to make repairs through the arrangement in the next year. It also makes it easier to know which items should be prioritized, which can later be included in the preparation of the School Budget Activities Plan (SBAP).
- Process Standard
  The measuring results of process standard improve teacher's understanding in carrying out the learning process, which also influences the improvement of the preparation of learning media. Therefore, it can be used as an evaluation material for the teaching-learning process. Then, it can be used as a reference for improvement by the teacher because the QAS instrument is closely related to the input and outcome in the process standard.
- Graduate Competence Standard
  The QAS measurement results are used as a guide for schools in determining graduation standards. The results of these measurements also encourage teachers to have a better understanding about students' needs and pay attention to things that are able to develop students' potential. Besides, this measurement can also be used as material to analyze shortcomings to develop a strategy to achieve standard graduation.
- Educators and Teacher Standards
  The performance and qualifications of educators and teacher can be seen from the results of QAS measurements. Therefore, they can be used as a reference to improve the quality of human resources through the fulfillment and improvement of their performance and qualifications.
- Facilities and Infrastructure Standard
  From the measurement results of QAS show facilities and infrastructure standard that must be equipped to meet the minimum service standard. It can determine the priority of facilities and infrastructure that must be completed through its procurement plan, as outlined in the School budget Activities Plan.
- Management Standard
  The results data from QAS measurement can be used as a reference in school development planning in order to make improvements in meeting management standards. With this measurement, the principal understands the flow of school management to be more effective. Therefore, school managerial management can be better.
- Financing Standard
  QAS data can be used as a reference in budget planning through the preparation of School Budget Activities Plan (SBAP) and can be used as a reference in improving the fulfillment of financial standards. The results of the QAS measurement can also be used as a reference in determining the priority scale of financing needs for improving students' achievement.
- Assessment Standard
  It can be used as a guide in developing strategies and assessment standards for students. With the

measurement of QAS, the teacher also understands the assessment steps and tries to implement them according to the standards set.

c. School Supervisor

Quality mapping is done by spreading quality assurance instruments that contain hundreds of questions. The instruments are addressed to school principals, teachers, students, supervisors, and school committees. School's answers in QAS instruments are validated by the supervisor, then send to the center online. The role of supervisors as coachers, supervisors, and validators is very important in the education quality assurance process in schools. A large contribution that the Total Quality Movement made to the organization is the concept of continuous improvement, applied to train new supervisors (Jones and Chen, 2006:36).

Validation of Instruments Educational Quality Assurance System (QAS) is carried out by supervisors before the operator sent it online to the center. In Yogyakarta, a supervisor validated as many schools as they are trained. One supervisor, more or less fosters 21-25 schools. In contrast, in Tarakan, one supervisor conducted validation in a target school of one school for nine supervisors. The method for validating the contents of the Education Quality Assurance System instrument conducted by the supervisor.

The stages carried out by the supervisor in validating the instrument contents are: 1) Checking the instrument that has been filled in by the respondent; 2) Ensuring all respondents fill in the instrument; 3) Accounting the respondents whether it is in accordance with the provisions; 4) Having each instrument been filled in all; 5) What date did the data entry take place.

d. Obstacle in QAS

An obstacle faced by Public Elementary School 2 Tarakan in the implementation of the Internal Quality Assurance System in elementary schools includes inadequate conditions and the affordability of internet access available at school, and in the classroom condition that is too hot. Furthermore, the obstacle in Elementary School of 49 Tarakan are some educators who did not have the awareness to advance schools and lack of facilities and infrastructure in schools, for example, lack of classrooms, no halls, no space for studying Islam and Catholicism. The obstacle in the implementation of IQAS in Public Elementary School 12 Tarakan is the lack of awareness from the school in order to fulfill the standards of facilities and infrastructure and their follow- up. The obstacle in Public Elementary School 24 Tarakan is the lack of willingness of the school to try to improve and meet the standards of facilities and infrastructure.

It also happens in DIY, the obstacle in IQAS in Timuran Elementary Schools included facilities and infrastructure of schools. Besides, in Bhayangkara Elementary School, the instruments are too complicated, sometimes it is not in accordance with statements in the field. The next obstacle in the implementation of IQAS in Tegalmulyo Elementary School is the lack of complete and inadequate facilities for teaching and learning activities. The last obstacle comes from IQAS in Muhammadiyah Nitikan Elementary School, where the existence of activities outside of teaching and learning, so the administration of the administration is often late.

The principal expects some guidance to the school to implement IQAS properly. Coaching can be held by the Education Quality Assurance Board (EQAB) and supervisors through workshops followed by ongoing assistance. In order to support the implementation of IQAS in schools, almost all principals who participated in the FGD say need to support adequate facilities and infrastructure in their schools, such as computer equipment, printers, and internet networks. The constraints in conducting validation are 1) many assisted schools to have an impact on the number of instruments that must be validated, 2) number of instruments/questions in each respondent, and 3) instruments for students are difficult to understand. Next, the constraints in QAS instruments are 1) teachers and principals do not understand each cycle in Quality Assurance System (QAS) well because IQAS schools have not been implemented for a long time, 2) the respondent (students and the school committee) do not understand the terminology of instrument items, 3) there are some inappropriate statements, 4) their item of questionnaire for school principals and staff are relatively similar that make the data input confusing.

To improve the implementation of IQAS in schools, it is necessary to develop and strengthen the competencies of human resources in schools. The school needs assistance from to be Quality Assurance Agencies (QAA) to monitor the IQAS. In addition, the Subject Teacher Working Group (STWG) should give intensive and special training to teachers to strengthen school team.

All in all, the position is that whatever the variation between one company and another, as well as between one professional institution and another-systems of (or approaches to) QA must be grounded in an understanding of overall intent (Tovey, 1994: 168).

Conclusions and Recommendation

Conclusion

Based on the data and information obtained, it can be concluded as follows.
1. Based on data obtained from 33,664 elementary schools in 2016 and 2017 for the quality report card assessment shows that all criteria still do not meet the NSE category with an average value of 6.67 - 7.00. From the national standard set, only process standard, graduate competency standard, financing standard, and assessment standard that are already at the level towards NSE 4. Other standards are still at the low level towards NSE 4. The lowest value achieved is educators and education personnel standard (3.18). The low number is more for education personnel who have not met in accordance with standard provisions. While the highest value is achieved by the process standard (6.40). This figure shows that in general, the learning process in the elementary school education unit has run well.
2. From the analysis, results indicate that Graduation Standards (GS) is a very important standard in realizing education quality nationally. To support the achievement of GS, it takes roles and contributions to the achievement of the learning process (content, process, assessment of learning), and supporting the learning process (CAR, Facilities and infrastructure, Management, and Financing). The results of the analysis statistically show that almost all standards affect GS. The higher the achievement of process standards, the higher the achievement of the graduate competency standard. In this result, only the achievement of process standards has a significant and most significant influence on achieving the GS standard, while the standard achievement of the smallest effect on GS is the standard achievement of Facilities and infrastructure. Based on the achievement of quality report cards at the Primary School level, from 7 standards (Content, Process, Educators and education personnel, Facility and infrastructure, Management, Financing, and Learning Assessment) are able to predict the achievement of Graduates Competency Standards by 70.7%. The remaining 29.3% is explained by other factors, except for the achievements of seven standards.
3. Based on the results of the FGD with teachers, principals, and school supervisors is concluded that the benefits of IQAS can be felt in efforts to improve the quality of learning. At the level of implementation, after the existence of IQAS shows a change, especially in the implementation of the learning process carried out by the teacher. Changes in the learning process affect the achievement of more effective learning outcomes.

Having implemented IQAS, the benefits received include togetherness sense in having the school to advance the school and an increase in the discipline of teachers and students at school. There is a change in the quality/output that is better both academically and non-academically; the collaboration between teachers and parents is established in a better manner.

However, there are still obstacles in implementing IQAS, including limited facilities and infrastructure in schools (internet access, study rooms) and also a low sense of school's ownership by teachers and education staff. Another obstacle is the school does not enter the model school category. Therefore, it is not given the socialization and time to receive the instruments and the limited of re-submission of the instruments and make the filling of the QAS instruments is inaccurate.

Recommendation

1. Based on the results of the quality report cards produced, it shows that the achievement of the National Education Standards is almost all criteria do not meet the standard. The strategic steps are needed towards the achievement of standards that still have low scores. Therefore, both the central and the provincial as well as district government prioritize assistance to achieve the low standard at the level of elementary school education.

2. Graduates competency standard is influenced by the achievement of 7 standards (Content, process, educator and education personnel, facilities and infrastructure, management, financing, and learning assessment). Therefore, in the implementation of education units, especially in elementary schools, the role of seven national education standards needs to be prioritized, especially the achievement of standards of educators and education personnel.

3. The result of the analysis shows that the educator standard contributes to the success of the learning process significantly. It means that educators or teachers have a significant effect on students' learning success. Therefore, increasing teacher competency through training is needed to achieve the success of teachers' teaching.

4. The instrument of school principals and the supervisors is too long that make them boring to fill a questionnaire that makes the school principal and supervisors fill it inaccurately. Therefore, it is recommended that the instrument should be simple.

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Author contributions

Sabar B.R, Meni, H. Lia, Y, HM Noor, Idris design research, performed research, and data analyzed. Sabar B.R gives more contribution to the paper than other authors. All authors wrote the paper, proofread it, and approved the final manuscript.

References

Analytical and Capacity Development Partnership/ACDP (2013). A Basic Study of Principal School Competence, Jakarta.

Akpan, C. P. Ita, A.A. (2015). Global Journal of Arts, Humanities, and Social Sciences Vol. 3(9): 65-76. European Centre for Research Training and Development UK.

Doherty, G. D. (2008). On Quality in Education. Journal of Quality Assurance in Education, 16 (3): 255-265.

Donnelly, J. (2002). Career Development for Teachers Kogan Page Limited 120 Pentonville Road London N1 9JN UK

Dumond, E. J., & Thomas, W. J. (2013). Managing university business educational quality: ISO or AACSB? Journal of Quality Assurance in Education, 21(2), 127–144.

Jones, E.J., and Chen, C.W (2006) New Supervisor Training. Linacre House, Jordan Hill, Oxford OX 2 8DP. Great Britain

Kemal, I., Hasibuan, R. A. (2017). Journal of Educational Management Accountability 5(1): 71–81. https://journal.uny.ac.id/index.php/jamp/article/view/11550/9301

Kalolo, J. F. (2015). The Quest for Quality Science Education Experiences in Tanzanian Secondary Schools: Journal of Studies in Education. 5 (2), 22-39, DOI: http:// dx. doi. org/10.5296/jse.v5 i2.7146.

Locke, E.A. (2009). Handbook of Principles of Organizational Behavior (Second Edition). Indispensable Knowledge For Evidence-Based Management John Wiley & Sons Ltd, The Atrium, Southern Gate, Chichester, West Sussex, PO19 8SQ, United Kingdom

Ministry of Education and Culture, Directorate General, Primary, and Secondary Education (2016). A General Guidance Quality Assurance System of Basic and General Secondary Education, Jakarta.

Meirawan, D. (2010). Education Quality of Education Unit in the Effort of Quality Control of National Education in the Era of Autonomy of Education. Educationist, Vol. 4(2): 126-137. http://103.23.244.11/Direktori/Jurnal/Educationist.

Macdonald, J. (2005). Understanding Total Quality Management in A Week, London: St Edmundsbury Press.

Ministry of Education and Culture 2016. Ministrial Regulation of Education No 28 of 2016 about Quality Assurance System of Basic and Secondary Education

Murniati, M., Usman, N., Husen, M., Irani, U. (2018). The implementation of System of Quality Standard: ISO 9001 2008 in Vocational School. An Accountability of Education Management, 6 (1), 1.https://doi.org/10.21831/amp.v6i1.1 6714

Oakland, J.S. (1995). Total Quality Management: The Route to Improving Performance. London: Butterworth-Heine-mann Ltd.

Okwiri, A.O. Mbece, M.I. (2014). SO 9001 Certification Status and Organizational Quality Maturity. International Journal of Business and Social Science, 5: 201-211.

Olaru, M., Paunescu, C. (2004). Foundational Elements of the AES Quality Management System Documentation. 3rd International Conference on Quality Management in Higher Education. Romania.

Richardson, E. Bhuiya, M.U, Islam, S. Uddin, S. (2018). Quality Educators for Every Child: A Pilot Professional Development Intervention in Bangladesh. International Journal of Education, Learning, and Development, European Centre for Research Training and Development UK Vol. 6 (10):85-103.

Salgado, E. G., da Silva, C. E. S., Mello, H. P., da Silva, E. R. S. (2014). Difficulties Encountered Projects in Incubated Technology-Based Companies. International Journal for Quality Research. 8 (3): 357-370.

Sumaedi, S., & Bakti, I. G. M. Y. (2011). The students" perceived quality comparison of ISO 9001 and non-ISO 9001 certified school: An Empirical Evaluation. International Journal of Engineering & Technologi IJET-IJENS, 11: 80-84.

Tovey, P. (1994). Quality Assurance in Continuing Professional Education (3rd edition). Routledge: London.

Turi, La Ode, Ahiri1, J, La Dunifa, Ardiansyah, LM. M (2017). Identifying the Problems of Indonesian Primary School Teachers in Developing Learning Devices. International Journal of Education, Learning, and Development Vol.5 (8): 55-64. European Centre for Research Training and Development UK.

Visscher, A.J. (ed) (2009). Improving Quality Assurance in European Vocational Education and Training. Factors Influencing the Use of Quality Assurance Findings. c Springer Science+Business Media B.V. Netherlands

Wasis, W.G, Andi, A.R (2016). The improvement of Quality Evaluation of Academic Evaluation, Malang Muhammadiyah University through Quality Information System. Kinetic Vol. 1 (1): 1-8.

Worthen, H. Berry, J. (2002). Bargaining for "Quality" in Higher Education: A Case Study from the City Colleges of Chicago (electronic version). Labor Studies Journal, 27, 1-23.