

Education Quarterly Reviews

Edwards, Alexander Kyei. (2019), How Authentic are our Examination Results? Investigating Causality in Cheating Behaviours and Moral Reasoning among Ghanaian Senior High School Students. In: *Education Quarterly Reviews*, Vol.2, No.4, 715-731.

ISSN 2621-5799

DOI: 10.31014/aior.1993.02.04.101

The online version of this article can be found at:
<https://www.asianinstituteofresearch.org/>

Published by:
The Asian Institute of Research

The *Education Quarterly Reviews* is an Open Access publication. It may be read, copied, and distributed free of charge according to the conditions of the Creative Commons Attribution 4.0 International license.

The Asian Institute of Research *Education Quarterly Reviews* is a peer-reviewed International Journal. The journal covers scholarly articles in the fields of education, linguistics, literature, educational theory, research, and methodologies, curriculum, elementary and secondary education, higher education, foreign language education, teaching and learning, teacher education, education of special groups, and other fields of study related to education. As the journal is Open Access, it ensures high visibility and the increase of citations for all research articles published. The *Education Quarterly Reviews* aims to facilitate scholarly work on recent theoretical and practical aspects of Education.



ASIAN INSTITUTE OF RESEARCH
Connecting Scholars Worldwide



How Authentic are our Examination Results? Investigating Causality in Cheating Behaviours and Moral Reasoning among Ghanaian Senior High School Students

Alexander Kyei Edwards¹

¹Institute for Educational Research and Innovations Studies, University of Education, Winneba – GHANA

Correspondence: Dr. Alexander K. Edwards E-mail: aedwards@uew.edu.gh / revedwards@gmail.com

Abstract

This was a causal comparative study to investigate the causality of *'ex post-facto'* variables: moral reasoning (MR) and cheating behaviour (CB) and their associational effect on the authenticity of examination results among Senior High School (SHS) students (N=2,520). Two different data sets were derived from (i) a survey questionnaire with one MR scenario, and (ii) archival WASSCE results of four schools were used to answer four research questions and three null hypotheses raised. Multiple statistical tests of differences including cross tabulations, Chi square, independent sample t-test, and ANOVA were used for analyses focusing on gender and school categories. Differences in MR showed statistical significances among gender [$t(2510)=4.83, p=0.00$] and school categories [$F(3, 2510)=21.88, p=0.00$]. Both positive and negative correlations were rather very low, (ranging between $R=0.02$ and -0.02). Two of the null hypotheses were rejected at alpha ($p=0.05$). Four recommendations were put forward for the Ghana's education system and WAEC the examination authority. Also, practical and policy implications are discussed. Thus, CB was found to have a cause-effect on the authenticity of examination results. But MR levels of SHS students are not solely responsible for CB; rather the schools' culture of offering 'helping hands' creates opportunities for students to cheat at examinations.

Keywords: Authentic Results, Cheating Behaviour, Ghana, Moral Reasoning, SHS Students

1.0 Introduction

1.1 Background to the Study

Examination malpractices or cheating behaviours (CB) have been the concern of many well-meaning educators. In Ghana the seriousness of CB is reflected in the media reports on its impact on teaching and learning outcomes. The West African Examination Council (WAEC), which is the authority body responsible for examinations, has come under fire to save the face of examination in the country (Ghanaweb.com, 2017; 2018). The argument is that cheating at any level defiles the very core of education and processes of knowledge

acquisition in any democratic society. The philosophical underpin is on the democratic essence of education as propounded by John Dewey, an American philosopher, who said “*Education is not preparation for life; education is life itself.*” (Mooney, 2000). We cannot educate people starting on a wrong note as in cheating for results.

Examination malpractice (cheating or CB) in this context is defined as any act or behaviour or assistance that compromises the testing results meant for assessing learning. Examination malpractice is a huge stakeholder affair not just those affected directly. It affects the trustworthiness of teaching and learning results in the academic pursuit. It also affects authenticity of examination results in learning. Authenticity of learning results is also contextualized as the *acceptability*, *believability* and *integrity* level assigned to academic results coming from an assessment tool used by teachers or examination authorities. Every year WAEC releases West African Senior School Certificate Examination (WASSCE) results which are used for admissions to tertiary institutions and other relevant assessments for employment and competitions.

At the school level, teachers administer examinations to assess learning in an effort to correct anomalies, errors and prevent assumptions and exaggerations in learning achievements. Examinations are useful in assessing both the work of teaching by teachers and the learning by students. A Headteachers’ Handbook has been produced in Ghana by the Ministry of Education to spell out a methodology for *school performance appraisal meetings* (SPAM) at various levels to evaluate schools and teachers’ efforts (GES/TED, 2014). The handbook deals with leadership for learning, improving the quality of learning, teaching and learning resources, and reasons for proper assessment of learning. Teacher leadership in this moral war against examination malpractices is therefore very critical (Edwards, 2019) and it is acknowledged by the Ministry of Education, (GES/TED, 2014).

In the era of digital technology, this canker is even widely spreading, taking different forms, and becoming toxic in the body of scholarship, especially in the distance and e-learning environment where students are to be self-regulated in learning (Gao, 2012). Questions are leaked before examination takes place. Students copy possible answers and send them to examination halls through mobile phones. Some help other students to solve questions using technology. The question lingers as to how online examinations for example are monitored or proctored and what is the guarantee of real knowledge or learning assessment. Hence Gao (2012) commented on the issue regarding academic integrity and recommended that institutions must require proctor supervision of online exams because of cheating. Although there is a report “indicating that there are no significant differences in cheating rates for online and F2F courses, more studies found that cheating rates are higher for online courses” (Gao, 2012, p. 3). But according to Gao, whatever the cost to keep the integrity of examination is worth it. Otherwise examination strategies must be reformed. Students must be made to value learning, and cherish ‘knowing’ than examination grades.

1.2 Contextualizing the Issue

The issue of cheating in examination can be situated in Ghana. Examination malpractices or any form of cheating behaviour raises concerns regarding the ethics of authenticity of examination results. Authenticity in life is “based on personal integrity, credibility, and trusting” (Bhindi & Duignan, 1991, p. 119) in any human accomplishment. It is both a moral, spiritual, and academic issue. Cheating affects the academic honesty, integrity, and believability of what is considered outcomes of learning achievements in the Ghanaian context. It affects claims of knowledge and skills because they might have cheated to possess ‘false’ examination results (Ghanaweb.com, 2018, para. ‘*born-again-confessed*’).

Also, cheating affects the reputation of examination agencies such as the West Africa Examination Council (WAEC). WAEC’s claims of relevance to the nation is based on releasing authentic examination results. It becomes more difficult in a social context if WAEC loses the legitimacy of examination results, certification, and competency that it claims. Institutionally, WAEC can lose the public opinion, public sympathy, respect and reputation if examination results are questioned and not believable. When examinations are challenged, surrounded with flaws, leakages of questions, then there is bound to be queries of authenticity. Yet institutions like WAEC tend to rather blame moral decadence in our society, the systemic corrupt in the nation, and its own

employees. Instead of taking the responsibility, WAEC often looks for those children to punish. WAEC should check the causes and effects of such CB on education and education outlooks in the country.

In addition such an issue affects the labour force. The industry or workplaces which are to absorb secondary students as manpower in the future depends on 'real' knowledge acquired. If there are issues they tend to distrust examination results because of malpractices. Most industries have to find other ways to test achievements with despair. According to Ghanaweb.com, in 2017/18 the media labelled the Brong Ahafo area (now divided into two separate regions) as the worse region in Ghana when it comes to examination malpractices. That was a moral and an academic issue.

1.3 Purpose of the Study

The purpose of the study was to investigate causality of examination malpractices (cheating behaviour) by examining moral reasoning (MR) levels among senior high school (SHS) students and comparing with their examination results (WASSCE) in Ghana. The main focus was to compare group categories, gender and schools, to find cause and effects on the authenticity (believability) of examination results from these schools. MR, is an *ex post facto*, dependent variable, was explored as the causation and linked to its association with students' opinions of what happens during examinations in their schools and its critical effects on WASSCE authentication.

1.4 Research Questions and Null Hypotheses

The following research questions and null hypotheses are raised to guide discussions:

RQ1: What differences in MR regarding examination malpractices are caused by gender categories?

H₀₁: There is no statistical significant differences in the levels of MR caused by gender groups based on the statistical notation: (H₀₁: $\mu MR_{MALE} = \mu MR_{FEMALE}$, $p = .05$).

RQ2: What differences in levels of MR are caused by school categories in comparison with their WASSCE examination results?

H₀₂: There is no statistical differences in the levels of MR caused by school categories based on the statistical notation: (H₀₂: $\mu MR_{SHS-A} = \mu MR_{SHS-B} = \mu MR_{SHS-C} = \mu MR_{SHS-D}$, $p = .05$).

RQ3: How does the relationship between MR and school's WASSCE results affect the authenticity of examination results in schools?

H₀₃: There is no statistical significant relationship between the levels of MR by school categories and that of their schools' WASSCE results to affect the authenticity of respective examination results.

RQ4: What are the opinions of SHS students regarding examination malpractices in their schools?

1.5 Significance of the Study

The significance of this study lies primarily in deepening our understanding regarding adolescence intuitive judgment actions and moral sensitivity to examination malpractices. SHS students are adolescents in Ghana. It serves as an exploratory, a plausible diagnostic study to understand developmental issues among the adolescents in Ghana. There is a very limited literature in the field of adulthood development that focuses on moral issues in Ghana. Yet, Ghana's economy, like most of sub Saharan Africa, is suffering with corruption, cheating at all levels of administration, and integrity issues. Evidence based studies on moral reasoning at a crucial developmental stage of SHS students must be significant for the curriculum reforms in Ghana.

Plausibly, the study should inform policy leadership and direct best practices in examination administration. There is an inherent significance materials for character development, contextual theorization of adolescence development, and guiding texts for scholarship in adulthood in Ghana for a lifelong learning and examination

issues. The study provides diagnostic evidences and practical prescriptions for the nurturing of moral reasoning as to why cheating is not beneficial, cheating effects on authenticity of examination results, which should lead to character development among secondary students within the Ghanaian school system.

2.0 Theoretical Framework

2.1 Moralization and Genderization

Most moral development literature show an interdependence of certain constructs that nurture ethical decisions and behaviours especially among teenagers. Beerthuizen, Brugman, and Bassinger (2013) studied adolescence delinquency and the moral reasoning behind their decisions and concluded that “overall level of justification of moral values decisions according to Kohlberg’s stages of moral development” is a sign of moral defiance (pp. 460-461). However, Kohlberg’s moralization stages are based on (a) normative order, (b) utility consequences, (c) justice or fairness, and (d) ideal self, whereby adulthood assumes the construct of meaning-making out of interactions with the environment. In this case, individuals can then construct their own moral judgment in any environment.

Also, moral development theories have rightly pointed to the natural differences in gender. The gender element is constructive, is based on natural tendencies, and can assist on gender considerations (genderization). In the moral development texts, there is a constant classic debate on gender differences based on Gilligan and Kohlberg’s views (Jorgensen, 2006; Noddings, 1986). According to most texts, Kohlberg assigned ethics of justice to masculinity; Gilligan on the other hand assigned ethics of care to femininity (Jorgensen, 2006; Flanagan, & Jackson, 1993). Genderization has dominated theoretical discussions and it is still contentious (Noddings, 1986; Jorgensen, 2006). Moralization based on gender is still presumptuous and flamed by the war of ‘different voices’ (Gilligan, 1986) and natural orientations (Rest, Thoma, & Getz, 1986). Yet, Rest et al. (1986) stated that the contention is rather expected and is intensified by Kohlbergian and Gilliganian followers. Whereby the mere mention of Kohlberg brings *ethics of justice*, perceived with the lenses of masculinity; likewise, the mere mention of Gilligan stirs up female biases towards *ethics of care* and femininity sentiments. Gilligan, Ward, Taylor, and Bardige (1988) made it clear that Gilligan’s stand against “*the tradition of Piaget, Kohlberg, and other cognitive developmentalists*”. Whilst Kohlberg is holding on to justice and critique as in a *moral rationality* (Rest et al., 1986).

In addition, the genderization debate in moralization simply means to give each gender group an equal but different attention. Genderization of moral reasoning is a growing concern and a sense of individuality, femininity, and interconnectedness between individuals (Rest et al. 1986, p. 111). If that proposition is held among scholars then male and female students may certainly be different in orientations, in cheating behaviour, but not necessarily in *receptivity* and *responsiveness* (Noddings, 1986). Moral reasoning studies must therefore consider this debate critical (Nunner-Winiker, 1993; Jorgensen, 2006) to erupt a constructive thinking in gender sensitivity, and public correctness. Even though most recent studies in Ghana found no significant differences in gender when it comes to leadership styles, opinions, perceptions, participations, and aptitudes (Edwards & Entsuah, 2019; Edwards & Aboagye, 2015; Dampson & Edwards, 2017), it is still debatable because of sociocultural and natural differences. But compare that with studies in Portugal where adolescents proved significant gender differences in their citizenship orientation and characterization (Dias & Menezes, 2014).

2.2 Adolescence and Cheating Behaviour

Many Ghanaian SHS students (aged between 15 and 19) may be classified as young or early adults, teenagers, or adolescents but still in the school system. Adolescence is a stage where in terms of maturity, moralization theorists agree that their sense of morality may be self-centered rather than the *preference for others* (Bee & Bjorklund, 2004; Bjorklund & Bee, 2008; Dias & Menezes, 2014; Lovett & Jordon, 2010). These students are fond of falling short of moral sensitivity and objectivity and are vulnerable in the school system where they may decide to go contrary to social norms (Dias & Menezes, 2014). According to Dias and Menezes, most of these adolescence students are developing their ego, personality, identity, and are prone to peer pressure in ‘*breaking*

rules'. Edwards and Entsuah (2019) citing Steinberg and Morris' work in 2001, mentioned that teenagers are ready to satisfy their social groups and their peers within the framework of Bronfenbrenner's ecological model.

Based on Bronfenbrenner's ecological model perhaps this characteristic of adolescence behaviour leads to most studies' claim of a predictive cause and effect for cheating among students based social motivations (Steinberg & Morris, 2001), academic self-efficacy (Curren, 2014), and personal goal orientations deficit among failing students (Goldstein, Davis-Kean, & Eccles, 2005). However, this predictive behaviour is yet to be proven empirically in Ghanaian literature and other sociocultural environment (socialization). This leads to the need for scholarly critiques to ascertain the predictions in a cultural context validity.

Nonetheless, examination cheating behaviour has attracted researchers' interests, because of moral development, moral reasoning, and ethical issues (Rettinger & Jordan, 2005; Danielsen, Simon, & Pavlick, 2006). Researchers are looking at MR as an indicative of cognition of soundness in judgment or not (Rachels & Rachels, 2007); education researchers are examining the capacity for someone to provide a *moral-problem-solution* based evidence or a moral framework for '*cheating or not cheating*' in examination (Edwards & Entsuah, 2019). MR should lead to choices of '*right*' or '*wrong*' based on a cognitive evaluation of consequences, opportunistic orientation, and levels of developmental determinants in any given environ. Moreover, such moral determinants emanate from sociocultural practices, traditional norms, societal interpretations, plus sociocultural philosophies (Rachels & Rachels, 2007).

Students' cheating during examination is critical among young adults. In 2017 a total of 117,306 WASSCE private candidates in Ghana had their examination results investigated for suspicion of malpractices (Ghanaweb.com, 2017). In another instance, the following year 1,873 candidates were allegedly involved in various examination malpractices (Ghanaweb.com, 2018). The social media is always raising concerns on the authenticity of WAEC examination results. CB is a phenomenon engrained in students, according to the media report. Jimoh (2009) raised the same concerns about what is keeping Nigeria students interested in cheating. (Nigeria is part of WAEC's jurisdiction anyway). Onuka and Durowoju (2013) attempted to set the concept of malpractices straight and to redefine the agents, agency, and route of avoidance. Michaels and Miethe (1989) tried to understand this phenomenon by applying the theories of deviance to academic cheating among young adults. The conclusion was that "although studies of academic cheating are often not theoretically driven ... cheating is similar to other forms of deviance behaviour" among adolescents (p. 1), and it is so cancerous than researchers realize or acknowledge. Against this background is the concept of authenticity of academic results (Gao, 2012; Nath & Lovaglia, 2009). Nath and Lovaglia rallied for solutions to help authenticate learning results.

2.3 Academic Dishonesty and School Integrity

The integrity of examination results is dependent on the trustworthiness of what happened at the examination administration stage. Examination results propagate learning outcomes and should not be compromised (MoE/GES, 2014). When academic results are tainted it compromises trust and institutionalized dishonesty. Nath and Lovaglia (2009) mentioned that factors determining cheating at examination vary but yet it is dependent on the *normative atmosphere* where cheating is either acceptable or unacceptable and remains punishable. In the case of multiple choice test, Nath and Lovaglia saw cheating affecting the level of learning and institutional reputations.

Many researchers are lamenting that cheating is now epidemic in University examination, and are asking how can society believe in results from university? Institutions that are not able to check cheating are prone to losing their integrity, credibility, and respect for their students (Muralidhan & Gaur, 2018). The authors lamented that institutionalized cheating behaviors, as it happens in India, has damaging consequences and should be stopped for "the youth generation to achieve their goal by hard work and ethics" (p. 594). It is more critical, prevalent, and of concerns at the secondary school level where the adolescents (graduates) are expected to have achieved a certain level of moral attributes (Chilver-Stainer, Asser & Perrig-Chiello, 2014). Students must achieve certain competencies, literacy, numeracy, and skills for employability. But these students are prone to cheating for 'unwarranted' results because of institutional neglect. These students are to be engaged in productive activities

within the society even if they choose not to continue their education (Chilver-Stainer et al., 2014). Research is yet to examine thoroughly the impact of such malpractices on the job market in the balancing act of knowledge production, productivity, and skills acquisition for the national human capital. Progress may be compromised.

Again, Muralidharan and Gaur (2018) cited Jordan's three categories of cheating at the school level as (i) *Neutralized* (cheating behaviour that does not harm others), (ii) *Semantic differential* (positive or negative cheating), and (iii) *Other attitude* (not classifiable). At the institutional level, according to Muralidharan and Gaur "cheating is an act of lying, deception, fraud, trickery, imposture, or imposition employed to create an unfair advantage often at the expense of others" (p. 549). Without checking examination malpractices at schools, Edwards (2019) advocated that it compromises ethical teachership in the art of influencing learning outcomes. By an institutionalized offering of '*helping hand*' the work of teaching is flawed, cheating for students to score higher in learning defeats the basic philosophy of learning assessment in education. The feat of the moral domain for *leadership for learning* is also flawed and compromised unnecessarily (The Cambridge Network, 2014). 'Helping' students to cheat as a school and failing to deal with colleagues staff in cheating act is tantamount to allowing crime to prevail, and disrupting the faith surrounding institutional performances and authentic results. For any form of cheating, according to Miller, Shoptaugh and Wooldridge (2011), is an *academic-integrity responsibility*, which defiles "ownership of integrity through attitudes, beliefs, and behaviors that support the role of the entire academic community (individual students, cohorts, and faculty) in promoting a climate of integrity rather than simply being the responsibility of professors [teachers]" (p. 170).

3.0 Methods

3.1 Research Design and Sampling

The research design adopted was causal comparative to examine the association of *ex post-facto* events of moral reasoning (MR) (as a dependent variable) and WAEC examination results (independent variable) without any experimentation among categorical groups (Fraenkel & Wallen, 2006; Gay, 1996). According to Gay (1996), "causal-comparative studies attempt to establish cause-effect relationships, correlational studies do not" (p. 322). The focus of this study was on gender and schools categories role in any causation. The sampling technique was that of a multi-stage – i.e., first stage was convenient sampling of schools (i.e., labeled A, B, C and D for anonymity), followed by a purposive sampling of examination candidates to provide the data and characteristics needed (*sampling homogeneity*), and then a census sampling of all examination candidates (N=2,520) in the four SHSs was used to be able to compare their aggregates of their WASSCE results eventually.

For ethical reasons, however, school authorities, parents and students were informed of the academic purpose of the study. This was because of the use of WASSCE data and the sensitivity of the subject matter concerned. In the process of data collection, administrators (who served as gate-keepers) had to explain the purpose; made students to understand that it was purely an academic exercise; and that it carried no punitive action, no reward system, nor are there any '*right or wrong*' answers. It was emphasized that participations were voluntary. Participants had to volunteer their responses. Ethically, this process was very important to the researcher to minimize examination stress over the survey questionnaire which had intense reading and thinking

3.2 Data Collection Instrument and Analyses

The instrument for data collection was a researcher-designed with a guide from similar instrument used for measuring MR through the use of moral scenarios (Loviscky, Trevino & Jacobs, 2007). The instrument was first tested on a similar but smaller sampled SHS students (n=420) in one of the regions (Edwards & Entsuah, 2019). The survey questionnaire had three main sections: (i) demographic (ii) an MR scenario and (iii) school examination sensitivity items. The MR items were based on a scenario: "*Helping Josephine during examination*" with a possible choice of recommended initial moral action/judgment: "*Should or Should not and a Neutral can't decide*"; it is followed by a sub-section with rating of 12 question items for each of the scenarios regarding their moral thinking based on a Likert scale of 1-5 (5=great, 1=none) which are crafted on the pre-set

Kohlberg's moral development stages (as cited in Edwards and Entsuh, 2019, p. 146); and finally, a ranking of importance in moral judgment (P-value) to test respondents' moralization sensitivity to MR items of importance.

The third section of the questionnaire had four items based on Jordan's three categories of cheating as (i) *Neutralized* (cheating behaviour does not harm others), (ii) *Semantic differential* (positive or negative cheating), and (iii) *Other attitude* (not classifiable) (as par the review of Muralidharan & Gaur, 2018) to solicit students' opinion on institutional sensitivity to authentication of WASSCE results. Question items such as: *To what extent do you thinking cheating in examination affects your school's reputation? Do you think people should believe your exams results when others cheat?* and *"to what extent is cheating an issue in the school?"* were asked. Respondents had a Likert scale 1-5 (5=very great extent, 1=not at all) to respond. The entire exercise took about 20 -30 minutes with the students seated in their respective examination halls during WASSCE exercises in May-June 2017/2018 academic year.

A second data set came from the school archives - thus, the final WASSCE results from each participating school were collated. This is also available to the public at the WAEC's website. The focus was on general four core courses: i.e., *English, Mathematics, Social Science and Integrated Science*. These are courses that offer candidates the chances to enter any tertiary institution in Ghana. Analyses reported descriptive statistics, graphical forms, and inferential statistical tests such as independent t-test, ANOVA, cross tabulations and Chi square. All these were to test the null hypotheses at the significance level of an alpha ($p < 0.05$). The use of graphical presentations were intentional for visual comparison, emphasis, and clarity in interpretations.

4.0 Results and Discussions

4.1 Results

4.1.1 Demographic results:

The response rate was 99.0 % with very few missing data. There were 1404 male (55.8%) against 1112 female (44.2%) adolescents. Below is a graphical cross-tabulation (figures 1 & 2) showing gender against age and school categories respectively. Majority (81.0%) were between the ages of 16 to 18 ($n=2059$), only few were below the age of 16 (2.30%) and above the age of 18 (16.70%).

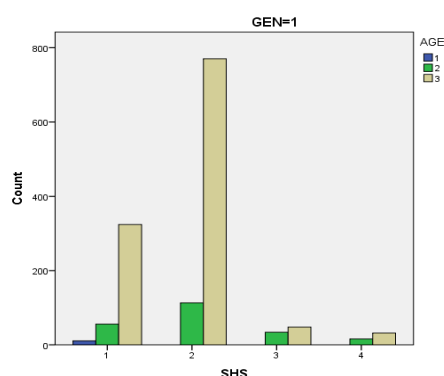


Figure 1: Cross-tab showing gender (male), age, and schools distribution counts

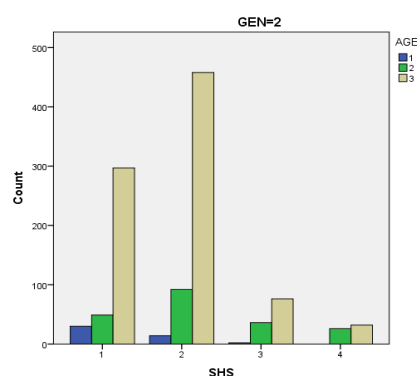


Figure 2: Cross-tab showing gender (female), age, and schools distribution counts

4.1.2 Research Questions

RQ#1: *What differences in levels of moral reasoning regarding examination malpractices are caused by gender categories?*

To answer this question, cross tabulation Chi square tests and the independent sample t-test, were performed. First, table 1 is the cross tabulation of gender and the SHD scores indicating that male students always fall short in percentage wise than the female in all the permutations.

Table 1: Cross Tab of Gender Scores on Initial Judgment Decisions (N=2512)

Gender	Should	Can't Decide	Should Not	Total
Male	718 (51.2%)	388 (27.6%)	296 (21.2%)	1402 (100.00%)
Female	594 (53.5%)	343 (30.9%)	173 (15.6%)	1110 (100.00%)
Total	1312	731	469	2512 (100.00%)

The female (53.5%) group was more affirmative of their initial judgment action as compared with male students (51.2%). Another significant result in the cross tabulation is the higher percentage of female students (30.9%) who *could not decide* unlike the male (27.6%) on actions to take, probably due to the feminine orientation of the ethics of care.

Table 2: Chi-Square (χ^2) Test Results on Gender Differences for Various Scores

Itemized Score		Value	df	Sig (2-sided)
Initial Decision	Pearson χ^2	12.98 ^a	2	0.002
	Likelihood Ratio	13.13	2	0.001
SSS (Simple Sum Scores)	Pearson χ^2	94.82 ^b	46	0.000
	Likelihood Ratio	100.45	46	0.000
P-value	Pearson χ^2	58.72 ^c	22	0.000
	Likelihood Ratio	61.35	22	0.000
Aggregate MR	Pearson χ^2	229.69 ^d	102	0.000
	Likelihood Ratio	260.55	102	0.000

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 207.24.

b. 24 cells (25.5%) have expected count less than 5. The minimum expected count is 0.44

c. 3 cells (6.5%) have expected count less than 5. The minimum expected count is 3.54

d. 86 cells (41.7%) have expected count less than 5. The minimum expected count is 0.44

Chi-Square results in table 2 indicate that the differences in moral reasoning (MR) caused by gender categories for the SHD scores, $\chi^2 (2)=12.98$, $p=0.002$, that of the SSS scores, $\chi^2 (46) = 94.82$ at $p=0.00$, and P-value, $\chi^2 (22) = 58.72$ at $p=0.00$ are all statistically significant. The aggregate MR scores caused by gender is also critical ($\chi^2 (102) = 229.69$, $p=0.00$), plus the likelihood ration = 102. All these may be interpreted as showing significant differences caused by gender.

Table 3: Independent t-test for differences in moral reasoning caused by gender group (N=2514)

t-test for Equality of Means							Sig. (2-tailed)	Mean Diffe rence	Std. Error Difference	95% CI of the Difference	
Gender	n	Means	sd	t	df	Lower				Upper	
SHD	1	1402	1.70	0.80	2.53	2510	0.012*	.08	.03	.02	0.14
	2	1110	1.62	0.74							
SSS	1	1402	36.41	8.44	4.83	2510	0.000*	1.65	.34	.98	2.32
	2	1110	34.76	8.59							
P-value	1	1402	4.95	2.59	4.18	2510	0.001*	.43	.10	.23	0.63
	2	1110	4.52	2.47							
Agg. MR	1	1402	14.35	3.12	5.79	2510	0.00*	.72	.13	.48	0.554
	2	1110	13.63	3.06							

Key: 1 = male (boys), 2 = female (girls). CI = Confidence Interval

* significance at $p=0.05$

Finally, the t-test results in table 3 indicates that the SHD judgment action scores had a statistical significance, $t(2510)=2.53$, $p=0.01$. The SSS also showed similar significance, $t(2510) = 4.83$, $p = 0.00$; and the P-values of 1st most important ranking, $t(2510) = 3.25$, $p=0.00$ too. Gender groups showed significant differences.

RQ 2: What differences in levels of moral reasoning are caused by schools' categories in comparison with their WAEC examination results?

To answer this research question, a cross tabulation of scores in MR are compared. Followed by a ANOVA test of variances conducted for significance. Then the aggregated MR scores are used for the purpose of simplicity to compare with two subsets of data later in answering research question three: (i) opinions on examination malpractices and (ii) the WASSCE results from the four schools. The examination results from the schools labeled as A, B, C and D serve as the IV (independent variable).

Table 4: Cross Tabulation of SHD sub-set of MR Scores with Schools (N=2514)

Schools	Should	Can't Decide	Should Not	Total
SHS-A	281 (49.91%)	180 (31.97%)	102 (18.12%)	563 (100.00%)
SHS-B	621 (49.80%)	332 (26.62%)	294 (23.58%)	1247 (100.00%)
SHS-C	151 (60.16%)	69 (27.49%)	31 (12.35%)	251 (100.00%)
SHS-D	259 (57.18%)	150 (33.11%)	44 (9.71%)	453 (100.00%)
Total	1312	731	471	2514

Bold text for emphasis and item distinction

Table 5 shows the cross tabulation of schools against sub-sets of MR has majority responding *Should*, SHS-C (60.16%), SHS-D (57.18%) and the least SHS-D (9.71%) saying *should not*. The differences in responses at the various schools are not significant.

Table 5: One-Way ANOVA Showing Moral Reasoning Differences Caused by Schools

Variable	Source	Sum of Squares	df	Mean Square	F	Sig (p)
Shd Decision	Between Group	20.736	3	6.912	11.72	0.000
	Within Group	1480.927	2510	0.590		
	Total	1501.663	2513			
SSS	Between Groups	4677.892	3	1559.297	21.88	0.000
	Within Groups	178809.060	2510	71.239		
	Total	183486.952	2513			
P-values	Between Groups	168.620	3	56.207	8.76	0.000
	Within Groups	16112.445	2510	6.419		
	Total	16281.066	2513			
Aggregate MR	Between Groups	789.55	3	260.18	27.71	0.000
	Within Groups	23568.02	2510	9.39		
	Total	24348.57	2513			

The ANOVA test in table 5 shows the mean differences caused by the school categories, SHD, $F(3, 2510) = 11.72$, $p=0.00$, SSS, $F(3, 2510) = 21.88$, $p=0.00$, the P-values, $F(3, 2510) = 8.76$, $p=0.00$, and the aggregate MR, $F(3, 2510) = 8.88$, $p=0.00$ are all statistically significant. Differences caused by school categories cannot be ignored; the school environment can affect moral reasoning.

RQ3: What is the relationship between MR and WASSCE results of the schools?

To answer this question, the aggregated MR scores and two subsets of data: (i) opinions on examination malpractices and (ii) the WASSCE results from the four schools are used. MR was correlated with the WASSCE results from the schools. Tables 6a (*Appendix A*) and 6b (*Appendix B*) show the WASSCE results obtained from the schools' achival data. The focus is on the core subjects: *English, Mathematics, Social Studies* and *Intergrated Science*. It shows majority had excellent scores (A grade) for Social Studies in all the schools. SHS-

C had students (30.9%) scoring A-grades in most of the subjects. Only few (3.87%) of the candidates failed in Social studies in SHS-C. The percentage passed in SHS-C was relatively higher (88.70%) in Social studies. Again table 6a (*Appendix A*) shows in the other schools (SHS-A, SHS-B, and SHS-D) nobody scored grade A (excellent) in most of the subjects. Overall, the results can be considered as good by WAEC standards, because to go to tertiary institutions students ought to have grades C6 (credit) or better in six subjects including the core four subjects. (Detail results are available in table 6b or Appendix B).

But then the research question focused on the relationship between MR and examination results, which is important to discuss the effects on authenticity. A correlation results are shown in table 7 below.

Table 7: Measures of Association between WASSCE Grades and Moral Reasoning

WASSCE Grades and MR	R	R Squared	Eta	Eta Squared
A1 * MR Total	-0.20	0.02	0.63	0.40
B2 * MR Total	-0.06	0.04	0.51	0.26
B3 * MR Total	-0.07	0.01	0.51	0.26
C4 * MR Total	0.06	0.00	0.44	0.20
C5 * MR Total	0.06	0.00	0.44	0.20
C6 * MR Total	0.02	0.00	0.42	0.18
D7 * MR Total	0.04	0.00	0.39	0.16
E8 * MR Total	0.06	0.00	0.44	0.19
F9 * MR Total	-0.02	0.00	0.58	0.33

In comparison with MR scores and examination results and their MR levels, table 7 shows negative correlations among some of the scores or grades. For instance, A grade, (R= -0.20), grade B2, (R= -0.06), grade B3, (R= -0.07) and that of grade F, (R= -0.02). This may be due to the fact that outliers were few in the normality MR curve, and that those outliers may have scored excellent (grade A) or failed (grade F) to skew results. Also Table 7 shows a small but significant correlations (*ranging from -0.02 to 0.20*) that can only be explained by the levels of MR showing a very little correlation, either positive or negative, with the various schools' WASSCE results. Thus, the data do not establish any strong relationship between MR and examination results (R= +/- 0.20).

RQ4: What are the opinions of SHS students regarding examination malpractices in their schools?

To answer this question, opinions were sought from the students regarding examination malpractices in their schools (Table 8). When students were asked: *To what extent ... do you thinking cheating in examination affects your school's reputation*, majority (62.1%) responded great extent (M = 1.43, SD = 0.58). Next item: *Do you think if others cheated, to what extent should entire exams results be cancelled because it affects all*, less than half (46.4%) responded to some extent (M = 1.82, SD = 0.71).

When the students were asked: *Do you agree that cheaters at examination affects results and the school should be punished*, more than half (51.2%) responded (mode) was to some extent (M = 1.89, SD = 0.69). And finally, when they were to express their opinion on *Cheating become part of the school life, but it's OK because no one should fail*, a significant majority (87.1%) said to a great extent it is a school culture (M = 1.15, SD = 0.41).

Table 8: Opinions of Students Regarding Examination Malpractices (N=2510)

To what extent ...	M	sd	(N=2510)		
			3	2	1
			f (%)	f (%)	f (%)
<i>Do you thinking cheating in examination affects your school's reputation?</i>	1.43	0.58	1558 (62.1)	833 (33.0)	117 (4.7)
<i>Do you think if others cheated the entire exams results should be cancelled because it affects all</i>	1.82	0.71	899 (35.8)	1170 (46.4)	440 (17.5)
<i>Do you agree that cheaters at examination affects results at the school and should be punished</i>	1.89	0.69	751 (29.9)	1285 (51.2)	473 (18.9)

<i>Cheating has become part of the school life, but it's OK because no one should fail</i>	1.15	0.41	2196 (87.1)	261 (10.3)	52 (2.1)
--	------	------	--------------------	------------	----------

*Mean of Means = 1.57, sd = 0.60 * Key: 3 = Great extent, 2= Some extent, 1= Little extent*

4.1.3 Hypotheses Test Interpretations

H₀₁ : according to Tables 2 and 3 results show a statistical significance which means the null hypothesis that stated that there is no statistical significant differences in the means of moral reasoning caused by gender categories has to be rejected.

H₀₂ : according to Table 4 the null hypothesis in a one-way ANOVA that stated that there is no statistical differences caused by school groups is also rejected.

H₀₃: finally, according to Table 7 the study hypothesis that stated there is no statistical significant relationship (correlation) between the levels of MR caused by school categories is accepted (ranging between R= -0.02 to -0.02).

4.2 Discussions

The difference in moral orientations within the gender categories is a confirmation of the gender debate. Genderization in MR is based on classical theories towards ethics of justice among males (boys) and ethics of care among females (girls) by Kohlberg and Gilligan (Gilligan et al., 1988; Kohlberg, 1984; Loevinger, 1986; Noddings, 1984). The difference is an indication of initial justice (masculinity) versus care (femininity) orientations in the gender categories. But the genderization theory still holds, and that MR studies must therefore consider this debate critical (Dias & Menezes, 2014; Jorgensen, 2006).

Overall, the evidence available in table 6a (*Appendix A*) supported the classical theoretical notions propounded by Kohlberg and Gilligan, but disputed the idea that the gender debate is gradually fading in argument (Rest et al., 1986) because of society becoming more homogeneous in thinking about genderization in moralization (Loevinger, 1986; Kohlberg, 1984). Hence, the findings challenged the line of thinking that the gender debate on moral reasoning may be obsolete. It should be noted that culturally, moral issues are sensitive. Rest and colleagues' (1986) stipulation about Kohlberg and Gilligan having gradually accepted both sides of the argument is just scholarly thinking; rather their respective differences in context is still relevant and culturally sensitive. The narrative is still holding on the premises that natural differences in gender is important in moralization.

In addition, the findings proved a statistical significance contrarily to the results of a smaller sample which had characteristic homogeneity of similar SHS students in Ghana (Edwards & Entsuah, 2019). The students' moral reasoning towards defiance of normality is not proven empirically, yet in the light of gender categorization the natural orientation biases still exist and should be acknowledged. And it is more pronounced with a larger sample (N=2510) showing the statistical significance. Thus, in the midst of a natural similitude, or 'sameness', variations in moral reasoning may naturally exist caused by gender. Hence, the findings support the proposition for 'otherness' (the value of others) in 'sameness' (Edwards, 2015).

Next, differences in school environment according to the opinions of students may account for their MR regarding CB based on evidence from statistical tests. This affects institutional reputation and believability of examination results. Authorities have to be mindful institutional reputation, sensitivity, and consequences (Muralidharan & Gaur, 2018). Even though the correlation results proved differently, the proposition of Starratt (1994; 1990) calling for ethical school building still stands, and that the evidence supported the assumption that schools need to be morally oriented against cheating behaviours. Students take opportunity in lapses.

Also, the data may show negative correlations (R=-0.02) between MR and WASSCE results because of the belief in less sensitivity to receptivity and responsiveness when it come to moral issues at adolescence

(Noddings, 1986). The caution is that this may however be wrongly interpreted as examination results can be authenticated irrespective of the measure of MR levels of candidates. Particularly based on the moralization concept, that Kohlberg's model of moral reasoning suggests that motivation for learning changes from childhood to adulthood, and that SHS students may grow to accept examinations and its associated school culture of cheating. Thus, those with higher levels of MR may end up cheating even the more or less depending on moral sensitivity levels, the opportunity available or created in a school environment. The findings confirm early studies that students' moral reasoning were not associated with cheating behaviour (Academic Dishonesty, 2015). Rather CB at the school level is usually based on *opportunistic venture* and more on the adolescence chancy culture of defiance and CB allowed by school system or leadership (Beerthuizen, et al., 2013).

The evidence in data confirmed CB is rampant in schools and somehow it affects the students' psyche in cheating during examination. Where there seems to be a systemic malpractices at the school level, the notion of WAEC cancellation had a slight majority (51.2%) effect on students' psyche against cheating. Importantly, if 87.1% of student respondents confirmed that the issue is systemic at the schools, then authorities have to find solutions. According to the table 8, students saw malpractices in examination as prevalent in the schools. This calls for an ethical teachership (Edwards, 2019) and building ethical school (Starratt, 1990, 1994). If 87.1% of students responded that the culture of cheating is part of school life, and it is acceptable, that should raise red flag among stakeholders, especially teachers, in any education system.

Additionally, data confirmed that students (51.2%) are more concerned about punishments and cancellations of their results not necessarily about the school's reputation nor institutionalized cheating culture. This is a conventional, normative moral stage issue (Kohlbergian stages). Muralidharan and Gaur (2018) lamented on institutionalized cheating in India. Ghanaian education authorities must emulate same because students can be more self-focused than global-focused in their learning achievements and in their conventional morality preferences.

5.0 Conclusion, Implications, Recommendations and Limitations

5.1 Conclusion

First, the study is concluded on the premises that students are inclined to do what is right during examination based on their MR levels and inclination toward the *good-boy*, *good-girl* moral orientation (Bjorklund & Bee, 2008). They ought to understand that examination is part of their school life. But at a normative judgment (conventional stages) based on a crossroad framework of their moral development students are to be taught, reasoned with, and made to know the consequences. These students may cease any opportunity to 'cheat'.

Secondly, the data on differences in moral reasoning based on gender categories also showed statistical significance differences in the means scores because of their respective natural differences. Hypothetically, in a situation where one gender category can be skewed towards *justice* or *care* in a moral reasoning (Noddling, 1985) there is a cause for concerns towards a CB when there are lapses in invigilations. Evidence confirm normative preferences in moralization and that SHS students may act in responses to cases and opportunities.

Thirdly, most importantly, data comparison on the school categories affirm a uniform assertion that the school's ecosystem can cause CB which emanate from apathy and 'acceptable' norms. Students are gradually accepting the idea that cheating in examination is a 'norm' and part of the school culture. This can be worrisome because children are supposed to be grounded in moral obligations of doing what is *right* or *wrong* for the fear of consequences (Rachels & Rachels, 2007). Chi-Square scores and ANOVA analyses showed significant statistical differences among the school categories. And when their MR scores are compared with their school's WASSCE results, data showed negative correlations at the higher grades (A1, B2, B3) whilst others showed positive correlations, but not at statistically high correlations (ranging $r=+/-0.02$) to cause panic.

What it means is that MR scores have no significant relations with WASSCE results to warrant a total rejection of the authenticity of the WAEC examination results. Cheaters are opportunists and possible opportunities

should be prevented. Examination malpractices have become a global issue in authenticating learning results and possibly educational outlook, and the Ghanaian secondary school situation is no exception. Yet, the students are afraid of punishments and cancellations. That in itself should encourage examination authorities to be innovative to discover preventive measures. The issue of CB is acknowledged; but should not affect the legitimacy, the authenticity of examination results, and moral reasoning may not be the causation of such damning educational outlook universally.

Therefore even though literature is raising issues with CB globally, the school culture of CB evidences may affect statistical inferences of results. In this study the conclusion is that MR may not necessarily account for a significance cause in CB among SHS students in Ghana. Except the blame is on the overall school culture of 'aiding and abetting' and opportunities created by the lack of proper invigilation. It happened to Nigeria (Onuka & Durowaju, 2013). In this vain, teachership and school leadership have major roles to play in understanding the repercussions of CB on examination results. Ethical teachers are to be groomed to promote credibility when it comes to authenticity and the entire exercise of examination.

5.2 *Implications*

5.2.1 *Implications for Practice*

Educational practitioners should examine such behaviours as flaws in our education system. Practical and pragmatic approach to best practices is needed for assessment in most education systems especially in sub-Saharan Africa. The traditional method of learning assessment which places too much premium on examination results is fueling cheating behaviours. Perhaps the practical approach should be training students to value knowledge acquisition, competency-based, and to acquire self-knowledge of what is moral and acceptable. WASSCE results should be fortified in our educational practices to avoid effects on believability of results.

Conceptually, Ghana's education system is not generating enough conversations along the lines of moral scenarios for doing what is right. Unlike the general practice of '*don't talk about sex*' as in the Ghanaian culture at the basic schools, we should rather encourage a practical discussion to expose 'ills' and 'corrupt practices' and 'casualties' in all cheating behaviours. Best practice is preventive measures. Consequences, punishments, should be drummed deep into the minds of SHS students because of CB practical implications on national human capital development.

5.2.2 *Implications for Policy*

Further discussions on moralization, examination issues, and their appropriation in the sociocultural context of research in education must engage policy makers. Genderization should be examined in all cultural context. Corruption from early years is cultivated and nurtured, not inherited. The Ghanaian education system is yet to have a well-defined policy direction on preventive measures when it comes to examination malpractices; teachers aid and abet cheating, and therefore policy ought to be framed in ethical and moral leadership for both teaching and learning (Edwards, 2019). There is a quest for a strong moral dimension of teaching and learning as a share responsibility for policy leadership against schools/teachers who flaw. According to John Dewey, in a democracy education is life, policy leadership must be in effect to ensure that both the work of teaching and moral domain of students' learning are protected by law. Policy implication is blunt: without codes of conduct and nondiscriminatory policing examination may lose its legitimacy. Education would be flawed and its potency plummeted if policies are not in place to protect the authenticity of examinations.

5.3 *Recommendations*

The first recommendation is that educational leadership should focus on building responsive rather than reactive measures. Responsiveness in the sense of leadership preventing CB that happens by opportunities. Moral reasoning can be instructional and non-instructional in nature. It should be part of Ghana education review for GES to establish comprehensive seminars for both teachers and students systematically and instructionally prior

to examination to sensitize students against all forms of examination malpractices. This can be organized at the district or circuit levels by Circuit Supervisors and also at school-based student assemblies.

Secondly, education systems should innovate other forms of assessment in learning. Examination should not be the only way to assess learning in secondary schools. GES should consider other forms of learning assessments tool that are consistent with the modern knowledge creation such as competencies-based assessment– i.e., more practical acquisition of knowledge and skills. The concept of lifelong learning is the future. Teachers and parents and stakeholders should be made to buy into the idea of lifelong learning rather than ‘snapshot’ orientation of learning for examination. SHS students in particular should be interested in the moral essence of their learning and acquisition of knowledge for life. Those students and schools who adhere to strict satisfactory conducts should be recognized to serve as motivation for exemplary leadership in learning.

Thirdly, the authenticity of examination results should never be compromised. Examination is a great assessment tool for development and growth of both contents and curricula. Examinations serve as tools for the job market and employability. WAEC should tighten their grips on unwholesome activities, leakages, and fraudulent activities to avoid disbeliefs and questionable integrity of examination results. WAEC should campaign for ethics/morals framework in curricula reforms at schools before, during, and after examination exercises. SHS students should be made to ascribe to and sign a personal academic-integrity responsibility (Miller, et al., 2011).

Finally, it is recommended that educational researchers should investigate WAEC administration practices. Assessment based on chances and opportunities such as a ‘sit-down’, a ‘snapshot’ examination, ‘at a stroke’, ‘chew and pour’ are not the best practices to assess lifelong learning behaviours. More especially in the Ghanaian culture, era of mobile technology, examinations are too chancy. Education is too valuable to be left for chances; learning is a lifelong pursuit and it should be strategically planned focusing on behavioural changes.

5.4 Study Limitation

Study limitation is based on the causal-comparative design, which uses the quantitative paradigm. Research in moralization still remains intrusive, culture sensitive, and prone to biases in interpretations of quantitative data. In future to get the best evidence is to mix the methods by triangulating quantitative data with responses from ‘narratives’ and ‘stories’ qualitatively.

6.0 References

- Academic Dishonesty (2015). Academic integrity and cheating scandal: Learning values and morality. Retrieved on 7th August 2019 from <https://www.privatewriting.com/blog/academic-integrity-and-cheating-scandal>
- Bee, H. L., & Bjorklund, B. R. (2004). *The journey of adulthood*. Upper Saddle River, NJ: Pearson/ Prentice Hall.
- Beerthuisen, M. G., Brugman, D., & Basinger, K. S. (2013). Oppositional defiance, moral reasoning and moral value evaluation as predictors of self-reported juvenile delinquency. *Journal of Moral Education*, 42(4), 460-474.
- Bhana, D. (2014). Ruled by hetero-norms? Raising some moral questions for teachers in South Africa. *Journal of Moral Education*, 43(3), 362-376.
- Bhindi, N., & Duignan, P. (1997). Leadership for a new century. *Educational management & administration*, 25(2), 117-132.
- Bjorklund, B., & Bee, H. L. (2008). *The journey of adulthood*. Upper Saddle River, NJ: Pearson/ Prentice Hall.
- Chilver-Stainer, J., Gasser, L., & Perrig-Chiello, P. (2014). Children's and adolescents' moral emotion attributions and judgements about exclusion of peers with hearing impairments. *Journal of Moral Education*, 43(3), 235-249.
- Curren, R. (2014). Motivational aspects of moral learning and progress. *Journal of Moral Education*, 43(4), 484-499.
- Danielsen, R. D., Simon, A. F., & Pavlick, R. (2006). The Culture of Cheating: From the Classroom to the Exam Room. *Journal of Physician Assistant Education*. 2006; 17(1):23-29

- Dias, T. S. & Menezes, I (2014). Children and adolescents as political actors: Collective visions of politics and citizenship, *Journal of Moral Education*, 43:3, 250-268, DOI: [10.1080/03057240.2014.918875](https://doi.org/10.1080/03057240.2014.918875)
- Edwards, A.K. (2019). The quest for ethical teachership as an embodiment of professionalism through spirituality and moral reasoning among Ghanaian teachers. *Journal of Education and Practice*. Vol. 10, No 20. 31-41. DOI: 10.7176/JEP
- Edwards, A. K. & Entsuah, S. (2019). Moral Reasoning and Cheating in Examination among Secondary Students in Ghana. *International Journal of Innovative Research & Development*. VI. 8(4). 144-154. DOI No.:10.24940/ijird/2019/v8/i4/APR19028
- Edwards, A. K. (2015). Otherness development model for assessing multicultural competencies for educational leadership. *International Leadership Journal*, 7(1): 23-34
- Edwards, A. K. and Aboagye, S.K. (2015). Assessing school leadership challenges in Ghana using leadership practices inventory. *International Journal of Education and Practice*, 3(4), 168-181
- Flanagan, O., & Jackson, K. (1993). Justice, care, and gender: The Kohlberg-Gilligan debate revisited. In M. J. Larrabee (Ed.), *an ethic of care* (pp. 69-84). New York: Routledge
- Fraenkel, J. E., & Wallen, N. E. (2006). *How to design and evaluate research in education*. New York, NY: McGraw-Hill.
- Gay, L. R. (1996). *Educational research: Competencies for analysis and applications* (5th Ed.). Englewood Cliffs, NJ: Prentice-Hall.
- GES/TED Handbook (2014). *Leadership for change: A Handbook for GES management staff*. Accra, Ghana: GES/Teacher Education Division/ UNICEF
- Ghanaweb.com (2014, September 14th). Malpractices in Brong Ahafo region. Accra, Gh. Retrieved on August 21st, 2018, from <https://www.ghanaweb.com/GhanaHomePage/regional/BNI-engaged-to-check-examination-malpractices-in-B-A-353363>)
- GhanaWeb.com (2017, August 10). 29 'Born again' Christians return their certificates to WAEC for cheating. Retrieved September 21, 2018, from <https://www.ghanaweb.com/GhanaHomePage/NewsArchive/29-born-again-Christians-return-their-certificates-to-WAEC-for-cheating-568143>
- Ghanaweb.com (2018, August 21). Article on cheating at examination. Accra, Ghana. Retrieved from <https://www.ghanaweb.com/GhanaHomePage/NewsArchive/WASSCE-1-873-private-candidates-results-withheld-for-alleged-cheating-603490>)
- Gao, Q. (2012). Biometric Authentication to Prevent e-Cheating. *International Journal of Instructional Technology and Distance Learning*. Vol. 9. (2). 2-13
- Gilligan, C. (1987). Moral orientation and moral development. In E. F. Kittay & D. T. Meyers (Eds.), *Women and moral theory* (pp. 19-33). Totowa, NJ: Rowman & Littlefield Publishers.
- Gilligan, C., Ward, J. V., Taylor, J. M., & Bardige, B. (1988). *Mapping the moral domain*. Cambridge, MA: Harvard University Press.
- Goldstein, S. E., Davis-Kean, P. E., & Eccles, J. S. (2005). Parents, Peers, and Problem Behavior: A Longitudinal Investigation of the Impact of Relationship Perceptions and Characteristics on the Development of Adolescent Problem Behavior. *Developmental Psychology*, 41(2), 401-413.
- Jimoh, B. O. (2009). Examination malpractice in secondary schools in Nigeria: What sustains it? *European Journal of Educational Studies*, 1(3), 101-108.
- Jorgensen, G. (2006). Kohlberg and Gilligan: Duet or duel? *Journal of Moral Education*, 35(2), 179-196.
- Kohlberg, L. (1984). *The psychology of moral development: The nature and validity of moral stages*. San Francisco, CA: Harper & Row.
- Loevinger, J. (1986). On Kohlberg's contributions to ego development. In S. Modgil & C. Modgil (Eds.), *Lawrence Kohlberg: Consensus and controversy* (pp. 183-193). Philadelphia, PA: The Falmer Press.
- Lovett, B. J., & Jordon, A. H. (2010). Levels of moralisation: A new conception of moral sensitivity. *Journal of Moral Education*, 39(2), 175-189.
- Miller, A., Shoptaugh, C. & Wooldridge, C. (2011). Reasons not to cheat, academic-integrity responsibility, and frequency of cheating. *The Journal of Experimental Education*, Vol. 79, No. 2. 169-184
- MoE/GES, (2014). *Leadership for learning: A Manual/Handbook for headteachers and circuit supervisors*. Accra, Ghana: Ghana Education Service/UNICEF
- Mooney, C. G. (2000). *Theories of childhood: An introduction to Dewey, Erikson, Piaget & Vygotsky*. St Paul, MN: Redleaf Press.
- Muralidharan, L., Gaur, S., & Menon, V. K.K. (2018). Cancer of Cheating Behaviour in students during examination. *IJRAR*. Vol. 5, Issue 04. Retrieved on 2nd July 2019, at <http://www.ijrar.org> DOI: 10.13140/RG.2.2.26660.53125
- Nahorna, O. (2018). Open book exam as assessment method at Master degree programmes in International Arbitration and Alternative Dispute Resolution: Foreign experience *Comparative Professional Pedagogy* 8(4). 26-30. DOI:10.2478/rpp-2018-0050

- Nath, L. & Lovaglia, M. (2009) Cheating on Multiple choice exams: Monitoring, assessment, and an optional assignment. *College Teaching*, 57:1, 3-8. Retrieved on July 5th, 2019 from <https://doi.org/10.3200/CTCH.57.1.3-8>
- Noddings, N. (1984). *Caring: A feminine approach to ethics and moral education*. Berkeley, LA: University of California Press.
- Onuka, A. O. U. & Durowaju, E. O. (2013). Stakeholders' role in curbing examination malpractice in Nigeria. *International Journal of Economy, Management and Social Science*, 2(6), 342-348.
- Passini, S. (2014). The effect of personal orientations toward intergroup relations on moral reasoning. *Journal of Moral Education*, 43(1), 89-103.
- Rachels, J., & Rachels, S. (2007a). *The elements of moral philosophy*. Boston, MA: McGraw Hill.
- Rachels, J., & Rachels, S. (2007b). *The right thing to do: Basic readings in moral philosophy*. Boston, MA: McGraw Hill.
- Rettinger, D. A. & Jordan, A. E. (2005) The Relations Among Religion, Motivation, and College Cheating: A Natural Experiment, *Ethics & Behavior*, 15:2, 107-129, DOI: [10.1207/s15327019eb1502_2](https://doi.org/10.1207/s15327019eb1502_2)
- Rest, J. R. (1986). *Moral development: Advances in research and theory*. New York, NY: Praeger Publishers.
- Steinberg, L., & Morris, A. S. (2001). Adolescence development. *Annual Review Psychology*, 2001(52), 83-110.
- Starratt, R. J. (1994). *Building an ethical school: A practical response to the moral crisis in schools*. London, UK: The Falmer Press.
- Starratt, R. J. (1990). *The drama of schooling / The schooling drama*. London, UK: The Falmer Press.
- WASSCE Results. (2018, July 22). *West African Examination Council examination results are out*. Retrieved February 5th, 2019, from waec: <https://www.waec.com/wassce-examination-results-2018/report>

Table 6a (Appendix A): WAEC Examination Results for the Four Selected Schools based on the Core Subjects (N=2508)

Schools	Subject	A1	B2	B3	C4	C5	C6	D7	E8	F9	Candidates	Pass
		f (%)	f (%)	f (%)	f (%)	f (%)	f (%)	f (%)	f (%)	f (%)	Present	%
SHS - A	Social Studies	8 (1.87)	35 (7.97)	89 (20.29)	115 (26.20)	96 (21.87)	78 (17.77)	16 (3.64)	2 (0.46)	0 (0.00)	439	99.90
	English Language	0 (0.00)	21 (4.78)	29 (6.60)	93 (21.18)	129 (29.38)	149 (33.94)	13 (2.96)	4 (0.91)	1 (0.23)	439	98.86
	Mathematics	0 (0.00)	26 (5.92)	45 (10.25)	143 (32.57)	136 (30.98)	76 (17.31)	6 (1.37)	5 (0.11)	2 (0.46)	439	99.43
	Integrated Science	0 (0.00)	38 (8.67)	66 (15.03)	123 (28.01)	132 (30.06)	69 (15.72)	7 (1.59)	2 (0.46)	2 (0.46)	439	99.08
SHS - B	Social Studies	27(10.76)	33 (13.15)	107 (42.63)	26 (10.36)	24 (9.50)	18 (7.17)	10 (3.98)	5 (1.99)	0 (0.00)	251	99.60
	English Language	0 (0.00)	0 (0.00)	25 (9.96)	50 (19.92)	31 (12.36)	83 (33.05)	29 (11.55)	17 (6.77)	15 (5.98)	251	93.60
	Mathematics	0 (0.00)	0 (0.00)	0 (0.00)	1 (0.40)	6 (2.41)	58 (23.29)	91 (36.55)	81 (32.50)	11 (4.42)	249	94.40
	Integrated Science	0 (0.00)	12 (4.78)	62 (24.70)	45 (17.93)	40 (15.94)	66 (2.69)	22 (8.76)	3 (0.80)	0 (0.00)	251	99.60
SHS - C	Social Studies	360 (30.93)	139 (11.94)	274 (23.54)	88 (7.56)	75 (6.44)	96 (8.25)	59 (5.07)	28 (2.41)	45 (3.87)	1164	88.70
	English Language	8 (0.69)	29 (2.49)	241 (20.74)	232 (19.92)	165 (14.18)	302 (29.95)	122 (10.48)	47 (4.04)	18 (1.55)	1164	83.90
	Mathematics	97 (8.33)	49 (4.21)	118 (10.14)	44 (3.80)	57 (4.90)	178 (15.29)	179 (15.38)	194 (16.67)	246 (21.13)	1164	46.7
	Integrated Science	50 (4.30)	64 (5.50)	190 (16.32)	94 (8.08)	113 (9.71)	199 (17.10)	232 (19.93)	166 (14.26)	56 (4.81)	1164	61.00
SHS - D	Social Studies	56 (9.98)	63 (11.23)	208 (37.68)	71 (12.66)	58 (10.34)	64 (11.41)	31 (5.30)	5 (0.81)	5 (0.81)	561	92.69
	English Language	0 (0.00)	2 (0.36)	37 (6.60)	124 (22.10)	121 (21.57)	158 (28.16)	80 (14.26)	25 (4.46)	14 (2.50)	561	78.79
	Mathematics	0 (0.00)	8 (1.43)	89 (15.86)	55 (9.80)	96 (17.11)	187 (33.33)	80 (14.26)	36 (6.42)	10 (1.80)	561	77.54
	Integrated Science	7 (1.22)	42 (8.57)	142 (28.98)	86 (17.55)	80 (16.55)	133 (27.14)	62 (12.65)	7 (1.43)	2 (0.41)	490	87.34
Total	Aggregated grades	613	561	1172	1390	1359	1914	1039	627	427	2415	

Bold text for emphasis and item distinction

Source: School administrators/West African Examination Council (WAEC) 2019, unconfirmed. Bold text for emphasis only.

Key: Grade:A1= Excellent, B2= Very good, B3= Good, C4 to C6 =Credit, D7 & E8 = Pass, F9=Fail (According to WAEC, the WASSCE Exams Authority)

Table 6b (Appendix B): Comparison of Moral Reasoning (MR) Scores and WAEC Examination Results from the Schools (N=2508)

MR Total	Pass %	A1	B2	B3	C4	C5	C6	D7	E8	F9	
11.67	Mean	100.00	0.00	12.00	62.00	45.00	40.00	66.00	22.00	3.00	.00
	Std. Dev	.	.	.	.	.	.	.	.	.	.
11.83	Mean	89.00	360.00	139.00	274.00	88.00	75.00	96.00	59.00	28.00	45.00
	Std. Dev	.	.	.	.	.	.	.	.	.	.
13.00	Mean	86.33	2.33	16.67	85.33	63.67	69.00	134.33	57.00	20.00	9.00
	Std. Dev	8.021	4.041	22.301	58.586	19.502	33.867	52.013	25.865	14.731	6.557
14.00	Mean	99.00	0.00	38.00	66.00	123.00	132.00	69.00	7.00	2.00	2.00
	Std. Dev	.	.	.	.	.	.	.	.	.	.
14.17	Mean	47.00	97.00	49.00	118.00	44.00	57.00	178.00	179.00	194.00	246.00
	Std. Dev	.	.	.	.	.	.	.	.	.	.
14.33	Mean	97.33	174.00	169.50	379.00	396.50	392.50	535.50	273.25	160.25	108.25
	Std. Dev	3.786	293.559	261.597	533.721	663.016	645.817	920.524	510.584	311.167	212.511
14.50	Mean	84.00	8.00	29.00	241.00	232.00	165.00	302.00	122.00	47.00	18.00
	Std. Dev	.	.	.	.	.	.	.	.	.	.
14.67	Mean	94.00	0.00	.00	.00	1.00	6.00	58.00	91.00	81.00	11.00
	Std. Dev	.	.	.	.	.	.	.	.	.	.
16.33	Mean	80.50	29.00	49.50	139.50	104.50	104.50	138.50	124.00	84.00	28.00
	Std. Dev	27.577	29.698	20.506	71.418	14.849	12.021	85.560	152.735	115.966	39.598
17.17	Mean	89.00	0.00	14.00	41.00	133.50	128.50	117.00	43.00	15.00	8.00
	Std. Dev	14.142	0.000	16.971	5.657	13.435	10.607	57.983	52.326	14.142	8.485
Total	Mean	87.69	72.12	66.00	170.24	163.88	159.88	225.00	122.24	73.76	50.24
	Std. Dev	15.274	164.489	131.849	270.172	320.401	312.226	440.813	244.638	153.652	113.498