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Co-Creation in Teaching and Learning at University of Hai Duong, Vietnam

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Abstract

In recent years, there has been a growing focus on co-creation in higher education. However, the number of studies specifically examining the co-creation process in the context of higher education in Vietnam remains limited. Consequently, research is needed to investigate co-creation in education, particularly in higher education. This article aims to (1) explore people's understanding of co-creation and (2) identify the values that lecturers and students at University of Hai Duong can gain from co-creation activities. The study applies the Knowledge, Attitudes, and Practice (KAP) theory to better understand the co-creation process, drawing on interviews with 15 lecturers and 35 students. Through these interviews, the study examines how participants perceive, engage in, and experience the outcomes of co-creation. To validate the preliminary theoretical framework, the study is grounded in the principles of Service-Dominant Logic (S-D Logic) theory, providing a solid foundation for the research. The results indicate that most interviewees actively participate in co-creation activities, even though the concept has not gained much attention in the community. Moreover, co-creation activities yield both positive and negative outcomes, with negative experiences being relatively rare. This study advances previous research by exploring the challenges that affect lecturers and students when collaborating to create value.

Keywords: Co-Creation, Higher Education, S-D Logic, Vietnam

1. Introduction

In the context of modern higher education, improving the quality of teaching and learning has become an urgent priority to meet the demands of an increasingly competitive labor market. In this process, co-creation has been recognized as a key factor, not only in the development of effective teaching methods but also in fostering a learning environment that actively engages students, encouraging them to be proactive and think critically. Co-creation refers to the collaborative process between lecturers and students to generate new ideas, solve problems, or find solutions in the teaching and learning process. It moves beyond the traditional role of lecturers as mere transmitters of knowledge, establishing creative partnerships where all participants are actively involved in the learning process. In higher education, co-creation offers faculty the opportunity to innovate and modernize instructional content. By applying active learning methods such as group discussions, research projects, and experiential learning, lecturers can create a dynamic, engaging learning environment where students feel motivated

to explore knowledge. This approach not only helps students absorb content more effectively but also develops essential soft skills such as communication, teamwork, and creative thinking—skills that are highly valued by employers in today's workforce. However, to achieve this, educational institutions must address several challenges, including improving infrastructure, teaching equipment, and management systems to facilitate co-creation. Additionally, enhancing the capacity of lecturers to design lessons and manage classes is a critical component.

Recognizing the importance of co-creation in teaching and learning, many universities worldwide have begun implementing programs and conducting research to apply innovative teaching methods. Examples include the integration of information technology to support teaching, encouraging student involvement in research, and establishing community projects to provide practical learning opportunities. Given the current context and challenges facing higher education, developing a co-creation model for teaching and learning not only benefits lecturers and students but also contributes to improving the overall quality of education. This article delves into the concepts of co-creation and value creation, with a focus on the values that lecturers and students can achieve through co-creation activities at University of Hai Duong. It is hoped that the research findings will offer new perspectives and contribute to the ongoing reform of higher education at the institution.

Over the past decade, collaborative efforts between students and lecturers in higher education have grown significantly (Børte et al., 2023). This trend is supported by a growing body of evidence demonstrating that co-creation and teamwork in teaching and learning yield a range of positive outcomes, including increased engagement, motivation, enhanced cognitive process understanding, and identity development. However, navigating the existing literature can be challenging due to the varied terminology used to describe these collaborative efforts, including terms such as "students as partners," "co-creation," "students as collaborators," "agents of change," and "students as producers."

In this article, we adopt the term "co-creation in learning and teaching" as it reflects a deeper level of student engagement compared to "student engagement," which sometimes implies mere participation without active involvement. "Co-creation of learning and teaching" occurs when educators and students work together to shape various aspects of courses and instructional methods. To better understand the diversity in co-creation theory and practice, this study introduces the concept of co-creation in teaching and learning activities. We established a taxonomy to engage diverse groups of students and lecturers in discussions about co-creation. Our approach involved collecting perspectives from both lecturers and students at University of Hai Duong regarding their understanding of co-creation and how value is generated through this process.

The study also explores the initial feedback from students and lecturers involved in co-creation initiatives. Finally, we offer insights into the practical applications of co-creation in different contexts. To achieve these goals, the study addresses the following three research questions:

- 1. What factors promote or initiate co-creation in teaching and learning at University of Hai Duong?
- 2. How is co-creation practiced in higher education within the context of University of Hai Duong?
- 3. What are the outcomes and effects of co-creative teaching and learning at University of Hai Duong?

2. Literature review

Co-creation initially emerged in the business literature, largely credited to the work of Prahalad and Ramaswamy between 2000 and 2005. Their work built on the concept of the core competency model developed by Prahalad & Hamel (1990). This model encourages organizations to recognize their strengths and resources across organizational boundaries, tapping into the untapped potential of users' perspectives and knowledge as a transformative resource (Prahalad & Ramaswamy, 2004). Co-creation emphasizes the importance of social interaction and relationships between organizations and users. It has long-term applications across various business and industrial sectors. Even organizations operating in relatively closed systems, with limited external input, must recognize the significance of user feedback due to users' purchasing power. However, contemporary expectations of user participation extend far beyond those of the past, with users increasingly seeking an active role in the creation of products and services. Co-creation allows users to collaboratively shape products and services

alongside organizations, minimizing the reliance on organizational assumptions. Despite its popularity, co-creation has been defined in various ways. Sanders & Stappers (2008) describe it as collective creativity shared among many individuals, while McColl-Kennedy et al. (2012) identify 27 distinct definitions. A comprehensive definition by McColl-Kennedy et al. (2012) describes co-creation as the benefit derived from integrating resources through collaborative activities and interactions. This definition highlights the integration of resources and continuous contributions of value, framing co-creation as an open process that involves diverse members. Co-creation differs from other user-centered approaches in several key ways. It redefines user participation and ownership, allowing consumers to feel a greater sense of ownership over the final product or contribute to its meaning and value by integrating their interests and preferences (Ramaswamy & Ozcan, 2014). Co-creation also has the potential to influence the feelings of co-creators toward the organization or each other, fostering the development of teams or alliances. Moreover, co-creation moves beyond traditional producer-consumer exchanges, which are typically onetime interactions. Instead, co-creation views these exchanges as continuous interactions where both parties consistently contribute value. This ongoing interaction is a critical component of the co-creation process. In summary, co-creation is a dynamic and collaborative process that transforms the traditional roles of consumers and producers. It emphasizes ongoing interaction and shared value creation within organizations. This study defines co-creation as a collaborative interaction between two or more stakeholders, where resources are integrated to create mutual benefits for both the organization and its users.

2.1. SD Logic approach

"Value co-creation" is a central concept in the Service-Dominant (S-D) logic of marketing literature. Research on S-D logic has intensified discussions around the concept of value co-creation. S-D logic represents a mindset that addresses the fragmentation within the marketing field by focusing on service rather than goods as the primary unit of exchange. Vargo and Lusch (2004, 2008) argue that products merely serve as delivery mechanisms for services, which enable customers to derive value from a company's capabilities. In this framework, the realization of value extends beyond the transaction itself and continues through the processes of marketing, consumption, and ongoing value creation. Since resources are heterogeneous and uniquely applied, the skills and knowledge of consumers play a critical role in shaping how value is co-created. As a result, value is always co-created through the interactions between suppliers and consumers (Vargo & Lusch, 2008).

2.2. Co-creation in higher education

Higher education institutions (HEIs) worldwide are facing numerous challenges, including budget constraints (Wong, 2004), increased competition among domestic institutions (Allen & Shen, 1999), a shrinking college-age population (Alves et al., 2010), rapid technological advancements (Sultan & Yin Wong, 2012), and evolving student expectations (Ledden et al., 2007; Nguyen & Leblanc, 2001). In Europe, the higher education landscape has shifted, with a greater emphasis on student mobility and teaching quality (Díaz-Méndez & Gummesson, 2012). This shift reflects the modern student's focus on external values, such as reputation, financial outcomes, and image, over intrinsic academic values (Judson & Taylor, 2014; Stein, 2013). Universities have responded to these challenges with strategies aimed at enhancing competitiveness, student attraction, retention, and satisfaction (Díaz-Méndez & Gummesson, 2012). There is also an increasing trend toward the standardization of HEI services, with an emphasis on consumer satisfaction and the promise of employability (Judson & Taylor, 2014). Judson and Taylor (2014) differentiate between the marketization of higher education and aggressive marketing strategies, noting that marketization shifts the academic focus toward short-term gains and views students as consumers (Molesworth et al., 2009; Stearns et al., 1995). To navigate these challenges, Service-Dominant (SD) logic has been proposed as a framework for understanding HEI activities and co-creation processes (Díaz-Méndez & Gummesson, 2012; Judson & Taylor, 2014; Vargo & Lusch, 2004, 2016). Four principles of SD logic are particularly relevant: value is defined by the beneficiary, co-creation occurs within a network of stakeholdersparticularly between students and lecturers, universities provide resources, and value is a subjective and complex concept shaped by customers (Díaz-Méndez & Gummesson, 2012; Ledden & Kalafatis, 2010; Lusch & Wu, 2012).

Although research on co-creation in higher education is still limited, it is gaining significance (Díaz-Méndez & Gummesson, 2012). There are two main research approaches: one explores the broader service ecosystem, focusing on collaboration between HEIs and external stakeholders, while the other examines students' roles and attitudes toward value co-creation.

3. Research methodology

This study aims to explore the co-creation experiences of both lecturers and students within the academic context of the University of Hai Duong. We employed semi-structured individual interviews as our primary research method. The focus of the study is to examine the Knowledge (K), Attitude (A), and Practice (P) of both lecturers and students to understand their perceptions, emotional responses, and levels of participation in co-creation experiences.

3.1. Variables

- (K) Knowledge: Knowledge involves the acquisition, retention, and application of information or skills (Badran, 1995) . It includes an understanding of Co-Creation, the value creation process, and its benefits.
- (A) Attitude: Attitude represents a psychological tendency expressed by liking or disliking something (Eagly & Chaiken, 1993) . Positive attitudes in education lead to greater engagement, goal-setting, and persistence (Schunk & Pajares, 2002) .
- (P) Practice: Practice reflects the synergy between knowledge and behavior (Qiquan, 2021). It involves acquiring knowledge, changing attitudes, and improving problem-solving abilities, illustrating the interaction between knowledge and dispositions.

3.2. Collect data

The study follows a social constructivist approach (Yin, 2003), aiming to understand co-creation in higher education from multiple perspectives, thereby informing an interpretive model. Data were gathered from interviews conducted directly on campus with both lecturers and students, fostering better engagement (Bryman, 2016) and ensuring authenticity (Holbrook et al., 2003). Participants were provided with a clear statement outlining the research's purpose and were introduced to the process by the research team to facilitate their involvement. During the interviews, participants were encouraged to share their experiences at their own pace. The research team acted as 'active listeners,' focusing on participants' narratives while using follow-up questions to explore deeper insights. In case study research, interviews are a crucial data collection method (Yin, 2009), and semi-structured interviews are particularly well-suited for exploratory studies, allowing themes to emerge naturally. Open-ended questions enabled participants to share their views on co-creation, with interviews taking place over 30 days at the University of Hai Duong, from July 10, 2024, to August 9, 2024.

3.3. Data analysis

This study employed a systematic text condensation method (Malterud, 2012). First, the results were reviewed to identify emerging themes. Next, coding was applied within these themes, guided by existing literature on cocreation in higher education. These codes were then organized into broader categories using Excel, with interview content grouped into themes such as "personal perspectives on co-creation," "determinants of co-creation," and "barriers to co-creation." To ensure reliability, the data analysis was cross-verified by the researcher who conducted the interviews. The authors worked collaboratively to refine and consolidate findings into overarching themes through consensus. During the qualitative phase, the interview results were reviewed and categorized to reach agreement among the researchers. The diverse responses provided insight into the concepts, motivations, and challenges that affect collaboration between lecturers and students in enhancing the educational system.

4. Analysis and Results

Co-creation in learning and teaching is a concept that can be defined more clearly and precisely. As a relatively new phenomenon in higher education, co-creation is best examined through multiple case studies, which reveal the diverse ways in which it can manifest in this field (Dollinger et al., 2018). The interviews began with a question designed to gauge participants' perceptions of co-creation in education: "When I talk about co-creation between students and lecturers, what do you think?" Interestingly, 75% of the interviewees, primarily students, reported that they had never encountered this concept before. In contrast, 20% of the instructors demonstrated a clear understanding, while the remaining 5% requested further clarification.

Feedback from instructors highlighted that:

"Co-creation in higher education refers to a collaborative approach to learning and teaching in which students and educators work together to create educational experiences that meet the needs and interests of all members." (Lecturer A)

Interestingly, one student had never heard of the term "co-creation" in an educational context. However, when asked about it, he described it as:

"I think about the connection between lecturers and students in solving a problem or studying or researching a certain issue." (Student A)

In summary, while some lecturers and students may have deep insights into co-creation in education, others may not have actively considered the concept. Nonetheless, they may have engaged in co-creation experiences without labeling them as such.

4.1. Role of students and lecturers

Students play four distinct roles in co-creation: representative (elected), consultant (paid for feedback), co-researcher (conducting research with lecturers), and pedagogical co-designer (co-creating the curriculum) (Bovill et al., 2016). Chemi & Krogh (2017) highlight that lecturers act as guides, mentors, and participants, fostering a collaborative and inclusive learning environment that empowers students to engage actively. Additionally, one instructor underscored the vital role of lecturers in resource integration, arguing that their involvement is essential, as students may lack the necessary knowledge to effectively integrate resources independently.

4.2. The premise of Co-creation

Antecedents, defined as elements that precede or are reasonably before an event, are crucial for understanding cocreation. Given the voluntary nature of most projects, these antecedents significantly influence outcomes. The characteristics of participants and their attitudes toward co-creation are particularly important. In various case studies, participants were often described as high achievers actively engaged in extracurricular activities. Professors leading co-creation programs value student input, underscoring its significance in higher education. This study identified second-order themes within the antecedent category, including student motivation and perceptions, lecturers' goals and motivations, and the promotion of a positive environment. In summary, these antecedents play a pivotal role in the co-creation process, challenging traditional notions of their importance.

4.3. Students' initial awareness and motivation

This study explores the participation of students in co-creation activities and their motivations for engaging in such initiatives. Participants expressed strong support for the integration of student resources into higher education, underscoring the increasing significance of student perspectives. While some students are driven by incentives like bonus points, others are motivated by a desire to assist peers and foster personal growth. Additionally, students view their roles as teaching assistants as crucial for facilitating knowledge transfer and enhancing relationships among lecturers, students, and fellow peers. These varied motivations emphasize the importance of effectively communicating the benefits of co-creation to encourage wider student engagement in the future.

4.4. Instructor's goals and motivation

Lecturers' motivations for initiating or managing student co-creation activities differ significantly from those of students. Faculty members prioritize benefits for the university and its services over personal gain. Their goals encompass improving the academic community, fostering alumni connections, enhancing marketing efforts, and assisting students in developing their CVs. Additionally, lecturers view co-creation as a means to improve research outcomes, encourage collaboration, and generate innovative solutions. A recurring theme in faculty objectives is the enhancement of student employability. They believe that participation in co-creation activities equips students with essential skills such as communication, leadership, and teamwork, thereby fostering creativity, innovation, and a sense of belonging. Ultimately, lecturers strive to create a more supportive and inclusive learning environment that contributes to student well-being and academic success (Lecturer H).

4.5. Good working environment

As several authors have emphasized, a favorable atmosphere is essential for successful co-creation in higher education. Virtanen et al. (2022) highlight the significance of "positive social interactions and a supportive atmosphere" for effective co-creation. Similarly, Woratschek et al. (2020) argue that a positive environment fosters community and commitment among co-creators, leading to meaningful outcomes. Other students have noted that such an atmosphere can "foster a growth mindset among co-creators, emphasizing the value of learning from mistakes and viewing challenges as opportunities for growth and development."

4.6. Co-creation resources

4.6.1. Educational equipment

Educational devices, including digital tools, interactive whiteboards, and mobile devices, significantly influence educational co-creation, as proposed by Kirschner et al. (2018). These tools facilitate real-time collaboration, communication, and knowledge sharing between learners and instructors, thereby promoting active participation and co-creation of knowledge. However, inadequate facilities, such as the absence of air conditioning, can hinder the quality of teaching. Effective educational devices enhance communication, collaboration, and active learning, ultimately fostering knowledge co-creation and improving learner achievement.

4.6.2. Share knowledge

Co-creation entails knowledge sharing, where students and lecturers exchange information and perspectives. This study emphasizes the importance of mutual learning, challenging traditional roles within the educational framework. Lecturers learn from students by applying new tools and approaches (Lecturer C), while collaboration between students and lecturers exemplifies a balanced and reciprocal relationship (Lecturer F). Instructors assist students in deepening their understanding, while students offer fresh and innovative perspectives (Lecturer B). These shared experiences strengthen relationships between students and lecturers, fostering a more collaborative co-creation environment.

4.6.3. Interaction between Lecturers and Students

This study analyzes interactions characterized by continuous communication, engagement, and honest conversations between students and lecturers, which support co-production elements such as equity and knowledge sharing. Lecturers emphasize the importance of these interactions for understanding students' perspectives, encouraging constructive criticism, and expressing personal and academic interests. "Because they are close together, students are better able to share their thoughts, debate ways to improve the learning environment, and provide constructive criticism. Based on students' qualities, faculty can demonstrate personal and academic interests through individual and group interactions" (Lecturer G).

Students also benefit from these interactions, gaining insights and networking opportunities. They appreciated the chance to engage with professors outside of class (Student K). However, while interactions do occur, they can sometimes be infrequent or superficial. Some students prefer to seek help from friends and find their interactions with instructors limited to discussions about homework (Student L).

4.6.4. Experience

This study examines participants' perceptions of co-creation activities, emphasizing their role in creating meaningful and transformative experiences. Previous research has highlighted the intrinsic value of co-creation experiences beyond mere outcomes (Vargo & Lusch, 2008). Students appreciate their involvement in co-creation activities. For instance, one student expressed that the Project Management course was highly valuable due to its focus on teamwork and the extensive responsibilities involved (Student J). Lecturers also derive intrinsic value from co-creation. One lecturer, who collaborates with students on publications, noted that this engagement adds greater meaning to their work. "I find it more meaningful to interact with students and help them realize their greatness. This space makes my work more significant," remarked Lecturer B. Additionally, another lecturer overseeing the peer mentoring program described the entire process—from project initiation to video production—as a comprehensive and fulfilling experience (Lecturer H).

4.6.5. Value co-creation activities

Value co-creation activities involve collaboration between businesses and customers to develop products and services (Prahalad & Ramaswamy, 2004; Wu & Tsai, 2022). In the educational context, this collaboration extends to students and institutions working together to generate ideas and services that align with the organization's mission, benefiting all stakeholders involved. One student emphasized that scientific research significantly contributes to value co-creation by fostering interaction with lecturers, enhancing knowledge, and developing essential skills such as data analysis and presentation. "I feel that in an educational environment, scientific research is the activity that brings me the most value. Because I had a lot of contact with lecturers, I also learned many skills such as data analysis on SPSS, report writing, and presentation skills," shared Student I. Another student highlighted the various valuable opportunities present in educational settings that help develop skills, increase confidence, and improve work readiness (Student E). Lecturers echoed this sentiment, noting that scientific research and classroom interactions play a crucial role in facilitating value co-creation (Lecturer A). Interview results indicate that scientific research activities, such as writing theses and graduation projects, are considered the most valuable co-creation initiatives at the University of Hai Duong, underscoring the importance of interaction between lecturers and students (Table 1).

Table 1: Activities that often take place in higher education

Question	Low	Average	high
	(percent)	(percent)	percentage)
STUDENT/LEARNER-CENTERED: In this flipped classroom model,	10	75	15
students actively explore lesson materials and present topics before			
attending class. During class time, discussions are encouraged, with the			
instructor facilitating and guiding the conversation to a conclusion.			
INSTRUCTOR-CENTERED: Students participate in a large lecture, in	25	50	25
which the instructor often lectures in front of the class.			
FORUMS/WORKSHOPS: Students engage as audience participants in	35	55	10
on-campus forums or seminars organized by the school or student			
clubs. These events provide opportunities for students to listen to			
speakers, engage in discussions, and gain insights on various topics,			
promoting a collaborative learning environment.			
STUDENT EXCHANGE PROGRAM: Students participate in a	15	50	35
student exchange program, allowing them to study abroad and immerse			
themselves in different cultures and academic environments. This			
experience promotes cross-cultural understanding, broadens			
educational perspectives, and enhances personal and professional			
development.			

QUESTIONNAIRE PARTICIPATION: Students participate in a university student satisfaction questionnaire for activities such as evaluation after each course, including curriculum content and faculty.	5	50	45
WORK INTEGRATED COURSE: With coaching and support from the university, students are placed with a company to complete an industry-related project		70	15
THESIS: Students participate in a thesis or project as part of their diploma. Students with excellent theses or good academic results can continue to study for a master's degree or a doctorate or can be retained at the University as teaching assistants.	0	40	60
CO-RESEARCH WITH INSTRUCTOR: Students participate in a research project or scientific inquiry as partners with a lecturer.	0	25	75
STUDENT ASSOCIATION: Students participate in the student association to represent and propose student issues in university policy improvement projects		45	20
TEACHING SUPPORT/TUTORING: Students can voluntarily and actively become teaching assistants or tutors in class, thereby actively absorbing and imparting knowledge.	25	50	25

Source: Authors

4.7. Results from co-creation activities

4.7.1. Benefits of co-creation

Students Self-Efficacy

Self-efficacy, as defined by Bandura and colleagues (1999), refers to the belief in one's ability to solve problems and achieve goals. Co-creation activities significantly enhance students' self-awareness and confidence. For instance, one student remarked, "I feel more confident sharing my ideas and knowledge about certain topics" (Student, N). Another student expressed, "I feel empowered to see myself in what I create more than in other topics" (Student, B).

Instructors also noted the positive impact on students' self-efficacy, stating, "Students realize their perspectives are meaningful and their ideas have value" (Lecturer, H). This feedback underscores the transformative nature of co-creation in fostering a sense of agency among students.

4.7.2. Building Positive Relationships

Co-creation between students and lecturers fosters service innovation by integrating diverse perspectives. One student noted that merging the insights of both lecturers and students leads to innovative ideas, highlighting the value of collaboration in generating creative solutions (Student, C). Additionally, students recognize their unique position as current learners, asserting that they often understand student challenges better than previous generations of lecturers (Student, D). Faculty members also gain valuable knowledge and skills through this collaborative process. Co-creation enables lecturers to remain current with digital teaching trends and methodologies. As one lecturer explained, "Co-creation allows faculty to gather knowledge from their students and share that knowledge. By collaborating, they can gain new skills and knowledge, such as keeping up with new trends or how to implement digital in teaching and learning" (Lecturer, C). While co-creation is a catalyst for innovation, longitudinal research is needed to explore how students' integrative perspectives may shape future practices, teaching methods, and policies.

4.7.3 University Brand Image

Co-creation activities significantly enhance the university's brand image and reputation, which are crucial in today's competitive higher education landscape (Foroudi et al., 2014; Gotsi & Wilson, 2001). Establishing a lasting brand image fosters positive attitudes among stakeholders, while effective marketing is essential for attracting students, faculty, and resources (Wilkins & Huisman, 2015). Both students and lecturers recognized the role of

co-creation in enhancing the university's appeal. Collaborative efforts create an engaging learning environment, making the institution more attractive to prospective students (Lecturer, E). Students noted that co-creation contributes to their happiness and success, ultimately elevating the university's status: "Students are happier and more successful, and programs and pass rates improve. This enhances the university's reputation through initiatives that genuinely care for students" (Student, G). These insights underscore the profound impact of co-creation on university marketing, reinforcing the importance of collaboration in shaping a positive institutional identity.

4.7.4. Limitations of Co-Creation

While the qualitative research yielded predominantly favorable results, several observations indicate that the cocreation process has its limitations.

Limited Impact

Co-creation activities may exert limited influence if perceived merely as supplementary to the curriculum rather than integral to the learning experience (Nyström et al., 2019). One instructor noted that the co-creation process had only a minimal effect on the relationship between the instructor and certain students, failing to significantly enhance knowledge or innovation (Lecturer, C). Additionally, some students, particularly introverts, expressed hesitance to participate, feeling that their lack of expertise hindered their involvement (Student, M). Uneven workload distribution within groups was also a concern, leading to dissatisfaction among some students (Student, D).

Conflict of Interest

Co-creation activities can give rise to conflicts of interest, as differing perspectives and expectations may create tension among participants (Lowman, 2010). Students sometimes find themselves at odds with lecturers, resulting in conflicts that may lead to some students dropping out of the course (Student, G). Managing co-creation effectively becomes challenging when conflicting expectations are present, particularly in larger classrooms (Smith & Fredricks-Lowman, 2019). Misunderstandings and disagreements among students, lecturers, and other stakeholders can also arise. As one lecturer remarked, "In larger classes, the co-creation process is not sufficiently facilitated, which can lead to misunderstandings and disagreements between students, instructors, and other stakeholders" (Lecturer F).

Table 2 summarizes the findings from the co-creation efforts in learning and teaching, indicating that the University of Hai Duong achieved results comparable to global case studies on the value of co-creation in higher education.

Table 2: Results of co-creation through interviews

Benefits Face Who experiences the effects?

The interaction between lecturers and	Build positive relationships	Student
students is engaging.		
I appreciate being asked to speak up	Build positive relationships	Student
Develop and experience an equal	Build positive relationships	Student
relationship		
The roles of students and lecturers change.	Build positive relationships	Students and lecturers
Even the worsening relationships happened	Conflict of interest	Students and Lecturers
before I joined the activities.		
Expand the learning process for more	Innovation	Student
transparency		
Increase confidence, enthusiasm,	Innovation	Student
excitement, and motivation		
Appreciate students' experiential learning	Innovation	Student

Enhance identity, metacognitive awareness	Innovation	Students and lecturers
of learning and teaching, inspire and		
transform.		
Build a learning community	Innovation	Students and lecturers
The curriculum becomes more relevant.	Innovation	Students and lecturers
Challenge and provide opportunities to pace	Innovation	Lecturer
teaching appropriately		
Value co-creation has little impact on the	Limited impact	Lecturer
technical skills I already possess.		
Students 'scores or quality of work will	Students 'self-study capacity	Student
improve		
Improve skills for future career	Students 'self-study capacity	Student
development, such as teamwork, critical		
thinking, and conversation		
You are studying beyond the course and	Students 'self-study capacity	Student
using what you have learned in new		
situations or to achieve further learning		
goals.		
Make the transition from grading to learning	Students 'self-study capacity	Student
Improve student satisfaction, program	University brand image	Organization
quality, and outcomes		
Creating value together can improve	University brand image	Organization
learning. This shows potential students that		
the university is dedicated to providing a		
high-quality, student-centered education.		

Source: Authors

4.7.5. Barriers to co-creation

This study investigates co-creation in higher education while exploring related barriers and issues. The identified obstacles include time constraints, large class sizes, inexperienced participants, power imbalances between instructors and students, and student initiative.

Time Constraints

Time constraints in higher education pose significant challenges for co-created teaching and learning. Students and lecturers often struggle with busy schedules, necessitating adjustments to their routines to accommodate co-creation activities. Some educators prioritize co-creation due to its positive outcomes or a desire for a more democratic and engaging educational experience. However, co-creation often requires more time than traditional methods, leading to concerns about balancing class time (Lecturer, A). Additionally, participants expressed a need for more time to foster connections and engagement before or after co-creation activities. Students often report feeling overwhelmed by extended study hours without breaks, which adversely affects their academic performance (Student, H).

Large Class Sizes

Large class sizes in higher education negatively impact learning, student engagement, and interaction between educators and students. This situation often forces educators to rely on lectures, reducing opportunities for active participation and in-depth discussions among students. The popularity of faster-graded assessments also stems from the challenges associated with large classes. Lecturers emphasized the need to reduce class sizes to improve the quality of education, as larger classes hinder individual attention (Lecturer, A). Smaller classes facilitate more meaningful interactions, dialogue, and exploration of ideas, while larger classes often lead to increased self-study and less facilitation of group discussions (Student, J). The feasibility of implementing whole-class co-creation in learning and teaching largely depends on class size, with smaller classes proving to be more conducive to effective co-creation.

4.7.6. Power Imbalance Between Students and Lecturers

Power imbalances can hinder effective co-creation in educational settings. Issues may arise in various contexts, including decision-making processes, organizational structures, and educators' perceptions of themselves as intimidating figures (Dollinger et al., 2018). Cam and Oruc (2014) highlight the power dynamics in which students may feel threatened by the authority of the instructor, making them uncomfortable expressing their ideas. Some students may feel discouraged when asking questions or sharing their thoughts (Student, L). In contrast, open and approachable educators inspire greater student engagement (Student, N). One student remarked, "I feel more inspired by professors who are open with students, always encouraging them to ask questions and engage in meaningful discussions. I will study harder for such professors, regardless of the subject" (Student, N).

4.7.7. Student Initiative

According to Ramaswamy (2009), value co-creation can promote student innovation and creativity, but this requires active participation and initiative. However, time constraints and a lack of awareness can prevent students from taking the lead. Some students believe that co-creation is unnecessary (Student, G). Educators have also noted a lack of student initiative in the classroom (Lecturer, F), stating, "Although students appreciate the importance of participating in their learning, many professors find that a significant number of students lack the initiative to take responsibility for their learning" (Lecturer, F). Student initiative is critical for developing essential skills, fostering creativity, and creating a collaborative learning environment.

In summary, co-creation in higher education faces barriers related to time constraints, class size, participant experiences, power dynamics, and student autonomy. Addressing these challenges is essential to fully realize the potential of co-created teaching and learning experiences.

5. Conclusion and implications

This section connects the literature-based co-creation model with the model developed from the data gathered in this study. Utilizing the Gioia method (Corley & Gioia, 2004), findings are summarized by linking participant quotes to second-order themes and aggregate dimensions. Figure 1 illustrates the composite themes and subthemes identified in this research. The primary aim of this study is to investigate the nature of co-creation in higher education through its inputs, processes, and outputs, leading to a model developed from empirical data. Several themes emerged from the analysis, including personal antecedents such as Student Initial Perceptions and Motivations and Instructor Goals and Motivations, as well as environmental factors like Student Attitudes and Motivations and the overall Learning Environment. Furthermore, the study emphasizes the importance of university resources, individual expertise, and activities that foster collaboration between instructors and students, encapsulated in the concept of Value Co-Creation. This process is contingent upon a variety of factors, including strong interpersonal connections. Significantly, the research highlights scientific research activities and graduation theses/projects as major contributors to Value Co-Creation at the University of Hai Duong. The study also examines the benefits of co-creation from the perspectives of students, lecturers, and institutions, alongside the concomitant barriers that may arise. While the benefits of co-creation tend to be consistent, the obstacles can vary between individuals or groups. Commonly cited barriers include time constraints, large class sizes, and a lack of student initiative.

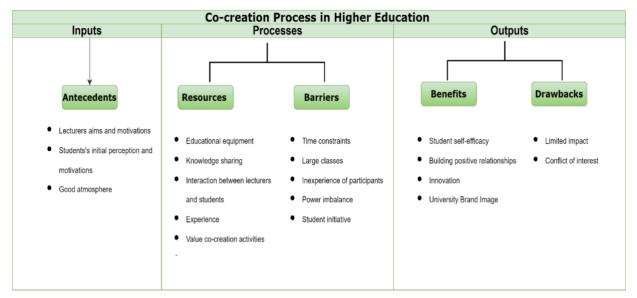


Figure 1: Co-creation model for higher education based on qualitative methods

Source: Authors

The most significant contribution of this study lies in its findings related to the barriers to co-creation within the context of the University of Hai Duong. Research has identified various transparent and diverse obstacles that hinder the co-creation process, encompassing five key factors: Time Constraints, Large Classes, Inexperienced Participants, Power Imbalance Between Lecturers and Students, and Student Initiative.

A study by Andriessen and colleagues (2019) highlights that implementing co-creation activities in larger classrooms presents challenges due to the varying time each student can devote to participation. This can lead to inequities in engagement, where some students have more opportunities to contribute than others. Consequently, power dynamics between students and lecturers can further complicate effective co-creation. Students may feel that their voices are not heard or their opinions undervalued, while lecturers might perceive themselves as being in control of the process.

To address these issues, several considerations must be made before initiating co-creation activities. These include assessing the time and effort required, determining how to support any necessary exam requirements, and finding ways to minimize power dynamics not only between lecturers and students but also among students themselves. Additionally, the duration of activities may impact motivation and interest; therefore, strategies to re-engage participants should be considered. One of the primary recommendations from this research is to start co-creation initiatives on a smaller scale and gradually expand them over time. This approach can help attract newcomers to the process, prepare them for more extensive co-creation activities, and reduce imbalances by allowing lecturers to engage more directly with students.

In interviews conducted by the research team, some perceptions emerged indicating that co-creation activities are not always beneficial. In certain cases, the co-creation process can even generate negative value. This finding is significant within the qualitative research context. Some lecturers expressed concerns that co-creation activities still predominantly reflect the role of the instructor. According to Järvi et al. (2018), negative outcomes associated with co-creation can include **Limited Impact** and **Tension and Conflict**. These issues suggest that co-creation activities may not significantly enhance the student learning experience or improve curriculum quality, and they can lead to conflicts among lecturers, students, and other stakeholders, particularly when there are differing expectations regarding the outcomes of these activities.

Some students feel that pressuring their closest friends to participate in activities that do not align with their personalities may result in shyness and lower self-esteem. This response can vary based on each student's unique

nature and circumstances; thus, lecturers must adopt teaching methods tailored to the diverse needs of each student group to ensure maximum effectiveness. Such misalignment can limit the efficacy of the co-creation process and create tension among students, lecturers, and other stakeholders. To mitigate these challenges, Mahr et al. (2014) suggest that practical co-creation activities in higher education should establish clear ground rules to minimize the potential for conflicts of interest. Additionally, inclusive processes, adequate resources, intentional integration, and recognition of achievements and contributions are vital components for successful co-creation. This study employs qualitative methods to explore co-creation in educational settings and addresses three key questions: (1) Most participants engage in co-creation activities, although they receive limited attention; (2) Co-creation encompasses four important components: resources, outcomes (including both positive and negative impacts), and barriers; (3) Co-creation yields both advantages and disadvantages, producing varied outcomes in educational contexts. The obstacles to co-creation are diverse and widespread.

In summary, this study benefits students, lecturers, and administrators at the University of Hai Duong by illuminating co-creation, its influencing factors, and its outcomes. Co-creation offers tangible benefits, including enhanced student confidence, employability, and service quality. However, challenges persist within Vietnam's education system. Co-creation represents a practical solution, and universities can leverage research to develop more co-creation-related activities, gaining valuable insights to enhance the teaching and learning process.

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