Student Learning Experiences in the Flipped Classroom Model: A Phenomenological Approach

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Abstract: This study aims to explore students' learning experiences in implementing the flipped classroom model at University X, Bandung City, using a phenomenological approach. The subjects were eight students who attended flipped classroom-based lectures in the odd semester of 2024/2025. Data were collected through in-depth interviews, observation, and documentation, then analyzed using Colaizzi's phenomenological steps including data reduction, coding, categorization, and theme extraction. The results showed that students experienced learning dynamics ranging from initial confusion to the formation of motivation, deeper understanding, and more active social interactions with lecturers and peers. The main challenges that emerged were time constraints, obstacles to technology access, and difficulties adapting to independent learning patterns. Nevertheless, students interpreted the flipped classroom as a meaningful experience that fostered independence, academic responsibility, and digital literacy skills relevant to the demands of 21st-century learning. This study concluded that flipped classrooms have the potential to improve the quality of learning in higher education, both in academic aspects and the development of students' soft skills. However, the success of its implementation depends on student readiness, infrastructure support, and the repositioning of the lecturer's role as a learning facilitator.

Keywords: flipped classroom, learning experience, phenomenology, learning motivation, higher education

INTRODUCTION

Higher education plays a strategic role in developing adaptive, critical, and innovative human resources. However, many universities in Indonesia still employ conventional, one-way, lecture-based learning. This model is relatively easy to implement, but often creates various problems. Students tend to be passive, class participation is limited, and interactions between lecturers and students are more about knowledge transmission than dialogue. Large-scale studies have shown that passive learning, such as lectures, leads to low student learning outcomes, particularly in the areas of conceptual understanding and higher-order thinking skills (Freeman et al., 2014). A survey by Hake (1998) of thousands of physics students also

showed that traditional methods yield significantly lower learning outcomes than interactive, engagement-based learning strategies.

The challenges of conventional learning are increasingly apparent in the 21st century. Advances in digital technology, the need for global competencies, and the demands of the workplace mean that lecturer-centered learning is no longer adequate. Today's students are required to possess 21st-century skills such as critical thinking, collaboration, communication, creativity, digital literacy, and lifelong learning. Therefore, a learning approach that facilitates student engagement, independence, and collaboration is an urgent need (Shi, 2025). Universities are not only responsible for disseminating information but also for creating learning experiences that prepare students for the complex challenges of the future.

One emerging innovative model is the flipped classroom. Flipped classrooms reverse the traditional learning structure: basic material is provided online or via video for students to study before class, while face-to-face sessions are used for higher-level activities such as discussions, case analysis, group collaboration, and problem-solving. Several studies have shown that flipped classrooms provide tangible benefits in improving students' conceptual understanding, learning motivation, and collaborative skills. A recent meta-analysis in medical education, for example, found that flipped classrooms were significantly more effective than traditional methods in improving academic outcomes, clinical skills, and student satisfaction (Shi, 2025). Other studies have also reported that this model increases student engagement, makes the learning process more active, and fosters a sense of ownership of knowledge (Mengesha, 2024).

Despite its many advantages, the implementation of flipped classrooms is not without its challenges. Several studies have revealed barriers such as disparities in technology access, a lack of motivation among some students for independent learning, and lecturers' limited ability to prepare effective digital learning materials (Asif et al., 2025; Yavuz, 2025). Furthermore, the shift in the lecturer's role from primary source of information to facilitator of learning also requires adaptation and readiness, which is not always easy. This situation demonstrates that the effectiveness of flipped classrooms cannot be measured solely by academic achievement but also needs to be seen in the students' own learning experiences.

Student experience is a crucial aspect because it reflects how they understand, perceive, and interpret the learning process. This aspect encompasses cognitive, affective, and social dimensions. Exploring student learning experiences can provide a more comprehensive understanding of how flipped classrooms operate in real-world contexts, the challenges and benefits they experience, and how they influence their attitudes and motivation. Therefore, qualitative research using a phenomenological approach is needed to deeply understand the meaning of students' learning experiences. This approach captures students' subjective perspectives, thus complementing the quantitative data that has dominated flipped classroom studies.

Thus, research on students' learning experiences in the flipped classroom model is highly urgent. This research not only provides theoretical contributions to the development of innovative learning models but also provides practical insights for lecturers and higher education institutions in designing more relevant, adaptive, and student-centered learning strategies.

Framework of thinking

Conventional lecture-based learning in higher education has significant weaknesses in fostering active student participation. Students are often passive recipients of knowledge, resulting in low engagement, conceptual understanding, and higher-order thinking skills (Freeman et al., 2014; Hake, 1998).

The demands of the 21st century require a learning model that not only conveys information but also develops competencies in collaboration, communication, creativity, digital literacy, and independent learning (Shi, 2025). In this context, the flipped classroom emerged as a learning innovation that reverses the role of the classroom. Students learn basic material before meetings online, while the classroom is used for collaborative activities, discussions, and problem-solving (Mengesha, 2024).

Previous research has shown that flipped classrooms effectively improve student motivation, learning outcomes, collaborative skills, and satisfaction (Shi, 2025; Mengesha, 2024). However, their implementation faces challenges such as gaps in technology access, student resistance to independent learning, and lecturers' limitations in preparing digital learning content (Asif et al., 2025; Yavuz, 2025).

Given these opportunities and obstacles, it is important to examine how students actually experience the flipped classroom. Student learning experiences encompass cognitive (conceptual understanding), affective (motivation, satisfaction), and social (collaboration, interaction with lecturers/peers) aspects. Through a phenomenological approach, this study seeks to explore the meaning of student experiences in depth, thereby providing more comprehensive insights into the effectiveness of the flipped classroom from the students' perspective.

METHOD

This study used a qualitative approach with a phenomenological method. This approach was chosen because it is suitable for exploring students' subjective experiences in depth (Creswell & Poth, 2018; Moustakas, 1994). The study was conducted at University X, Bandung City, in the 2024/2025 academic year. The research participants consisted of eight students attending lectures using the flipped classroom model. The number of participants was selected based on the principle of sufficient information until data saturation was reached (Guest, Namey, & Chen, 2020). Data were collected through in-depth semi-structured interviews, participant observation during the lecture process, and documentation studies in the form of teaching materials, student assignments, and reflection notes.

Data analysis was conducted through data reduction, open coding, categorization, and theme extraction, referring to Colaizzi's (1978) phenomenological analysis procedures. This process enabled researchers to systematically identify the meaning of students' learning experiences. Data validity was tested using source triangulation, member checking, and an audit trail to ensure the consistency and credibility of the findings (Lincoln & Guba, 1985).

RESULTS AND DISCUSSION
Results
Students' initial experiences when facing the flipped classroom

This study involved eight students from University X in Bandung City who took courses using the flipped classroom model in the odd semester of 2024/2025. Phenomenological analysis produced several main themes that represent the students' learning experiences, namely (1) initial experiences facing the flipped classroom, (2) challenges in learning, (3) perceived benefits, and (4) the meanings that students construct towards this model.

1. Initial student experiences: The majority of students stated that their first encounter with the flipped classroom created both surprise and curiosity. Students are used to receiving material directly from the lecturer, but in the flipped classroom, they are required to prepare their initial understanding before class. One student said: *"I was a bit confused at first because usually the lecturer explains things, but now I have to learn from videos first. It feels different, but I'm better prepared for class discussions."*(M1).

2. Learning challenges: Students face several obstacles, primarily limited time and consistency in independent study. Some students report difficulty managing time to watch videos or read materials before class. Furthermore, internet access is also a challenge for some students, who don't always have a stable network.

3. Perceived Benefits: Despite the challenges, students reported significant benefits. They felt more active in discussions, more confident in expressing their opinions, and better understood the material because the learning process was more hands-on. This aligns with previous research findings that flipped classrooms can increase student engagement and learning satisfaction (Mengesha, 2024; Shi, 2025).

4. Student-constructed meaning: Based on their shared experiences, students perceived the flipped classroom as providing space for them to become independent learners. This model was perceived as a challenging yet relevant learning method for the digital age. Students also perceived a shift in the lecturer's role to become a facilitator, focusing more on guidance than simply delivering material.

Table 1. Results of thematic analysis of student learning experiences in the flipped classroom

Student Quotes	Initial Coding	Category	Theme
"At first I was a bit confused because usually the lecturer explains, but now I have to learn from the video first." (M1)	Initial confusion, adapting to self-study	Initial adaptation	Initial experience facing flipped classroom
"Sometimes I don't have time to watch videos before class because of other assignments." (M3)	Time constraints, lack of preparation	Technical barriers and time management	Challenges in learning
"Discussions in class are more lively, I'm more confident in speaking up because I understand a little from the video." (M4)	Increased participation, courage to express opinions	Active interaction	Benefits felt
"This model made me realize that learning is not just in the classroom, but is also a personal responsibility." (M7)	Self-learning awareness, responsibility	Self-reflection	The meaning of flipped classroom learning

Table 1 shows that students transitioned from initial confusion to active engagement in the discussions. Time and access constraints persisted, but the benefits of increased self-confidence and awareness of independent learning were emphasized.

The findings of this study support previous studies that suggest that flipped classrooms can improve learning outcomes while building students' collaborative skills (Freeman et al., 2014; Mengesha, 2024). However, the results also demonstrate that student readiness is a key factor for success. Limited time, internet access, and self-study discipline are issues that need to be addressed, in line with reports by Asif et al. (2025) and Yavuz (2025). Thus, the student experience in the flipped classroom at University X demonstrates a complex dynamic: technical and motivational challenges on the one hand, and opportunities to strengthen learning independence and academic interaction on the other.

Challenges Faced by Students

Although flipped classrooms offer a more interactive learning experience, students at University X in Bandung reported several significant challenges in their implementation. These challenges stemmed from time management, technological readiness, and adapting to new learning patterns.

First, time constraints were the most frequently cited obstacle. Students had numerous other coursework assignments, so they weren't always able to watch videos or read the material before class. This led some to come to class unprepared. One student stated:

"Often I don't have time to watch all the videos before class because I have so much assignments." (M2).

Second, technology-related barriers were also highlighted. Although most students in Bandung are accustomed to using digital devices, unstable internet access remains a problem, especially for those living in suburban areas. One student explained:

"Sometimes I have trouble streaming videos if the signal is bad at home. I can finally watch them on campus."(M5).

Third, challenges arose in adapting to independent learning patterns. Some students were accustomed to the conventional, lecturer-centered system, so the transition to a flipped classroom required new disciplines. Some students expressed feeling awkward during class discussions because they were not used to being active participants.

Table 2. Student Challenges in Implementing Flipped Classroom

Student Quotes	Initial Coding	Category	Theme
"Often I don't have time to watch all the videos before class because I have so much assignments from other courses." (M2)	Limited time, heavy course load	Time management	Time constraints
"Sometimes I have trouble streaming videos if the signal is bad at home." (M5)	Internet is unstable	Access to technology	Technology barriers
"At first I was confused because I usually just listened to the lecturer, but now I have to actively speak." (M6)	Initial confusion, passive	Adaptation of learning patterns	Adaptation to new systems
"If you're not disciplined, the material will pile up and it will be difficult to keep up with the discussion." (M8)	Lack of discipline, difficulty being independent	Learning independence	Self-regulation challenges

Table 2 shows that the main challenges faced by students lie in limited time, access to technology, and the process of adapting to independent learning patterns. These factors influence students' readiness to participate in class discussions and activities, thus requiring attention in the implementation of flipped classrooms. This finding aligns with previous studies that reported that flipped classrooms often face obstacles related to student readiness, particularly related to motivation for independent learning and limited access to technology (Asif et al., 2025; Yavuz, 2025). Time constraints and academic load are also factors that can reduce the effectiveness of flipped classrooms if not balanced with good task management strategies.

In general, these challenges indicate that the success of a flipped classroom depends not only on innovative learning design, but also on students' readiness to manage time, manage technology, and adapt to a new learning paradigm that demands more independence.

Impact on Learning Motivation, Understanding of Material, and Interaction with Lecturers/Friends

The research results show that the implementation of flipped classrooms at University X in Bandung City has had a number of positive impacts on students. These impacts are primarily seen in increased learning motivation, deeper understanding of the material, and more active interactions with lecturers and fellow students.

First, in terms of learning motivation, students felt more motivated to prepare before class. The prior knowledge they gained from the videos and modules made them more confident in discussions. One student explained:

*"*If *I've watched the previous video, I'm more enthusiastic about joining the discussion, because I already have an idea about the material."*(M3).

This motivation is not only related to self-confidence, but also the desire to contribute to the class.

Second, in terms of material comprehension, students reported that the flipped classroom helped them grasp concepts better because they had the opportunity to clarify their

understanding in class. Discussion and problem-solving activities encouraged them to not only memorize but also apply the material. One student stated:

"In class, we discuss more difficult topics. It makes us understand better because we can ask the lecturer directly if we're confused."(M6).

Third, interactions with lecturers and peers significantly increased. Students felt closer to their lecturers because their role was more of a guiding facilitator, rather than simply a lecturer. Furthermore, group discussions strengthened relationships between students, fostered collaboration, and built confidence in expressing opinions. This aligns with findings that flipped classrooms can enhance collaboration and social engagement (Mengesha, 2024; Shi, 2025).

Table 3. Impact of Flipped Classroom on Motivation, Understanding, and Interaction

Student Quotes	Initial Coding	Category	Theme
"If I had watched the previous video, I would have been more enthusiastic about joining the discussion." (M3)	Passionate, confident	Learning motivation	Motivation to learn
"In class we discuss more difficult questions, so we understand better." (M6)	Increased understanding, clarification of concepts	Deep learning	Understanding the material
"Group discussions make me more courageous in speaking." (M4)	Courage, active involvement	Social participation	Interaction with friends
"Lecturers often guide, not just explain." (M8)	The role of the lecturer as a facilitator	Academic relations	Interaction with lecturers

Table 3 illustrates that the flipped classroom impacts three important dimensions of learning. Students are more motivated to prepare, their understanding of the material deepens through discussion, and interactions with lecturers and peers increase, creating a more collaborative learning environment.

These findings align with a recent meta-analysis showing that flipped classrooms consistently improve student motivation, engagement, and conceptual understanding compared to traditional methods (Shi, 2025). Furthermore, research in medical education supports that flipped classrooms not only improve academic outcomes but also student satisfaction and social interaction (Mengesha, 2024). In the context of University X, the increased interaction between students and lecturers confirms the shift in learning paradigm from teacher-centered to student-centered.

Thus, the flipped classroom can be understood not only as an alternative method of delivering material, but also as an approach that encourages students to be more motivated, understand concepts more deeply, and interact more actively in the learning process.

The Meaning of Flipped Classroom Learning for Students

Besides providing a new learning experience, students at University X in Bandung have developed their own meaning for the flipped classroom. This meaning manifests itself in their awareness of the importance of independent learning, personal responsibility, and the relevance of learning to 21st-century needs.

First, students see the flipped classroom as a tool to enhance independent learning. By requiring them to watch videos and read materials before class, they realize that the learning process depends not only on the lecturer but also on their own efforts. One student said:

"I feel more independent because I have to study before class. So I'm not just waiting for the lecturer to explain."(M2).

Second, students viewed the flipped classroom as a form of learning that fostered a sense of academic responsibility. The learning process, which requires prior preparation, made them feel more accountable for their learning success. One student said:

"If I'm not disciplined, I'll be the one who loses out because I won't be able to participate in discussions properly."(M5).

Third, students interpreted the flipped classroom as a learning model relevant to the challenges of the digital era. They felt this method fostered skills in managing information, utilizing technology, and working collaboratively in groups. One student said:

"Learning this way is more suitable for today's era, because we are used to looking for information from the internet and learning on our own first."(M8).

Table 4. The Meaning of Flipped Classroom Learning for Students

Student Quotes	Initial Coding	Category	Theme
"I feel more independent, because I have to study first before class." (M2)	Independent, initiative	Academic independence	Learning independence
"If I'm not disciplined, I'll be the one who loses out because I won't be able to participate in the discussion." (M5)	Discipline, responsibility	Self-regulation	Academic responsibility
"Learning this way is more suitable for today's era." (M8)	Digital relevance, adaptation to the modern era	Digital literacy	21st century relevance

Table 4 shows that students interpreted the flipped classroom not only as a new learning technique, but also as a meaningful experience that fostered self-awareness, responsibility, and digital literacy skills.

These findings align with the social constructivist view that the meaning of learning is constructed through students' active experiences. Flipped classrooms encourage students to become active subjects in the learning process, thus fostering self-regulation and a sense of responsibility (Creswell & Poth, 2018; Moustakas, 1994). Furthermore, these findings support research by Shi (2025) and Mengesha (2024), which suggests that flipped classrooms impact not only academic aspects but also students' attitudes and readiness for 21st-century learning. Therefore, the significance of flipped classroom learning for students at University X includes:

1. Awareness to learn independently,
2. A sense of responsibility for the learning process, and
3. Understanding that this method is relevant to technological developments and global challenges.

Discussion
Interpretation of Results Based on Learning Theory

The results of the study show that the experiences of University X students in the flipped classroom include dynamics from initial confusion, technical and managerial challenges, to the creation of motivation, deep understanding, social interaction, and the meaning of learning that is relevant to the needs of the 21st century. To understand these findings, it is necessary to link them to a relevant learning theoretical framework.

First, from a Piagetian constructivist perspective, the flipped classroom supports the principle that knowledge is actively constructed by individuals through interactions with the environment (Piaget, 1970). Students are required to construct knowledge independently from video materials before class, then reinforce their understanding through discussion. This explains why students report increased understanding and engagement when they have prior knowledge before class.

Second, Vygotsky's (1978) theory of the zone of proximal development (ZPD) explains how interactions with instructors and peers expand students' learning abilities. In a flipped classroom, students bring their initial knowledge and then develop it through class discussions, with the instructor acting as a facilitator. Research shows that students are more

confident in asking questions and engaging in discussions, in line with Vygotsky's scaffolding concept.

Third, from the perspective of humanistic learning theory proposed by Rogers (1983), the flipped classroom fosters students' intrinsic motivation through the freedom to learn independently, develop responsibility, and provide meaningful experiences. The finding that students feel more independent and responsible aligns with humanistic learning principles that emphasize personal experience and self-actualization.

Fourth, Deci and Ryan's (1985) self-determination theory can be used to understand the increase in student motivation. The flipped classroom provides autonomy by providing opportunities for independent learning, enhances competence through problem-solving exercises, and strengthens social connectedness through class discussions. These three components are the main factors explaining the increase in student learning motivation in the context of this study.

The flipped classroom is not only understood as a technical learning strategy, but also as a concrete implementation of the principles of modern learning theory. It integrates constructivism (knowledge building), sociocultural (collaboration and scaffolding), humanism (meaningful experiences), and motivational theory (autonomy, competence, and connectedness).

Comparison with Previous Research

The findings of this study, which highlight the experiences of students at University X in Bandung City in flipped classrooms, show a number of similarities and differences with previous research.

First, regarding learning motivation, the results of this study show that students are more enthusiastic about participating in discussions when they already have prior knowledge from the video material. This is consistent with the findings of Shi's (2025) meta-analysis, which reported that flipped classrooms significantly increase student motivation and engagement compared to traditional methods. Research in medical education also shows similar results, where flipped classrooms increase student satisfaction and motivate them to learn more independently (Mengesha, 2024).

Second, regarding material comprehension, this study supports the findings of Freeman et al. (2014), which confirmed that active learning, such as flipped classrooms, can improve students' academic achievement and conceptual understanding in science, technology, and mathematics. Students in this study reported that class discussions after independent study helped them clarify concepts and apply the material to real-world contexts.

Third, in terms of learning challenges, the results of this study align with a report by Asif et al. (2025), who found that time constraints and academic load were the main obstacles to implementing flipped classrooms. Furthermore, the findings regarding internet access constraints for some students also align with Yavuz's (2025) research, which stated that technological readiness and digital literacy significantly influence the effectiveness of flipped classrooms.

However, this study also reveals a unique aspect, namely how students interpret the flipped classroom as a meaningful experience that fosters awareness of learning independence and personal responsibility. This aspect is rarely discussed in depth in previous quantitative research, but is closer to the findings of qualitative research based on phenomenology, as suggested by Moustakas (1994) that the meaning of students' subjective experiences can enrich the understanding of an educational phenomenon. This study not only confirms the results of previous studies regarding the effectiveness of the flipped classroom in increasing motivation and understanding, but also adds a new perspective on the meaning of learning for students in the local context, namely at universities in Bandung City.

Implications of the Flipped Classroom Model in Improving the Quality of Learning in Higher Education

The results of this study indicate that the flipped classroom not only provides new experiences for students, but also has significant implications for improving the quality of learning in higher education, especially in the context of University X in Bandung City.

First, the flipped classroom has implications for increasing the effectiveness of the learning process. By moving information transfer activities outside the classroom, face-to-face time can be focused on discussion, problem-solving, and collaboration. This supports the principles of active learning, which has been shown to be more effective in enhancing conceptual understanding than lecture methods (Freeman et al., 2014). Consequently, universities can adopt this strategy to strengthen the achievement of more meaningful learning outcomes.

Second, in terms of soft skills development, flipped classrooms foster 21st-century skills such as communication, collaboration, critical thinking, and digital literacy. Students involved in group discussions reported increased confidence in expressing opinions and ability to collaborate with classmates. This is relevant to the needs of the workplace, which demands that college graduates possess non-academic competencies in addition to theoretical knowledge (Shi, 2025).

Third, a significant implication is seen in the shift in the lecturer's role from a material deliverer to a facilitator. In this study, students felt a closeness to the lecturer because their role was more guiding than simply explaining. This shift aligns with the direction of higher education reform toward a student-centered learning paradigm (Mengesha, 2024).

Fourth, the implementation of the flipped classroom encourages increased student responsibility and independence. Findings indicate that students are beginning to recognize the importance of discipline and preparation before class. This aligns with Deci and Ryan's (1985) self-determination theory, which argues that autonomy and personal responsibility can increase intrinsic motivation.

However, these positive implications also need to be balanced with supporting strategies to overcome identified obstacles, such as limited time, technology access, and digital literacy. Universities need to provide adequate infrastructure, lecturer training, and monitoring mechanisms for the optimal implementation of flipped classrooms (Asif et al., 2025; Yavuz, 2025). Thus, flipped classrooms have implications for transforming the quality of learning in higher education, both in terms of academic effectiveness, strengthening 21st-century competencies, repositioning the role of lecturers, and student independence. Planned and adaptive implementation will make flipped classrooms a crucial strategy for enhancing the competitiveness of higher education in the global era.

CONCLUSION

This study found that the implementation of the flipped classroom at University X, Bandung City, presents challenges in terms of time constraints, technology access, and adaptation to independent learning. However, this model has been proven to improve student motivation, material understanding, and interaction with lecturers and peers. Students interpret the flipped classroom as an experience that fosters independence, responsibility, and digital literacy, making it relevant to the demands of 21st-century learning. Thus, the flipped classroom has the potential to strengthen the quality of learning in higher education if supported by student readiness, infrastructure, and the role of lecturers as facilitators.

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