

EFL Learners' Perceptions on Flipped Classroom in a Private University in Indonesia

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Abstract

This research will analyze the students' perception about flipped classroom. This study used a qualitative case-study approach. conducted at Universitas Muhammadiyah Sorong. The subjects of this research are 20 subjects. The findings of the study shows that three important patterns emerged from the data. The first theme, structure learning approach, includes sub-themes that define the flipped classroom: preparatory aspects, procedural views, and structured processes. The second theme, creating enjoyable atmosphere, is further divided into several sub-themes: engagement through active learning, personalized and flexible learning, and supportive classroom culture. The final theme, fostering independent learning activities, encompasses sub-themes such as learning without direct teacher guidance, developing problem-solving skills, and managing their time effectively. The findings of this study imply that the flipped classroom model can be highly effective in higher education by promoting a more structured and engaging learning environment.

Keywords: Flipped classroom; structure learning approach; enjoyable atmosphere; independent learning

Introduction

The flipped classroom has emerged as a promising alternative learning method, transforming traditional teaching by allowing students to engage with instructional materials before class. This approach fosters student-centered learning, allowing learners to explore concepts at their own pace, thereby enhancing comprehension and retention. Additionally, it promotes active learning during in-class sessions, where students participate in discussions, problem-solving, and collaborative activities rather than passively receiving information (Bergmann & Sams, 2012). The use of technology in the flipped classroom also makes learning more flexible and accessible, accommodating diverse student needs and learning styles. Due to its effectiveness in enhancing learning experiences, the flipped classroom has gradually gained popularity, particularly in EFL classrooms.

As more educators recognize its advantages, the flipped classroom is increasingly being adopted in EFL settings, where it proves to be a practical approach for improving language acquisition and meeting modern educational demands. Many educators are embracing this approach because it aligns with the growing emphasis on student-centered learning, enabling more interactive and engaging classroom experiences (Chang & Hwang, 2018). Additionally, the widespread availability of digital learning platforms has implemented flipped classrooms more accessible, encouraging more institutions to adopt this method. The flexibility it offers also appeals to both students and teachers, as it allows learners to study at their own pace while giving instructors more time to facilitate meaningful discussions and activities (Aprianto et al., 2020). Furthermore, as research continues to highlight its pedagogical effectiveness, the flipped classroom is gaining greater recognition in academic communities, further driving its adoption in EFL education.

Furthermore, the concept of the flipped classroom has been widely discussed in educational research, with various scholars providing their definitions. According to Bergmann and Sams (2012), the flipped classroom is an instructional model in which direct instruction is shifted outside the classroom, allowing in-class time to be used for active learning and problem-solving. Similarly, Lage et al., (2000) define the flipped classroom as a methodology that inverts the traditional teaching approach by delivering content outside of class and using class time for interactive activities. Tucker (2012) describes it as a pedagogical model that leverages technology to provide students with instructional content before face-to-face sessions, enabling more meaningful engagement during class. In addition, Bishop & Verleger (2017) characterize the flipped classroom as a blend of online learning and active learning strategies, emphasizing student-centered instruction. These definitions highlight the core principles of the flipped classroom, reinforcing its role in enhancing student engagement and learning outcomes, particularly in EFL contexts.

The implementation of the flipped classroom in EFL settings requires careful planning to ensure its effectiveness in enhancing language learning. One crucial aspect is the preparation of high-quality instructional materials, such as pre-recorded lectures, reading materials, and interactive exercises, which allow students to engage with the content before attending class (Strayer, 2012). These resources must be well-structured and accessible to accommodate different learning styles and proficiency levels. Another key factor is the design of in-class activities that promote active learning, such as group discussions, problem-solving tasks, and collaborative projects (Gavranović, 2017). By utilizing class time for meaningful interactions, students can apply

their pre-learned knowledge in real-world language contexts, resulting in deeper comprehension and enhanced communication skills.

Several studies have highlighted the advantages of the flipped classroom in improving learning outcomes across various educational contexts, including EFL classrooms. Flipped classroom is effective in improving language skills in EFL classes (Abdullah et al., 2019; Amiryousefi, 2017; S. C. Chen et al., 2016; Dong, 2016). Flipped classrooms can also increase student interest, participation and motivation in learning (Challob, 2021; Chang & Hwang, 2018; Haghighi et al., 2018; Hasanah & Arifani, 2020). EFL learners also had a high interest and positive attitude in the flipped classroom method because flipped classroom method has combined technology and teaching method (Rahman et al., 2023). These findings reinforce the effectiveness of the flipped classroom in promoting active learning and better student performance.

In addition to its documented advantages, several studies have explored students' perceptions of the flipped classroom, revealing generally positive responses toward this instructional model. Research by Zainuddin and Ferera found that students appreciated the flexibility and autonomy offered by the flipped classroom, as it allowed them to learn at their own pace and revisit materials whenever necessary (Zainuddin & Perera, 2019). Similarly, a study by Mehring (2016) & Mahmud et al. (2024) indicated that students felt more engaged and confident in their learning because they had prior exposure to the content before participating in classroom discussions and activities. However, research by Lo and Hew (2017) highlighted that while many students valued the interactive nature of the flipped classroom, some faced challenges in adapting to the increased responsibility for self-directed learning. These studies suggest that while the flipped classroom is generally well-received, its implementation should consider students' learning preferences and readiness for independent study.

In conclusion, the flipped classroom has emerged as an effective instructional model that enhances student engagement, promotes active learning, and improves language acquisition, particularly in EFL settings. Various studies have highlighted its advantages, including increased motivation, improved language proficiency, and the development of higher-order thinking skills. Additionally, research on student perceptions generally indicates positive responses, with learners appreciating the flexibility, autonomy, and interactive nature of the flipped classroom. However, some challenges, such as students' readiness for self-directed learning, remain a concern.

Despite the growing body of research on the flipped classroom, most existing studies have focused on its general benefits and implementation in language learning. Limited research has specifically examined students' perceptions of the flipped classroom in the context of academic reading, a critical skill for EFL learners in higher education. Therefore, this study aims to fill this gap by investigating students' perceptions of the flipped classroom approach in academic reading classes, providing insights into its effectiveness and potential areas for improvement in this specific context.

Literature review

History of the flipped classroom model

The Flipped Classroom (FC) Model, with a history spanning two decades, has roots in earlier educational concepts. Alison King's 1993 study, *"From Sage on the Stage to Guide on the Side,"* criticized the traditional teacher-centered model and promoted a constructivist approach, where students actively create knowledge, and teachers act as facilitators (King, 1993). Although not directly related to the FC Model, King's ideas laid a theoretical foundation (Ağırman & Ercoşkun, 2022). Eric Mazur's Peer Instruction strategy, introduced in 1997, further influenced

the development of the FC Model by promoting peer-led teaching and active engagement (Crouch & Mazur, 2001). In 2000, Dr. J. Wesley Baker introduced the "Classroom Flip" concept, integrating technology with pedagogy to promote active learning outside the classroom (Baker, 2016). Simultaneously, Lage, Platt, and Treglia from the University of Miami implemented an Inverted Classroom strategy, requiring students to engage with learning materials before class and dedicating class time to discussions and problem-solving activities (Lage et al., 2000; Talbert, 2012).

The FC Model gained significant attention in 2007 when Jonathan Bergmann and Aaron Sams shared instructional videos online to help students who missed classes. Realizing its potential, they expanded its use to support all students by enabling them to learn at their own pace, especially those struggling academically. Their approach, combined with technological advancements, garnered widespread interest in the educational community. By 2012, after publishing several books and studies on the model, Bergmann and Sams contributed significantly to the global adoption of the FC Model, which has since been widely applied across various educational levels and disciplines (Bergmann & Sams, 2012).

Definition and concept of flipped classroom

Educational activities have been greatly influenced by technological advancements, leading educators to develop innovative teaching models (Husnia et al., 2023). One such model is the flipped classroom, a blended learning approach that integrates online and face-to-face education (Ağırman & Ercoşkun, 2022). Bergmann and Sams (2011) describe it as shifting traditional in-class learning to homework while using class time for interactive tasks. Similarly, Brown (2016) defines it as a pedagogical model that relocates lectures outside the classroom and prioritizes critical thinking activities during class. This role reversal fosters a student-centered learning environment that emphasizes active learning and engagement.

Building on this concept, the flipped classroom model, initially introduced by Bergmann and Sams, harnesses technology by offering students video lectures for independent study at home while using class time for project-based learning. This evolution reflects the growing flexibility of instructional methods alongside technological advancements (Eppard & Rochdi, 2017). In this approach, students engage with theoretical content through online materials, reserving classroom sessions for discussions and practical applications (Evseeva & Solozhenko, 2015). Consequently, the flipped classroom serves as an adaptive teaching strategy that enhances student engagement, critical thinking, and active participation.

Building on this foundation, the flipped classroom is recognized as a student-centered learning model where students acquire new content through electronic resources outside class and engage in interactive, cooperative tasks during class time (Jungić et al., 2015; Kawinkoonlasate, 2019a). This method shifts the focus from traditional in-class lectures to video-based instruction viewed at home, allowing class sessions to be used for discussions, activities, and targeted support. As Davies et al. (2013) explain, the flipped classroom inverts traditional teaching by moving lectures to homework and using class time for practice and instructor-guided learning. Similarly, Bishop and Verleger (2013) describe it as an approach that integrates direct individual instruction outside class with interactive group learning in class, emphasizing the role of technology in enhancing learning outcomes.

Further reinforcing its effectiveness, the flipped classroom method redefines traditional teaching by reversing the sequence of instructional activities. Instead of attending lectures in class, students independently review pre-recorded videos, readings, or multimedia materials before

engaging in hands-on tasks, discussions, and problem-solving under teacher guidance (Al-Samarraie et al., 2020; Munir et al., 2018; Rajaram, 2019). This contrasts with conventional classrooms, where lectures are delivered during class and homework follows to reinforce learning (Talbert, 2012). Ultimately, the flipped classroom aligns with constructivist and student-centered learning principles, making it a pedagogically sound approach. While traditional classrooms are often teacher-centered (Patel et al, 2021), the flipped model personalizes learning by enabling students to learn at their own pace outside class and actively engage in collaborative activities during class (Basal, 2015). The teacher's role shifts from knowledge transmitter to facilitator, fostering an environment where students take responsibility for their learning, work in groups, and participate in meaningful discussions. This shift promotes deeper understanding, critical thinking, and active learning, establishing the flipped classroom as a more effective alternative to conventional methods.

From several explanations about the flipped classroom, the researcher can conclude that the flipped classroom represents a form of blended learning where students engage with instructional materials, such as pre-recorded videos, independently at home and then apply their understanding through practice and interactive activities during class sessions. This approach contrasts with traditional teaching methods, where new content is typically introduced in class, followed by homework and projects completed independently at home. By integrating face-to-face interaction with self-directed learning, often facilitated by technology, the flipped classroom encourages students to come to class prepared with foundational knowledge and questions, enabling more effective in-class learning and application.

Previous studies of flipped learning

Several studies have examined students' perceptions of the flipped classroom, revealing generally positive views toward this instructional model. Many students expressed that the approach enhanced their learning experience and recommended its implementation in other courses (Zainuddin & Attaran, 2016). Notably, the flipped classroom was found to benefit shy and reserved students, international students with limited English proficiency, and full-time students with more time for self-directed learning. Additionally, students reported feeling more engaged, valued, and empowered in their learning process while developing positive attitudes toward collaborative work (Chivata & Oviedo, 2018). These findings suggest that the flipped classroom creates a more inclusive and supportive learning environment.

Further research highlights students' enthusiasm for the flipped classroom, emphasizing its role in fostering an enjoyable and effective learning environment (Egara & Mosimege, 2024; Maidin & Shukor, 2021). EFL learners, in particular, expressed high interest and positive attitudes toward this method, as it seamlessly integrates technology with pedagogy (Rahman et al., 2023). This integration of technology not only enhances accessibility but also modernizes the learning experience.

Beyond perception, researchers have also explored students' learning experiences with the flipped classroom. Studies indicate that this approach fosters independence, autonomy, critical thinking, and increased motivation (Fulgueras & Bautista, 2020; Zaka et al., 2019). Moreover, the flipped classroom promotes independent learning by empowering students to take greater responsibility for their academic progress (Kustandi et al., 2019). These advantages highlight the potential of the flipped classroom as an effective and student-centered instructional approach.

Research method

Design of the study

This study used a qualitative case-study approach. According to Saldana, a case study focuses on a single unit of analysis, such as an individual, group, event, or organization, providing a manageable, holistic project for novices in qualitative research to learn basic methods of fieldwork, data collection, and analysis (Saldana, 2011). The single unit of analysis here is students' perception of flipped classroom. The case-study design used in the social sciences because it involves observing subjects, or cases, in their natural setting, with minimal interference from the researcher. The observation of this study is in Academic Reading Class in English Education Department.

Participants

The study was conducted at Universitas Muhammadiyah Sorong, involving 20 participants, consisting of 5 males and 15 females. In table 1, the participants were fourth-semester students enrolled in the Academic Reading class within the English Education Department. They had previously experienced flipped classroom instruction in the preceding semester.

Table 1. Participants' profile (table by authors)

No.	Participants	Participants' Code	Sex	Class
1	ADP	S1	Female	4 th semester
2	ANS	S2	Female	4 th semester
3	DLKP	S3	Female	4 th semester
4	ALN	S4	Female	4 th semester
5	ALDS	S5	Male	4 th semester
6	EML	S6	Female	4 th semester
7	FJR	S7	Male	4 th semester
8	FKR	S8	Male	4 th semester
9	FTR	S9	Female	4 th semester
10	HLMR	S10	Female	4 th semester
11	HRM	S11	Male	4 th semester
12	INL	S12	Male	4 th semester
13	KRTK	S13	Female	4 th semester
14	LTL	S14	Female	4 th semester
15	LLT	S15	Female	4 th semester
16	NLY	S16	Female	4 th semester
17	NVLK	S17	Female	4 th semester
18	RBL	S18	Female	4 th semester
19	RBV	S19	Female	4 th semester
20	TSL	S20	Female	4 th semester

Data analysis

The researcher obtained qualitative data through interviews, which were then transcribed and analyzed thematically. Following the three-step process by Miles et al. (2014), the researcher condensed the data by selecting, focusing, simplifying, abstracting, and transforming the raw materials, such as field notes, interview transcripts, and other empirical documents. During this stage, the researcher sorted and identified information relevant to the research focus, streamlining the data for further analysis. The researcher displayed the data by organizing and presenting it systematically to enhance understanding and enable deeper analysis of the research context. This structured presentation helped identify patterns and insights from the data. Finally, the researcher drew conclusions by continuously analyzing the data from the collection stage to the final phase.

They identified irregularities, recognized patterns, and traced cause-and-effect relationships to produce meaningful conclusions, ensuring the findings were valid and reliable.

Instrument and procedures of data collection

The researchers conducted semi-structured interviews in Indonesian to ensure that participants could comfortably express their views. This method was chosen for its flexibility, allowing for an in-depth exploration of participants' perspectives while maintaining a structured focus on essential topics, particularly students' perception on the flipped classroom.

The data of this research was collected using the following procedures: (1) The researcher asked permission to rector of Universitas Muhammadiyah Sorong, dean of Teacher and Education Faculty and the lecturer Academic Reading subject for doing research in eight meetings. (2). The researcher observed the flipped classroom learning model. Observation was conducted to get the data about the students' perception, of flipped classroom learning model. The data was collected by video-audio recording in classroom interaction. The researcher attended four different meetings and watched how the teaching and learning process worked. During the observation, the researcher plays the role of an impartial third party who is not personally involved in the event or activity that is being studied. (3). After conducting the observation, the researcher conducted face-to-face interview with the teacher and students at the end of observation to clarify every moment that happened in teaching and learning process. (4). The researcher transcribing the data that researcher gets.

Results

Three perception patterns emerged from the data. These patterns were categorized into three main themes: structure learning approach, creating enjoyable atmosphere, and fostering independent learning activities. The first theme, *structure learning approach*, includes sub-themes that define the flipped classroom: preparatory aspects, procedural views, and structured processes. The second theme, *creating enjoyable atmosphere*, is further divided into several sub-themes: engagement through active learning, personalized and flexible learning, and supportive classroom culture. The final theme, *fostering independent learning activities*, encompasses sub-themes such as learning without direct teacher guidance, developing problem-solving skills, and managing their time effectively. The discussion of these three themes from the study aims to illustrate students' perceptions of the flipped classroom.

Structure learning approach

The analysis of the findings in this study revealed that the theme of *hierarchical Activities* consists of three sub-themes: preparatory aspects, procedural views, and structured processes. These sub-themes collectively provide a comprehensive insight into how students perceive the flipped classroom as a learning model.

The first is preparatory tool emphasize the importance of pre-class preparation as a foundational element in enhancing students' readiness and engagement during in-class activities. The preparatory aspects in the flipped classroom refer to the activities and resources provided to students before the in-class session to ensure they are adequately prepared for the learning experience. This typically involves assigning multimedia content, such as video lectures, readings, or interactive modules, that introduce key concepts and theories.

For me, the flipped classroom is a learning approach where assignments or assessments are given several days before the face-to-face meeting in the classroom (S14).

The perspective from S.14 views the flipped classroom mainly as a preparatory activity involving assignments or assessments before face-to-face meetings. Students' views on the preparatory aspect as part of their perceptions of the flipped classroom are influenced by the impact they experience from this method. *With this approach, students can study lengthy or complex material in advance, allowing them to focus more on discussions and deeper understanding during class. This saves time in class and helps them grasp the material better, as they already have foundational knowledge before engaging directly with the content in class* (S. 1). This statement effectively highlights how students' perceptions of the preparatory aspect of the flipped classroom are shaped by their experiences. It underscores the benefits of having time to study complex material before class, which enhances their ability to participate in discussions and deepen their understanding during in-class activities.

The second is procedural tools in the flipped classroom refer to students' understanding of the systematic steps and processes involved in this learning model. Procedural views highlight students' comprehension of the step-by-step approach involved in the flipped classroom. Students describe it as a "reversed learning method." The student acknowledges the sequence of pre-class tasks and in-class discussions, which aligns with the flipped model. This perspective emphasizes the importance of clearly defined procedures in helping students navigate and engage with the flipped classroom effectively.

The flipped classroom is a reversed learning method. Beforehand, the lecturer sends the assignments through Google Classroom. These tasks are completed prior to the scheduled class day. Then, on the day of the class, students can engage in discussions or explanations about the assignments (S18).

Students 18 in this study provides a clear and concise description of procedural views in the flipped classroom, highlighting the reversed learning process and the sequencing of tasks. Like other student in the study explains the procedures of flipped classroom that: *"the flipped classroom is a teaching technique where a lecturer provides learning materials to students in the form of assignments. The students are expected to first understand the materials independently as homework. In the following meeting, the materials that the students have studied at home are reviewed and discussed further"* (S6). The student acknowledges the sequence of activities— independent homework followed by in-class review and discussion—showing alignment with the fundamental principles of the flipped classroom.

The third is structured tools reflect their understanding of how the learning activities in flipped classroom are systematically organized to facilitate knowledge acquisition. In this model, the process is clearly structured to ensure that students are first introduced to new material outside of class, often through multimedia resources like videos or readings. This is followed by in-class activities that are designed to deepen understanding through interactive and collaborative tasks. The structured process also involves clear guidelines and expectations for both pre-class preparation and in-class participation, ensuring that students can effectively transition from passive consumption of content to active, hands-on learning.

I think this method is great. First, we review the material on the website. Then, during face-to-face sessions, we discuss what was previously sent. This way, we study the initial material beforehand. By the time we meet in class, we already have some understanding of the topic. Finally, we can engage in face-to-face discussions, perhaps with our peers (S17).

Student 17 demonstrates a positive perception of the flipped classroom, emphasizing its structured process. The student appreciates the progression from individual study to collaborative in-class activities, suggesting that the method helps them arrive at class with prior knowledge, thereby enhancing engagement and comprehension. This perspective aligns well with the pedagogical goals of the flipped classroom. Students also emphasized the benefits of the structured process, stating: *"We watch videos and complete assignments at home before class, which is very helpful as preparation. By preparing the material at home first, we are ready for discussions in class. If we were to watch videos and learn the material during class, it would feel difficult and take more time. However, by studying at home, we can understand the material better and be more prepared for class discussions"*(S4). This statement clearly highlights the positive impact of the structured process in the flipped classroom.

Creating enjoyable atmosphere

Creating an enjoyable atmosphere in the flipped classroom can be elaborated into three main aspects: engagement through active learning, personalized and flexible learning, and supportive classroom culture. Creating an enjoyable atmosphere in the flipped classroom is essential to enhance student engagement and foster a positive learning experience.

Firstly, engagement through active learning emphasizes the importance of involving students in meaningful, hands-on activities that promote interaction, collaboration, and application of knowledge. In the flipped classroom, this approach becomes a central element, as it shifts the focus of in-class time from passive content delivery to active participation.

I find the flipped classroom method is interesting. We already have prior knowledge before attending the class, which helps us to be better prepared for the material. This makes the learning process in the classroom flow more smoothly and effectively (S1).

S1 response is related to the aspect of engagement through active learning in the flipped classroom: application of pre-class preparation. Preparing in advance allows students to feel more confident and ready to participate in interactive activities such as discussions, problem-solving, or group work. As a result, classroom activities become more effective and flow smoothly, fostering a dynamic and enjoyable learning environment. Since students prepare by reviewing materials before class, in-class activities are designed to build on this foundation.

In a flipped classroom, the discussion sessions become highly active. The students' engagement feels genuine, not just a formality. All students participate in the discussions because they truly understand the material being discussed, so it is not just one or two students who dominate the conversation. Every student has the opportunity to speak. They understand that the material discussed in class has already been studied at home, allowing class activities to focus more on interaction (S2).

S2 highlights the core principle of engagement through active learning in the flipped classroom: collaborative learning environment. By studying the material at home beforehand, students come to class prepared and ready to engage in meaningful discussions. The shift from passive listening to interactive learning enhances student involvement, deepens understanding, and fosters a more collaborative classroom environment. The students also demonstrate interactive activities in class session: *"in the flipped classroom, students study the material before the class*

begins. In class, they present their understanding as evidence of their learning, and then continue with discussions and answering questions, making the learning process more interactive". (S2). By having students study the material in advance, they come to class prepared to engage in meaningful activities like presenting their understanding, discussing concepts, and answering questions. These activities promote active participation, ensuring that students are not passive recipients of information but are actively involved in the learning process.

Secondly, personalized learning contributes significantly to creating an enjoyable atmosphere by allowing students to engage with content in ways that align with their individual learning preferences. By providing students the flexibility to learn at their own pace before class, they enter the classroom feeling more confident and prepared. This reduces stress and creates a more relaxed, positive learning environment. When students are allowed to choose how they learn, whether through videos, articles, or interactive tools, they are more likely to find the material enjoyable and engaging. During in-class activities, teachers can tailor discussions, group work, and projects to the varying levels of understanding, ensuring that all students are actively involved and feel supported.

In my opinion, the flipped classroom means that learning is more focused on independence. This is enjoyable because we get to explore the material on our own, using resources that are readily available to us (S12).

The ability for students to explore materials on their own can be both empowering and enjoyable, as it encourages self-directed learning and provides opportunities to discover resources that align with their interests and learning style. Additionally, students have the opportunity to learn anywhere, not just in the classroom. This flexibility allows them to access learning materials at their own convenience, whether at home, in a library, or even while commuting. The freedom to study in various environments can enhance their learning experience, as they are not limited to a specific location or time frame. A student state that: *"We have the opportunity to learn at home or anywhere, offering flexibility to expand knowledge and insights beyond the classroom. Learning is no longer confined to the lecture hall". (S5).* The idea that learning is no longer confined to the classroom allows for a more dynamic and personalized educational experience.

Thirdly, the supporting classroom culture makes students feel valued, respected, and encouraged to take risks in their learning. The teacher fosters an environment where open communication, collaboration, and mutual support are prioritized. This sense of safety and inclusion allows students to engage more freely in the learning process without the fear of making mistakes. When students feel supported by their peers and instructors, they are more likely to participate actively in discussions, ask questions, and contribute to group activities, which enhances the overall enjoyment of the learning experience.

I feel really comfortable in this class because the teacher is always there to help us when we have questions. Even though we study the material on our own before class, we never feel lost or confused. During class, the teacher encourages us to ask anything, and we work together in groups to discuss the material. (S15)

S15 reflects a strong sense of a supportive classroom culture, where students feel comfortable and confident in their learning environment. The teacher's approach of being readily available to help and encourage open communication ensures that students feel supported, even when learning independently before class. Support is not only provided by the teacher, but students

also receive assistance from their classmates: *"It's great that no one feels judged for not understanding something, and we all support each other. The classroom atmosphere is so welcoming that I feel confident sharing my thoughts and opinions, and that makes learning more enjoyable."*(S16). When students feel comfortable sharing their thoughts without fear of judgment, it encourages active participation and engagement. This sense of mutual support among classmates contributes to a positive learning experience, making the process not only more enjoyable but also more effective.

Fostering independent learning activities

Fostering independent learning activities in a flipped classroom involves empowering students to take charge of their own learning process, especially in three key areas: learning without direct teacher guidance, developing problem-solving skills, and managing their time effectively.

The first is learning without teacher guidance. In flipped classrooms, students are expected to engage with learning materials (such as videos, readings, or online resources) on their own before coming to class. This fosters independence by encouraging students to learn without direct, continuous instruction from the teacher.

In the flipped classroom, we learn the material independently before coming to class, which allows us to explore the content on our own. Sometimes, when we encounter difficulties, we try to find solutions by searching online or discussing with classmates. This independent learning process helps us to become more resourceful and confident in solving problems on our own (S6).

S6 emphasizes the importance of students taking initiative in their learning process by independently exploring the material before class. The willingness to seek out solutions through online resources or peer discussions fosters resourcefulness and critical thinking. When facing difficulties in understanding the material at home, students often turn to their classmates for assistance: *"sometimes, when we encounter difficulties, we try to find solutions by searching online or discussing with classmates. We are responsible for understanding the material before class, and it allows us to engage more meaningfully during class discussions"*.(S20). By seeking solutions independently or collaborating with classmates, students take responsibility for their learning.

The second is developing problem-solving skills. By engaging with complex problems independently before class, students learn to think critically, analyze situations, and develop solutions on their own. This process helps enhance their problem-solving abilities as they are responsible for addressing challenges using the knowledge they acquired during self-study.

When I encounter difficulties, I usually watch the video multiple times. Once I understand, I analyze it independently by taking notes on the key points. After noting the important parts, I break down the material further until I fully grasp it. Then, I explain it again using my own language or method (S7).

S7 demonstrates a strong approach to developing problem-solving skills in the flipped classroom. The process of revisiting materials, breaking them down, and reconstructing the information in their own words demonstrates critical thinking and a deep engagement with the content.

In classroom learning, particularly during discussion sessions, students are often challenged to provide solutions or answers to questions that are typically thought-provoking and demanding.

In class discussions, when we face a challenging question, we collaborate as a group to find a solution. Each of us shares our thoughts and ideas, and we analyze different approaches together. If one method doesn't work, we try another until we solve the problem (S1).

S1 clearly illustrates how class discussions in the flipped classroom foster the development of problem-solving skills. By working collaboratively, students engage in critical thinking and explore multiple approaches to tackle challenging questions. The willingness to try different methods when one fails reflects perseverance and adaptability, which are essential components of effective problem-solving.

The third is managing time effectively. Managing time effectively in a flipped classroom is a crucial aspect that empowers students to take responsibility for their learning while ensuring they make the most of the limited class time. In a flipped classroom, students are expected to engage with learning materials, such as videos, readings, or exercises, before coming to class. This preparation allows class time to be used for more interactive activities, such as discussions, group work, or problem-solving tasks, which require higher-order thinking and active engagement.

In traditional classrooms, time often feels insufficient, especially when unanswered questions remain due to limited class duration. These questions are typically postponed until the next week, but by then, new material has been introduced, leaving previous content less understood. In contrast, flipped classrooms allow for a deeper and more thorough understanding of the material (S12).

This response (S12) effectively captures one of the key advantages of the flipped classroom model. The student highlights a common challenge in traditional classrooms—limited time for addressing questions and revisiting content—while emphasizing how the flipped classroom allows for a more comprehensive understanding of the material. The student's insight shows a clear recognition of how the flipped model can provide more opportunities for engagement and clarification, fostering a deeper learning experience. It would be interesting to hear more about how the flipped classroom specifically helps in clarifying doubts and reinforcing understanding.

Discussion

The findings of this study reveal that students perceive the flipped classroom as a structured learning approach, reflected in three key aspects: preparatory aspects, procedural views, and structured processes. The preparatory aspect highlights the importance of engaging with learning materials before class, helping students feel more prepared. Procedural views capture how students understand and adapt to the step-by-step flow of the flipped classroom. Meanwhile, structured processes emphasize the organized nature of this approach, which supports a more effective learning experience. Together, these aspects show that students appreciate the flipped classroom as a guided and systematic way to enhance their learning and engagement.

The pre-class preparation is a key aspect of the flipped classroom, enhancing students' readiness and engagement during in-class activities. By accessing learning materials such as videos, readings, or assignments beforehand, students develop knowledge, allowing them to focus on deeper discussions and critical thinking during class (Jungić et al., 2015). The preparatory phase allows students to engage with complex or extensive material at their own pace before attending class, thereby enabling them to focus more on discussions and critical thinking (Chang & Hwang, 2018) rather than on initial exposure to new concepts. Student perspectives suggest that this preparatory phase enables them to grasp complex concepts more effectively and participate more

actively. This aligns with previous research emphasizing the benefits of pre-class preparation in fostering cognitive engagement and optimizing classroom time (Abeysekera & Dawson, 2014).

The students recognize the procedural aspects of the flipped classroom as a structured and sequential learning process. This perspective is reflected in their understanding of the reversed learning method, where pre-class assignments serve as the foundation for in-class discussions and deeper engagement. Students acknowledge the clear sequence of activities: accessing and completing learning materials independently before class, followed by interactive discussions during in-class sessions. This structured approach helps students navigate the flipped classroom effectively, ensuring that they come to class prepared for more meaningful participation. These responses are consistent with previous studies, which state that the flipped classroom is an instructional model that moves lectures from in-class activities to at-home assignments, while transforming traditional "homework" into in-class activities that promote critical thinking (Bergmann & Sams, 2012; Brown, 2016). These insights suggest that well-defined procedures play a crucial role in students' ability to adapt to and benefit from the flipped classroom model.

The findings suggest that students view the structured tools in the flipped classroom as essential for effective learning. This structured process involves introducing new material outside of class through multimedia resources, followed by in-class activities that focus on deepening understanding through interaction and collaboration. The flipped classroom approach refers to a teaching method where students acquire new content outside of class through electronic resources, allowing in-class time to focus on interactive and application-based activities (Jungić et al., 2015). Students appreciate the clear guidelines and expectations for both pre-class preparation and in-class participation, which facilitate a smooth transition from passive content consumption to active learning. Student reflects positively on the model, noting that reviewing material beforehand allows them to come to class with a foundational understanding, making class discussions more engaging and productive. The flipped classroom approach involves structuring the educational process so that students arrive at face-to-face sessions with prior theoretical knowledge and an understanding of the topics to be discussed during class (Kawinkoonlasate, 2019). These student views highlight the effectiveness of the structured approach in enhancing both learning preparation and active engagement during in-class activities.

Creating an enjoyable atmosphere in the flipped classroom is crucial for boosting student engagement and promoting a positive learning experience (Amiryousefi, 2017). The findings highlight that the flipped classroom enhances engagement through active learning by shifting in-class sessions from passive content delivery to interactive, collaborative experiences (Haghighi et al., 2018). By preparing beforehand, students come to class better equipped, fostering confidence and enabling active participation. This preparation transforms class time into an opportunity for deeper exploration through discussions, problem-solving, and critical thinking. The flipped classroom promotes an inclusive learning environment where all students contribute, and in-class activities like explaining concepts and answering questions help refine understanding. This structured approach supports collaborative learning, strengthens comprehension, and encourages diverse perspectives, ultimately fostering a more engaged and motivated classroom community (Marca & Longo, 2017). Integrating pre-class preparation with in-class interaction optimizes student engagement, promotes deeper learning, and enhances academic performance.

Personalized learning is integral to creating an enjoyable atmosphere in the flipped classroom by allowing students to engage with content in ways that align with their individual learning preferences (Cevikbas & Kaiser, 2022). The flexibility to learn at their own pace before class builds confidence and reduces stress, fostering a positive and relaxed learning environment.

By offering options such as videos, readings, or interactive tools, students can select the learning method that works best for them, making the material more engaging and enjoyable (Zaka et al., 2019). This personalized approach extends to in-class activities, where teachers can adapt discussions and tasks to suit students' varying levels of understanding, ensuring everyone feels supported and actively involved. Additionally, the ability to study anytime and anywhere—whether at home, in a library, or on the go—provides students with the freedom to learn in diverse environments that suit their needs. This flexibility promotes self-directed exploration, enhancing both the enjoyment and effectiveness of the learning process (Chen et al., 2014). In essence, the personalized nature of the flipped classroom cultivates a more dynamic, engaging, and stress-free educational experience, empowering students to take control of their learning journey.

A supportive classroom culture is vital for fostering an enjoyable learning environment in the flipped classroom, as it encourages students to engage openly in the learning process. When students feel valued, respected, and supported, they are more likely to participate actively and confidently. A key component of this culture is the teacher's approachability, where the teacher ensures that students feel supported, even during independent learning before class. This openness enables students to seek assistance when needed, fostering a safe environment for learning. Additionally, students are encouraged to help one another without judgment. This mutual respect and collaboration enhance the classroom dynamic, making students feel more comfortable sharing their ideas and engaging in discussions (Dallimore et al., 2010). In such a culture, students feel safe taking risks and making mistakes, which promotes active participation and deeper engagement with the material. Ultimately, a supportive classroom culture leads to a more positive, inclusive, and effective learning experience, benefiting both individual students and the group as a whole.

Fostering independent learning is a fundamental aspect of the flipped classroom, where students take an active role in their own learning process. This model encourages students to engage with learning materials, such as videos, readings, or online resources, independently before attending class. Learning without direct teacher guidance enables students to explore content at their own pace, promoting autonomy and self-sufficiency (Challob, 2021). When challenges arise, students often seek solutions through online resources or peer discussions, a process that cultivates critical thinking and problem-solving skills. By taking responsibility for their learning, students not only deepen their knowledge but also build confidence in their ability to tackle problems independently (Herlambang et al., 2024). This sense of ownership enhances their participation in class discussions, making them more engaged and resourceful. Ultimately, this independent learning process leads to a richer and more meaningful learning experience, as students develop stronger connections with the material and greater self-reliance in their educational journey.

Developing problem-solving skills is a key advantage of the flipped classroom model, as it encourages students to engage with complex problems independently before class. This process fosters critical thinking, analytical skills, and the ability to find solutions independently (Fulgueras & Bautista, 2020). Students develop problem-solving skills by revisiting learning materials, taking notes, and breaking down content until they fully grasp it. This method of engaging deeply with the material encourages critical thinking, which is essential for effective problem-solving. Additionally, the collaborative aspect of in-class discussions further enhances these skills. Students often face challenging questions during class that require them to collaborate, share ideas, and explore different solutions. This teamwork promotes resilience and adaptability, which are key traits of successful problem solvers (Sanchez-Gil-Machín et al., 2025). By combining independent exploration with group collaboration, the flipped classroom creates a supportive environment that

nurtures problem-solving skills, preparing students to approach complex issues with confidence and creativity.

Managing time effectively is a significant advantage of the flipped classroom model, as it empowers students to take charge of their learning while optimizing in-class time (Talbert, 2012). By engaging with learning materials—such as videos, readings, or exercises—before class, students arrive well-prepared for interactive activities that require higher-order thinking, like discussions, group work, and problem-solving tasks. This preparation enables class time to be used efficiently, fostering deeper engagement and a better understanding. In traditional classrooms, time limitations often leave questions unanswered and topics underexplored, which can hinder comprehension. However, in the flipped classroom, students' prior exposure to the material enables a more thorough understanding and provides the opportunity to address questions during class. This not only makes learning more effective but also allows students to build on their knowledge and fully benefit from interactive experiences. Ultimately, the flipped classroom's structure ensures that both independent study and class activities work together to create a more efficient and engaging learning process.

Conclusion

This study reinforces the effectiveness of the flipped classroom as a structured and student-centered learning model. By shifting knowledge acquisition to pre-class activities and dedicating in-class time to interactive discussions, the approach fosters deeper engagement and critical thinking. The integration of clear procedures and structured learning sequences allows students to navigate the learning process more effectively, promoting autonomy and active participation. These insights contribute to the broader discussion on innovative pedagogical approaches, highlighting the potential of the flipped classroom in enhancing higher-order thinking skills and optimizing classroom interactions.

Creating an enjoyable and engaging atmosphere in the flipped classroom is essential for maximizing its effectiveness. By integrating active learning, personalized instruction, and a supportive classroom culture, this approach fosters student motivation, confidence, and deeper cognitive engagement. The flexibility and interactivity of the flipped model empower students to take ownership of their learning while promoting collaboration and inclusivity. These insights contribute to the growing body of research on student-centered learning, underscoring the importance of well-structured and adaptable instructional strategies.

The flipped classroom model provides a transformative approach to learning by promoting student autonomy, enhancing cognitive engagement, and maximizing instructional time. By shifting passive learning outside the classroom, this model creates opportunities for deeper interaction and higher-order thinking during face-to-face sessions. Its emphasis on self-directed learning and collaboration aligns with contemporary educational strategies that prioritize critical thinking and problem-solving. These insights contribute to the ongoing discourse on student-centered learning, highlighting the need for adaptable and structured pedagogical approaches.

Declaration of conflicting interest

The authors declare that there is no conflict of interest in this work.

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