Improving Quality Pedagogy in Malaysian Tuition Centre through Flipped Classroom: Action Research

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ABSTRACT

The classroom is the essential component in education settings where students and teachers interact. The unprecedented COVID-19 brings education to go virtual from physical to online classrooms. Educators, students, and their parents are panicked and unprepared in adapting to home-based learning within the concise notice. Tuition centre faces an even more severe impact as many parents decided to discontinue the tuition class subscription as they doubt the online tuition class effectiveness. Hence, this paper aims to evaluate the improved quality of teaching pedagogy and tutors' willingness to implement the flipped classroom in the tuition centre. This action research adopted semi-structured interview sessions with two private tutors who had conducted flipped classrooms to their secondary student tuition classes to solve two research questions, mainly how well the flipped classroom improved the quality of teaching pedagogy and how willing the tutors to implement as daily teaching pedagogy. Generally, both tutors are keen to teach using flipped classrooms because technological education is unavoidable, while educators must quickly adapt themselves to stay competitive. The tutors mentioned that the time allocation in the flipped classroom weighted more before class while the tutor functions as a facilitator to guide the learning consolidation process in the class, as compared to the online classroom. Timely feedback is added advantage for tutors to identify students' weaknesses for instant strengthening. In addition, tutors need not spend long hours reviewing student performance after class as compared to the traditional classroom. In conclusion, flipped classrooms enabled an improved teaching pedagogy for tutors in the Malaysian tuition centre as it is a combination of traditional and online classrooms. However, the management shall empower their staff with adequate resources and facilities, establish fair wages and equivalent rewards for good staff.

Keywords
education; flipped classroom; Malaysia; pedagogy; private tutoring; total quality management

Introduction

Malaysia enacted the first Movement Control Order (MCO) backed in March 2020, various alike of MCOs were introduced after that. The education was forced to shift from physical classrooms and moved into online classrooms. Educators, students, and their parents are panicked and unprepared in adapting to home-based learning (Teo, 2020). Tuition centres used to be an emerging industry in Malaysia as increased parents, especially in the urban opt to send their kids to receive private tutoring services (Nair, 2012). It is a standard solution for parents who desire children's academic excellence. The unprecedented COVID-19 outbreak brings tuition centres in Malaysia into difficult conditions as the efficiency of online classrooms is hindered by interaction and communication barriers. An increasing number of parents intend to discontinue their service subscription, one of the tuition centres in Johor Bahru disclosed that. The main reason is that the parent perceived that the teaching pedagogy is less effective in the virtual classroom. The classroom is the essential component in a formal education where the student and teacher come in interaction. The teacher instructs about the course of knowledge formally while the student responds to the delivered message. Wasriep & Lajium (2019) highlighted that 21st-century learning focuses have 4C, which comprises creativity, critical thinking, collaboration, and communication. The overall teaching-learning process shall essentially nourish by digitalisation and technology advancement. With contemporary digital literacy, various borderless classrooms and innovative teaching-learning activities are available.

The current education trend focuses on learner-centred teaching to meet the diverse needs of the students; it is essential to incorporate more elements of active learning into teaching pedagogy (Naz & Murad, 2017). The teaching pedagogy is primarily influenced by educational policy, educational objective, course content, and another requirement. Practising innovative classrooms could be started by making small changes on any one element in the teaching-learning process. These elements include teaching pedagogy, curriculum design, learning styles, classroom

discourse, assessment methodology, way of communication, and many more. In this rapid-transforming world, technology keeps enriching our lifestyle continuously. The technological-enhanced learning is quicky in transforming the overall teaching-learning process, especially during this Covid-19 pandemic season where social distancing is the utmost requirement. Viewing the availability and accessibility of information, the teacher role has to shift instantly from a content deliverer to a co-partner towards achieving knowledge transfer. (Lytras et al., 2020).

Blended learning combines face-to-face and online teaching methods as a whole. It incorporates online digital media into traditional classrooms to make classroom interaction more effective (Dhawan, 2020). The flipped classroom is one of the effective blended learning models. In the flipped classroom, the traditional in-class teaching session was substituted by in-class discussion or assessment. At the same time, the content delivery was conducted online and outside the school before the actual class. The in-class timing was mainly allocated for consolidating the learning content that students had learned prior they came to class. The advantages of flipped classrooms have many; various researchers used different instruments to assess the effectiveness of flipped classroom implementation, either qualitatively, quantitatively, or a combination of both. For example, Zainuddin & Attaran (2016) examined effectiveness from a student perspective at the University of Malaya. They found that the student has more flexibility to control the learning because students can adjust the learning process based on their own needs, according to their preferred timing and location. In addition, the student can repetitively learn the given content; this would allow the student to do their revision. However, the authors noted that short but concise content is more effective. The flipped classroom is not a new pedagogy in Malaysia. Siti Fatimah et al. (2019) provided an overview of the implementation of flipped learning in Malaysia. They concluded with positive practicability of the flipped classroom in various disciplinary at both higher education and school level in Malaysia, suitable for both small and large classes. Hashim & Shaari (2020) evaluated the effectiveness of flipped learning from the teacher's perspective. The teaching pedagogy of flipped classrooms is significantly fit with the learning behaviour of the generation Z and alpha.

The main reason is that these two generations love short but concise content. The study of Apaydin and Kaya (2020) demonstrates that generation alpha has more exhibit behaviour than generation Z. Generation alpha is more curious about new things and dislikes obeying the existing rules. They tend to think out of the box rather than stay and wait. Their learning track is quick, but they quickly get bored. Hence, developing a more concise but innovative teaching pedagogy is essential to suit their learning behaviour. The digitalisation and virtual learning environment might hinder the interaction and communication between students and students in the online classroom. Thus, more and more parents decided to discontinue subscribing to the tuition class service for their children, as evident by the survey conducted by one of the tuition centres in Johor Bahru disclosed that 67% of the parent expressed their doubt about the online tuition class effectiveness. Hence, that is an urge for Malaysian tuition centres to innovate the teaching pedagogy to improve customer's satisfaction. To evaluate how the flipped classroom implementation could improve the teaching pedagogy in the tuition centre, action research was adopted. This paper aims to report the intervention, the evaluation process, and the reflection of action research that mainly measures the willingness and effectiveness of tutors in conducting flipped classrooms.

Methodology

To date, no solid prove to demonstrate flipped classrooms have been implemented in the tuition centre in Malaysia. This paper aims to using action research methodology to observe how the implementation of flipped classrooms as a techno-structural intervention could improve the teaching pedagogy in tuition centre. In order to observe and measure the changes, qualitative methodology was adopted as the form of data collection. The reason to conduct interview session is owing to a limited sample available and the interview session allows the respondent to clarify the described question, so they fully understand the scenario before answering. By employing semi-structural interview sessions, the researcher is able to collect the tutor's response more directly. There are two interviewees who conducted the intervention while the interview session was conducted independently. The main evaluated content focuses on teaching pedagogy, from class preparation until performance review. The interview session was conducted independently to collect their opinion and thought right after the tutors have successfully implemented their very first flipped classroom onto their secondary student tuition class in one tuition centre that they are servicing, located in Johor, Malaysia. This is by replicating the methodology of Chun & Sathappan (2020), that the researcher conducts the data collection after the implementation of an intervention to ensure that the respondent could give greater reflection with accuracy and impact. Prior to the interview session, two tutors from the same tuition centre conducted a trial run of flipped classrooms as their teaching pedagogy. One tutor conducted flipped classroom for the junior school students and the subject taught is science while the other tutor teaches high school

students and the subject taught is mathematic. As they are the tutors who carry out the flipped classrooms, they could give a very detailed and personal opinion from their teaching experience. The interview response was transformed into an interview summary and being analysed using a case-by-case method. This is due that the qualitative data collection was designed in a way that the interviewee has different teaching background and expertise. The thematic analysis was conducted based on three predominant themes that are: class preparation, class delivery, and class performance.

Research Objective

The main objective of this action research is to evaluate the willingness and challenges of tutors in implementing the flipped classroom. Despite numerous studies, including Zainuddin & Attaran (2016), conducted research to demonstrate the advantages of flipped classrooms, particularly in Malaysia setting; there is no implementation of flipped classrooms observed in the Malaysian tuition centre to date. Hence, it is essential to measure tutors' willingness to shift their current teaching pedagogy to innovative modern teaching. To witness such advantages, it is good to let the tutors have a test run by themselves. One tutor conducted flipped classroom for the junior school students and the subject taught is science while the other tutor teaches high school students and the subject taught is mathematic. The reason to choose secondary school students in conducting the intervention is that the effectiveness of flipped classrooms is mainly dependent on the student's self-disciplinary. Zakaria and Md Yunus (2020) explained that less challenging for older students to adopt flipped classrooms as less guidance is needed to guide them to learn independently before class. Two main research questions formulated in this action research are:

RQ1: Is flipped classroom improve teaching pedagogy of tutor in Malaysian tuition center?

RQ2: Do tutors willing to implement flipped classrooms as long-run teaching pedagogy after they perceived its advantages?

Respondent Profile

The respondent profile for the two interviewees is as follows:

“Tutor A is a male tutor aged between 30 to 35 years old. He is a doctorate holder and has been actively teaching secondary school students on mathematics subjects in one tuition centre in Johor, Malaysia. He attended the flipped classrooms during his tertiary education but he yet to conducted one so far.”

“Tutor B is a female tutor aged between 30 to 35 years old. She is a master holder and is a science tutor who teaches both primary and secondary students in one tuition centre in Johor, Malaysia. She is unaware about flipped classroom, but she keens to try it.”

Result and Discussion

Three essential steps in the qualitative analysis are data reduction, data display, and concluding. The interview responses of two interviewees were transformed into an interview summary using a case-by-case basis. From there, the thematic analysis was conducted using the aggregate method for data display. The advantage of the aggregate method is easier to handle due to the small volume of interview sessions shown. It is a more straightforward way to reduce irrelevant data and group meaningful responses following the predominant theme. The thematic analysis disclosed eleven main themes. These themes include the demographic of tutor and student, tutor's perception, willingness to implement, teaching and learning quality, learning process, class preparation, class delivery, and class performance, and challenges. The eleven themes are Table 1 illustrate the output of the thematic analysis using the aggregate method. After completing the thematic analysis, it is essential to demonstrate the relationship between each predominant theme through a simple mind mapping. Data displaying plays a significant role in connecting these themes. By doing so, the association and logic between each theme are seen, including its mediator variable, if any. To ease comparison and discussion purposes, a conceptual framework, as shown in Figure 1, was developed to disclose the interrelation between the willingness of tutors to implement the flipped classrooms and the improved quality of teaching pedagogy using flipped classrooms. The centre of the success of the flipped classroom is

eventually the suitability of the audience. There is a mediator factor between the tutor's and student's demographic. Different treatment is needed to cater to various target audience grouping. In terms of the overall teaching and learning process, class preparation assesses the teaching quality in flipped classrooms. At the same time, the tutor's perception and willingness primarily drive the teaching quality. The learning quality in the flipped classrooms is evaluated by the class performance, while the tutor's challenges and recommendations mainly lead the learning quality.

Table 1. Data coding

Theme	Response
Tutor's demographic	**Tutor A:** Male, age 30 to 35, doctorate holder **Tutor B:** Female, age 30 to 35, master holder
Student's demographic	**Tutor A:** Secondary school, mathematics **Tutor B:** Secondary school, science
Perception	**Tutor A:** Attended, thought of implement but inexperience **Tutor B:** Unaware
Willingness to implement	**Tutor A:** Encouraging as technological education trend that is unavoidable, educator to adapt themselves **Tutor B:** Keen continuing to conduct the flipped classroom owing to the improvement on student engagement
Class Preparation	**Tutor A:** Disagree time saving in preparation, it is more difficult. Formative assessment in class reduce time for reviewing after class. **Tutor B:** Time skewed toward pre-class preparation, lesser for after class.
Class Delivery	**Tutor A:** Students are more concentrated and being engaged in the flipped classroom, probably due to new learning environment or being forced to its nature is learner centred. Conduct a mini lecture to recap the key points is good **Tutor B:** Quick poll reveal majority students watched video multiple times; student active in clearing doubt, greater control over class
Class performance	**Tutor A:** Materialises immediate feedback on understanding during class, extremely essential to tuition centre to gain formative feedback in timely manner. Improve class communication **Tutor B:** Get immediate feedback, student willing to share opinion and communicate with peer, independency, and interdependency. Improved motivation and eager of learning
Teaching Quality	**Tutor A:** Tutor is the facilitator. Flipped classroom is more effective than a conventional online classroom, it is convenient. Improved teaching pedagogy and generic soft skill **Tutor B:** More efficient to organise teaching content, improved pedagogy.
Learning Quality	**Tutor A:** Student has fewer questions to ask but more engaged to the concept. Learning is productive, discussion is interdependence. Student is self-motivated **Tutor B:** Students scores higher quiz marks
Learning Process	**Tutor A:** More time allocation before class to watch video and prepare homework, spend less time after-class, purely recap **Tutor B:** Learning process shifted backward, more learned central
Challenges	**Tutor A:** Requires additional time for preparation and technological adaption. **Tutor B:** No technological barrier that will stop her from using, infrastructure of current information technology is very advancing and user-friendly

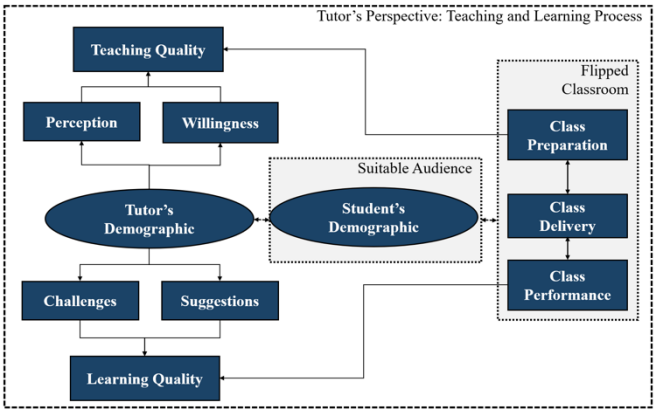

Figure 1. Interrelationship between themes

Improved Teaching Pedagogy

The overall teaching pedagogy will be discussed based on three teaching processes, that is before class, during class, and after class. Due to the nature of flipped classrooms that shift the in-class teaching outside the classroom and prior to the actual class, both interviewees opined that they must allocate more in the preparation work before the class. In terms of the weightage of the teaching time allocation, it is heavily skewed toward before class as the tutors perceived that there is a significant reduction of time required for after-class assignment marking. As the flipped classroom is new pedagogy to them, they will have to spend extra effort and time not only adapting the technology software and sourcing relevant teaching content; they have also had no choice but mandated to redevelop teaching material into video-based content. Similarly, Hashim & Shaari (2020) pointed out that technological adaption is one of the major teacher's challenges in adopting flipped classroom implementation. To improve the student's learning experience, the tutors must allocate multiple times of time and effort to prepare the flipping class well. Table 2 shows the differences in teaching design between flipped classrooms and traditional classrooms.

Table 2. Difference of teaching between flipped and traditional classrooms

Teaching design	Online Classroom	Flipped Classroom
Pre class activity		
Pre-recorded lecture	No	Yes
Lecture notes/slide	Yes	Yes
Exercises	No	Yes
In class activity		
Lecture	Yes	No
Exercises	Yes	Yes
Discussion	Yes	Yes
Presentation	No	Yes
Quiz	No	Yes
Post class activity		
Homework	Yes	No

Although both tutors perceived an additional time spent in the flipped classroom as compared to the traditional classroom, the returns seem fruitful. Owing to that the tutors noticed that their students spend more time learning the content given to them before the class, the tutors felt their hardship heard. From the quick poll result that one of the tutors created, it revealed that the majority of the students watched the video multiple times before the class. The students also spend more time learning themselves through the video-based learning material. A similar trend was observed in the research conducted by Su Ping et al (2020). They disclosed that most of the students spend additional time interacting with the learning material before class. Techanamurthy et al. (2020) explained that the student who watches and learns video lectures prior to the actual class could perform better in completing the given tasks in class more accurately. This is because the students come to class with a basic understanding. This finding is in common agreement with the tutor's in-class observation. As compared to the traditional classroom, the student increased in

asking question class. From the content of the questions being asked in the flipped classrooms, one of the tutors is able to deduce that the students are ark with an intention to clear doubt or to reaffirm if they have fully understood the learned concept correctly. The same tutor discovered that students become more actively participating in class discussion and this makes the tutor have greater controllability over overall class delivery.

Sarita (2017) explained that flipped classrooms change teacher pedagogy as the teacher interacts with their student in a more personalised way and is less didactic in the knowledge conveying process. The teacher prioritises the communication of content in the class to promote idea generation. Therefore, the student is willing to be more actively involved in knowledge acquisition and peer discussion. Cole et al. (2019) highlighted that student engagement is one key criterion to improve the online learning environment. Learner-centre learning will be making a greater impact on the online learning environment as compared to face-to-face learning.

From the tutors' observation, the overall teaching and learning activities of the flipped classroom are definitely learner centred. The tutors noticed the students are more active in communicating in the flipped classroom as compared to the traditional classroom, both between peers or between the tutor and the student. Overall, the secondary students who attended the flipped classroom tuition class have behaved more independently and interdependently. The tutors are unsure about the main reason behind the active communication, which might be owing to the flipping approach being new to students; or probably the in-class activity forced student have no choice but must speak. What can be sure here is that the tutor's role has been changed. Instead of purely paying attention to teaching the subject content in class, the tutors are concentrated on facilitating the learning process. Conventionally tutor plays the role of the teacher who is responsible to teach similar knowledge content as the schoolteacher did in the face-to-face classroom. By having flipped classrooms, the tutor's role is totally overwhelming. The overall teaching and demonstration process was delivered prior to class for students' preview and learning, discussions that happened in the actual class are designed to examine students' understanding and mastery level on pre-learned content. Thus, the action of learning by students themselves promotes independent learning while the in-class activity promotes interdependence learning between peers and interaction between tutor and student in the class. Interestingly, Fernández-Martín et al. (2020) in their study also observed that the students in the flipped classrooms take a bigger role in making a positive learning climate and encouraging greater collaborative bond. The student's motivation and eagerness to learn was significantly improved in the flipped classroom. Therefore, regardless of which is the actual key success factor that trigger the change to the observed tuition class in this action research, the most important is that the student has to participate more actively in the class so that the tutors are able to detect the level of student's understanding of the subject learning. This will be solid proof of the improved teaching pedagogy in the flipped classrooms as compared to the traditional classrooms.

The tutors are appreciated for another added advantage that flipped classrooms provided, that is immediate feedback. This is in agreement with Hashim & Shaari (2020) that stated that immediate learning response could be identified in the flipped classrooms for instant improvement. This is one solid reason to justify why the flipped classrooms pedagogy suit the Generation Z and Alpha. As the main aim of the tuition centre is to support and enhance student learning on the content that has been formally taught in school, it is extra important that the tutors are able to identify students' weaknesses in class. If not, the tutoring process will be repetitive and bring no value added to the student as well as their parent. Conventionally, tutors need to spend long hours evaluating and reviewing student performance after class. With the presence of flipped classrooms, it materialises immediate formative feedback in a timely manner during discussion and sharing sessions. When students are willing to share his opinion and communicate with peers, it is much easier to detect if they have grabbed the key concept correctly. The research of Su Ping et al (2020) disclosed that 80% of students agreed that the interaction between teacher and students was improved in the flipped classroom.

The tutors opined that formative assessment that happened in the flipped classroom through discussion and presentation is eventually sufficient to replace the traditional way of assigning after-class homework to the student as a summative assessment. The in-class activity in flipped classrooms enables a quick assessment of student understanding. Although a significant reduction of after-class homework was identified, the overall quality of learning was maintained and even better. This is evident by the in-class Kahoot quiz conducted, students are able to score higher marks as compared to an online class. Similarly, the research of Goh and Ong (2019) has proven that the flipped classroom is able to stimulate a greater academic performance for a historically low passing rate's pharmacy course. The improved quality of the teaching pedagogy enables students to feel more confident throughout

the learning process. Moreover, Hassan et al. (2021) further explained that the flexibility and interactivity entailed from the flipping approach eventually is the factor in boosting positive learning outcome.

Perception and Willingness

Despite both tutors being tertiarily education graduates, they have yet conducted the flipped classroom before this action research. One of them is totally unaware of the existence of flipped classrooms. In general, both are keen to teach using flipped classroom because they believe that the technological education trend is unavoidable while educator must quickly adapt themselves to be competitive and brings value to students' learning. This finding was also reported by Lee (2020) that now is the correct time for educational technology to shine. Both agreed that flipped classroom is good pedagogy to be employed in the tuition center. The systematic review of Siti Fatimah et al.(2019) exposed the truth that flipped classrooms had shown positive practicability in various disciplinary and different educational levels in Malaysia.

Despite overall teaching pedagogy of flipped classroom seems positive, there are also two possible hindrances. The first obstacle is technological adaption while the other is how to monetize their extra service given in redeveloping the teaching pedagogy into the flipping approach. From the tutor's perspective, without proper resource and financial support from the management, it is beyond their capability to conduct flipped classroom in long-run. Undoubtedly, Hashim & Shaari (2020) viewed technological adaption as one of the major teacher's challenges of the flipped classroom implementation. In addition, Corlatean (2020) explained that teachers need sufficient training in facilitating online learning to overcome the challenges of newly developing curriculum and technology familiarization. Although one tutor mentioned that there is no technological barrier existed owing to the advancing and user-friendliness of current information technology infrastructure available, the success of the flipped classroom is not merely to bring the teaching away from the classroom, but most importantly, is how to change student learning traits to be self-discipline and proactive in learning. This is the reason why many flipped classroom implementations halted halfway as students are reluctant to change and go back to original learning practices. On the other hand, as flipped classroom requires redevelopment of teaching content by shifting the curriculum into video-based, it is an additional task for all the tutors. Without appropriate compensation support in return, the tutor's motivation might reduce while the changing force will slowly be turning into maintaining force amid the implementation of the intervention. This problem of additional work done is easier to be solved by monetize the equivalent time cost. In fact, the tuition center may compile all the video as a series and commercialize it. This is a new untapped opportunity for the tuition center that worth exploring.

Conclusion and Reflection

The flipped classroom could benefit the tuition centre in improving its teaching pedagogy throughout the teaching and learning process from class preparation before class, learning activity in the class, and performance evaluation after class. In terms of time allocation, the overall teaching and learning are skewed toward prior to actual class whereby both the tutors and students spend more time to do preparation before class. In terms of the role and responsibility, the tutor functions as a facilitator to guide the learning consolidation process in the flipped classrooms, unlike a dictator or content deliverer in traditional classrooms. The learning material in video format that is given in advance enables the student to have adequate time to learn repetitively prior to class. On top of that, students own the flexibility to carry out their revisions whenever and wherever they are. This pedagogy allows students to fully understand the given content. In terms of in-class participation, the tutors observed more willingness in students to share their opinion and communicate with a peer. Therefore, it is much easier for the tutors to detect if they have grabbed the key concept correctly. Timely feedback is added advantage for tutors to identify students' weaknesses to instant strengthening. Despite the multiple advantages the flipped classrooms offer, the tutors disclose their worry about their own capability in conducting this teaching pedagogy in long run. They stated that more time is needed to adapt technology software, source relevant teaching content, and redevelop delivery content into a video-based format. Two possible hindrances are technological adaption and unattractive reward system to encourage them to shift their teaching pedagogy. Changing into flipped classroom requires redevelopment of teaching content, surely an additional task and responsibility for the tutors. Without proper resource and financial support from the management, it is beyond their capability to conduct flipped classroom in long-run. Despite the tutors are willing to makes the changes, their motivation might reduce while the changing force will slowly be turning into maintaining force if without equivalent reward system to link with the intervention. In conclusion, flipped classroom enabled an improved teaching pedagogy for tutors in the Malaysian tuition centre as it is a combination of traditional

and online classrooms. However, the management shall empower their staff with adequate resources and facility, establish fair wage and equivalent reward for promising staff

Limitations and Future Studies

Previous research focuses on the implementation of flipped classrooms in compulsory education or higher education and there is still no research conducted on private tutoring services. Hence, the action research was pioneering as a microscale evaluation to the one specifies tuition center while the collected response is limited. Moreover, only selected content taught in flipped and both are scientific subjects. One is a high school mathematic class, and another is a junior school science class. In fact, it is also appropriate to conduct the flipped classroom on languages class as well so that the effects on different types of subjects could be compared to determine its suitability. As the tutors are new to flipped classrooms and have limited experience thus their responses might be less comprehensive. It is good to include some perspectives of tutors who had experienced flipped approach in a more frequent manner. All the above-mentioned limitations may lead to a less deductible conclusion. To tackle the above-mentioned weaknesses, the following recommendation was made for future studies: 1. Include the student's viewpoint in judging the improved quality of teaching pedagogy; 2. Implement flipped classroom for the linguistic subject to make a comparison; 3. Using quantitative methodology to evaluate a pre- and post- intervention changes.

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