

IMPACT OF FLIPPED CLASSROOM ON ACADEMIC PERFORMANCE
OF PRIVATE SECONDARY SCHOOL STUDENTS IN KARACHISidra Ghafoor^{*1}, Maria Hussain², Zubia Shaikh³, Dr. Munawar Sultana⁴^{*1,2,3}Research Scholars, Department of Education, Hamdard University, Karachi⁴Associate Professor, Department of Education Hamdard University Karachi^{*1}sidraghafoor08gmail.comDOI: <https://doi.org/10.5281/zenodo.17810594>**Keywords**

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Corresponding Author: *

Sidra Ghafoor

Abstract

This study examines the effect of flipped classroom methodology with reference to the level of academic performance, engagement, and collaborative abilities of learners under this mode of English instruction, in comparison with the traditional classroom strategy. Research done among the students of private secondary schools in Karachi, part took to investigate how this student-centered model has an effect on learning outcomes, classroom dynamics, and whether teachers are prepared for implementation. It also explores what challenges teachers face during implementation. The study follows a qualitative action research design in which convenient sampling is used because of short time. The research is comprised of in-class observations, students and teacher reflections.

The study had a pre-intervention and post-intervention design. In the pre-intervention phase, data showed us low levels of engagement by the student, poor collaboration, limited interpersonal skills which resulted in difficulty to realize learning outcomes. Students were commonly bored, demotivated, and disconnected from the content learning by traditional means. The intervention phase implemented a flipped classroom model. Findings revealed significant changes in student motivation, participation, collaboration and conceptual understanding. Students showed improved interpersonal skills and they were more confident when forming ideas.

INTRODUCTION

In 1998 flipped classroom model was introduced for the first time and was appreciated worldwide as a very effective teaching model. It changed the traditional face-to-face lectures to pre-class activities and learning through which students were provided with basic education and knowledge by recorded lectures, pre-class activities, tests and quizzes (Bergmann and Sams., 2019). This is what helps the teachers to use the class time for developing higher-order cognitive activities for the students such as problem solving, debates, discussions and practical activities and experiments. Unlike the traditional classroom in which students only pay

attention on learning the knowledge during the class time and later when they are doing homework, they apply it, whereas the flipped classroom let the students to actively get engaged in the learning to understand the ideas under the teacher's support and guidance. The research has demonstrated that this strategy upgrades educational performance, involvement and motivation of the students by making the process more learner-centered (Lai and Hwang., 2016; O'Flaherty and Phillips., 2015).

The flipped classroom consists of three main learning theories comprising Constructivist

Learning Theory together with Bloom's Taxonomy and Social Learning Theory. Constructivism theory provides the basis for learning through environmental interactions because of its alignment with student-driven educational models in flipped classrooms (Piaget, 1952; Vygotsky, 1978). Students undertake memory-based and understanding assignments before classes to make space in class time for skill development of analysis and evaluation and creative thinking (Mazur, 2001; Anderson & Krathwohl, 2001). According to Bandura's Social Learning Theory social interactions between students and teacher-led discussions create stronger learning outcomes by invigorating collaboration and observation (1977). Several theoretical principles validate the flipped classroom as an effective student-active approach delivering meaningful learning experiences to students.

In flipped classroom a very important role is played by the technology, especially after the COVID-19 pandemic, which expanded the inclusion of online resources in education. The universal acceptance of online learning platforms, digital tools, and electronic resource has made flipped learning more convenient and effective (Trust & Whalen, 2020; Al-Samarraie et al., 2020). At all levels of education, technology become a crucial part. Flipped learning carries on to emerge as a modern teaching strategy (Schelew & Wieman, 2019). However, even with-it growing execution globally, insufficient research exists on its application in Asian contexts, notably in secondary private schools in Karachi, Pakistan. Given the growing stress on digital-driven education, there is a considerable need to examine the practicality and influence of the flipped classroom model in this region.

This study is important for teachers, parents, and students, as it gives visions into the changeover from traditional teaching to flipped and online instruction. By inspiring teachers to embrace student-centered tactics such as discussions, debates, and interactive activities, it spotlights the powers and flipped learning issues (Sun, Wu, & Lee, 2017). Additionally, this research can direct future studies in examining parental and student views on the efficiency and

usefulness of the flipped classroom method in different learning environments.

The rationale for this research for this study stems from the increasing shift towards digital learning environments, particularly in secondary education. As educators and students navigate this transition, it becomes evident that traditional methods may not fully address the needs and preferences of today's learners (Zhang et al., 2021). The integration of technology in the classroom, especially through interactive platforms like games, offers unique opportunity to engage students more effectively. During the pandemic the whole world took a shift towards the use of technology to provide education but it was a challenge for many teachers to adopt it. Despite the growing interest in online learning, there's a notable lack of research focused on how these changes specifically impact secondary school students. The research aims to fill this gap by exploring this area and provide insights into how flipped classroom can enhance learning outcomes. Additionally, understanding the challenges faced by educators and students in adapting to these new methods is crucial for developing effective strategies that support this transition (Ahmed and Siddiqui, 2021). Ultimately, this research seeks to add more to the continued discussion about the future of education, highlighting the importance of innovative approaches that resonate with the changing dynamics of learning in a digital age.

Objectives

General Objective

To evaluate the impact of flipped classroom on the students' academic performance at private secondary schools in Karachi.

Specific Objectives

The research assesses English subject academic outcomes before and after private secondary schools apply the flipped classroom model.

This study investigates how students engage and stay motivated when participating in a flipped classroom instead of traditional lectures for English classes.

The research examines which obstacles private secondary school instructors encounter when introducing the flipped classroom system for English language classes in Karachi.

Research Questions:

How does the flipped classroom approach impacts student academic results in English subjects better than traditional classroom teaching methods?

What distinctions arise in students' classroom engagement together with their motivational status when English education occurs within flipped and traditional instructional methods?

What difficulties are faced by teachers while adopting flipped classroom practices for teaching English courses?

Literature review**Foundation knowledge**

The flipped classroom method was built on constructivist learning theories, borrowing ideas from Vygotsky's social constructivism and Bloom's taxonomy. Educational growth under the flipped model takes place through Vygotsky (1978) identified elements of social interaction and scaffolding. Students need to accomplish remembering and understanding tasks independently during their self-study period according to the Bloom's modified taxonomy framework (Anderson & Krathwohl, 2001) yet teachers play a crucial role in guiding students through application and analysis and evaluation activities inside the classroom. The theoretical arrangement indicates that the flipped classroom presents itself as an efficient teaching approach which advances student learning results. According to the social learning theory introduced by Bandura in 1977 students attain knowledge more effortlessly through observing others and carrying out collaborative activities which strengthens the flipped classroom methodology.

Moreover, a huge number of studies have investigated the influence of flipped classrooms on student learning outcomes. According to (Minhas et al., 2021) the Pakistani students usually value the flipped classroom model but for daily basis they spot it less engaging than traditional methods due to restricted interaction. The study emphasizes the requirement of training for teacher to competently carry out flipped learning. Similarly, (Naureen.,2022) examined that while flipped classrooms enhance comprehension,

their achievement relies on organized execution and student adjustability.

A study by (Hussain et al., 2023) investigated the effects of flipped classrooms on Grade 9 students' academic achievement in chemistry. The results suggested numerically important enhancement in test scores as compared with traditional method. Despite that, challenges such as restricted digital access and teacher objection were observed as obstacles to proper implementation.

A wider analysis by (Lo and Hew., 2020) examined 53 studies and validated that flipped learning commonly directs to greater student performance, enhanced motivation, and improved engagement, particularly in STEM subjects. A similar study by (Akayr and Akayr.,2021) discovered that flipped classrooms increase critical thinking skills but needs powerful technological support and teacher readiness. Additional studies show that flipped learning improves self-understanding and self-regulated learning (Rahman et al., 2023), which are essential for student success.

Challenges in Implementation of Flipped Classrooms

Meanwhile global studies declare the advantages of flipped learning, its application in Karachi's private secondary schools show exceptional challenges. First, digital inclusion and technological backbone vary across institutions. According to research by (Khan et al., 2022), many students in Pakistan need entry to authentic internet and digital devices, blocking the steady performance of flipped classrooms. Moreover, teachers' forwardness to embrace new instructional techniques remains an essential factor. The study by (Ahmed and Siddiqui.,2021) expose that Pakistani teachers require focused vocational training to incorporate flipped learning successfully.

Likewise, to these considerations, teacher workload is another challenge. A study by (Javed et al.,2023) stated that teachers using flipped learning often experience increased workloads, as they have to prepare digital content and provide the students with in-class discussions in a successful way. Such challenge can be reduced with the help of resource-sharing and institutional support among teachers and

managements. (Patel et al., 2022) argue that continuous teacher encouragement is essential for the longer run success of the flipped classroom model. Parental opinions and involvements are crucial for the effective application of flipped classrooms. (Naureen., 2022) noticed that many parents in Pakistan are uncertain about uncommon teaching approaches, being worried that self-directed learning could vanish

face-to-face contact between teachers and students. Furthermore, the societal norms prioritize more memorization over engaging methods may prevent the approval of learner-centered methods. (Latif and Alam., 2021) pointed out that although the teachers accept the importance of flipped learning, many share their worries about increasing workload and the necessity for required professional training to carry it out effectively.

Moreover, the lack of resources in schools is still a major obstacle, too. 40 percent of private schools don't have the technology resources required to successfully employ flipped learning, according to research by the Pakistan Education Council (2023). According to this research, government and commercial parties need to work together to improve educational institutions' digital accessibility.

The Significance of Flipped Classroom

In a student-centered learning flipped classroom adds in many benefits. research which was done by (Patel et al., 2022) and (Javed et al., 2023) found out that flipped learning presents a more engaging strategies which promotes critical thinking and problems solving skills. Moreover, another study by (Zhang et al., 2021) confirmed that flipped classrooms always results in better and improved memory rates and deep understanding of ideas across varied fields. (Garrison and Vaughan., 2020) mentioned that flipped classrooms enhance collaboration and independence between the students, providing them with opportunities for advanced education and careers goals.

Further, the flipped classroom model lets the students to learn or study at their own pace by offering pre-recorded lectures, content and other digital means before class sessions (Lo & Hew, 2020). Research by (Akçayır & Akçayır, 2021).

Which state that flipped classroom has been very help in addressing the different educational needs of pupils as it allows them to view the difficult concepts again and again if needed which helps them to comprehend and understand the subject area (Akçayır & Akçayır, 2021). Studies taken place in Pakistan have also showed that flipped learning crucially improved student involvement, as learners become active participants rather than passive recipients of knowledge (Naureen, 2022; Khan, Ahmed, & Waqar, 2022).

Moreover, during the in-person sessions the flipped classrooms often encourage collaborative learning, as students get involve in meaningful discussions, debates and problem-solving activities (Minhas et al., 2021). Research proposes that this contact promotes a greater sense of academic ownership, enhancing motivation and performance (Rahman & Akhtar, 2023). Additionally, flipped approach supports blended learning methodologies, implementing digital tools that prepare students for technology-driven educational environments (Wong & Chiu, 2021).

Regardless of its many advantages, the effective application of flipped learning needs careful planning and access to technological tools (Hussain, Butt, & Qaisar, 2023). A study by (Latif and Alam., 2021) discovered that while students respond was positive toward flipped classrooms, but challenges like digital literacy gaps and internet availability must be discussed to assure fair learning opportunities. However, the complete influence of flipped classrooms stays extremely positive, making it a better pedagogical approach in modern education.

Student Engagement and Motivation in Flipped Classroom

One of the most important measures of flipped classroom performance is student motivation. According to research by (Fredericks, Blumenfeld, and Paris., 2019), there are behavioral, emotional, and cognitive aspects of student engagement that can be impacted by teaching strategies. By offering interactive learning opportunities and self-paced content, flipped classrooms frequently enhance student involvement (Bishop & Verleger., 2020).

Flipped classrooms increase motivation because they provide students a greater sense of control over their education, according to studies by (Hew and Lo., 2019). However, students' motivation differs according to their ability to adapt to self-directed learning, as noted by (Zainuddin and Halili., (2020). Discipline and time management are issues that some students face, and this can have a detrimental effect on engagement. (Rahman et al., 2023) found that whereas flipped classrooms enhanced secondary school enrollment rates in Pakistan, the effectiveness of the model's structure affected student enthusiasm. Students were more engaged in schools with clear policies and teacher assistance, while they were less engaged at those without.

Further, flipped classrooms may be more or less effective depending on the subject area. (Lo and hew., 2020) meta-analyzed 53 studies and found that STEM fields, which emphasize problem-solving and practical application, were the best suited for flipped classrooms. In fields like mathematics and physics, flipped learning improves conceptual knowledge, claim (Akçayır & Akçayır., 2021). In Karachi's secondary schools, (Hussain et al., 2023) found that flipped learning significantly improved the performance of chemistry students, but not in literature or social science, because the pupils were reliant on the traditional rote learning approach.

Comparison Between Flipped and Traditional Teaching Methods

Many studies have compared the effectiveness of flipped and traditional teaching models. (Zhang et al., 2021) discovered that students in flipped classrooms show better academic performance and memorization rates compared to those in traditional lecture-based settings.

For students who still need controlled learning environments, traditional methods might still be more productive. (Latif and Alam., 2021) point out that flipped classrooms may be difficult for students used to rote learning in Pakistan at first, which could result in differing opinions on how beneficial they are. While flipped learning upgraded exam results by 15%, children in traditional classrooms informed feeling more at ease because they were used to direct instruction, according to a controlled experiment carried out

in Karachi's secondary schools by (Ahmed and Siddiqui., 2021). These results highlight the necessity of incorporating flipped learning gradually with conventional approaches.

Flipped learning surroundings greatly change the role of teachers. Teachers facilitate debates and problem-solving for students rather than serving as the main source of information. This post compels strong pedagogical and technological skills, according to (Garrison and Vaughan., 2020). According to (Naureen., 2022), a lack of professional preparation causes many instructors in Pakistani classrooms to struggle with this transition. It is suggested that teachers' confidence level enhance when they obtain systematic training in flipped approaches, (Ali et al., 2023). In order to guarantee student success, teachers must also learn how to facilitate class debates and give prompt feedback, according to research by (Patel et al., 2022).

Methodology

Research method

Research methods which examine conceptual elements utilize non-statistical data from text and audiovisual material (Bhandari 2020). The research method finds broad application in social sciences and psychology for analyzing human behavioral patterns together with their beliefs and attitudes. Qualitative research uses interview and observational methods together with focus groups while statistical method analysis is not its main focus (Jain, 2023). This research uses a qualitative method to study the flipped classroom model effects on Grade 6 English students through the examination of their learning conditions and participation levels and understanding capabilities. The study bypasses traditional test score assessments by examining student and instructor views while assessing their commitment levels and motivational abilities as well as their ability to adjust. Research investigates suitable techniques for implementing flipped learning across Karachi private schools at a time when educational technology assumes greater significance in education. The research adopts classroom observation techniques with open-ended feedback approaches along with interviews to present both the positive points

and difficulties of this progressive instructional method.

Research design

Education researchers use self-reflective inquiry to enhance their teaching approaches while studying classroom environments and improving student results (Carr & Kemmis, 1986). Educational institutions currently use this method because it helps teachers monitor their instructional methods and develop improved practices in direct contact with their students. Stakeholders achieve an active learning space by reflecting on their practices then adjusting these approaches for different student requirements.

The researcher implements and observes the flipped classroom model in an authentic educational environment through this study which adopts an action research design. The nature of action research matches qualitative techniques since it promotes systematic improvement by conducting observations and reflections followed by adjustments to processes. Flipped learning assessment will base its findings on face-to-face classroom interactions together with teacher contemplation and student assessment feedback to present detailed findings beyond statistical data. The target population for this study consists of private secondary school students in Karachi.

Sampling

To gather data from all related study participants becomes challenging in research so a representative sample is chosen to stand for the larger population. The methodology of choosing this chosen group is known as sampling.

The research adopts convenience sampling to obtain Grade 6 students from Karachi's private secondary school. The selection process involves choosing anyone classroom where students were divided into two different groups of 10 students in each group. One group was taught using flipped classroom model whereas the other received traditional instructions. The sampling process using convenience sampling selects participants according to (Saunders et al., 2019) because participants must be both available and accessible. This stands as a non-probability sampling method. The method proves suitable

because it helps effectively gather data even when facing time and resource limitations. The researchers employ convenience sampling in this investigation because it allows both groups of students to learn under similar conditions within one institution to minimize extraneous factors that might influence the results. The study maintains accessibility over randomization thereby achieving practical application which produces valuable findings regarding flipped-learning effects on real classrooms.

Data collection process

A diagnostic baseline test in English will evaluate student prior knowledge during the pre-intervention stage. The first lessons will employ traditional teaching approaches to monitor student involvement and participation together with their encountered difficulties. The insights will come from student opinions combined with observations from teachers.

The flipped classroom method will be implemented to Group A students during the study's second stage as Group B students maintain their traditional education format. The educational content will derive from Sindh Board English courses though lessons integrate pre-made videos together with active student engagements. The educational staff will conduct ongoing checks to evaluate student cognitive levels throughout the program. After the intervention the educational achievement will be measured through testing to check which group exhibits better progress. The study will obtain student perspectives and teacher reflective data by conducting discussions and maintaining a journal of reflection throughout the project. The research team will conduct thematic data analysis for determining the effects of flipped learning approaches on English teaching results for Grade 6 students.

Data tools

Qualitative data collection instruments served as the research methodology to evaluate flipped classroom model effects on 6th-grade English learners. Academic progress measurement involves both pre-test and post-test testing which follows content from the Sindh Board English syllabus to detect changes before and after the intervention. Two data collection tools will

document student experience: A teacher's reflective journal and classroom observation with checklist. These tools will monitor student interaction in both traditional and flipped approaches. Student opinions along with focus group meetings will help identify student learning experiences and motivational factors and encounters faced by students. Each day the teacher will conserve their evaluative observations combined with assessments of teaching quality in their reflective journal.

Data analysis

The chosen data analysis strategy will base its operations on thematic analysis for qualitative data assessment during this research project. Researchers use this method according to (Braun and Clarke., 2006) to discover patterns within qualitative data while analyzing and interpreting them. The research outlines five sequential steps to follow in this order.

Transcribe: The conversion of recorded audio data along with interviews into written text through the transcribing process constitutes the first step.

The translation process consists of turning information between languages from spoken or written words.

Researchers utilize coding to identify the main themes within the research materials.

Data organization happens through classifying groups of identified themes which serve to categorize information.

The underlying patterns ideas and concepts which research data produces constitute themes. Researchers apply themes to large datasets of qualitative information for summarization and interpretation purposes.

Ethical consideration

The protection of research participants together with research integrity depends on serious ethical considerations. The study will perform all ethical research requirements when conducting action research within a Grade 6 English classroom. School administration will grant consent plus teachers and parents to ensure all volunteers come forward on their own. The purpose and procedures of this study together with its advantages and possible risks will be disclosed to students and guardians.

Personal data confidentiality and data anonymity will be preserved through pseudonyms and restricted data access. All stakeholders maintaining their right to withdrawal from the study at any time will encounter no adverse effects. Research data such as lesson plans together with student responses and reflections will receive secure storage through digital password protection and physical document lock-up. The responsible disposal of collected data will take place after the research process finishes.

Limitations

The scope and generalizability of all research depends on its limitations which need consideration during analysis. The research about flipping the Grade 6 English classes in Karachi English schools faces multiple constraints. The research has limited relevance beyond its specific group because it used only twenty participants as part of the study. The research period was too brief to properly evaluate long-term results from flipped learning education. The research had to be confined to a single private school due to its role as a degree project alone so it failed to explore multiple educational facilities. Objectivity gets reduced because convenience sampling introduces selection bias that affects the study's results.

Findings

Pre-intervention

Academic performance

Many Students were struggling to understand the key grammar concepts through traditional methods. Mostly the lessons were based on lectures, causing boredom and weak academic performance. When the students were asked directly to explain what is adverb or adjectives, they seemed confused and hesitated to answer as they were not sure whether its correct or not.

Student 1: "The topic is very hard. I can't understand the lecture."

Student 2: "I kind of feel sleepy and don't feel like paying attention."

Student 3: "We are only writing and listening, I easily get confused."

Students 4: "After class I don't usually remember what the teacher taught."

Students were having difficulty relating the material to real life which led to poor learning outcomes. The students were not confident enough to share what they have learnt. Moreover, due to lecture method the students were unable to grasp more knowledge. They just understood as much as their brain was able to accept at that moment. Sometimes they could recall the definitions but struggled to apply them in their writing

Student engagement and motivation level

During the pre-lesson the students were seemed to be passive and their interaction with teacher was too limited. Most sessions followed a direct instruction format where the teacher explained the grammatical rules and students listened or copied. They were often waiting for teacher's instruction and answers only when they were asked any question. Students were showing very little engagement and motivation level in traditional classes.

Student 1: "I don't take part in class because I feel sleepy."

Student 2: "I was getting extremely bored, because we were only listening and writing."

Student 3: "Sometimes I forget whatever we have studied because it's not interesting."

Student 4: "I don't like coming to English class, it's very boring."

Due to the lack of interaction in traditional method students lost interest quickly and were not actively responding the teacher during the lecture.

Teacher's preparedness

The teacher was used to and comfortable with using traditional methods for delivering her lessons. Therefore, the teacher was mostly prepared for delivering traditional, lecture-based content with no integration of interactive or digital tools.

Teacher: "I usually prepare lectures and notes for my class".

Teacher: "I rarely use technological tools or videos in my lecture."

Teacher: "My lessons are mostly based on reading and writing tasks for the students."

Teacher: "Planning interactive activity was not part of my daily routine."

In traditional settings, teachers generally felt more confident and in control. Lessons were pre-planned, often reused with minimal revisions, and the delivery followed a predictable flow. This resulted in efficient time use but limited innovation or student-driven activities. This is what shows that the preparation was straightforward and meaningful but not suitable for an engaging, student-centered learning.

Post-intervention

Academic performance

After using flipped classroom strategies such as interactive activities and videos, the understanding of the students improved as well as their achievements. Students presented better understanding of parts of speech (especially nouns, adjectives, and adverbs), applying concepts more accurately in writing tasks. Pre-class videos and quizzes gave them foundational knowledge, allowing classroom time to be used for application and practice.

Student 1: "the topic is very easy now; it helped me understand the pictures and activity clearly."

Student 2: "when we already watched the video at home, it was easier to relate and understand in class."

Student 3: "Activities made it simple to understand the concepts."

Student 4: "I'm confident enough that I can explain the lesson now without getting confused."

When certain questions were asked so every student was eager to answer. It showed that flipped learning encouraged deeper understanding of concepts and helped meet learning goals.

Students were able to relate the knowledge that they had to the knowledge they got through watching the videos. Students came up with more examples apart from the videos which showed that their conceptual understanding has increased. It also enhanced the student's knowledge of the subject which resulted in good academic performance.

Student engagement and motivation level

While using the flipped classroom model, the engagement and motivation level improved noticeably. Students became significantly more engaged during lessons. One of the most notable

findings was the increase in student engagement during in-class sessions. Students who initially appeared passive began actively participating in grammar-based discussions, particularly during lessons on adjectives and adverbs.

They frequently asked questions and collaborated with peers during group tasks.

Student 1: "I thought it was the first time that I understood English grammar well."

Student 2: "While doing activities I really enjoyed working with groups."

Student 3: "When the teacher asked questions and I was able to answer every question, I felt proud."

Student 4: "Now I'm excited to come to English class."

Students were interacting with one another during the activities and became active learners, showing enthusiasm for class discussions and tasks. This shift was attributed to the flipped model allowing students to familiarize themselves with the content before class, building their confidence to interact.

Teacher's preparedness

In contrast, implementing the flipped classroom required greater planning time and adaptability. Preparing video lectures or searching for appropriate lectures according to the students' level, designing engaging pre-class materials, and structuring interactive in-class activities demanded a more dynamic instructional approach. Teacher initially felt discomfort with the technology component, such as using online platforms and facing excuses from the students

Teacher: "Preparing interactive lessons and videos took a lot of time."

Teacher: "I had to search for new resources to make the lessons more engaging."

Teacher: "I had to design tasks and search for right materials for students to complete before class as well."

Teacher: "Using technology in my lessons become a necessary part of my planning,"

While using flipped classroom teacher had to shift her mind and strategies to support active learning environment.

Challenges implementing flipped classroom

Although, many benefits were seemed, several challenges emerged during the transition to a flipped classroom model.

Teacher: "It is very time consuming to prepare videos and activities."

Teacher: "Sometimes students came without watching the videos at home."

Teacher: "Some students don't have proper internet access."

Teacher: "Managing an active, talkative classroom needs different strategies."

These challenges affected the smooth execution of flipped learning but were gradually addressed with experience and adjustments.

Discussion

The study examined the application and results of flipped classroom approaches that private secondary schools in Karachi used in their English subject. This research developed its narrative because of worldwide attention toward student-centered education following the rise of digital platforms after COVID-19. Western educational systems widely use the flipped classroom approach yet its practicality in Pakistan and other South Asian locations needs more investigation. Research investigator conducted this study because they sought to understand how this teaching approach affects student engagement as well as academic performance together with classroom interactions within a specific educational context.

The study results match what numerous researchers across different nations have published in their work. According to (Lai and Hwang., 2019) students develop deeper academic achievement through pre-processing and active participation when adopting flipped classrooms. The research findings correspond to existing literature which demonstrated that Karachi students gained motivation and focused better during in-class interactions after experience flipped learning principles which support autonomy while promoting active student participation and teacher-guided instruction.

Moreover, findings from (Lo and Hew's., 2020) meta-analysis showed that flipped classrooms function effectively to develop higher-order

thinking abilities and learning autonomy according to the analysis. Research findings supported these observations as students achieved superior results on understanding and working on their assignments after completion of their pre-class assignments. The study confirmed (Akçayır and Akçayır's., 2021) findings about how technological balance together with prepared teachers leads to ideal flipped learning outcomes. The students who completed pre-class materials regularly including video lectures with quizzes demonstrated enhanced knowledge of English grammar as well as better readiness for class activities.

Further, the study exhibits unique obstacles facing Karachi specifically which produce results that differ slightly from international scholarly research. The research disapproving (Garrison and Vaughan., 2020) because it identified that Karachi students experienced difficulties using digital tools due to limited access to dependable Internet and personal computing devices. Students in less advantaged environments which have minimal technological barriers encountered numerous logistical problems when participating in the flipped methodology. (Khan et al., 2023) stated that developing nations need contextual adaptations when implementing digital pedagogies because of the argument.

Contrary to most Western literature assumptions about traditional-to-flipped progress this study demonstrated that students together with educators needed more than enough support to transition. Educators specifically experienced formidable pressure because they needed to develop virtual curriculum materials while creating dynamic hands-on classroom activities. The findings of (Ahmed and Siddiqui., 2021) support that professional development with institutional backing represents essential elements for sustaining innovative learning approaches in Pakistan.

The research examined actual cultural influences on learning behaviors which exist between students. The educational system in this society had a strong tradition of rote learning so the flipped classroom encountered initial opposition from its inception. The traditional passive learning culture of students

caused them to resist taking charge of their pre-class assignments. The research demonstrates that educational reform should analyze how students learn according to their cultural tendencies as (Latif and Alam., 2021) suggested. The findings both verify previous academic research regarding flipped model gains along with providing contextual data about economic barriers teachers face in Pakistan. This research supports the development of detailed knowledge about how worldwide educational innovations must be adjusted properly when implemented locally. Enhanced digital tools and appropriate training for teachers will enable policymakers and educational organizations to establish the flipped classroom model as a transformative learning system for secondary education in Pakistan.

Recommendations

- Schools should offer regular training workshops to help teachers effectively design and implement flipped classroom strategies.
- Organize orientation sessions for parents to help them understand the flipped classroom model and its benefits.
- Educational institutions must ensure that both teachers and students have access to devices, internet connectivity, and digital platforms etc.
- Curriculum planners should integrate interactive and collaborative activities within English lessons to foster communication, critical thinking, and real-world application.

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