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Improving Grammar Skills through Flipped Learning: A Study of Pakistani ESL Learners at the University Level

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Abstract

This study aimed to examine the effects of the flipped learning model on the grammar achievement of undergraduate English as a Second Language (ESL) students in Pakistan. A quasi-experimental research design was employed at a public university in Karachi, Pakistan. From the university's English department, two sections of first-year undergraduate ESL learners (each comprising 30 students) were selected through convenience sampling. These two sections were randomly assigned to either the experimental group (flipped classroom) or the control group (traditional instruction). Over a 10-week intervention period, the control group received instructions through conventional lecture-based methods, while the experimental group engaged with the flipped learning model, where instructional videos and materials were studied at home, and in-class time was used for interactive grammar activities. Pre-tests and post-tests were administered to measure grammar achievement in both groups. The results indicated a statistically significant improvement in grammar performance in the experimental group compared to the control group. The findings suggest that the flipped learning approach is more effective than traditional methods in enhancing grammar acquisition among Pakistani undergraduate ESL learners. The study discusses implications for ESL instruction in higher education contexts across Pakistan.

Keywords: Grammar Skills, Flipped Learning, ESL Learners, University Level, Karachi

Introduction

English has become the global lingua franca, essential for academic success, international communication, and access to knowledge. In Pakistan—a multilingual country with over 70 languages—English holds a significant position, particularly in higher education, business, and government sectors. Recognizing its importance, the Government of Pakistan has designated English as a major medium of instruction in secondary and tertiary education. Mastery of English, particularly grammar, plays a crucial role in students' academic and professional achievement.

Grammar is widely acknowledged as a foundational component of English language proficiency (Ur, 2009). Scholars (Biber et al., 2021; Fromkin et al., 2018; Li et al., 2024; Thornbury, 1999) have emphasized grammar's role in enhancing language clarity, developing the four language skills, and supporting comprehensive English learning. In Pakistani universities, first-year undergraduate ESL learners typically enroll in compulsory English communication

courses. These are designed to improve students' grammar, fluency, and communicative competence, enabling them to meet both academic and social demands.

Despite the emphasis on grammar instruction, many undergraduate students across Pakistan continue to struggle with its practical use, especially in writing and speaking. This is largely due to outdated teaching practices, limited exposure to English outside the classroom, and challenges like overcrowded classrooms and time constraints (Ali & Noor, 2024). These issues create a gap between the expectations of the academic and job markets and the actual language skills of university graduates.

In response, innovative instructional strategies are being explored, with the Flipped Learning Model (FLM) gaining recognition for its student-centered approach. In FLM, foundational grammar instruction is shifted to pre-class tasks (e.g., video lectures), allowing class time to be used for collaborative and communicative activities (Strelan et al., 2020). This method directly addresses common challenges in Pakistan's educational settings by promoting active engagement, peer collaboration, and real-time feedback in large ESL classrooms.

FLM has shown promise in improving students' grammar achievement through increased interaction, contextual learning, and self-paced study (Li et al., 2024). It offers a dynamic alternative to lecture-based methods, allowing students to revisit content outside class and use class time for practical application. Global studies (Noroozi et al., 2020; Gough et al., 2017; Zierock, 2019) affirm the model's effectiveness in enhancing grammar retention, learner satisfaction, and academic performance.

Within the Pakistani context, FLM has the potential to transform grammar instruction, especially in communicative English courses. Students benefit from multimedia resources, reduced reliance on rote memorization, and opportunities for authentic language use. The flexibility of accessing content anytime also helps overcome infrastructure and scheduling limitations (Hasjim, 2023; Sheerah, 2022).

However, implementing FLM is not without challenges. Barriers such as inadequate technological infrastructure, faculty training needs, content creation difficulties, and student motivation levels (Lo & Hew, 2017; Alyoussef, 2022; Zhao & Li, 2021) may hinder its success in Pakistan. Moreover, since FLM depends heavily on students' self-regulation and preparation, those lacking in motivation or digital literacy may not benefit equally.

Despite these challenges, the potential of FLM to enhance grammar achievement among Pakistani undergraduate ESL learners remains underexplored. While some international studies (Al-Harbi & Alshumaimeri, 2016; Dincer & Polat, 2022) show modest gains in grammar performance, others report significant improvements (Lubis & Rahmawati, 2022; Noroozi et al., 2020), and a few (Jensen et al., 2015) find no noticeable impact. These conflicting results highlight the need for context-specific research in Pakistani higher education institutions.

Therefore, this study aims to investigate the impact of the flipped learning model on grammar achievement among first-year undergraduate ESL students in Pakistan, addressing a significant gap in local empirical research and offering evidence-based recommendations for teaching practices in Pakistani universities.

Problem Statement

Grammar instruction remains a persistent challenge in Pakistani ESL classrooms, particularly at the tertiary level. Despite English being a compulsory subject and the medium of instruction in many higher education institutions, students often demonstrate weak grammatical competence. Traditional grammar teaching methods in Pakistan are predominantly lecture-based

and teacher-centered, which limits student engagement, critical thinking, and active learning. This outdated pedagogy results in poor academic performance and an inability to apply grammatical knowledge in real-life communication. The lack of learner autonomy and insufficient use of technology further hinder students' progress in mastering essential grammar concepts.

In light of these challenges, there is a growing need to explore innovative teaching models that promote active learning and improve grammar outcomes. The Flipped Learning Model (FLM), which reverses the traditional instructional sequence by delivering content before class and using class time for interaction and practice, has shown promising results in international contexts. However, there is a scarcity of empirical research on the effectiveness of FLM within Pakistani higher education settings, particularly in teaching grammar. Therefore, this study investigates whether the implementation of the FLM can significantly enhance grammar achievement among first-year university students in Pakistan and whether this approach offers a statistically significant advantage over conventional teaching methods.

Research Objectives

- To investigate the effectiveness of the Flipped Learning Model (FLM) in enhancing grammar achievement among undergraduate ESL students in Pakistani universities.
- To determine whether there is a statistically significant difference in grammar achievement between students taught through the flipped learning model and those taught through traditional methods in ESL classrooms in Pakistan.

Research questions

1. Does the Flipped Learning Model (FLM) in ESL classes in Pakistani universities enhance students' grammar achievement?
2. Is there a statistically significant difference in grammar achievement between the flipped and non-flipped groups of undergraduate ESL students in Pakistan?

Significance of the Study

This study holds significant value for English language education in Pakistan, particularly within the context of undergraduate ESL instruction in higher education institutions. As English continues to be a key medium for academic and professional advancement in the country, improving students' grammar proficiency is essential for their overall language development and academic success.

The research explores the use of the Flipped Learning Model (FLM) as an innovative, student-centered teaching approach to address persistent challenges in Pakistani classrooms, such as large class sizes, limited instructional time, and traditional lecture-based teaching methods. By shifting grammar instruction to pre-class activities and utilizing classroom time for collaborative, communicative practice, FLM may offer a more engaging and effective learning experience for ESL students.

Scope of the Study

This study focuses on examining the impact of the Flipped Learning Model (FLM) on grammar achievement among first-year undergraduate ESL students in Pakistani universities. It is limited to English language learners enrolled in compulsory English courses at the tertiary level. The study specifically compares the performance of students taught through the flipped classroom approach with those taught using traditional lecture-based methods. The scope includes the use of pre-recorded video lectures for grammar instruction, in-class interactive grammar activities, and the measurement of learning outcomes through pre- and post-tests. It does not extend to other

language skills such as reading, writing, listening, or speaking, nor does it examine long-term retention or the use of FLM in secondary education settings.

Review of Related Literature

This section provides the review of related literature, which entails past research, theoretical considerations, and results of the studies regarding how the Flipped Learning Model can promote grammar performance among ESL students.

Flipped learning model (FLM)

Educators and academics describe FLM differently. According to Bishop & Verleger (2013), this educational technique involves interactive group learning activities in the classroom and direct computer-based individual training outside of the classroom. The term 'computer-based instruction' implies that technology is crucial for flipped learning implementation. Videos are crucial in flipped learning (Purwanti et al., 2022), but recorded lectures and readings can also be used (Hamdan et al., 2013).

Flipping allows teachers to use technology to enhance student-teacher interaction, spend more time on interactive activities (Aidoo et al., 2022; Tarimo et al., 2016). Note that technology may not be essential for flipped learning (Mehring, 2018). Students can acquire grammar principles using written or video materials at home and participate in relevant communicative activities in class (Voss & Kostka, 2019, p. 10). Technology facilitates a shift from a teacher-centered to a student-centered, active, and communicative learning environment (Dinc´er & Polat, 2022). The FLM strategy involves creating pre-class materials to encourage active learning and engage students in in-class activities (Gross et al., 2015). Flipped learning involves doing "school work at home and homework at school" instead of in the traditional classroom (Flipped Learning Network, 2014, p. 1). 'Inverting the classroom' is an instructional strategy that involves pre-class activities and class time for discussion, problem-solving, and student interaction (Zhou, 2022). In a regular classroom, students study material in class and practise it at home for homework. A flipped classroom involves autonomous home study of new information, followed by collaborative concept application in class (Jensen et al., 2018; Liu et al., 2024). Based on Brame (2019), students should independently master information demanding lower-order thinking before class to maximise active learning time.

According to Biggs and Tang (2011), students should build on their knowledge, be active, receive constructive feedback, and actively monitor and reflect on their learning. Besides reversing classrooms, the FLM assigns pre-class content such as recorded lectures or readings. Assignments for completion before class time are not new, and video instruction has been used since the introduction of the Video Cassette Recorder (Strayer, 2012). FLM, based on Bloom's Taxonomy, emphasises lower-order thinking at home and higher-order thinking in the classroom. Lower-order cognitive tasks like remembering and understanding are addressed at home by students due to their simplicity, while higher-order tasks like applying, analysing, evaluating, and creating are addressed in the classroom through peer discussions or teacher assistance.

Misconceptions about the FLM

Educators should be aware of frequent misunderstandings about the flipped classroom approach before implementing it in their institutions (Flipped Learning Network, 2014). According to Bergmann et al. (2013), educators often associate the flipped classroom method with online videos or courses that substitute a teacher's role and involve students working alone on a computer screen. Associating flipped learning with online learning is the first mistake. The rise of video education and MOOCs led to the misperception that flipped learning is the same as online learning (Herreid & Schiller, 2013). Flipped learning connects online and face-to-face learning, although

pre-class activities can also include paper and hardcopy resources (Alsowat, 2016). The second myth is that the flipped learning paradigm replaces classroom teachers with videos and minimises their function. According to King (1993), the FLM does not replace the teacher's position, but rather shifts it from 'sage on the stage' to 'guide on the side'. Misconception #3: Assuming the FLM relies on technology. Academics have access to online teaching resources, however technology is not the only factor in teaching and learning (O'Flaherty & Phillips, 2015). Myth #4: FLM requires teachers to videotape themselves lecturing in front of a camera. Teachers using this methodology for the first time will have more work to perform. Bergmann and Sams (2012) propose a solution for novices to flip their courses by using the numerous online resources as teaching materials. Another misconception is that students spend a lot of time working alone and staring at screens. The FLM emphasises student-student and teacher-student collaboration while assimilating knowledge gained through individual learning during class engagement. A higher level demands greater assimilation, while a lower level allows for autonomous information transmission (Mclaughlin et al., 2016).

The last FLM mistake is the confusion between 'flipped classroom' and 'flipped learning'. Flipped learning is not the same as flipping a class, although is often used interchangeably. Teachers can use flipped learning by assigning reading, watching films, or solving extra tasks outside of class, but must follow the four pillars of the approach (Flipped Learning Network, 2014). The Flipped Learning Network (2014) identifies four pillars of F-L-I-PTM: Flexible Environment, Learning Culture, Intentional Content, and Professional Educator. Flexible Environment refers to adjusting the learning area to meet students' diverse demands regarding timing and location. Learning Culture is a movement from a teacher-centered to a student-centered approach. The third pillar, intentional content, involves teachers choosing which knowledge to flip and what students can acquire autonomously. The fourth pillar, Professional Educator, highlights the exceptional importance of trained educators in the FLM compared to regular classrooms. Flipped learning (FL) is not just about using videos in courses, but also about optimising in-class time with students (Flipped Learning Network, 2014; Bergmann & Sams, 2012).

Benefits of the FLM

FLM advocates emphasise the benefits of reversing standard teaching and learning methods in higher education. This method promotes self-paced learning, active participation with recorded lectures, and more effective, creative, and interactive activities in class (Nouri, 2016; Ajmal et al., 2024; Najmi, 2020). Teachers can better analyse and communicate with students, and empower them to take charge of their learning (Jeet & Sahotra, 2025). Why flip a classroom? Bergmann and Sams (2012, p.20–21) include the following. Effective Education: Flipping is a useful tool for students of all abilities, including those who grew up with digital resources such as YouTube, Facebook, and MySpace. It allows students to pause and rewind their teacher, increases student-teacher interaction, and helps teachers better understand their students. While literature and research studies emphasise the benefits of the FLM, certain findings are contentious. Overmyer (2014) challenges the idea that flipping the classroom frees up time for more effective, creative, and active learning activities (Betihavas et al., 2016; Gilboy et al., 2015). The flipped model does not change the amount of face-to-face time students spend in the classroom compared to traditional classrooms. Atkins (2018) suggested that the flipped classroom may not be beneficial for general education courses.

Challenges in implementing the FLM

Although educators typically favour the flipped classroom approach (Adnan, 2017; Aljaraideh, 2019; L€ ofnertz, 2016; Unal & Unal, 2017), implementation presents obstacles. These issues may be attributed to both teachers and pupils, depending on the circumstance. Challenges for teachers

include preparing pre-class materials, accessing or producing high-quality videos, and aligning pre-class and in-class activities (Ansori & Nafi, 2022; Bouwmeester et al., 2016; Bergmann & Sams, 2012; McLaughlin et al., 2016). Flipped classrooms present unique challenges for students, such as increased workloads and responsibilities, limited support, and accountability for pre-class assignments and unpreparedness (Ma et al., 2024; Vuong et al., 2018; Han, 2022). Although some difficulties demand major effort from instructors and students, others can be solved with easy solutions (Bergmann & Sams, 2012). Not all flipped classrooms utilise videos, but those that do can reduce video production costs by utilising existing assets. While challenging, aligning pre-class materials with in-class activities is crucial for successful implementation. Instructors might address students' lack of preparation by assigning graded tasks based on pre-class note-taking.These methods can ease FLM implementation. To assess student participation and understanding, encourage them to ask individual questions based on pre-class information. The value of individual question-and-answer time is in the interaction between students, peers, and the teacher. To keep students engaged, limit video length to 10-20 minutes (Bordes et al., 2021) or less.

Technology platforms that enable students and teachers to publish and reflect on their learning and instruction through blogs may be important in the absence of instant support. Reviewing recent studies on flipped learning in tertiary education highlights its effectiveness. Studies by Lubis and Rahmawati (2022), Webb and Doman (2016), Bulut and Kocoglu (2020), and Jayapaul and Blesswin (2023) sought to determine if the flipped classroom paradigm improves EFL learners' grammar achievement. Overall, these research examined the effectiveness of the FLM in enhancing grammar achievement in higher education. The researchers collected data using pre- and post-tests for both control and experimental groups to answer this question. Data analysis included descriptive statistics, paired-sample tests, independent sample t-tests, and mixed factorial analysis of variance (ANOVA).

Finally, kids' grammar skills continually improve. Lubis and Rahmawati (2022) found significant improvements from pre- to post-test. Webb and Doman (2016) found significant achievement gains solely in the experimental group, indicating the intervention's effectiveness. Bulut and Kocoglu (2020) discovered that while both groups improved, the experimental group had significantly higher post-test results. Flipped learning led to significant gains in students' grammatical skills, as proven by Jayapaul and Blesswin (2023).

Research indicates that flipped learning improves grammar achievement by fostering learner autonomy, motivation, and engagement (Lubis & Rahmawati, 2022). Webb and Doman (2016) emphasise the FLM's suitability for ESL/EFL curricula. Bulut and Kocoglu (2020) attribute the experimental group's success to accessible video materials, which aid introverted students who are hesitant to seek help. According to Jayapaul and Blesswin (2023), flipped learning is recommended for effective grammar education in undergraduate courses. All of the studies above demonstrate that the FLM improves students' grammatical achievement.

Research Methodology

The research design used in this study was quasi-experimental to examine the effects of Flipped Learning Model (FLM) on grammar achievement among undergraduate ESL learners. The intended students were undergraduate students of the Department of English of one of the universities in the Karachi city (public sector) of Pakistan. In the study, 60 students were selected. A purposive sampling methodology was adopted to capture the study participants, who qualified as persons taking ESL courses in the first semesters of BS English program and whose schedules they could meet during the intervention.

Data collection instruments

In order to compare the students' grammatical achievement before and after the treatment, two parallel versions of researcher-made pre and post grammar tests were developed. Tests are the most prevalent method of gathering quantitative data, and they may encompass both pre-tests and post-tests (D€ ornyei, 2007).

Table1 Composition of Grammar Items Based on Bloom's Revised Taxonomy *(Adapted from Anderson & Krathwohl, 2001)*

Grammar Topics	Remembering	Understanding	Applying	Analyzing	Total Items
Modals & Infinitives	2	2	2	2	8
Tenses	2	2	2	2	8
Conditional Clauses	2	2	2	2	8
Active and Passive Voice	2	2	2	2	8
Total	**8**	**8**	**8**	**8**	**32**

Due to the uniformity of the module between the flipped and non-flipped groups, they were evaluated using the same pre-test and post-test. The pre-test was administered one week prior to the experiment to assess the grammar proficiency of both the control and experimental groups. The intervention's efficacy was evaluated through the post-test, which was administered within the same interval following the intervention. Tests that correspond to the first four cognitive domains of the revised Bloom's Taxonomy: remembering, understanding, applying, and analyzing, were developed by combining the grammar topics of modals, tenses, conditionals, and voice (Anderson & Krathwohl, 2001). The pre- and post-tests consisted of a total of 32 questions, with two grammar items assigned to each knowledge domain and two items for each grammar topic (refer to Table 1). The instructional verbs employed in the teaching process and the difficulty level of the topics were used to categorize them into distinct knowledge domains. Before the intervention, the tests were categorized into the various knowledge domains and the difficulty level was determined with the assistance of specialists in the field. The tests were intended to evaluate the students' grammar knowledge and serve as a baseline.

Data analysis

The raw data was imported into SPSS for thorough analysis after collection. The study analysed data using descriptive statistics (mean, standard deviation, t-test) in SPSS version 26 with a 95% confidence level ($p < .05$). This software calculated pre- and post-test results for students in both control and experimental groups. Pairwise t-tests are used to compare the means of two related groups or a single group at one sample of related pairings (Ross & Willson, 2018). The COGENT EDUCATION 9 statistical approach is used to compare students under two different settings. Analysing paired data from two related groups using the paired samples t-test can reveal statistically significant differences. This study used an independent samples t-test to compare mean scores of two groups (Tabachnick & Fidell, 2019) to see if a statistically significant difference existed. This case had two independent groups: the control (non-flipped) and the experimental (flipped). Multiple groups of students were taught grammar in various methods and given pre- and post-tests. The goal of the pre-test was to assess participants' prior grammar knowledge for comparison purposes. The post-test assessed the impact of the intervention on participants' grammar scores.

Results and Interpretation

The study used descriptive and inferential statistics to evaluate the effect of the Flipped Learning Model (FLM) on students' grammar achievement. Descriptive data showed a notable difference between the control and experimental groups. The control group's average grammar score slightly decreased from 14.27 (pre-test) to 14.03 (post-test), while the experimental group's average score increased significantly from 12.02 to 17.51, indicating a strong positive effect of the FLM.

To confirm these observations, paired samples t-tests were conducted. For the control group, the p-value was .676 ($p > .05$), suggesting no statistically significant improvement. However, for the experimental group, the p-value was .001 ($p < .05$), confirming a statistically significant improvement in grammar achievement due to the flipped learning intervention.

An independent samples t-test further compared the performance of both groups. The pre-test scores did not show a significant difference ($p = .068$), indicating both groups started at a similar level. However, the post-test results revealed a statistically significant difference in favor of the experimental group ($p = .008$).

To measure the practical significance, the ETA-squared value ($\eta^2 = 0.0607$) indicated that approximately 6.07% of the improvement in grammar achievement can be attributed to the use of FLM—a modest but meaningful effect. A supporting bar graph visually illustrated the improvement trend in the experimental group compared to the minimal change in the control group.

These findings suggest that the Flipped Learning Model is effective in improving grammar achievement among undergraduate ESL learners in the Pakistani higher education context.

Discussion

This study explored whether the Flipped Learning Model (FLM) improves grammar achievement among ESL students in Pakistani universities, comparing flipped and non-flipped instruction. The findings related to the first research question, Does the FLM enhance students' grammar achievement in ESL classes in Pakistan?, are consistent with previous research that supports the positive impact of FLM on grammar performance. As with Al-Harbi and Alshumaimeri (2016) and Nuon and Champakaew (2017), the flipped group in this study significantly outperformed the non-flipped group in grammar post-tests.

Compared to earlier work, this study took a more rigorous methodological approach by using both pre-test and post-test comparisons with paired and independent t-tests, which improved internal validity. Unlike Al-Harbi and Alshumaimeri (2016), who found insignificant differences possibly due to design limitations, this study ensured baseline equivalence and incorporated ongoing formative assessments. These methodological enhancements offer stronger evidence that the FLM is effective in improving grammar achievement among Pakistani ESL learners.

Findings also resonate with those of Nuon and Champakaew (2017), who found measurable grammar gains through semester-long ICT-supported flipped learning. Even though the current study involved a shorter intervention, the use of video lectures, pre-class tasks, and collaborative classroom activities still led to noticeable improvements, highlighting the adaptability of FLM in Pakistani classrooms.

Regarding the second research question—Is there a statistically significant difference in grammar achievement between flipped and non-flipped groups?—this study confirmed that

students in the flipped group significantly outperformed their counterparts, echoing results from global studies such as those by Bezzazi (2019), Bulut and Kocoglu (2020), Fardin et al. (2021), and Lubis and Rahmawati (2022). For instance, the use of interactive learning tasks and structured pre-class preparation—a key feature of successful FLM implementation—also proved effective in the Pakistani context.

Moreover, like Fardin et al. (2021) and Saidah (2019), who employed YouTube, WhatsApp, and recorded videos in pre-class learning, this study utilized Telegram channels to deliver digital instructional content. These platforms enabled greater student engagement before class and reinforced key grammar concepts. Similarly, this study successfully addressed complex grammar topics such as modals, tenses, conditionals, and passive voice, much like Jayapaul and Blesswin (2023) and Noroozi et al. (2020) who confirmed FLM's effectiveness in teaching intricate grammatical structures.

Beyond performance, this study supports previous findings by Lubis and Rahmawati (2022) and Noroozi et al. (2020), who emphasized that FLM also fosters learner motivation, autonomy, and content retention. These factors likely contributed to the improved grammar achievement in the flipped group and are especially relevant in the Pakistani ESL context, where learner independence is a growing pedagogical goal.

However, it is important to acknowledge contrasting findings, such as those of Jensen et al. (2015), who found no substantial learning gains when both flipped and traditional models integrated active learning. In the present study, the comparison was made with the Communicative Language Teaching (CLT) approach—a method already rich in interaction and student-centered activities. These differing results underscore the influence of context, instructional design, and sample diversity in shaping FLM outcomes. Further localized research is needed to refine FLM applications in Pakistani classrooms.

In conclusion, the findings support a growing consensus on the effectiveness of the FLM in enhancing grammar learning in ESL contexts. Despite contextual and methodological differences across studies, the consistent improvements observed reinforce FLM's value as a flexible, student-centred pedagogical approach for Pakistani higher education institutions.

Conclusion

The main objectives of this study were to investigate whether the Flipped Learning Model (FLM) enhances grammar achievement among first-year ESL students in Pakistani universities, and to determine whether there is a statistically significant difference in grammar performance between students exposed to flipped instruction and those taught through traditional methods. The findings revealed that the experimental group, which received the FLM intervention, demonstrated statistically significant improvement in grammar achievement, whereas the control group showed no meaningful change. These results support the effectiveness of flipped learning as a promising instructional strategy for grammar teaching in Pakistani higher education institutions, particularly where resources and class time are often limited.

Importantly, these findings contribute to the growing body of research on flipped learning in ESL contexts within Pakistan, where empirical studies remain relatively limited (see also Dincer & Polat, 2022). The study's use of a pre- and post-test framework, along with a blended material delivery approach (including platforms such as Telegram, USB flash drives, and printed handouts), enhanced the internal validity and practical applicability of the results. This addresses methodological limitations found in prior studies like Al-Harbi and Alshumaimeri (2016), which lacked pre-intervention comparisons and group equivalence.

The success of this short-term, ten-week targeted grammar intervention also aligns with findings from Nuon and Champakaew (2017), suggesting that focused and interactive applications of FLM can yield measurable benefits, even in constrained environments. This is especially relevant to Pakistan, where classrooms often face challenges such as large student numbers, limited access to technology, and time constraints.

In conclusion, this study underscores the flexibility and effectiveness of the FLM in teaching grammar to ESL students in Pakistan. It shows that even in settings with infrastructural challenges, the student-centred principles of flipped learning can provide more equitable and engaging grammar instruction. While these findings are promising, further large-scale studies across different institutions are needed to fully generalize the model's effectiveness and explore its impact on other areas of language learning.

Implications of the Study

The findings of this study have several important implications for English language teaching in Pakistani higher education, especially regarding grammar instruction in ESL classrooms. Firstly, the statistically significant improvement in grammar achievement among students taught through the Flipped Learning Model (FLM) suggests that this approach can serve as an effective alternative to traditional, teacher-centered methods commonly used in Pakistani universities and colleges. By promoting pre-class engagement and active in-class participation, the FLM encourages learner autonomy and deeper understanding, which are often lacking in conventional classrooms.

Secondly, the study highlights the practical feasibility of implementing the FLM in resource-constrained environments. Even with challenges such as limited internet access, large class sizes, and time restrictions, the use of mixed delivery formats (e.g., offline videos, printed materials, mobile apps like WhatsApp or Telegram) demonstrated that flipped learning can be adapted to suit local teaching conditions in Pakistan.

Furthermore, this study implies a need for teacher training and professional development in innovative instructional methods like FLM. Many instructors in Pakistan may be unfamiliar with integrating technology and learner-centered approaches, thus investing in capacity-building initiatives could help improve teaching quality.

Finally, curriculum designers and policymakers in Pakistan's higher education sector may consider integrating flipped learning strategies into national ESL curricula to enhance grammar instruction, improve learning outcomes, and foster 21st-century skills such as critical thinking, collaboration, and digital literacy.

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