ESL TEACHERS' FLIPPED CLASSROOM PRACTICE: A SIGNIFICANT REVIEW

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Abstract:

The Flipped Classroom (FC) model has gained significant attention as an innovative pedagogical approach in English as a Second Language (ESL) instruction, offering a shift from traditional lecture-based teaching to a more student-centred, technology-enhanced learning environment. This scoping review explores ESL teachers' adoption of the FC model, focusing on its effectiveness, technological integration, and barriers to implementation. Drawing on data from the Scopus database, the study synthesizes research on the impact of FC on ESL learning outcomes, the technological tools employed in flipped instruction, and the challenges educators face in incorporating this approach into their teaching practices. Findings indicate that while the FC model enhances student engagement, promotes active learning, and improves language proficiency, several factors hinder its widespread adoption. These include limited access to technological resources, insufficient teacher training, resistance to pedagogical change, and institutional constraints. Additionally, studies highlight the need for professional development programs to equip educators with the necessary skills to implement FC effectively. This review contributes to the growing body of research on technology-enhanced language learning by providing insights into best practices, identifying gaps in current literature, and offering recommendations for optimizing FC implementation in ESL education.

Keywords:

Flipped Classroom (FC), English as a Second Language (ESL), Technology Integration, Barriers to Adoption, Teacher Perception, Student Engagement

Introduction

Technology integration has become more widespread in the language education landscape, ushering in dynamic pedagogical techniques. This paper embarks on a significant review, focusing on the adoption of the Flipped Classroom (FC) model by English as a Second Language (ESL) teachers. The FC model has evolved as a transformative instructional strategy, challenging existing paradigms and redefining the traditional roles of in-class as well as out-of-class activities (Saira et al., 2021). The intersection of language acquisition, technology integration, and pedagogical innovation within ESL contexts prompts a critical exploration of how educators navigate and implement this transformative approach (Ansori & Nurun Nafi', 2022; Betaubun, 2021; Satparam & Apps, 2022). The FC approach, distinguished by the inversion of traditional teaching methods, throws the burden of initial subject acquisition on students outside the classroom, freeing up valuable in-class time for collaborative learning (Gomez-Lanier, 2018; Rau et al., 2017) and interactive learning experiences (Swart & Macleod, 2021). While this approach has garnered attention in various educational domains, application in ESL comes with its own challenges due to the diverse linguistic backgrounds, cultural differences, and complex nature of language acquisition (Evseeva & Solozhenko, 2015; Vitta & Al-Hoorie, 2023; Zou et al., 2022).

From this study, we aim to shed light on three pivotal dimensions: the degree to which the FC model improves ESL learning outcomes, the diverse technology integration pedagogical approaches employed within Flipped ESL classrooms, and the barriers encountered by ESL teachers in its adoption. In the subsequent sections, we explore the FC's effectiveness for ESL learning, the integration of technology in various pedagogical approaches within flipped ESL classrooms, and the barriers to its adoption in both the teaching as well as learning process.

Table 1. Data Search Strategy

	Keyword	Search String
Scopus	Flipped, ESL, Effect	TITLE-ABS-KEY (flip* AND (esl OR efl) AND effect*) AND (LIMIT-TO (PUBYEAR , 2023) OR LIMIT-TO (PUBYEAR , 2024)) AND (LIMIT-TO (DOCTYPE , "ar")) AND (LIMIT-TO (PUBSTAGE , "final")) AND (LIMIT-TO (LANGUAGE , "English")) AND (LIMIT-TO (SUBJAREA , "SOCI"))
	Flipped, ESL, EFL, Technology, Tool	TITLE-ABS-KEY (flip* AND (esl OR efl) AND (technology OR tool*)) AND (LIMIT-TO (PUBYEAR , 2023) OR LIMIT-TO (PUBYEAR , 2024)) AND (LIMIT-TO (DOCTYPE , "ar")) AND (LIMIT-TO (PUBSTAGE , "final")) AND (LIMIT-TO (LANGUAGE , "English"))
	Flipped, ESL, teacher, barrier, challenge	TITLE-ABS-KEY (flip* AND (esl OR efl) AND teacher AND (barrier* OR challenge*)) AND (LIMIT-TO (PUBSTAGE , "final")) AND (LIMIT-TO (DOCTYPE , "ar")) AND (LIMIT-TO (LANGUAGE , "English")) AND (LIMIT-TO (PUBYEAR , 2021) OR LIMIT-TO (PUBYEAR , 2022) OR LIMIT-TO (PUBYEAR , 2023) OR LIMIT-TO (PUBYEAR , 2024))

Review of Paper

Effectiveness of Flipped Classroom for ESL learning

Writing Performance and Strategies

An extensive collection of research frameworks has been devoted to examining the flipped instructional approaches' effects on diverse aspects of language education. The articles assembled under this sub-scope explore the multifaceted nature of writing instruction in the flipped context. The investigation begins with a study examining the efficacy of metacognitive strategy-based instruction in FC of Iranian EFL learners (Khosravi et al., 2023). Their findings indicated substantial enhancements in writing proficiency, heightened self-efficacy and decreased anxiety among students who were exposed to flipped instruction compared to traditional methods.

Similarly, Mohammad & Khan (2023) presented an FC approach for a pre/post quasi-experimental research with the objective of enhancing EFL students' writing abilities in a "Technical Report Writing" course. The study, involving 25 students, demonstrated a significant improvement in writing abilities, suggesting the efficacy of FC in addressing challenges in EFL teaching and learning. Furthermore, Wu et al. (2023) examined the opportunities of a writing instruction approach that integrated constructivist learning, flipped learning, reading-writing connection, as well as online intercultural exchanges among 48 Taiwanese EFL learners. The research examined the effects of intercultural online exchanges with American counterparts and demonstrated that the participants developed greater intercultural sensitivity, improved writing outcomes, and enhanced cross-cultural observations. The research underscored the significance of integrating online intercultural exchanges to develop writing skills and foster intercultural sensitivity in EFL learners.
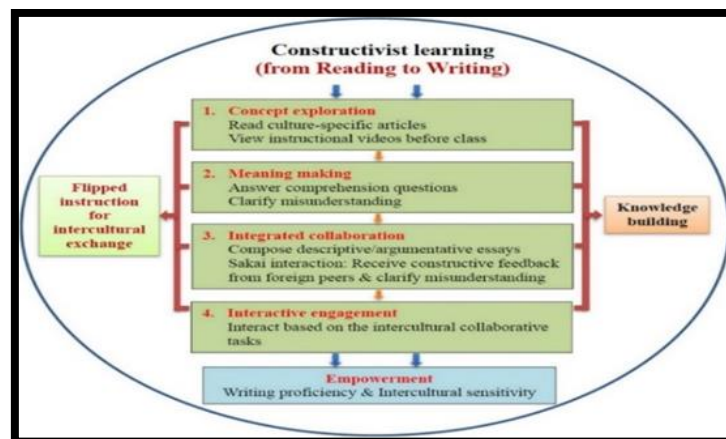

**Figure 1: The Incorporation of Constructivist Learning, Reading-Writing Connection,
Flipped Learning, And Online Intercultural**

Source: (Wu et al., 2023)

In a related investigation, Maharani et al. (2023) implemented an explanatory mixed-methods study design to determine how students felt about a blended process-based approach in the argumentative writing course. Findings from 28 sophomores demonstrated positive perceptions, with pre-writing stages revealing the highest frequency of strategy selections. Significant progress was observed in post-test writing performance, highlighting the blended process-based approach's effectiveness by differing perceptions between male and female

students. In addition, Deti et al. (2023) studied the influence of reflection-supported learning on the writing attitudes and accomplishment goal orientations of first-year natural sciences students at Jimma University. The study revealed statistically significant distinctions in writing attitudes and achievement goal orientations. Given the favorable outcomes associated with reflection-supported learning, there is a growing need for EFL instructors to integrate guided reflection into their approaches to teaching writing. In relevance, Fathi et al. (2021) examined the effects of a FC on Iranian EFL students' writing performance and self-regulation. Across all areas, the experimental group exhibited enhanced performance in comparison to the control group due to their exposure to FC. Lastly, Shamsi Lameshkani et al. (2024) investigated the impact of teaching academic writing in a virtual FC with constructive alignment principles. It underscored the significance of constructive alignment, showcasing how aligning learning outcomes, activities, and assessment in a virtual FC setting can lead to notable improvements in student engagement, writing proficiency, and higher order thinking as compared to non-aligned teaching. These results are of great significance in the context of incorporating flipped classroom instruction (FCI) into EFL courses.

Classroom Assessment and Methodology

The compiled articles examined the effects regarding the FC approach on evaluating student learning and suggested innovative teaching strategies for ESL. In a comprehensive examination of language education approaches, Kantamas (2023) investigated the efficacy of the FC in boosting language learning experiences for EFL undergraduate students in Thailand. The study, employing a blend of quantitative and qualitative methods, revealed that implementing FC strategies positively impact language learning performance, motivation, participation, and overall interest in English learning.

Table 2: Students' Satisfaction with The FC Elements

Satisfaction of Students with the Flipped Classroom Elements	EFL Students		
	$\bar{x}$	S.D.	Level
1) Online modules helped in improving the learning process.	4.61	0.61	Very Effective
2) Flipped classrooms offered more interaction with EFL students.	4.45	0.67	Somewhat Effective
3) This method encouraged interest in the course.	4.53	0.64	Very Effective
4) EFL students defined the course content to be useful for professional needs.	4.48	0.73	Somewhat Effective
5) EFL students considered assignment and in-course test feedback to be of help.	4.43	0.76	Somewhat Effective
6) This method was supportive in developing personal autonomy and independence.	4.53	0.64	Very Effective
7) Students agreed that their interest in the course was encouraged by the lecturer.	4.63	0.58	Very Effective
Total	**4.52**	**0.66**	**Very Effective**

Source: (Kantamas, 2023)

Similarly, Abdelghafar et al. (2023) contributed to the discourse on language education in the context of the COVID-19 pandemic by concentrating on integrating WebQuests in both traditional and FC settings for English listening skills and L2 listening anxiety among preparatory education students in Egypt. Their quasi-experimental design highlighted the effectiveness of WebQuests, particularly in the FC setting. Additionally, Syarifudin (2023) examined the deployment of an Online Collaborative Flipped Writing Classroom (OCFWC) learning framework which addressing the issues given by the epidemic. In the distant learning condition, the study examined the perceptions of EFL students, the obstacles they experienced, and proposed improvements. Findings indicated positive perceptions regarding effectiveness, motivation, satisfaction, efficiency, engagement, as well as writing skill development. Lastly,

Algouzi & Hazaea (2023) investigated the unexplored terrain of teamwork Emergency Remote Teaching Practices (ERTPs) with regard to EFL writing during the COVID-19 pandemic. Their context-based study, conducted at Najran University, Saudi Arabia, employed a conceptual framework integrating ethnography with pedagogical technology. The analysis revealed the hybrid nature of the EFL writing class as a communicative event, showcasing the adaptability of teaching practices and the effectiveness of a teaching team during crises.
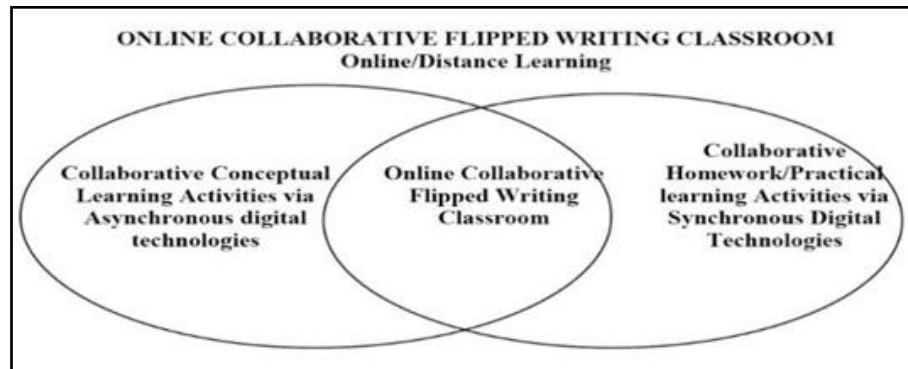

Figure 2: Online Collaborative Flipped Writing Classroom (OCFWC) Learning Framework

Source: (Syarifudin, 2023)

Student Engagement and Perception

Addressing the student engagement in the language learning process through FC, (Wang & He, 2023) delved into the engagement of pre-service teachers in flipped Chinese language as well as culture learning. The research, involved 50 American undergraduate pre-service teachers, revealed that task compatibility with abilities, goal-setting opportunities, instant feedback, and clear learning objectives influence positive engagement in FC. Insights from the study contributed to the design and practice of flipped instructional strategies for foreign languages. Similarly, Craigie (2023) offered a nuanced examination of the use of online quizzes as part of the FC approach in an EFL course. It highlighted the instructor's motivations for incorporating online quizzes and discussed two different implementation strategies. Moreover, the study explores student engagement with these quizzes and reflects on how closely the learning outcomes align with the original intentions. Overall, this study emphasizes the importance of balancing the benefits of online quizzes for formative assessment with the challenges of ensuring student engagement and alignment with learning objectives. The proposed strategies aim to address these challenges and maintain students' focus on the intended learning path within the FC context. Additionally, Gasmi & Al Nadabi (2023) conducted a mixed-methods study at Sultan Qaboos University in Oman, investigating students' viewpoints on active learning methods, including FCI. The findings revealed that students appreciated the advantages of active learning, such as skill enhancement, autonomy, and increased motivation. However, they highlighted challenges, including a heavy workload and insufficient skills. The findings contribute to the EFL knowledge base, offering implications for teaching as well as learning in similar settings.

On the other hand, while investigating the impact of FCI on EFL learners' writing performance and attitudes towards technology, Muluk & Dahliana (2024) conducted a mixed-method study at three State Islamic Universities in Indonesia. Their findings revealed a positive attitude towards FCI among students, despite varied improvements in writing performance hence FCI is perceived to offer a meaningful and effective learning experience for EFL students. On

another note, a study explored the influence of the FC approach on EFL learners' cognitive and meta-cognitive competence during the Covid-19 pandemic. Conducted in private language institutes in Iran, Samadi et al. (2024) demonstrated the significant positive effects of FCs on learners' utilization of cognitive self-regulated learning strategies and enhancement of higher-order thinking skills. The findings advocated for the incorporation of FC practices in language education to foster self-directed learning and critical thinking among EFL learners particularly in the context of remote learning during the Covid-19 pandemic.

Finally, Retnaningsih et al. (2023) addressed the gap in research by scrutinizing the impact of FC on the development of speech acts of requests among 64 EFL learners in Indonesia. The flipped group provided course materials to members via the WhatsApp application prior to class, enabling them to concentrate on refining their speech acts of requests and enhancing their communication competence during in-class sessions. The research utilised pre-and post-tests, with the Discourse Completion Test (DCT) being specifically applied to evaluate the speech proficiency, request behaviour, and communication ability of the learners. The learners' acceptability and opinions of FC were further assessed through the utilization of self-report questionnaires as well as a Technology Acceptance Model (TAM) questionnaire. Findings indicated that the flipped group achieved superior post-test scores and demonstrated greater involvement in learning activities in comparison to the control group. They expressed appreciation for using digital platforms through WhatsApp for learning, highlighting positive perceptions and acceptance of FC activities. These findings contributed valuable insights to the literature on English communicative competence, especially in speech acts of requests, utilizing technology-based tools within a FC framework.

Technology Integration in ESL Flipped Classroom

Technology-Mediated Language Learning

This sub-scope explores the dynamic intersection between the FC methodology and cutting-edge technological advancements, probing into how technology enhances various aspects of ESL teaching and learning. The exploration starts with investigating Augmented Reality Games (ARG). In recent years, ARG has developed as a significant feature in instructional settings, taking three-dimensional media on mobile devices to mix virtual and physical environments. Sixty elementary children participated in an examination of the efficacy of ARG-enhanced education for EFL learners in both flipped as well as blended contexts (Khodabandeh, 2023). In terms of learning to give and receive directions, both the flipped and mixed groups that were exposed to 16 sessions of ARG-enhanced education performed better compared to the control group. The research, utilizing an 8-week treatment, showcased the effectiveness of integrating ARG technology into language education, paving the way for its use in online and traditional classes.

Additionally, as interest in FCs grows, Hung & Yeh (2023) featured an AR-enhanced Game-Based Learning (ARGBL) approach using an augmented board game to actively engage students in FC contexts. The experimental group which participated in ARGBL activities through a quasi-experimental design, outperforming the comparison group in vocabulary acquisition as well as creative thinking. Results indicated the positive impact of ARGBL on student learning outcomes, highlighting its potential for enriched content visualization as well as active learner engagement through gameplay in the flipped EFL classroom. Through the successful integration of active learning approaches and emerging technology, this study

contributed significantly to the ongoing body of research on effective instructional design. It particularly highlighted the potential of ARGBL in augmenting FC experiences.

Likewise, Robillos & Bustos (2023) explored the impact of task-based language teaching, which is technology-mediated, utilizing the FlipGrid application in a Thai EFL context. The study examined the impact of FlipGrid-based technology-mediated Task-Based Language Teaching (TBLT) on descriptive writing performance with the objective of examining 29 second-year university students. Results indicated significant improvements in descriptive writing components, such as coherence-cohesion, task response, grammatical range as well as accuracy, and lexical resource, as demonstrated in pre- and post-test results and writing quizzes. Qualitative insights showed that students perceive the TBLT approach with the FlipGrid application as innovative and learner-centered, fostering collaboration, communication, and interactivity in producing effective descriptive written products. In addition, Ypsilanti & Karras (2023) examined the transformative effects of an EFL teacher's experience in a Computer-Mediated Intercultural Communication-based assignment during the coronavirus lockdown. Their study revealed significant improvements in students' descriptive writing performance, highlighting the effectiveness of the task-based language teaching approach with technological integration. Furthermore, the research emphasized the importance of incorporating reflection-based inquiry and a student-generated coronavirus memory archive to reform the teaching techniques of a graduate-level TEFL program. Lastly, a comprehensive review was undertaken to assess the efficacy of FCs in EFL courses within the COVID-19 pandemic (Linling & Abdullah, 2023). By evaluating fifteen studies from sources such as Scopus and Web of Science, the review demonstrates that FCs have a favourable effect on EFL classes across the epidemic.

Furthermore, Chaisiri (2023) examined the impact of technology-mediated oral assignments on the WTC of virtual classroom-enrolled Thai EFL students. Using the Flipgrid application as entrance as well as exit tickets in an online English for Communication course, the study involved 34 participants over eight weeks. Results revealed a statistically significant increase in overall WTC after the intervention, with students expressing positive opinions on technology-mediated oral tasks, especially regarding academic engagement as well as skill improvement. Similarly, Luan et al. (2024) examined a digital storytelling-based online FC approach's impact on EFL learners' WTC during the pandemic. It demonstrated how innovative instructional approaches not only enhance language skills but also boost learners' confidence and promote meaningful interaction. This is shown when learners in the experimental group exhibited higher WTC compared to the comparison group. The study's qualitative data also supported increased confidence in speaking English and enhanced interaction and collaboration. Thus, these findings contributed to understanding the role of technology in FC to enhance WTC and offer implications for online English language classroom best practices.

Correspondingly, Zhang (2024) investigated the impact of a MOOC-based and AI-powered flipped teaching and assessment (MAFTA) model on college English teachers' growth in technological pedagogical content knowledge (TPACK) and students' learning outcomes in EFL writing. Through three cycles of MAFTA instruction involving three college EFL teachers and 66 students, the lesson study found varying degrees of TPACK growth among teachers and substantial improvements in students' essays. Moreover, students perceived the MAFTA model positively, highlighting its benefits. The findings underscore the importance of integrating multiple technological affordances effectively to enhance EFL education at the tertiary level. Meanwhile, Chang et al. (2024) explored the effects of an annotation-supported Socratic

questioning approach in FCs on argumentative writing and critical thinking skills. The significant improvements in argumentative writing for the experimental group were attributed to scaffolding thinking through verbal articulation and visualizing thinking with social annotations. The study emphasizes the role of technology in scaffolding students' thinking processes and facilitating collaborative learning. Furthermore, the effects of a FC on EFL lessons and students' attitudes toward technology were explored (Jeon, 2023). The seventeen-week study comprised of 428 EFL primary school students and utilized a variety of technologies in both experimental as well as control groups. Findings of the study showed that the experimental group, which underwent the FC, exhibited improved levels of digital literacy, perceived usefulness, and reduced anxiety. The survey results were further supported by thematic analysis of qualitative data, which underscored the positive influences of the FC on the attitudes and digital literacy of the learners. These studies presented compelling findings regarding the potential advantages of using the FC for young students in public school settings, emphasizing the profound impact that technology may have on language education.

Flipped Classroom with Different Language Skills

In addressing the challenges faced by international ESL students with lower levels of oral language proficiency, Chen & Wong (2023) implemented a teaching innovation in a graduate-level TESOL program. Employing the Flip video recording, sharing, as well as discussion platform, the program aimed to create a more inclusive and less formal online space for international ESL students. They found out that Flip promotes the development of teacher identity and skills, a feeling of community membership, and increased equity in assessment processes, while also addressing linguistic obstacles. In a parallel exploration, Keskin (2023) investigated the incorporation of the FC approach in EFL classrooms. The study presented tools to guide teachers in flipping language classrooms to create more active and communicative learning environments. The results of an inquiry into the learning experience questionnaire, focus group interviews, as well as instructor observations indicated that EFL students held favorable views of the FC method. Online assignments and discussion tasks emerged as valuable components for implementing the FC in EFL reading courses, highlighting the effectiveness of this approach in promoting student engagement and communication in language learning. In relevance, Alolaywi & Alkhalaf (2024) examined the efficacy of a FC in enhancing grammar skills among undergraduate EFL students at Qassim University, Saudi Arabia. Through a 12-week intervention involving online video lectures and activities, the experimental group outperformed the control group in grammar performance. Additionally, students express positive attitudes towards this approach, emphasizing its engaging and effective nature. These findings suggest the potential of FC methods to enhance EFL learning experiences across various language skills.

Barriers to Adoption

Challenges and Perspectives in Flipped Classroom Implementation

Investigating challenges and perspectives in implementing FC, Al-Naabi et al. (2022) focused on EFL teachers in Oman who adopted FC during Emergency Remote Teaching (ERT) due to the Covid-19 pandemic. Employing a qualitative explanatory case study, the research analyzed teachers' experiences, identifying four key themes: strategies, challenges, advantages, as well as suggestions for better practice. The study shed light on the specific challenges faced during ERT and offered recommendations for future FC implementations. Similarly, Alahmadi & Saleem (2022) examined challenges Saudi Arabian ESL teachers faced implementing the flipped classroom model in language teaching. Through an end-of-term survey, including

questionnaires and interviews, the study highlighted teachers' difficulties with FC, emphasizing their dissatisfaction and the lack of preparedness in handling this new approach. Indirectly, the study proposed a contradictory perspective. Figure 3 shows teachers who use FCs are more likely to be familiar with basic technologies, social media, and communication tools than with online content creation tools; thus, the apparent disparity between teachers' familiarity with technologies and their dissatisfaction with the FC approach emerged. On the one hand, the study reported the teachers who used FCs were more familiar with basic technologies like webcams, mass storage media, social media, and communication tools. However, on the other hand, despite this familiarity, they expressed dissatisfaction with the approach, citing a general feeling of being ill-equipped to deliver lessons as well as to effectively handle feedback.

Table 3: Background Information on Gadgets Owned and Used by Teachers (n=50)

Gadgets	Owned		Used for FCM	
	Number	%	Number	%
Smart phone	50	100	45	90
Laptop computer	50	100	5	10
iPad	10	20	0	0
Other tablets	13	25	0	0
Media player	5	10	0	0
Webcam	50	100	50	100
E-reader (e.g., Kindle)	13	25	5	10
Mass storage media (e.g., USB pen-drive)	50	100	40	80
External/portable hard drive	25	50	25	50

Source: (Alahmadi & Saleem, 2022)

Table 4: Teachers' Familiarity with online/offline activities (n=50)

Activity	Number	%
Text messaging	50	100
Facebook use	50	100
E-mail	50	100
Stream and download web-based videos	50	100
Compose/view a web-based text document	10	20
Read e-books	12	25
Write/read blogs	5	10
Use social networking sites	50	100
Participate in online chats, webinars, etc.	50	100
Use LinkedIn	45	90

Source: (Alahmadi & Saleem, 2022)

In relevance, Kiang & Yunus (2021) investigated Malaysian primary ESL teachers' perceptions of the FC by employing a mixed-method design. The study revealed positive perceptions and concerns about ICT gadget availability and internet connectivity in rural areas. The findings contributed to understanding teachers' attitudes towards FCs, offering suggestions for infrastructure improvements, and recommending future studies for a more comprehensive perspective on Malaysian teachers' perceptions of the FC approach. Continuing the exploration of challenges and perspectives in FC, (Suparman et al., 2023) delved into the teachers' and students' experiences with the FCM. Utilizing written narratives and interviews, the research revealed that while the FC facilitated active learning and increased student engagement, successful implementation required students to possess learning autonomy, technological proficiency, and access to reliable internet services.

Similarly, Alwehebi (2021) examined the impact of FCI on pre-service teachers of EFL in Saudi Arabia. The study demonstrated, by pre- and post-tests, a questionnaire, and students' lesson plan writing as well as teaching abilities, indicating a favorable correlation with FCI. As

the emphasis shifted to the virtual FC throughout the COVID-19 pandemic, as per Al-Naabi (2022), autoethnographic study was utilized to investigate individual teaching styles and obstacles faced during the implementation of a virtual FC in Oman. Thematic analysis had identified three primary themes pertaining to the implementation of the virtual FC: advantages, obstacles, and strategies. A framework was suggested by the study to assist instructors in higher education in utilizing the virtual FC successfully. In comparison, Han et al. (2024) examined student teachers' perceptions of the FC model in EFL teacher education. Through surveys and focus group interviews with student teachers in Norway, the study explored the advantages, challenges, and potential future adoption of FC. Unexpectedly, the study revealed a dichotomy between their interest in experiencing flipped courses and their hesitation in implementing the approach in their own teaching practice. This outcome suggests a need for further exploration of barriers and facilitators to FC adoption among teacher educators and student teachers.

Another avenue was explored using Artificial Intelligence (AI) to address EFL students' challenges in practicing English. The study by Lin & Mubarok (2021) implemented AI-driven chatbots in a flipped English-speaking classroom; the utilization of mind map-guided AI chatbots demonstrated superior efficacy in enhancing students' speaking abilities and educational achievements. However, the study acknowledged study limitations such as the small sample size and duration of the experiment, suggesting avenues for future research, including exploring different learning strategies, investigating the approach's impact on psychological aspects, and studying its application in diverse contexts such as virtual reality or augmented reality. Additionally, Park (2022) conducted an exploratory study examining the perceptions as well as experiences of EFL pre-service teachers with FC. The findings revealed the pre-service teachers' positive views on the usefulness as well as effectiveness of FC for self-regulation and autonomy while addressing challenges and emphasizing the need for connectivity between online sessions and actual classroom learning. Collectively, these studies provide an exhaustive comprehension of the influence and efficacy of FCs across various educational settings.

Conclusion

In ESL education, the FC model demonstrates its adaptability and efficacy across multiple scopes. In writing instruction, studies by Khosravi et al. (2023) and Mohammad & Khan (2023) highlight enhanced proficiency and reduced anxiety among Iranian EFL learners. Moving to assessment and instructional methodologies, Kantamas (2023) and Abdelghafar et al. (2023) showcase positive impacts on language learning experiences and participation. Technological integration emerges as a catalyst for improvement, with Hung & Yeh (2023) emphasizing positive contributions from Augmented Reality-Enhanced Game-Based Learning. These comprehensive insights underscore the FC's adaptability, emphasizing its role in fostering language proficiency, engaging learners, and integrating technology effectively in ESL education.

The synthesis of studies reveals the intricate impact of technology in ESL FCs. Chaisiri (2023) and Robillos (2023) showcase how Flipgrid positively impacted students' inclination to engage in oral English communication. Innovative approach such as by Jeon (2023), highlight technology's potential for enriching content visualization and active engagement. Beyond specific language skills (Keskin, 2023), and technology, including Flip video recording (Chen & Wong, 2023), the FC approach fosters inclusive learning environments, positive attitudes, and increased engagement. Moreover, technology-mediated approaches significantly enhance writing skills, from argumentative essays (Khodabandeh, 2023) to descriptive writing (Robillos

& Bustos, 2023). Retnaningsih et al. (2023) address a research gap by exploring the impact of flipped learning, utilising WhatsApp, on the development of speech acts among EFL learners, revealing higher scores and positive perceptions. These findings underscore technology's transformative role in diverse language learning aspects within the ESL FC.

Studies across Oman, Saudi Arabia, China, and Malaysia highlight shared barriers to adopting FC, including dissatisfaction with the FC model (Al-Naabi et al., 2022; Alahmadi & Saleem, 2022), infrastructure limitations (Kiang & Yunus, 2021), and the importance of technological proficiency (Alwehebi, 2021). These studies emphasize the need for strategic planning, collaboration among stakeholders, and tailored strategies to address these challenges effectively. Positive relationships between FC instruction, student skills (Alahmadi & Saleem, 2022) and the efficacy of AI-based tools (Lin & Mubarok, 2021) suggest the potential for successful implementation. These findings call for targeted interventions and further research to facilitate effective FC adoption across diverse educational contexts.

Acknowledgements

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