Flipped classroom approach in EFL context: Implementing self-regulated learning to improve students’ performance in use of grammar

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ABSTRACT

The Flipped Classroom has gained popularity in various fields, including the field of English as a Foreign Language (EFL) learning, offering new possibilities for improving students’ grammar skills. This study aimed to investigate the implementation of self-regulated learning (SRL) strategies within the Flipped Classroom to enhance students’ performance in the use of grammar. The sample comprised 50 high school students in a Saudi Arabian school. Using the quantitative research paradigm, the study employed a pretest and posttest control group design within the domain of quasi-experimental research. The experimental group was given instruction using multiple SRL strategies while the control group was given instruction without SRL strategies in a Flipped Classroom. The results indicated a significant difference in the post-test scores between the experimental (which utilized SRL strategies) and the control group (which was taught without SRL strategies). The findings suggest that SRL strategies in Flipped Classroom positively impacted students’ grammar skills. Additionally, the study categorized students into different proficiency levels and found significant differences in grammar skills based on proficiency levels. The study also aligned with the social cognitive model of SRL, which emphasizes the importance of performance control, and self-reflection phases in the learning process. The study recommends the integration of SRL strategies in Flipped Classrooms to enhance students’ grammar skills and calls for further research to explore the impact of SRL strategies on other language skills in EFL contexts. Overall, the study contributes to the understanding of how SRL strategies can be used to improve language learning outcomes within the Flipped Classroom Approach.

Contribution/ Originality: This empirical study contributes to the field by investigating the implementation of self-regulated learning (SRL) strategies within the Flipped Classroom to enhance students' grammar skills in the context of EFL learning. The experiment study demonstrates the positive impact of incorporating SRL strategies on students' grammar skills.

1. INTRODUCTION

The 21st century has witnessed significant advancements in the education sector, driven by the frequent advancement of Information and Communication Technology (ICT). As a result, there has been a notable shift from a face-to-face mode of education to online learning (Bergmann & Sams, 2014; Honey, Culp, & Carrigg, 2000; Hosseini, Ejtehadi, & Hosseini, 2020). This transformation has introduced academia to the realm of online or e-learning, which involves the delivery of educational content primarily through digital platforms and the internet (Oweis, 2018). Subsequently, the dynamic landscape of technology necessitated the integration of both face-to-face
and online instructional approaches in order to leverage their respective strengths and enhance the overall quality of the teaching-learning process. This gave rise to the concept of blended learning, which encompasses various innovative strategies and methodologies. One such approach that has gained significant popularity within the broader framework of blended learning is the 'Flipped Classroom.'

The origin of the Flipped Classroom is drawn back to 2007 when Bergmann and Sams initiated the formal practice of flipping their physical classrooms. The primary objective was to record lectures and making them accessible online for students unable to attend classes (Bergmann & Sams, 2014). This instructional paradigm emphasized the completion of coursework at home, thereby utilizing valuable class time for the active application and consolidation of concepts (Overmyer, 2014). By delivering lectures as pre-class assignments and reserving in-person sessions for interactive learning, the traditional teaching environment underwent a fundamental shift (Tucker, 2012). In the Flipped Classroom model, pre-recorded instructional videos are utilized prior to class, allowing students to access and download them at their convenience (Mok, 2014; Zhou & Jiang, 2014). Classroom time is then dedicated to engaging students in practical application, hands-on activities, and collaborative learning experiences (Mok, 2014). The Flipped Classroom concept has gained widespread acceptance worldwide in a relatively short period due to its inherent benefits. Moreover, numerous studies have demonstrated its effectiveness in the EFL courses.

Thus, the Flipped Classroom has emerged as an effective instructional model within the broader framework of blended learning. Its implementation in EFL contexts has shown promise in improving students' language skills, fostering engagement, and optimizing the utilization of class time. Further, scholarly research is necessary to explore the potential of the Flipped Classroom in other subject areas and to investigate its impact on various aspects of language learning.

1.1. Flipped Classroom for EFL Learning

The dynamic nature of the teaching-learning process necessitates the continuous evolution of instructional methodologies. In response to this demand, the effective integration of ICT in EFL instruction has gained significant traction (Haghighi, Jafarigohar, Khoshsima, & Vahdany, 2019). Among the various approaches available, the Flipped Classroom stands out as a promising option for enhancing the quality of language learning. By implementing a flipped classroom model, EFL courses can facilitate increased intercommunication, enabling learners to receive immediate corrective feedback from instructors as they assimilate new information and develop their language skills (Hosseini et al., 2020). This approach not only enhances students' motivation and active engagement but also contributes to the achievement of targeted learning outcomes (Chen, Wu, & Marek, 2017). Egbert, Herman, and Lee (2015) further posit that flipped classrooms can effectively address the issue of limited communication in language teaching. In teaching of EFL, the students have the advantage to access online videos outside the classroom to learn different grammar principles and speaking skills.

Within a flipped classroom environment, students can engage in a range of language activities, such as listening exercises with audio files, writing tasks with discussion forums, and collaborative project work (Wu, Hsieh, & Yang, 2017). In-class activities, guided by instructors, provide opportunities for meaningful learning through feedback, exchanging meaningful knowledge, and providing remedial support (Liu, Sands-Meyer, & Audran, 2019).

By leveraging the advantages of the flipped classroom, students can participate in numerous writing activities, and gain access to diverse learning resources for mastering grammar rules and language structures (Evseeva & Solozhenko, 2015). A review conducted by Turan and Akdag-Cimen (2020) also mentioned the same findings as they highlighted that designing a flipped classroom more effectively can help in improving the students EFL skills which have a positive impact on their performance in EFL based course.
1.2. Self-regulated Learning in the Flipped Classroom

The implementation of the flipped classroom approach entails a shift in the roles and responsibilities of both teachers and students. In this pedagogical model, the teacher assumes a more passive role, while the students become active participants (Zheng, Ward, & Stanulis, 2020). They take on increased ownership and responsibility for their learning process. Consequently, in order to thrive as independent learners within the flipped classroom, students must employ the techniques for self-regularized learning (Rahman, Aris, Mohamed, & Zaid, 2014). This calls for performing a number of activities both inside and outside the classroom, such as independently reviewing educational materials such as videos, audio lectures, and images at home, completing assigned homework, and actively taking part in group work, question-and-answer sessions, hands-on activities, and discussions (Turan & Akgad-Cimen, 2020; Wu et al., 2017). However, a lack of self-regulated learning (SRL) abilities may make it difficult for pupils to handle these assignments successfully (Rasheed et al., 2020). Therefore, in order to increase the students' involvement in flipped classrooms, it is imperative to promote self-regulated learning among them (Öztürk & Çakiroğlu, 2021). The traditional responsibilities of teachers and students must shift in the flipped classroom paradigm, with students taking on more active and independent learning roles. In order to successfully navigate the flipped classroom, students must also use a variety of self-regulated learning strategies in order to be able to handle the many duties and obligations that come along with this methodology. To maximize engagement and learning results in the flipped classroom setting, educators should provide special attention to helping students develop their self-regulated learning skills. In order to examine the effects of these SRL tactics on EFL students' academic performance as well as on their metacognitive development, more research is required to explore effective strategies for promoting self-regulated learning among EFL learners within the setting of the flipped classroom.

1.3. Problem Statement

Research conducted in the Saudi context has highlighted the challenges in teaching and learning process in the EFL context, particularly in the domain of grammar (Al-Hamlan & Baniabelrahman, 2015). Despite the significance placed on EFL programs in Saudi educational institutions, students continue to encounter difficulties in accurately and fluently using grammar in their spoken language (Al-Hamlan & Baniabelrahman, 2015). To overcome these challenges, the idea of flipped classroom has developed gradually as a potential platform for enhancing students' grammar skills (Al-Harbi & Alshumaimeri, 2016; Hsieh, Wu, & Marek, 2016).

However, very few studies have explored the potential effectiveness of self-regulated learning, particularly within language-learning contexts (Zhang, 2019). Research suggests the importance of addressing students' self-regulated learning skills within the flipped EFL classroom (Öztürk & Çakiroğlu, 2021; Zou, 2020). Managing the timing and methods of studying, as well as evaluating learning outcomes in both during the class time and of out-of-class activities, can be challenging for students in a Flipped EFL Classroom. Therefore, EFL teachers should integrate self-regulated learning strategies to support students' language development. Lai and Hwang (2016) propose that the integration of SRL strategies in the flipped learning environment can improve students' learning outcomes, through improving their self-efficacy and an ability to plan and manage study time more effectively. Utilizing multiple SRL strategies, for instance planning learning activities, supporting self-motivation, engaging in organization of the task, rehearsal of the instructional material, doing self-monitoring, self-observation, self-assessment, and empower empowering students to actively control their learning process (Artino Jr & Stephens, 2009).

While existing research has explored the benefits of the flipped classroom in EFL courses, still, limited evidences exist on how the implementation of diverse SRL strategies can foster students' language skills, particularly in the use of grammar (Öztürk & Çakiroğlu, 2021). In a nutshell, the Saudi context faces challenges in EFL learning, specifically in the area of grammar. The flipped classroom has been identified as a potential solution
to improve students’ grammar skills. However, there is a need to focus on enhancing students’ self-regulated learning within the EFL based flipped classroom.

Therefore, this study aims to bridge this gap by investigating how the effective implementation of self-regulated learning strategies can contribute in improving students’ use of grammar skills in the flipped EFL courses in Saudi Arabia.

1.4. Research Questions

1. To what extent do the students self-regulate their learning in flipped classroom in the EFL courses to improve their grammar skills in Saudi Arabia?
2. How effective is using self-regulated learning strategies in flipped classroom in the EFL courses for improving students’ use of grammar skills based on their proficiency level in Saudi Arabia?

It was hypothesized that:

Ha: Using self-regulated learning strategies in the flipped classroom in the EFL course have a significant and positive contribution to improving student’s use of grammar skills in Saudi Arabia.

1.5. Theoretical Underpinning

The study was built upon the social cognitive model of self-regulated learning which was given by Zimmerman (1995) and Zimmerman (2008) adapted by Zumbrunn, Tadlock, and Roberts (2011). Figure 1 shows the model’s details.

Self-regulation is a cognitive and metacognitive process that encompasses self-generated thoughts, emotions, and actions, aimed at achieving personal goals (Zimmerman, 2008). Within the self-regulated learning framework,
this process follows a cyclic pattern, consisting of three interconnected phases: forethought and planning, performance monitoring, and reflection on performance (Zhang, 2019). The first phase, named as the 'forethought and planning phase', sets the foundation for learning performance, encompassing goal-setting, task analysis, and strategic planning. The second phase, performance monitoring phase, involves the execution of learning behaviors, employing strategies such as self-monitoring, attention allocation, and self-instruction. Finally, the reflection of performance phase involves metacognitive processes, including evaluating one's performance, attributing causes for success or failure, and making adjustments for future learning (Zhang, 2019; Zumbrunn et al., 2011).

In the present study, all three phases of self-regulated learning were integrated into the instructional design when assigning in-class and out-of-class tasks to students in the EFL course. By incorporating the forethought and planning phase, students were encouraged to set goals and plan their learning activities strategically. During the performance monitoring phase, students engaged in various self-monitoring techniques, directed their attention effectively, and utilized self-instruction strategies to regulate their learning behaviors. Finally, the self-reflection on performance phase facilitated students' metacognitive processes, allowing them to assess their performance, react to feedback, and adapt their learning strategies accordingly.

By implementing a comprehensive approach to self-regulated learning, this study aimed at improving students' ability to self-regulate their learning process effectively in the EFL course based on the flipped classroom idea. By fostering students' metacognitive awareness, strategic planning, and self-monitoring skills, it was anticipated that their overall learning outcomes and performance would be enhanced.

2. METHODOLOGY

In order to evaluate the impact of self-regulated learning (SRL) strategies on students' usage of grammar skills in the context of a flipped classroom in the EFL course, this study was experimental in character and used a quasi-experimental research methodology. In particular, a pretest-posttest control group design was used, in which the course was taken by both an experimental group and a control group. Students in the flipped classroom in the EFL course who made up the experimental group were given training that included self-regulated learning techniques. The same course material was taught to the control group, but it did not include SRL methods. Thus, in this study, the independent variable was the use of self-regulated learning strategies, while the dependent variable was the students' usage of grammar. The current study used the aforementioned research design to assess how self-regulated learning strategies (SRL) affected students' usage of grammar skills, offering important insights into the potential advantages of including SRL strategies in the Flipped EFL instructional framework.

2.1. The Procedure of the Study

The flipped classroom model designed by Öztürk and Çakiroğlu (2021) was adapted for the current study to support the students in possessing self-regulated learning strategies in flipped classroom in the EFL courses. Figure 2 showed the adopted SRL-based Flipped Classroom Model. The intervention model in this study was designed based on Zimmerman (1996) model where he proposed three phases of SRL. During the intervention, which lasted for a total of 8 weeks, multiple SLR strategies were practiced with the experimental group.

The participants were initially pre-tested to ensure comparable English language proficiency levels between the groups. Both the experimental and control groups of the study were provided with the same online instructional material and engaged in similar activities during class. However, the experimental group received additional instruction on various SRL strategies. These strategies included goal setting, self-efficacy, help-seeking, organizing, rehearsal, time management, self-evaluation, and feedback as shown in the Figure 2.
Within the goal setting strategy, students were encouraged to set their own short-term goals and strive to achieve them, fostering a sense of ownership in their learning process. The self-efficacy strategy aimed to continuously motivate students, instilling the belief that they could successfully complete their tasks through their own efforts. Students were encouraged to learn from their mistakes and avoid repeating them.

Help-seeking and feedback strategies were implemented throughout the intervention, providing guidance and support to learners as needed. The organizing characteristic involved students organizing their tasks independently under the guidance of the instructor. They were also encouraged to divide and collaborate on assigned tasks within their groups.

The feedback and help seeking strategies, within the flipped classroom, provided students with numerous opportunities to practice and reinforce their learning through various means, such as watching instructional videos, PowerPoint presentations, and written materials. Help seeking also involves class discussions and question-answer sessions to engage students in active learning. Students are also encouraged to share their knowledge with peers, further enhancing their understanding of the concepts.

Within the time-management strategy, students were instructed to create a flexible timetable based on their individual preferences, specifically managing their out-of-class tasks. This helped them develop effective time management skills, both individually and in group settings. Lastly, students were guided in self-evaluation, setting benchmarks under the supervision of the instructor.

The control group in this study received instruction in the EFL Flipped classroom without the use of any self-regulated learning strategy. Similar to the experimental group, they were provided with the same online instructional materials, including a short video, PowerPoint presentation, and a two-pager Word document. During class time, multiple tasks were assigned to the students to apply the learned concepts.

Both the experimental and control group participants took a post-test evaluation that evaluated their performance in the usage of grammatical skills after the intervention offered throughout the study to the experimental group exclusively. The post-test results were then compared to determine whether there were any significant differences between the control and experimental groups. Students in the experimental group were
further separated into three subgroups according to their level of grammar proficiency. This divide made it possible to analyze the large mean variances in students' grammatical usage according to their degree of skill.

The procedure followed with the control group and experiment group is illustrated in Figure 3, outlining the specific steps taken during the study.

**Figure 3.** Procedure followed in control and experiment groups

### 2.2. Participants of the Study

The current study was conducted in the Kingdom of Saudi Arabia (KSA). It concentrated on high school pupils pursuing an English as a Foreign Language (EFL) course. The study was participated by 50 students between the ages of 16 and 18 years, who were divided into two groups, experimental and control groups with 25 students in each group. Both the experimental and control groups were given a pre-test examination to determine their beginning levels of English proficiency prior to the intervention. The pre-test results showed that both groups had English proficiency of similar level. This ensured that any subsequent differences observed between the groups could be attributed to the intervention itself rather than variations in their initial proficiency.

### 2.3. Data Collection Instrument

Pre- and post-tests were employed in the study to assess students' proficiency levels and measure their performance before and after the experiment. The pre-test was adopted from Al-Harbi and Alshumaimeri (2016) which was utilized as an English Proficiency test.

The purpose of pre-testing the students from both groups was to ensure that both the experimental and control groups possessed similar level of proficiency in grammar usage. The test consisted of multiple-choice questions (MCQs) and comprised a total of 40 items. The pre-test is provided in Appendix A for reference.

The post-test was given to the students following the intervention to determine whether there had been any noticeable changes in their performance as a result of their participation in the flipped classroom, both with and without the inclusion of SRL practices. 42 items on the post-test were intended to assess success in grammar-related areas. The test, which is Appendix B, was used to determine how the intervention affected the performance of the pupils.

The internal consistency approach using the Cronbach’s Alpha was used to determine the reliability of the tests within the precise parameters of the study. The findings showed that the tests had a good level of reliability, indicating that the tests could be used in this study.
2.4. Data Analysis

Statistical analysis of the quantitative data was performed using the SPSS 25.0 program. The formulated hypothesis was tested using inferential statistics. Appropriate statistical test was used to test the hypothesis. First, an independent sample t-test was used to determine whether there were any appreciable differences in the way grammar was employed by the students in the flipped classroom with and without the inclusion of SRL strategies. The data gathered for this research satisfied the criteria for a t-test because they were parametric in nature and had a normal distribution.

Based on their post-test results, the students who participated in a flipped classroom and received instruction utilizing self-regulated learning methodologies were divided into three proficiency categories. These categories included the high level (scores between 36 and 42), the intermediate level (scores between 25 and 35), and the low level (scores under 25).

A one-way analysis of variance (ANOVA) was carried out to look into any notable variations in the manner that students used their grammar abilities across these proficiency groups. In order to determine the significance of the differences in the data, the t-test and ANOVA were both used. This allowed for a thorough investigation of how self-regulated learning practices affected students' usage of grammar in the flipped classroom.

3. RESULTS

3.1. Comparison of Experimental and Control Group- Between Groups

Both the experimental and control groups' post-test scores were compared using the independent sample t-test. The post-test scores for the control group (M=8.97, SD=2.9) and experimental group (M=16.43, SD=4.3) were statistically different, according to the test results, t =8.70, p.001.

This demonstrated how employing self-regulated learning techniques in a flipped classroom positively impacted the students' grammar abilities in the experimental group. The independent sample t-test results are displayed in Table 1.

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>T</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental</td>
<td>25</td>
<td>16.43</td>
<td>4.3</td>
<td>8.70</td>
<td>0.00</td>
</tr>
<tr>
<td>Control</td>
<td>25</td>
<td>8.97</td>
<td>2.9</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

3.2. Descriptive Statistics of Students' Proficiency Groups

After the experiment, the students were divided into three sub-groups which were categorized as proficiency groups.

These proficiency groups included the students from advanced (36-42), intermediate (25-35) and low-level (below 25) proficiency in grammar use. The descriptive statistics of these sub-groups are presented in Table 2.

<table>
<thead>
<tr>
<th>Level of proficiency</th>
<th>N (n=25)</th>
<th>Score ranges (N=42)</th>
<th>Use of grammar proficiency</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Minimum</td>
<td>Maximum</td>
</tr>
<tr>
<td>Advanced</td>
<td>15</td>
<td>37</td>
<td>40</td>
</tr>
<tr>
<td>Intermediate</td>
<td>08</td>
<td>27</td>
<td>35</td>
</tr>
<tr>
<td>Low</td>
<td>02</td>
<td>18</td>
<td>20</td>
</tr>
</tbody>
</table>

Note: M= Mean, SD = Standard deviation.

3.3. Comparison of Students Based on Their Proficiency Groups in Grammar Use

The usage of grammar by the students was examined based on their skill level using a one-way ANOVA (Analysis of Variance). The results revealed a considerable variation in the students' test scores depending on how well they used grammar (for further information, see Table 3).
Table 3. ANOVA results based on students' proficiency groups.

<table>
<thead>
<tr>
<th>Variations</th>
<th>Sum of squares</th>
<th>Df</th>
<th>Mean square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between groups</td>
<td>11839.856</td>
<td>2</td>
<td>5769.778</td>
<td>218.643</td>
<td>0.000</td>
</tr>
<tr>
<td>Within groups</td>
<td>2531.856</td>
<td>23</td>
<td>26.826</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>14371.712</td>
<td>25</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

4. DISCUSSION

In the current study, the focus of the investigation was on determining how the use of SRL practices in a flipped classroom specially in the English as a Foreign Language (EFL) courses affected students' grammar abilities. According to the findings, there was a statistically significant difference between the post-test scores of the experimental group's students, who actively used SRL techniques throughout the intervention, and those of the control group's students, who did not receive any SRL strategy instruction in the flipped classroom in the EFL courses. These results imply that compared to simply using a flipped classroom strategy for EFL learning, the employment of SRL methods in a flipped EFL classroom environment generates more progress in students' usage of grammatical skills. These findings align with previous research conducted by Evseeva and Solozhenko (2015) which posited that flipped classrooms facilitate the acquisition of grammar rules. The identified challenges in learning grammar rules for EFL learners in Saudi Arabia, as emphasized by Al-Hamlan and Baniabdelrahman (2015) and supported by students themselves, further underscore the significance of the present study's findings. Consistent with the findings of Hsieh et al. (2016) and Al-Hamlan and Baniabdelrahman (2015) the current study also validates the notion that flipped classrooms can enhance students' grammar skills. Moreover, this study aligns with the conclusions of Lai and Hwang (2016); Al-Hamlan and Baniabdelrahman (2015) and Öztürk and Çakıroğlu (2021) which highlight the positive effects of integrating SRL strategies in flipped classroom in the EFL courses, resulting in improved grammar skills and enhanced learning outcomes.

5. RECOMMENDATIONS

The results allow for a number of recommendations to be made for the successful adoption of the flipped classroom in Kingdom of Saudi Arabia with a focus on self-regulated learning techniques in an EFL environment.

1. Flipped Classroom Integration: To improve students’ language abilities, particularly their use of grammar, flipped classroom integration is advised in EFL training. The strategy can be applied to teaching grammar as well as to improving speaking, writing, and other language skills.

2. Self-Regulated Learning (SRL) strategies should be emphasized. The flipped classroom design should incorporate SRL strategies. Based on the unique needs of the students and the learning setting, teachers should carefully choose and execute the right SRL strategies. The teaching approach should incorporate strategies like effective goal-setting, self-efficacy, help seeking, excellent time management, concrete self-evaluation, and on-the-spot feedback.

3. Teacher Training: Teachers should be provided with training and professional development opportunities to familiarize themselves with the flipped classroom approach and effective SRL strategies. They should be equipped with the necessary pedagogical knowledge and skills to effectively implement the flipped classroom model and guide students in their self-regulated learning processes.

4. Learner Support: Adequate support and guidance should be provided to students throughout the flipped classroom experience. Teachers should offer continuous assistance, feedback, and timely interventions to facilitate students' self-regulation and monitor their progress. Peer collaboration and interaction should also be encouraged to foster a supportive learning environment.
5. Contextual Adaptation: It is essential to adapt the flipped classroom and SRL strategies to the specific Saudi Arabian educational context. Consideration should be given to cultural, linguistic, and educational factors to ensure that the instructional approach aligns with the needs and preferences of the learners.

6. Ongoing Assessment and Evaluation: Regular formative and summative assessments should be implemented to monitor students' progress and to evaluate the effectiveness of the flipped classroom with SRL strategies. Continuous feedback and self-evaluation opportunities should be provided to students to promote their metacognitive awareness and self-assessment skills.

7. Further Research: Future research can explore the long-term effects and sustainability of the flipped classroom approach with SRL strategies in EFL learning contexts in Saudi Arabia. Additionally, investigations can focus on identifying optimal combinations of SRL strategies and instructional approaches for different language skills and learner profiles.

By implementing these recommendations, educators in Saudi Arabia can enhance the quality of EFL instruction, promote active and self-regulated learning, and ultimately improve students' language proficiency and skills acquisition.

6. CONCLUSION

The present study investigated the effectiveness of utilizing self-regulated learning (SRL) strategies in a flipped EFL classroom to improve students' grammar skills and enhance learning outcomes. The findings exposed that the application of SRL strategies in the flipped classroom model yielded positive results in terms of grammar skill development.

This approach has the potential to address common challenges faced by EFL learners when acquiring grammar rules. However, it is also crucial to acknowledge certain limitations of the study. Firstly, the current research employed a quantitative methodology, which may have restricted the depth of understanding of the phenomenon. Secondly, due to constraints in time and resources, a limited sample size was utilized, and data were collected from a specific geographic area.

Consequently, special attention should be given while claiming the generalization of results to a broader population. The study offers implications for future research and directions for further investigation. Subsequent studies could build upon the current findings by extending the application of the SRL-based flipped classroom model to enhance other language skills such as speaking, writing, reading, and listening.

Additionally, employing a mixed-methods approach in future research would provide a more comprehensive and detailed understanding of the outcomes. It would be valuable to gather perspectives from teachers to gain insights into their experiences and further refine the SRL-based flipped classroom model. Furthermore, the same study procedure and model can be adapted to other subjects, such as mathematics, sciences, and other foreign languages. In conclusion, the implementation of SRL strategies in a flipped EFL classroom proved to be an effective approach for improving students' grammar skills. This study serves as a foundational investigation that contributes to the ongoing efforts to enhance the quality of EFL learning and address the challenges faced by EFL learners.

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Institutional Review Board Statement: The Ethical Committee of the Deanship of Scientific Research, Qassim University has granted approval for this study (Ref. No. 22-33-13).

Transparency: The author states that the manuscript is honest, truthful, and transparent, that no key aspects of the investigation have been omitted, and that any differences from the study as planned have been clarified. This study followed all writing ethics.

Competing Interests: The author declares that there are no conflicts of interests regarding the publication of this paper.
REFERENCES


APPENDIX

**Appendix A.** An English proficiency pre-test.

1 ( )'s your name? Thomas
   a- How b-Who c-What d- Where

2 This is Lucy and her brother, Dan. ( ) My friends.
   a-We're b-I'm c-You're d-They're

3 ( ) I'm from Italy.
   a- Where are you from? b- Where you are from? c- Where from you are? d- From where you are?

4 I'm from Milan. ( ) is in Italy.
   a- They b-It c-He d-She

5 Excuse me, how ( ) your last name? R-I-L-E-Y
   a- spell b-you spell c- do you spell d- spell you

6 Oh. ( ) are my kes.
   a- This b-These c-That d- It

7 I'd like ( ) somelette, please.
   a- a b- c-an d-Wo

8 And here is your ( ).
   a- desk b-desks c-a desk d-an desk
9 My name’s Pete and this is Sylvia. ( ) doctors from France.
a-I’m b-We’re c-She’s d-They’re
a-I isn’t b-I is not c-I aren’t d-I’m not
11 ( )? No, he isn’t.
a-Are they teacher? b-Are your from Italy c-Is Mr Banning a d-Is this your phone?
teacher?
12 ( ) is the school? It’s 50 years old.
a-How many year b-How much years c-What year d-How old
13 What is ( )?
a-Job Mary b-Mary Job c-Mary’s job d-Job’s Mary
14 Your bag is next ( ) the table.
a-on b-to c-in b-of
15 ( ) are the keys? on the table.
a-What b-When c- Where d-Who
16 I go to work ( ) train.
a-with b-by c-for d- in
17 She ( ) a dog.
a-not have b-don’t have c-don’t has d-doesn’t have
18 Stephen ( ) in our company.
a-work b-works c-is work d-working
19 ( ) live in London?
a-Are b-Is c-Do d-Does
20 ( ) to the cinema.
a-We not often go b-We don’t go often c-We don’often go d-Often we don’t go
21 When do you play tennis? ( ) Monday.
a-On b- In c-At d-By
22 What time ( ) work?
a-start she b-do he starts c-does she starts d-does he start
23 ( ) tow airports in the city.
a-It is b-There is c-There are d-This is
24 There aren’t ( ) here.
a-a resturant b-any resturants c-any restaurant d-a restaurant.
25 I’m afraid it’s ( ).
a-a hotel expensive b-expensive hotel c-expensive a hotel d-an expensive hotel
26 They ( ) popular TV programmes in the 1980s.
a-are b-were c-was d-is
27 ( ) at school last week?
a-Do you where b-Was you c-Were you d-You where
28 Brat Pitt is a popular actor but I don’t like ( ).
a-him b-his c-her d-them
29 We ( ) the film last week.
a-see b-saw c-sees d-were see
30 He ( ) tennis with me yesterday.
a-doesn’t played b-didn’t played c-not played d-didn’t play
31 She was born ( ) May 6th, 1979.
a-in b-at c-on d-from
32 Where ( ) last summer?
a-you went b-did you went c-did you go d-do you went
33 Were you at the shops at 5 p.m. yesterday? No, I ( )
a-didn’t b-am c-wasn’t d-werent’t
34 Excuse me, ( ) is the T-shirt? It’s £25.99.
a-what expensive b-How much c-How many d-How price
35 She is only four but she ( )
a-can read b-cans read c-can reads d-cans reads
36 This part is boring. We ( ) a goodtime.
a-don’t have b-aren’t having c-don’t having d-aren’t have
37 Sorry, I ( ) you at the moment.
a-can’t help c-don’t can help c-can’t helping d-can’t helps
38 I ( ) my computer very often.
a-am not using b-don’t use c-doesn’t use d-am not use
39 It’s my mum’s birthday next week. I ( ) her a present.
a-buy b-buys c-am going to buy d-buying
40 What ( ) do after school today?
a-are you going b-are you c-do you d-you

Appendix B. Post-test.
1. You have to keep ( ) to achieve your goal.
a-work b-woking c-the work
2 I ( ) the meeting tomorrow. I don’t feel well..
a-might cancel b-could have canceled c-might have cancelled
3 Let’s go on a trip next week, ( )?
a-Can we b-will we c-shall we
4 The food ( ) ready by now. It’s been in the oven for over an hour.
a-must be b-can be c-must have been
5 He stopped ( ) pictures when he saw the ‘No photos’ sign.
a- take b-to take c-taking
6 I have to many books ( ).
a-carrying b-to carry c-carry
7 As soon as layla ( ), she will meet the new customer.
a-arrive b-arrives c-will arrive
8 You ( ) worry about the tickets. My friend will help us to get them.
a-don’t need to b- not need c-didn’t need
9 Ben is too tired ( ) to the festival today.
a-going b-to go c-for going
10 That ( ) Sara’s sister. She doesn’t look like Sara at all.
a. Would not be b- wasn’t c. can’t be
11 If I see Jaime, I ( ) him his book back.
a-give b. will give c. would give
12 If I ( ) you, I would transfer to another apartment. This neighborhood is crowded.
13. The jungle is a dangerous place to sleep. You ( ) goal one.
   a. Might not b. have not c. must not

14. I will get some rest before the kids ( ).
   a. come b. came c. comes

15. I regret ( ) to my sister like that.
   a. talking b. to talk c. talk

16. My sister ( ) if the doctor hadn’t arrive in time.
   a. may b. might have died c. may be dead

17. If Lara didn’t have lots of responsibilities, she ( ) more.
   a. would travel b. will travel c. can travel

18. You ( ) go to the supermarket. We will call Danny to bring what we need.
   a. don’t need to b. no need to c. didn’t need to

   a. will feed b. feed c. would feed

20. She is not here, ( )?
   a. is she b. isn’t she c. she is

21. You ( ) get ready early. I will not wait for you.
   a. can b. have to c. could

22. I can’t find my wallet. I ( ) it at home.
   a. must have left b. must have leave c. leave

23. We ( ) in the backyard after you eat your meal.
   a. will play b. would play c. play

24. Good! You turned off the oven just in time. You ( ) the cake.
   a. might burn b. could have bured c. would burn

25. If she ( ) in your place, she would buy less toys.
   a. were b. was c. is

26. Our schedule is full. We ( ) the company.
   a. might not visit b. might not have visited c. would not have visited

27. Anna regerts ( ) them our secret.
   a. tell b. to tell c. telling

28. If she ( ) for what she did, I will give her the present.
   a. apologizes b. apologize c. will apologize

29. Let’s prepare dinner together, ( )?
   a. can we b. will we c. shall we

30. She refused ( ) the contract.
   a. to sign b. signing c. sign

31. If I had a bike, I ( ) in the race.
   a. can participate b. would participate c. will participate

32. It ( ) freezing outside. It is ~5 degree Fahrenheit.
   a. could be b. can be c. must be

33. He ( ) the bus if he hurries.
   a. will miss b. will not miss c. miss

34. Kate: Lara and Sara said: “they are going to their brother’s wedding” Kate’s sister: That ( ) true! They don’t have a brother.
a. can’t be  b. could not be  c. might not be
35 You ( ) put on the seat-belt when you drive.
a. could  b. need  c. have to
36 I ( ) the book, but I’m not sure. I forget many books I’ve read.
a. could read  b. read  c. may have read
37 Nora ( ) her mother that I was sick. She asked me how I was feeling.
a. must have told  b. might tell  c. could have told
38 You are coming to school tomorrow, ( )?
a. are you  b. aren’t you  c. shall you
39 You ( ) park here. It is prohibited.
a. may not  b. must not  c. have not
40 If you ( ) home late I will tell my father.
a. came  b. come  c. comes
41 John hopes ( ) London eye.
a. visit  b. visiting  c. to visit
42 I ( ) the race, but I sprained my ankle just before crossing the finish line.
a. can win  b. could have won  c. would win

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