

The Effect of Using a Flipped Classroom Strategy on Female Omani Grade Eleven Students' Grammar Learning and Their Motivation Toward Learning English

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Abstract

This quasi-experimental study examined the effect of the flipped classroom strategy (FCS) on the grammar learning of female Omani grade eleven students as well as their motivation toward learning English. In total, 72 female students attending one public school in A'Seeb, Muscat Governorate, in the 2023/2024 academic year participated in the study. One class of 37 students was assigned as an experimental group and was taught using the FCS whereas another class of 35 students was taught the same grammatical structures using conventional teaching methods as a control group. Two instruments were utilized to collect data: a pre- and post-grammar achievement test and a motivation questionnaire. The results showed a statistically significant improvement in the experimental group's grammar performance. There were also statistically significant differences between the mean scores in the post-test in favor of the experimental group. However, there were no statistically significant differences in motivation toward learning English before and after applying the FCS. In light of these findings, the study concludes with some implications and recommendations for further research.

Keywords: Flipped classroom strategy, Grammar learning, EFL, Oman, Motivation

1. Introduction

As technology in the classroom has continued to evolve, it has ushered in a new variation of blended learning, one that quite literally flips the traditional teaching script on its head. It is called the flipped classroom strategy (FCS), and it takes a more active approach to learning (Tucker, 2012) where students prepare lessons at home and then apply the acquired knowledge in the classroom (Ozdamli & Asiksoy, 2016).

The FCS has been widely used to overcome various challenges that language learners commonly face while learning English such as a lack of participation, communication opportunities, and feedback (Basal, 2015). In the same vein, the FCS has been used to enhance students' motivation to learn English (Awidi & Paynter, 2019).

As long as the English language is adopted as the lingua franca in many different countries, grammatical knowledge of English is viewed as a vital basic skill to learn (Criado, 2016; Orakbayeva, 2022). Ullman (2001) further stresses that learning English depends mainly on learning the grammatical structures of the language since it is strongly tied to the learning of other skills. For example, knowledge is essential to be able to produce different sentences when speaking or writing. Accordingly, it is crucial for students to master grammatical structures and to be able to apply the rules accurately; this, in turn, requires EFL teachers to implement efficient learning strategies. One important way to do this is to integrate technologies with traditional teaching methods to improve the quality of teaching and achieve learning outcomes.

Many studies suggest that FCS is one of the most effective and successful strategies for teaching grammar in many contexts (Al-Harbi & Al-Shumaimeri, 2016; Mandasari & Wahyudin, 2021). However, the impact of this strategy on grammar learning has not been examined in the Omani context yet. Hence, it is important to explore the effect of FCS on the learning of grammar in Oman as well as its impact on motivation to learn English.

In the context of the Omani educational system, the main focus of the Ministry of Education (MOE) in the grade eleven curriculum is to revise and consolidate the language that has been taught over the last 10 years (Ministry of Education, 2024b). Within that framework, great emphasis is placed on grammar because the MOE views it as a basic skill needed to succeed in acquiring the English language. In fact, in the grade eleven curriculum, there are four themes, each with five units, and in each unit, two are specified for grammar. Despite the Ministry's efforts, there is a general agreement that grammar is still one of the most common obstacles EFL learners in Oman face (Al-Mekhlafi & Nagarathnam, 2011; Bakhshayasha, 2015; Sabtan & Elsayed, 2019). According to teacher feedback, some Omani students struggle to master and apply grammatical features effectively in new situations that require communication through writing or speaking (Al-Mamari, 2020; Al-Seyabi & Tuzlukova, 2014). Indeed, Omani students experience difficulties making decisions regarding the best

form to use in certain situations and in expressing grammar correctly when communicating with others (Al-Mekhlafi & Nagaratnam, 2011). This lack of grammatical competence results in miscommunication.

Therefore, some studies have been conducted in the Omani context to identify the main challenges to mastering and applying grammar. Class size and the number of students in each class in secondary schools may be one of the reasons, since learners do not have many chances to participate in the class and be active learners; a lack of exposure to and practice with the language inside and/or outside the classroom may also play a role. Traditionally, the only place where students could practice grammar was in textbooks (Al-Hosni, 2014). Al-Jardani (2012) also argues that Omani post-basic education students do not have many chances to use the English language outside the classroom. Accordingly, several studies have highlighted the importance of providing students with various tasks that require communication with others to practice grammar inside and outside of the classroom (Al-Abri et al., 2017; Al-Jardani, 2012). Without a doubt, a suitable strategy is needed to simplify the grammatical structures that help students apply rules accurately (Al-Qutaiti & Ahmad, 2018). Hence, there is a need for research exploring the impact of the FCS on Omani students' grammatical performance.

Few studies have examined the influence of this strategy in teaching EFL in the Omani context. Further, these studies have focused merely on the influence of the FCS on Omani students' speaking, reading, writing, listening, and vocabulary (Abdullah et al., 2019; Ahmad, 2016; Al-Qasmi et al., 2022; Fahmi et al., 2020). It is worth noting, however, that these studies have found that the FCS has a positive impact on learning.

This is because learners have more time to review content before classes, which enhances their confidence during discussions with classmates and teachers. Moreover, according to Shumin (2002), the FCS provides more chances for students to be exposed to the English language, which is important because insufficient exposure leads to misunderstanding the language. Even though studies have demonstrated the positive influence of the FCS on grammatical competence at different school levels (Al-Bahuoth, 2023; Al-Harbi & Al-Shumaimeri, 2016; Zarinfard et al., 2021), no study has investigated the effect of this strategy on grammar learning in Oman. Thus, there is a need to investigate the effect of utilizing the FCS on enhancing the grammar competence of Omani EFL students in post-basic schools. Also, it is necessary to explore students' motivation regarding learning grammar after FCS implementation. Hence, this study investigated these topics in detail. This research attempts to precisely answer the following two questions:

1. Are there any statistically significant differences in grammar performance between the experimental group taught by the FCS and the control group taught by the conventional method for female grade eleven students?
2. What is the effect of the FCS on female grade eleven students' motivation toward learning English?

Considering the current status and reported challenges of grammar instruction and learning in Oman, as discussed above, the current study has theoretical and practical importance. Concerning theoretical significance, a few Omani studies have investigated the effect of the FCS on different English language skills and subject areas other than English. However, the present study is unique in its examination of the impact of the FCS on grade eleven students' grammar learning. This study also has practical significance, as it provides an in-depth analysis of the influence of the FCS on students' grammar learning.

2. Literature Review

2.1 Grammar Learning

The word "grammar" was first used in the fifth century BC and its rules developed gradually until reaching what is currently known today (Abu-Laban, 2017). In the literature, grammar has been defined in various ways, but there is general agreement that "language without grammar would be chaotic" (Batstone, 1994, p. 10). The role of grammar in EFL learning cannot be neglected as it is the most significant part of the language system without which speech is perceived as simply words lacking structure or meaning (Al-Zaytuniya, 2016). Thus, several studies have investigated the importance of grammar in attaining EFL (Al-Abri et al., 2016; Al-Essa, 2018; Aslani & Tabrizi, 2015) since ignoring it could lead to serious problems such as error fossilization and imprecise fluency (Freeman & Long, 2014).

Undoubtedly, uttering sentences with an extensive number of fossilized errors impedes communication (Demana, 2023) as it makes speech "incomprehensible and wrongly understood" (Nozadze, 2012, p. 42). Tabbert (1984) also suggests that the significance of grammar can be noticed when "students confuse lie and lay, do not choose who and whom correctly, say infer instead of imply, mismatch subjects and verbs, mix up pronoun references, use double negatives, etc., and that these mistakes are evidence of their need to study grammar" (p. 39). Indeed, grammar plays a vital role in transmitting purposeful language and making sense of whatever is heard, uttered, and seen (Azar, 2007; Podgorski, 2008).

Ur (2009) defines grammar as "the way language manipulates and combines words (or bits of words) to express certain kinds of meaning, some of which cannot be conveyed adequately by vocabulary alone" (p. 3). Similarly, Millrood (2004) views grammar as the system of how words are linked together to produce different sentences. Wilcox (2004) further defines grammar as "a branch of linguistic study that deals with classes of words, their inflections or other means of indicating relations to each other" (p. 27). Although scholars have provided diverse definitions for grammar, there is an agreement that it constitutes the basic system of word structures. It thus follows that language learners who encounter difficulties in using accurate grammatical rules cannot utilize the English language to communicate with precision.

Hence, teachers apply various strategies, including technology integration, to improve students' grammar proficiency. Thus, combining technology with typical teaching methods yields positive results (Afshar & Mojavezi, 2017). One such strategy is the flipped classroom, which integrates technology into the teaching of the grammatical structure of the target language.

2.2 Flipped Classroom Strategy

The FCS, also known as an inverted class, flipped teaching, inverted learning, blended learning, and the reverse classroom (Anjomshoaa et al., 2022), is a strategy that reverses the traditional models of teaching students and conducting homework (Garza, 2014). The FCS is used to refer to a wide range of blended educational methods “in which students get prepared materials and then take part in structured in-class activities” (Berrett, 2012, p. 2). Overmyer (2014) elaborates on the characteristics of the FCS by stating that “what used to be classwork is done at home via teacher-created videos and what used to be homework is now done in class” (p. 1). The broadest definition of the FCS is given by Eppard and Rochdi (2017), who specify that it is the process of supplying learners with various new materials before class time.

November and Mull (2012) offer the simplest and narrowest definition of the FCS, describing it as a method that prepares students for various lessons by listening to webinars, reading articles, and watching videos to acquire information. They also suggest that the FCS is synonymous with online videos that replace the teacher with students working outside the classroom in isolation (Overmyer, 2014).

Many studies have examined the effect of the FCS on instruction and learning of grammatical structures in the English language. In Saudi Arabia, Al-Harbi and Al-Shumaimeri (2016) examined the impact of the FCS on grammar classes, and they found that it had a positive impact on students' grammar performance. Moreover, in China, Li et al. (2017) explored the influence of the FCS on grammar instruction. The study's findings indicated a significant impact of the FCS on students' understanding and application of grammatical structures. Al-Naabi (2020) also found that the FCS positively impacted the understanding and usage of grammar.

2.3 Motivation

Motivation is defined as a collection of thoughts and emotions that inspire individuals to perform particular tasks to reach a desired outcome (Al-Naqeeb, 2012). Gardner (1988) describes motivation as an aim that individuals attempt to achieve. Additionally, motivation is seen as an internal force that propels a person to undertake specific work to reach a certain goal (Sunitha, 2016; Taylor, 2012). Borah (2021) and Nunan (2015) both view motivation as an essential aspect of the learning process, reporting that there is an association between motivation and language learning. Definitely, motivation is a necessity for learners as it improves their academic performance and drives them to finish the task (Anwer, 2019; Fadilah et al., 2019). Skinner et al. (2009) note that having motivation towards learning is correlated with excitement, interest, engagement, and enthusiasm, which are crucial elements of the learning process. This is because motivation is the process that leads to a psychological deficiency or need that triggers behavior to achieve the targeted goals (Combs et al., 2008). Although Debbağ and Yıldız (2021), Zainuddin (2018) and Yuzulia (2021) found that the FCS does not affect motivation, Lightbown and Spada (2020) argue that students' success in language acquisition relies on various types of motivation.

2.3.1 Types of Motivation

According to Oxford and Shearin (1994), “without knowing where the roots of motivation lie, how can teachers water those roots?” (p. 24). Teachers need to identify the sources of motivation to enhance their students' learning. Gardner and Lambert (1972) identify different types of motivation, such as integrative, instrumental, intrinsic, and extrinsic goals, task value, control of learning beliefs, and self-efficacy.

2.3.1.1 Integrative and Instrumental Motivation

It influences and controls the processes and outcomes of learning. Integrative motivation involves learning a language primarily to understand the culture of its speakers, while instrumental motivation involves learning a language to secure a job (Ellis, 1995; Gardner, 1988).

2.3.1.2 Intrinsic and Extrinsic Motivation

Intrinsic motivation is about the individual's desire to expand their knowledge, while extrinsic motivation is about acting to receive a reward or avoid punishment from others (Khouni, 2011). More specifically, intrinsic motivation refers to the eagerness and interest to perform tasks that are enjoyable for individuals (Bembenuddy et al., 2022). However, extrinsic motivation results from external factors, such as the objective to gain high grades in exams, the desire for financial rewards, and the expectation of future travel.

2.3.1.3 Control of Learning Beliefs

It is the extent of a learner's belief in their capability to control their learning (Rotter, 1966). Bandura (1994) also views control of learning beliefs as learners' perceptions of their ability to adjust their motivation, cognition, behaviors, and emotions. Moreover, it involves the learners' belief in an association between their attempts and positive outcomes.

2.3.1.4 Self-Efficacy of Learning and Performance

This concept refers to an individual's anticipation of their potential to act effectively (Taylor, 2012). Bandura (1989) also defines academic self-efficacy as a learner's personal belief in their capability to perform an academic task at a designated level of achievement. It also links to the self-assessment of the capability to master the tasks presented and the confidence in completing the targeted tasks.

3. Methodology

This section introduces the methodology employed to conduct this research. It addresses research design, population, and sample. It describes in detail the research instruments and materials used. It also addresses validity, reliability, and a pilot study. It elaborates on the

research procedures and summarizes the data analysis.

3.1 Research Design

To accomplish the study aims, a quasi-experimental research design was applied to evaluate causal consequences and the effectiveness of the intervention. In this study, grammar was taught via the FCS to the experimental group while the control group learned the same linguistic forms using the conventional method. Moreover, pre- and post-grammar achievement tests were administered to examine the effect of the FCS on Omani post-basic EFL students' grammar learning. Also, a questionnaire survey was conducted before and after the treatment to identify the influence of the strategy on students' motivation toward learning English.

3.2 Population and Samples

The study population consisted of 4801 female grade eleven students who attended public schools in Muscat during the academic year 2023/2024 (Ministry of Education, 2024a), (2024a). Yet considering the difficulty reaching all of these students, the sample was limited to one school, namely, Umama Bint Abi Al-Aas Post Basic Female School (10–12) in Al Seeb, Muscat governorate. Thus, the total sample included 72 students ranging in age from 16 to 17 years old. The sample was split into the experimental group taught grammar using the FCS (37 students) and a control group taught grammar via conventional methods (35 students).

3.3 Research Instruments and Instructional Materials

Two instruments were employed in this study. These are summarized in Table 1, along with the research questions they aimed to answer.

Table 1. Instruments Used to Answer Research Questions

Instrument	Research Question
Pre- and Post-Grammar Achievement Tests	RQ 1: Are there any statistically significant differences in grammar performance between the experimental group taught by the FCS and the control group taught by the conventional method for female grade eleven students?
Questionnaire	RQ 2: What is the effect of the FCS on female grade eleven students' motivation toward learning English?

The same test was administered before and after the intervention. The test had three different formats of questions that measured the targeted grammatical structures with a total score of 30 points. All of the tested grammatical structures were included in the grade eleven textbook (Engage with English) and were from the three themes covered in the experiment. The test was shared with a panel of specialists and experts in English language instruction to establish face and content validity. To ensure reliability, the test was given to a random class of about 30 grade 11 students not involved in the study. The results were statistically analyzed to estimate validity, reliability, and the time needed to complete the test. Students were able to understand the items and short texts, demonstrating the test's strong face validity. The reliability was calculated using Cronbach's alpha in SPSS and was found to be 0.75, indicating a good consistency.

Following the treatment, a motivation questionnaire was administered to the experimental group to address the second research question. More specifically, it aimed to examine the change in the participants' motivation toward learning English after the intervention. The questionnaire was adapted from Al-Zaytuniya (2016) conducted in the Palestinian context, which explored the impact of the FCS on tenth graders' grammar learning and their motivation to learn English. That study designed a questionnaire based on the Motivated Strategies for Learning Questionnaire (MSLQ) and related studies on students' motivation (Al-Zaytuniya, 2016).

The questionnaire was scored on a five-point Likert scale (5= Strongly Agree, 4=Agree, 3=Neutral, 2=Disagree, and 1=Strongly Disagree), requiring students to respond to all items. The questionnaire included 32 items covering five main types of motivation. The first section focused on self-efficacy for learning English in general (items 1–7); the second section addressed the task value for learning English (items 8–16); the third section pertained to control beliefs of learning (items 17–21); the fourth section dealt with extrinsic goals (items 22–27); and the fifth section covered the achievement goals of English language as a subject (items 28–32). The questionnaire's validity and reliability were reviewed by a panel of experts. To confirm reliability, it was piloted with a random class of 30 grade 11 students who were not part of the study. The Cronbach's alpha was 0.7, indicating high reliability and appropriateness for use.

The teacher's manual was also validated by the researcher's supervisors and experienced educators in the field to assess its clarity and appropriateness. It is worth mentioning that all grammar activities included in the covered themes in the textbook were taught during the experiment, in addition to the materials that I designed, which included videos and various supplementary materials.

3.4 Implementation and Procedures

3.4.1 Before Implementation

Before the experiment, consent was obtained from the school's English teachers, participants, and their parents. To confirm the homogeneity of the two selected classes, a pre-achievement grammar test and a motivation questionnaire were administered to both groups (control and experimental).

3.4.2 During Implementation

Two days before each lesson, related activities, adapted videos, and online games targeting the grammar structure were sent to students via the WhatsApp group. Students were expected to watch the videos, complete the activities, and write their questions for the next day's discussions. On the following day, the teacher engaged students in discussions about the sent files and provided activities that required higher-order thinking skills at the beginning of every lesson. Each session lasted 30 minutes. The cooperating teacher's role was to

monitor students and provide help when needed. Through the classroom discussion, students received instant feedback from their teacher and their classmates. In contrast, the control group followed conventional grammar teaching methods. The teachers usually followed the book, explaining rules explicitly, providing students with different examples, asking them to complete exercises, having students write answers on the board, and checking students' answers in the textbook. It is worth mentioning that both groups were taught the same grammatical structures.

3.4.3 Post Implementation

Students in both groups received 3 months of instruction, for a total of 15 sessions. The post-test was then given, as described above. The same questionnaire was also given to the experimental group to check the influence of the strategy on their motivation toward learning English.

3.5 Data Analysis

Data collected from the pre- and post-grammar achievement tests, as well as the questionnaire, were analyzed using SPSS, a widely used platform for the analysis of quantitative data. An independent sample t-test was employed to determine the statistical differences between the control and experimental groups. Additionally, a paired sample t-test was utilized to track the progress in students' grammar performance before and after the intervention. For the data derived from the motivation questionnaire, a descriptive analysis was conducted by calculating the mean and standard deviation of participants' responses to the items. A paired-sample t-test was used to identify changes in motivation before and after the intervention.

4. Results and Discussion

This section presents data analysis procedures, reports the research findings, and discusses the results.

4.1 Impact of the FCS and the Conventional Method on Grammar Performance

Regarding the impact of the FCS, a statistically significant difference in the mean scores of the post-test between the experimental group (M=25.6) and control group (M=22.9) was found (Table 2).

Table 2. Independent Sample T-test Results for Post-Grammar Achievement Test Scores of the Experimental and Control Groups (n=72)

Group	N	M	SD	df	t	p-value	Effect Size
Experimental	37	25.6	4.2	70	2.4	**0.018	0.6
Control	35	22.9	4.9				

*Total score = 30

**Significant at 0.05

This indicates that the experimental group outperformed the control group. Further analysis revealed an effect size of 0.6 for the experimental group, which is considered large according to Cohen's (1988) guidelines. Thus, it can be concluded that the FCS had a positive impact on the students' grammar performance.

Additionally, as shown in Tables 3 and 4, there was a greater improvement in the experimental group's grammatical performance compared to the control group.

Table 3. Paired-Sample T-test for the Pre- and Post-Grammar Achievement Tests for the Experimental Group (n=37)

Test	M	SD	df	t	*p-value	Effect-size
Pre-test	20.8	6.2	36	-6.8	0.000	0.77
Post-test	25.6	4.2				

*Significant at 0.05

Table 4. Paired-Sample T-test for the Pre- and Post-Grammar Achievement Tests for the Control Group (n=35)

Test	M	SD	df	t	*p-value	Effect-size
Pre-test	22.6	5.0	34	-.49	0.62	0.05
Post-test	22.9	4.9				

*Not significant at 0.05

There was a statistically significant difference in the mean scores between the pre- and post-tests for that group. The mean before the treatment (M=20.8) was less than after it (M=25.6). The mean difference was 4.8 between the pre- and post-tests with a 95% confidence interval ranging from -3.34 to -6.17. Conversely, the mean difference with the control group was 0.3 between the pre-and post-tests, with a 95% confidence interval ranging from -1.76 to -1.07. This difference in the mean scores between the pre-test (M=22.6) and the post-test (M=22.9) with a small effect size (0.05) was not significant. Overall, the findings suggest that the FCS was more effective and enhanced the experimental group's scores more than the conventional method used with the control group.

These findings align with previous research (Al-Harbi & Al-Shumaimeri, 2016; Al-Naabi, 2020; Li et al., 2017). The increase in the students' grammar performance could be attributed to the positive features of the FCS, which enable them to grasp the targeted structures

in a positive and motivating environment. As reported by Al-Naabi (2020), the use of the FCS enhances students' grammar performance as a result of watching the videos and engaging with different online activities before class time.

Moreover, the FCS reduces students' cognitive load by enabling them to engage with learning materials before class at their own pace, which aligns with Cognitive Load Theory. For example, watching videos and interacting with instructional content in advance allows learners to comprehend grammatical rules easily, thus reducing demand on the cognitive resources for deeper practice during class time. This is consistent with the findings of Zarinfard et al. (2021) and Al-Naabi (2020), who reported that pre-class video engagement promotes understanding more effectively than traditional textbook-based instruction. Furthermore, the FCS enhances students' exposure to grammatical input through repeated interaction with videos, online activities, and in-class discussions. Such comprehensive exposure enhances the acquisition of grammatical structures, where frequent input and practice lead to retention and automatic processing (Al-Harbi & Al-Shumaimeri, 2016; Hedge, 2001).

Additionally, the FCS enables immediate and continuous feedback while learners are completing classroom tasks. As students apply grammar in interactive activities, instructors give prompt instructional feedback, which is important for acquiring the language (Al-Sudais, 2019). Al-Harbi and Al-Shumaimeri (2016) and Topu and Goktas (2019) emphasized that this engaging environment also supports active learning, as learners are required to study the content in advance and actively participate in various class activities.

Finally, the interactive aspect of in-class tasks reflects Social Constructivism, where language development is co-constructed through a participatory environment. Studies such as Mandasari and Wahyudin (2021) and Al-Hamlan and Baniabdelrahman (2015) showed that the utilization of the targeted grammatical structures in a communicative environment promotes language development. Thus, the collective impact of the reduced cognitive load, broadened exposure, instant feedback, active learning, and social interaction gives an in-depth explanation for the enhancement in grammar performance.

4.2 Effect of the FCS on Female Grade Eleven Students' Motivation Toward Learning English

In regard to motivation, the analysis results are summarized in Tables 5 and 6.

Table 5. Scale Used for Interpreting the Mean of the Students' Scores in the Motivation Questionnaire

Scale Value	Level of Motivation
1–2.33	Low
2.34–3.67	Moderate
3.68–5	High

Table 6. Paired Sample T-test for the Experimental Group's Motivation Questionnaire Before and After the Intervention (n=37).

Instrument	Questionnaire	N	*M	SD	t	df	*p-value
Motivation	Before Intervention	37	4.11	.40	-.45	36	0.65
Questionnaire	After Intervention	37	4.14	.36			

*Not significant at 0.05.

Students had high positive motivation toward learning English before and after the treatment. However, the experimental group's motivation increased slightly after using the FCS, although the difference was not statistically significant.

To gain deeper insight into this aspect, a paired-sample t-test was run for each dimension of the questionnaire, and the findings are given in Table 7.

Table 7. Paired-Sample T-test for the Experimental Group's Motivation Toward Learning English Before and After the Treatment (n=37)

Dimensions	Before Intervention		After Intervention		df	t	*p-value
	M	SD	M	SD			
Self-efficacy	4.2	0.53	4.2	0.41	36	.29	0.76
Task-value	4.1	0.57	4.2	0.57	36	.47	0.63
Control beliefs about learning	4.3	0.48	4.3	0.67	36	.12	0.90
Extrinsic goal	3.5	0.48	3.6	0.51	36	.95	0.34
Achievement goal	4.1	0.76	4.2	0.67	36	.08	0.93
Overall Motivation	4.11	.40	4.14	.36	36	-.45	0.65

*Not significant at 0.05.

The mean scores ranged from moderate (M=3.5) to high (M=4.3) before the intervention and from moderate (M=3.6) to high (M=4.3) after implementing the strategy. There were no statistically significant differences across all the dimensions. The mean scores remained at the same high level of motivation after the intervention. More specifically, the experimental group's level of self-efficacy and control beliefs about learning the English language continued at the same high level after the treatment. However, their motivation increased slightly. In particular, motivation regarding extrinsic goals (M=3.5), high achievement goals (M=4.1), and high perceptions of the significance of the tasks and the content materials in learning the English language (M=4.1) improved slightly.

The lack of a statistically significant improvement in students' motivation may be attributable to a ceiling effect, as participants in the experimental group were already highly motivated before the intervention, leaving little opportunity for significant improvement. In fact, the concept of the ceiling effect indicates that high motivation can impede the influence of the intervention, as a result of the current

research. These findings are aligned with prior research conducted by Debbağ and Yıldız (2021) and Zainuddin (2018), which also reported non-significant changes in motivation after the utilization of the FCS. Zainuddin (2018) justified that irregular involvement in preparatory tasks, such as failing to view instructional videos, might hinder the effectiveness of the strategy on motivation. Nonetheless, the current findings also showed that the FCS did not negatively influence participants' motivation; instead, it ensured their previously high levels, which can be considered a noteworthy result. This supports previous studies (Al-Zaytuniya, 2016; Chung & Lee, 2018; Davey, 2015), representing that the FCS slightly increases learners' motivation.

Additionally, some motivational dimensions, such as self-efficacy, remained high during the intervention. This indicates that learners had high confidence in their capability to acquire English, and the FCS assisted in enhancing confidence rather than significantly increasing it. Hsiao et al. (2023), Namaziandost and Çakmak (2020), and Zhao et al. (2021) confirmed this in their studies, which found that participating in instructional materials provided in advance increases students' confidence and willingness to participate in classroom interaction. Likewise, students' beliefs about the association between effort and learning outcomes stayed stable, supporting results by Abuhmaid (2017) and Al-Zaytuniya (2016) that the FCS promotes active learning without reducing motivation.

It is also notable that some dimensions of motivation, such as interest in content and task value, indicate minor but non-significant enhancement, remaining at moderate levels. This proposes that while the FCS might increase engagement and interest (Al-Qasmi et al., 2022), these changes might not be large enough to yield statistically significant differences, given that students' motivation before the intervention was high. Moreover, participants' motivation guided by individual goals stayed strong, aligning with Duckworth et al. (2015), who highlighted the role of extrinsic goals in giving direction to students' effort and resilience.

Finally, contextual factors such as having the same instructor during the study may have contributed to the consistency in motivation levels. As confirmed by Yuzulia (2021), teachers play a vital role in shaping learners' motivation, which may have contributed to maintaining the high motivational baseline identified in this study.

Overall, the non-significant change in motivation should not be explained as a limitation of the FCS; rather, it shows a ceiling effect together with constantly high baseline motivation. The strategy was determined to have effectively maintained learners' motivation, self-efficacy, and positive learning beliefs, even if there were statistically insignificant gains.

The results of this study contrast with studies that stated significant improvements in motivation after implementing the FCS, like Al-Qasmi (2022) and Al-Zaytuniya (2016), while aligning with others that found no significant change (Debbağ & Yıldız, 2021; Zainuddin, 2018). This difference can be described by changes in baseline motivation levels. In the current study, students showed very high motivation before the intervention; however, studies stating significant enhancements might have students with lower initial motivation, resulting in significant room for improvement. Furthermore, variation in students' engagement with pre-class activities might justify the inconsistent results, as reported by Zainuddin (2018). External influence like the teacher's role, the use of technology, and the duration of the intervention, could also have affected the findings.

5. Conclusion

Based on these findings, it can be concluded that the FCS affects students' grammar learning positively. That is because it provided a flexible learning setting where students could learn at any time and from anywhere, and transitioned the learning environment from being student-centered to teacher-centered. In this setup, the teacher acts as a facilitator, promoter, and feedback provider, while students actively participate in the classroom. Furthermore, the FCS encourages students to become autonomous learners, responsible for their learning both inside and outside the classroom.

6. Study Limitation

The present study has one main limitation to mention:

- It was confined to female Omani grade eleven students who attended one public school located in the Muscat governorate during the academic year of 2023/2024.

7. Recommendation

This research suggests several actions. First, teachers should be encouraged to transition from solely relying on conventional, teacher-centered teaching methods to more interactive approaches that promote active learning. Another recommendation is for teachers to utilize various mobile applications, such as WhatsApp, to teach different English language skills. On another note, curriculum designers are urged to include a variety of materials that provide students with opportunities to practice grammar learning outside the classroom. This study also uncovers several opportunities for future research. First, it would be beneficial to replicate this study with students from various regions of Oman. Another potential direction is to conduct this study in diverse educational settings: cycle-one schools, second-cycle schools, and higher-education institutions, including universities and colleges.

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Author contributions

Both main author and the corresponding authors have revised, read and approved the final manuscript. The main author is Adhari Hamed Al-YAhyae and the co-author and the corresponding author is Abdo Mohammed Al-Mekhlafi.

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- A. fly B. has flown C. flew D. was flying
19. Tom and John have been..... in the company since last January.
 A. working B. worked C. work D. works
20. Last year, we.....in Mexico.
 A. have been B. were C. had been D. has been

Grammar (2) (Items 1-5)**(5 Marks)**

For each item, shade in the bubble ☐ next to the correct option.

Razan (1) ----- in Canada two years ago. After that, she returned to the UK. Her parents (2) ----- in New York for a long time. She has (3) ----- - meet her children for one year. She has a lovely son, called Omar, who has lived in another country with her sister (4) ----- the last year. He (5) ----- a lot since the last time they see each other.

1. ☐ lived ☐ has lived ☐ had lived ☐ was living
2. ☐ lived ☐ were lived ☐ have lived ☐ had lived
3. ☐ still ☐ yet ☐ ever ☐ never
4. ☐ from ☐ since ☐ for ☐ many
5. ☐ grown ☐ grows ☐ have grown ☐ has grown

Grammar (3) (Items 6-10)**(5 Marks)**

Read the text below and fill in the gap with one word only.

Fatma was the most attractive girl I have (1) ----- seen. I still remember the date I saw her for the first time. It was three years (2) ----- when I found her sitting next to me on the train. I (3) ----- really interested by her speech when spoke. I remember she was sad and she said "I haven't seen my parents (4) ----- last month. She loved them a lot. She invited me to her town. I have (5) ----- there for two weeks.

Appendix 2

Students' Motivation Toward Learning English Language

No.	Items	SA	A	N	D	SD
Motivation Scale for English Learning						
First Domain: Self-efficacy						
1.	I'm sure I can master the skills taught in the English class.					
2.	I will persist in learning English despite the difficulties.					
3.	I'm certain I can understand what I am taught in English.					
4.	I know that I will be able to learn the English class contents.					
5.	I think having good English can help me make more friends.					
6.	I'm sure that I can do well on English tests.					
7.	When I find English content difficult, I try hard to learn it.					
Second Domain: Task Value						
8.	I like what I am learning in my English classes.					
9.	I think that what I learn in English is useful for me.					
10.	I think that learning English is important because I can use it in my daily life.					
11.	I believe if I exert more effort, my English is sure to be better.					
12.	Learning English makes me happy.					
13.	Learning English increases my self-confidence.					
14.	Even when study materials are boring, I keep working on them					
15.	Understanding English is important to me.					
16.	It is important to have the opportunity to satisfy my curiosity when learning English.					
Third Domain: Control Beliefs About Learning						
17.	If I use the right way, I can learn English better.					
18.	I always try to understand what the teacher is saying even if it does not make sense.					
19.	If I do not know the contents of the English class, it is because I am not working hard.					
20.	If I study hard enough, I will understand the content of the English class.					
21.	If I pay attention to the English class, it will be so easy to learn.					
Fourth Domain: Extrinsic Goal						
22.	I study English hard for the praise of the teacher.					
23.	I work hard to get good grades even when I don't like a class.					
24.	I study English only to pass the exam.					
25.	When I get good grades, I become satisfied.					
26.	High achievement in English is a crucial factor in getting high grades, so I study English carefully.					
27.	I participate in English courses to perform better than other students.					
Fifth Domain: Achievement Goal						
28.	During the English class, I feel most satisfied when I attain a good score on a test.					
29.	I become most satisfied when I feel confident about the English course content.					
30.	During the English classes, I feel most satisfied when I can answer difficult questions.					
31.	During the English classes, I feel most satisfied when the teacher rewards my contribution.					
32.	During the English classes, I feel most fulfilled when other students praise my contribution.					