

Flipped classroom writing instruction: Investigating the moderating effect of EFL students' resilience

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Abstract

The study aimed at examining the impact of the interaction between a learner's resilience and two flipped classroom (FC) instructional models for teaching writing: the traditional flipped classroom (TFC) and the Explore Flip Apply (EFA) strategy. The two models differed in terms of the extent to which they included inquiry-based learning and risk-taking. The second technique included a phase of inquiry-based learning before the normal video-based instruction that characterizes flipped classroom teaching. The participants of the study comprised three EFL secondary school classes that were selected from an Egyptian secondary school for girls in Egypt. Three instruments were utilized in the study: a writing skills checklist, a writing pre-posttest and a resilience scale. The findings demonstrated that the adoption of the FC strategy resulted in increased levels of engagement among learners in class and improvement in their writing skills. Nevertheless, students identified as having low resilience showed minimal improvement in the EFA intervention with regards to their writing skills. Yet, their performance shown some degree of improvement in the TFC intervention. On the other hand, students who had higher levels of resilience did better than students with lower resilience levels in both treatments. It was concluded that the adoption of distinct FC models can help in targeting students of various resilience levels, using strategies that cater for their learning styles.

Key words: Flipped classroom; writing instruction; resilience; writing skills; TEFL

تدريس الكتابة باللغة الإنجليزية باستخدام استراتيجية الصف المقلوب: التأثير المعدل

لمتغير المرونة النفسية للطلبة

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مستخلص

هدفت الدراسة إلى رصد تأثير التفاعل بين درجة المرونة النفسية للطلبة، ونموذجين تعليميين للفصل الدراسي المقلوب لتدريس مهارات الكتابة في اللغة الإنجليزية كلغة أجنبية: وهما نموذج الفصل الدراسي المقلوب (TFC) واستراتيجية اكتشف- الصف المقلوب- وطبق (EFA)؛ ويختلف النموذجان التدريسيان من حيث درجة التعلم القائم على الاستقصاء ودرجة المخاطرة المتضمنة فيهما؛ حيث تنطوي الاستراتيجية الثانية على مرحلة قبلية من التعلم القائم على الاستقصاء يمارسها الطلبة قبل التعرض للتدريس المباشر باستراتيجية الصف المقلوب. وتألفت عينة الدراسة من ثلاثة صفوف دراسية من الطلبة في الصف الأول الثانوي، تم اختيارها من إحدى المدارس الثانوية للبنات في مصر. وتم توظيف ثلاث أدوات في الدراسة وهي: قائمة بمهارات الكتابة المناسبة لطلبة الصف الأول الثانوي، واختبار قبلي-بعدي في الكتابة، ومقياس المرونة النفسية.

وقد أظهرت النتائج أن تطبيق استراتيجية الصف المقلوب أدى إلى زيادة مستويات الاندماج في عملية التعلم لدى الطلبة، وتحسين مهاراتهم في الكتابة بشكل واضح. كما أظهرت الدراسة أن الطلبة الذين تم تصنيفهم على أنهم يتمتعون بدرجة منخفضة من المرونة النفسية أبدوا تحسناً طفيفاً فيما يتعلق بمهاراتهم الكتابية عند تعرضهم للاستراتيجية الثانية، التي تنطوي على مرحلة قبلية من التعلم القائم على الاستقصاء. إلا أن أداء هؤلاء الطلبة في مهارات الكتابة قد تحسنت بدرجة معقولة عند تعرضهم لاستراتيجية الصف المقلوب التقليدية، والتي لا تنطوي على مرحلة قبلية من الاستقصاء الحر. من ناحية أخرى، فإن أداء الطلاب ذوي مستويات المرونة النفسية المرتفعة في مهارات الكتابة باللغة الإنجليزية فاق أداء أقرانهم ذوي مستويات المرونة المنخفضة في كلا النموذجين التدريسيين للصف المقلوب. وقد خلصت الدراسة إلى أن تطبيق نماذج متميزة من استراتيجية الصف المقلوب يمكن أن يساعد في استهداف الطلاب المتفاوتين في مستوى المرونة النفسية، عن طريق استخدام الاستراتيجيات التي تلبي أساليب التعلم الخاصة بهم.

الكلمات المفتاحية: الصف المقلوب- تدريس مهارات الكتابة- المرونة النفسية- تدريس اللغة الإنجليزية كلغة أجنبية

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I. Introduction

Writing in English enables effective interaction with people from different backgrounds in a globally interconnected milieu, mostly driven by the use of the internet. ESL/EFL learners should possess the ability to compose emails, argumentative essays, reports, blogs, and effectively reply to adverts. It is imperative for them to comprehend the distinct requirements of each writing genre, particularly those that are digitally enabled, and to effectively incorporate them in their daily life (Din et al., 2021; Gurung, 2023).

However, despite the importance of EFL writing for communication and language development, it is considered one of the most challenging skills to teach and learn. This is because it requires the mastery of multiple skills simultaneously (Bouchebra, 2017; Hyland, 2003). It mainly requires the utilization of advanced cognitive abilities such as strategic planning and effective organization, along with other essential linguistic skills (Rahimi & Zhang, 2018; Rostamian, Fazilatfar, Jabbari, 2018). In addition, writing is a multi-stage process, that should take place under teacher's supervision, and hence the lack of sufficient instructional time might hinder its proper development among EFL learners (Muluk et al., 2022, p. 592).

Research shows that traditional teacher-centered writing instruction is ineffective in maintaining students' enthusiasm and improving their proficiency (Bhowmik, 2021; Buitrago & Diaz, 2018). Students are often given explicit instruction about writing skills, but rarely have opportunities to engage in hands-on exercises or collaborative writing activities in class. Writing is often assigned as homework, leaving students to their own devices with limited feedback (Saunders, 2020). This lack of practical opportunities to practice writing contributes to the

noticeable low writing performance among EFL students (Lin et al., 2018, p.119).

To address these issues, technology provides a range of solutions that can effectively support writing instruction and allow teachers to cater to learners' diverse learning styles (Yousofi, & Bashiri, 2023). One of these technology -based instructional strategies is the flipped classroom (FC)-a form of blended learning- integrating technology and face-to-face learning (Alamri, 2019; Chai et al., 2023; Erbil, 2020). In this strategy the main learning process is transferred outside of the classroom, promoting self-directed learning and fostering increased classroom participation (Gustian et al., 2023; Khan & Watson, 2018; Sergis et al., 2018).

However, despite the efficacy of the FC strategy, researchers have noted a discernible disparity in writing proficiency between students who are able to fulfill the anticipated standard and those who seem disinterested in the learning process (Saunders, 2020). This prompts enquiries on the impact of other personal characteristics on the acquisition of EFL (Mahesar & Jokhio, 2021; Zhang, 2022). Relevant to this discourse is a growing opposition to one-size-fits-all instructional approaches in EFL writing studies. Studies suggest that learners are more likely to attain the target level of performance when they receive instruction that takes into account their individual personality traits (Li et al., 2020). Hence, several scholars advocate for doing research that examines the correlation between the FC instruction and various individual factors that could impact its implementation (Sun et al., 2018; Yousofi & Bashiri, 2023).

One such feature that can result in discrepancy in students' performance is their ability to maintain stability when faced with challenges throughout the process of language learning (Li et al., 2020), and is defined as resilience (Zhang, 2022). Therefore, it is hypothesized that students' resilience may influence their perception of writing instruction, including the implementation of FC strategy. However, it seems that up till now there is a dearth of research examining the potential combined impact of the FC strategy and resilience on students' written performance. Hence, this study was conducted to investigate the effect of two models of FC strategy on the writing skills of EFL secondary stage students, exhibiting distinct levels of resilience

1- Context of the study

In Egyptian secondary schools, writing proficiency is a fundamental skill that secondary school students should strive to acquire. The students are required to compose several writing genres with distinct communicative

objectives. However, only 180 minutes (four classroom periods, 45 minute each) per week are devoted to the study of English, limiting students' potential to improve their writing skills in the classroom.

Prior research conducted in the Egyptian context has revealed that writing is not allocated an adequate amount of time or attention (ElQersh, 2022). Furthermore, the majority of teachers still adhere to the product-oriented approach, wherein they refrain from providing students with feedback until their written work is submitted for evaluation (Abd El-Aziz, 2023). Therefore, upon scrutinizing students' written performance, it becomes evident that they frequently make many grammatical, organizational, and lexical mistakes (Ibrahim, 2020; Mohamed et al., 2022; Mohammedeen et al., 2023; Saleh, 2022; Youssif, 2021).

Hence, the present study focused on the problem that has arisen from the realization that secondary school students written English expression has notable shortcomings. The identified problems might perhaps be attributed to the teaching methodologies employed.

2- Purpose of the study

The primary objective of this study was to investigate the impact of the interaction between learner's resilience and two instructional models for teaching writing. These models utilize the flipped classroom strategy and differ in terms of the level of inquiry-based learning and risk-taking incorporated. In particular, two variations of the flipped classroom approach were investigated, namely the traditional flipped classroom (TFC) and the Explore -Flip -Apply (EFA) strategy.

3- Research questions

The problem of the study could be summarized in the following main question:

How can EFL students' writing skills categorized according to their level of resilience differ if exposed to two distinct flipped classroom (FC) treatments?

The following questions were derived from the main question:

1. What is the effect of the traditional FC treatment (TFC) on EFL first year secondary students' writing skills?
2. What is the effect of the modified FC treatment (Explore-Flip-Apply) (EFA) on EFL first year secondary students' writing skills?

3. To what extent will the (TFC) have a significant effect on the writing skills of EFL learners categorized as high versus low in resilience?
4. To what extent will the (Explore-Flip-Apply) (EFA) have a significant effect on writing skills of EFL learners categorized as high versus low in resilience?

4- Research hypotheses

The following hypotheses were tested:

1. There are statistically significant differences between the mean scores of the experimental groups and the control one on the posttest in writing skills in favor of experimental groups.
2. There are statistically significant differences between the mean scores of both experimental groups on the pretest and posttest in writing skills in favor of the posttest.
3. There is a main effect for the treatment; that is there are statistically significant differences between both groups on the posttest in writing skills.
4. There is a main effect for the learners' resilience; that is there are statistically significant differences between low and high resilience students on the posttest in writing skills.
5. There is an interaction between resilience and treatment; that is the effect of the treatment is moderated by resilience; or the effect of the resilience is not the same for both experimental groups in writing skills.

5. Significance of the study

This study expands upon existing research by investigating the effectiveness of implementing the flipped classroom strategy as a means of enhancing EFL writing proficiency. However, the present study acknowledges that students with diverse personal characteristics-such as resilience- may not exhibit similar responses to the same teaching method. Hence, it is expected that this study would provide teachers and curriculum designers with the opportunity to consider the inherent characteristics of EFL learners when designing writing instructional activities within the framework of the FC strategy. The study also aims to change students' negative perspective on developing their writing skills by promoting self-directed learning and increased independence.

II- Literature review

1. The flipped classroom: Definition and characteristics

The flipped classroom (FC) is a teaching strategy that allows learners to be more active during the learning process; students have more influence over their learning, which allows them to participate in meaningful learning activities and cognitively engage in them (Zhang et al., 2022, p.2). The word "flip" originates from the concept that instruction deviates from conventional models, in which students acquire knowledge in the classroom and reinforce it through homework assignments (Anwar & Pratama, 2016, p.287). FC overlaps with various instructional approaches, such as reverse instruction, inquiry-based learning, blended learning, and online instruction (Bennett et al., 2011). Substantially, this instructional shift positively impacts students' cognitive, emotional, and behavioral engagement, all of which are significant predictors of educational outcomes (Elmaadaway, 2017).

In FC instruction, students engage in preparatory tasks that they practice prior to class- often involving video materials- to grant them more time for independent practice. This is followed by in-class activities, like application, discussions and presentations, which are guided by the teacher (Danker, 2015; Dooly & Sadler, 2020; Lo et al., 2018). FC instruction hence aligns with Bloom's revised taxonomy, as it allocates pre-class activities to lower-level cognitive skills, such as remembering and understanding, while focusing class time on higher-order cognitive activities, including application, analysis, evaluation and creating (Erbil, 2020; Lin, 2021; Putra, 2021; Saunders, 2020).

To implement FC, teachers have to generate online instructional videos and upload them to a learning management system like Google Drive, Facebook, or WhatsApp groups. These videos should be short, no more than 20 minutes, and the teachers should possess a thorough understanding of the content in order to address students' enquiries. Students have the option to participate in self-directed learning, collaborate with classmates for support, and review materials more than once to improve their understanding before receiving regular instruction and practice in class.

Research on the use of FC instruction in ESL/EFL settings has shown positive effects on learning performance, social skills, satisfaction, and self-regulation skills (Khan& Watson, 2018; Putra, 2021). Moreover, FC allows for differentiated and personalized instruction, as students autonomously engage with educational materials before class, which helps to accommodate various individual learning paces. In addition, it

facilitates teacher-student interaction, enabling students to submit questions and receive feedback, online and face-to face, thus tailoring instruction to meet individualized needs (Saunders, 2020; Wang et al., 2018). The use of FC strategy has also demonstrated its advantages in terms of decreased lecturing time, increased student engagement, and the cultivation of higher-order thinking skills (Li et al., 2020).

Nonetheless, research highlights that the implementation of the FC might present several problems, such as students' lack of motivation, self-regulation, and dedication to pre-class autonomous learning. This points to the need for teacher intervention, such as assessing the knowledge acquired via online assignments, adapting tasks for students who are less prepared, dividing study units into smaller parts, and integrating interactive components, such as quizzes or gamification (Anjomshoaa et al., 2022; Beatty et al., 2019; Lee et al., 2019; Zainuddin et al., 2019). Other challenges might include students lacking ICT literacy skills (Bouchefra, 2017), the potential impact of students' home environments on motivation, limited access to technology (Anwar, 2017), absence of teacher constant assistance, and the mismatch with certain learning styles, particularly kinesthetic learners (Zhang, 2022). This complexity suggests the need for a "flipped learning continuum" that can cater to different learning needs by providing various levels of teacher-led guidance and scaffolding (Tomas et al., 2019, p.3). In other words, technology challenges, students' characteristics and specific educational contexts should be considered when planning FC treatments.

2. Flipped classroom and teaching writing:

Various studies have explored the impact of FC on students' writing skills. Research has demonstrated that it effectively supports students in adopting the process writing approach, accommodating diverse learning styles (Sengul et al., 2022). Baranovic (2013) employed the FC strategy to improve the writing skills of first-year college students, both native and international. The results demonstrated advantageous impacts across all levels of proficiency. Additionally, the strategy effectively addressed the problem of inefficient peer assessment. Similarly, research by Mireille (2014), Elfatah and Ahmed (2016), Qader and Arslan (2019), and Mahmood and Mohammadzadeh (2022) demonstrated significantly higher scores and improved attitudes towards writing for EFL students. Lin et al. (2018) incorporated gamification with the FC strategy and could prove that the flipped contextual game-based training enhanced writing performance and reduced writing errors. Likewise, Bouchefra (2017) implemented a four-stage FC strategy to teach writing that includes video

lessons, in-class remedial sessions, out-of-class drafting, and peer feedback. Findings revealed a significant positive impact on students' writing quality and attitudes.

Studies by Abedi et al. (2019), Florence (2020), Gürlüyer and Elkılıç (2020), and Indayani et al., (2022) examined the impact of FC on EFL learners' writing sub-skills. These studies, which varied in their use of smartphones and WhatsApp for pre-writing instruction, consistently found superior performance in FC groups. Sarani et al., (2020) found that high school Iranian EFL students exposed to FC outperformed their control group in content, organization, and vocabulary. Scholars also found that FC significantly enhanced writing skills in specific writing genres (Kawinkoonlasate, 2023; Putra, 2021; Roohani & Rad, 2022; Soltanpour & Valizadeh, 2018; Sze & Hamid, 2022).

Focusing on the effect of FC on students' social and emotional learning skills relevant to writing instruction, studies conducted by Barakat (2021) and Fathi et al. (2021) have demonstrated that the incorporation of FC enhances students' engagement in instructional tasks, their self-regulation skills, and attitudes towards writing instruction. Muluk et al. (2022) conducted a study that investigated the impact of using FC in (IELTS) preparatory courses. The study revealed that students had positive attitudes towards the assigned courses and that they demonstrated significant improvement in their performance on the writing exam.

In a similar vein, the study conducted by Yousofi and Bashiri (2023) shown that the implementation of mobile technology in flipped classroom learning had positive effects on students' confidence, readiness to learn, and engagement in pre-class activities. Furthermore, it fostered the development of their self-regulation and self-directed learning. Likewise, Hidayat and Praseno (2021) obtained consistent results regarding students' attitudes towards learning when they utilized “*Edpuzzle*” as an online learning platform in a FC context.

However, despite the abundance of research that investigates the impact of FC, there is a scarcity of studies exploring the elements that moderate students' reactions to FC instruction, especially in EFL settings where students' resistance may be anticipated (Sung, 2015). Chuang et al. (2018) investigated the role of individual characteristics, such as learner motivation, self-efficacy, and beliefs, in influencing the impact of FC strategy. The results indicated that students' attributes can significantly influence their performance in FC environments, highlighting the need for tailored approaches to encourage students to review the content prior to attending class instruction. The research conducted by Yang et al., (2018) and Andewi and Hastomo (2022) has also demonstrated that the

writing scores of students in FC-based treatments might vary according on their levels of motivation.

In a nutshell, previous studies have consistently demonstrated the positive effect of FC instruction on improving EFL students' writing skills. Additionally, they emphasize that FC can enhance learners' interest, motivation, and engagement in learning, while also facilitating differentiated learning. Nevertheless, prior research suggests that efficient FC implementation requires an extensive approach that takes into account individual student attributes, such as motivation, aptitude, self-regulation, and attitudes towards learning.

3. Models of flipped classroom:

The flipped classroom can take two major patterns; the first is called the first iteration flip, whereas the second is called the second iteration flip (Qader & Arslan, 2019).

3.1 The first iteration flip (traditional flip):

This strategy requires students to independently engage in the study of instructional content, followed by the completion of activities pertinent to the topic being studied (Abedi et al., 2019; Ghufroon & Nurdianingsih, 2021). The model starts with an initial stage of warming up, which is then followed by a short lecture utilising a video technique that students view outside of the classroom. Subsequently, writing tasks and practices are carried out in class under the supervision of the teacher. Because EFL teachers rarely devote long periods of time to direct instruction of writing in their classes, they do not consider this model to be much different from what they already do in English lessons (Sze & Hamid, 2022).

3.2 Second Iteration Flips

This model consists of three strategies: Explore-Flip-Apply, Flip-Mastery, and Peer Instruction (PI) Flip. Yet, the one that is focused on in this study is the Explore-Flip-Apply (EFA). The EFA model is based on the idea that teachers should purposefully hide knowledge from their students (Gerstein, 2011; Musallam, 2013) until they create or disclose it by themselves, after being challenged. These include the following steps:

- (a) Explore Stage: Students engage in exploration processes, such as brainstorming or responding to a writing prompt, without teacher intervention, in an environment that supports experimentation and self-discovery. This stage persists until students reach a point when they require explicit instruction or additional knowledge in order to advance, and the mental effort required becomes more demanding.

- (b) Flip Stage: Based on observing students' struggle and needs, a short video is presented to provide them with necessary content, outside the classroom. The teacher, through online communication tools, verify comprehension, clarify misconceptions, and guide students towards the subsequent phase.
- (c) Execute Stage: After the content in the flip stage has been provided, students might engage in a classroom activity or assignment to apply the knowledge acquired in the previous two stages in a new way (Sakulprasertsri, 2017).

4. Learners' resilience and FC instruction:

There is an increasing emphasis within the field of TEFL on the identification of factors that impact the process of teaching and learning. In relation to the FC strategy, it has been established that students' reactions to instruction may differ, as self-regulation and group preferences may positively influence learners' readiness to FC instruction (Dewaele et al., 2019; Li & Dewaele, 2021). In a similar vein, research has shown that students who possess robust collaborative skills and a high level of self-confidence demonstrate exceptional achievement in an FC environment (Hao, 2016; Sun et al., 2018). However, contrary to this, Chuang et al. (2018) and Andewi and Hastomo (2022) found no significant correlation between self-efficacy and performance in FC contexts.

One of the distinctive learner's characteristics that may influence the learning process is resilience. It is a distinctive attribute that enables learners to adjust to situations or surroundings that present certain risks or challenges to them (Luthar, 2013, p.1; Toland & Carrigan, 2011). Components of resilience include perseverance, self-regulation, optimism, adaptation, and communicative effectiveness (Li et al., 2017, p.671). Given the intricate and time-intensive process of acquiring a foreign language, which requires learners to exhibit considerable perseverance and resilience (Li et al., 2020; Zhang et al., 2022), recent studies have focused on investigating the correlation between resilience and a variety of foreign language learning variables, including motivation, stress tolerance, coping mechanisms, and language proficiency (Chen & Padilla, 2022; Kim et al., 2019; Nguyen et al., 2015).

The stress and coping theory (SCT) identifies three types of resilience: ego resilience, which refers to how individuals react to challenges and their ability to overcome them (Li et al., 2021; Maltby et al., 2019) and cognitive resilience, which involves using positive cognitive strategies and mechanisms to deal with challenging situations (Lou & Noels, 2020).

It also comprises social resilience, which involves navigating available resources and building strong relationships with others (Liebenberg, 2020).

Consequently, it is anticipated that high-resilience learners will possess a strong motivation to achieve success when confronted with instructional tasks that demand independent investigation and experimentation, with minimal guidance from the teacher, owing to their intrinsic persistence and strategic mindset. On the contrary, individuals who lack resilience are more likely to respond positively to direct instruction approaches that entail reduced levels of risk and uncertainty. Consequently, there might exist discrepancies in the responses of students with high resilience to various FC models when compared to those with low resilience.

The FC is a learning approach that emphasizes student-centered learning through the use of technology-mediated asynchronous direct instruction outside the classroom. As far as EFL writing instruction is concerned, the FC strategy can be efficient as it provides opportunities for students to engage in collaborative activities, peer instruction, as well as project-based learning. The FC strategy can increase learners' engagement, foster one-on-one interaction between teachers and students, and help teachers make efficient use of class time to cater for various students' needs. Moreover, the FC strategy proved to have a positive impact on variables other than writing skills, such as self-regulation, self-efficacy, learning autonomy, attitudes, motivation and sense of responsibility.

However, in spite of the advantages of the FC strategy, some researchers have alluded to the conflicting evidence supporting its usefulness. Drawbacks of using FC were pinpointed, such as problems pertinent to accessing technology, students' lack of commitment, and difficulty of accommodating individual differences. Moreover, some research has presented inconsistent findings on the influence of the FC strategy on students' level of satisfaction. It has been demonstrated that the excessive workload students encounter in FC settings can potentially undermine their level of satisfaction and hence their achievement.

Notably, also, only very few studies examined the moderating effect of learners' personality traits, such as their motivation, self-regulation, locus of control and self-belief, on their performance in FC settings. Likewise, to the best knowledge of the researchers, resilience was not investigated as a moderating variable that can affect students' learning in FC settings. Hence, to bridge the gap in previous research, two FC models were compared: the Explore-Flip-Apply model (EFA), and the traditional FC model (TFC). The EFA model, based on the inquiry-based learning

approach, requires students to investigate the writing process related to a particular genre and engage in cognitive struggle before getting explicit instruction. The TFC model, in contrast, is derived from the conventional PPP model (presentation, practice, and production), which entails providing explicit instruction on writing genres prior to participating in practical activities. It was hypothesised in this study that students with diverse personality traits, namely varying levels of resilience in the current study, would respond differently to both models.

As the EFA model promotes independent exploration of writing strategies before formal instruction, it is expected to attract students with higher resilience levels, as they have the capacity to tolerate ambiguity and persevere through difficulties. With the same token, students with lower resilience may struggle with uncertainty in the EFA model. So, they may perform better when exposed to the TFC model, where instruction is provided directly to them without additional cognitive burden of autonomous exploration.

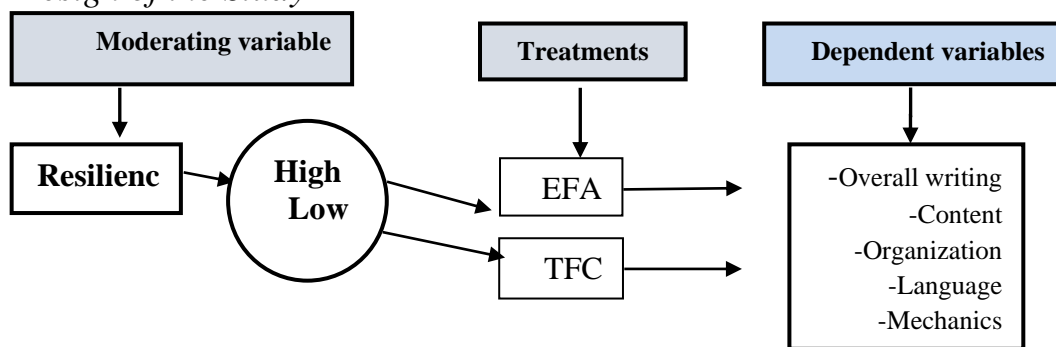
III. Method:

1. Study design

A non-orthogonal design was utilized to investigate the main and interaction effects of independent variables as predictors for dependent variables. This involved doing descriptive analysis, paired samples t-tests, ANOVA, and a factorial 2x2 analysis of variance. The study design can be visually represented in figure (1).

Figure 1.

Design of the Study



Non-equivalent group design- as a type of quasi-experimental design- was implemented in the current study. It is the same as the experimental group/control group pretest- posttest design. However, as it is impossible to completely guarantee the random selection of the sample, intact classes

were selected as samples of the current study and were assigned to experimental and control groups based on non-random criteria.

2. Participants

The study involved three first-year secondary school classes from Dr. Muhammad Rabie Falah Secondary school for girls in Sharqya governorate, during the 2022-2023 school year. Two experimental groups were designated, with 38 students in the experimental group (EFA), 40 students in the experimental group (TFC), and 37 students in the control one. The three classes were homogenous in terms of gender, EFL language history, internet and cellphone access, and age range of 15 to 16. Moreover, one-way ANOVA revealed no statistically significant differences in writing test scores between the three groups. The sample used in the statistical analysis consisted of students who were selected after excluding those with medium resilience level; the study only included students with high and low resilience, 29 students for the EFA group, and 30 students for the TFC group.

3. Instrumentation

3.1 The Writing Skills checklist:

The Writing Skills checklist was developed to identify the most important writing skills for first-year secondary school students. The checklist, based on Ministry of Education directives and previous literature, included 17 skills categorized into five main areas: purpose, content, style, organization, grammar, and mechanics. Each level of importance is assigned a value ranging from very important to less important. The validity of the checklist was evaluated by a team of TEFL professionals and experts. After analyzing the jury's responses, ten skills were identified as the focal point for the study. The skills with the highest frequency under content, organization, language, and mechanics were chosen based on their opinions. The checklist's first and final versions, jury members' names, and proportions assigned to each writing sub-skill are included in Appendix (A).

3-2 The Pre-Post Test:

A writing test was used to investigate the effectiveness of both treatments in developing the selected writing skills. It was given to a panel of jury of specialists and TEFL experts (N=7). The test proved to be mostly valid as the jury approved it and suggested decreasing the number of tasks to just three. Topics included in the test were unseen by the students to ensure that they reflect their actual skills, yet they addressed the same genres

students have studied throughout the program. The duration of the test was 45 minutes. The test final version consisted of three writing tasks. For each genre, students had to choose one of two topics.

The test was piloted on a group of 10 students to determine its difficulty and suitability. Results revealed that the majority of students obtained low scores on the test. In addition, it was estimated that forty-five minutes would provide ample time to complete the test. This time was estimated as follows:

$$\frac{\text{Time of the fastest student (20)} + \text{time of the slowest student (70)}}{2} = 45 \text{ minutes}$$

In order to establish the test reliability, test-retest method was used on a group of 15 secondary school students. The correlation coefficient between the results of the two tests was (.89). Therefore, the test was considered reliable for the purpose of the study.

The pre-test was administered to the experimental and control groups on February 14th 2023, a week prior to the experiment. The post-test was administered, 2 days after the experiment, which ended on April 25th 2023 (Appendix C).

The assessment rubric utilized to correct writing was derived from previous studies and encompassed four distinct dimensions or main skills, namely content, organization, language, and mechanics (Appendix B). To correct the test, analytical scoring was adopted as most appropriate for realizing the study purpose. Two raters marked the essays; yet if the discrepancy between them exceeded 8 points, a third person re-examined the essays. The correlation coefficients among raters of the pre-posttest were calculated and they revealed high correlations as follows:

Table 1

Summary of the correlation coefficients between individual raters

Test raters	Control group	Experimental group
Pre-test	.85	.91
Post-test	.94	.87

The researcher assigned a weight of (4) marks for each main skill or domain. So, each written piece was marked out of (16). As the pre-posttest consisted of three writing tasks, the test was scored out of (48).

The pre- posttest in its first and final versions and jury members' names are included in Appendix (C).

3-3 The Resilience scale:

The purpose of the resilience scale was to evaluate how students' response to the two suggested FC strategies was affected by their resilience level. The Foreign Language Learning Resilience Scale (FLLRS) was employed to measure their ability to deal with difficulties and setbacks encountered while learning a foreign language. The scale originally consisted 19-item and was designed by Guo and Li (2022) and had three dimensions: ego resilience, social resilience and metacognitive resilience. Guo and Li (2022) indicated that the FLLRS is a suitable and valid scale for use in FL learning contexts. The FLLRS scale was validated by a panel of six professionals in the field of learning psychology and TEFL y. They proposed including additional items, resulting in a final scale consisting of 25 items. The Cronbach Alpha reliability estimate was computed, resulting in a value of 0.76. Students were asked to rate each item using a 5-point Likert scale that ranged from 1 (strongly agree) to 5 (totally disagree). The administration of the resilience scale was conducted for both experimental groups on February 15th 2023. The resilience scale in its first and final versions and jury members' names are included in Appendix (D).

4. The Treatment:

4-1 Objectives:

The intervention implemented in this research aimed to enable students to produce two or more paragraphs, each consisting of a maximum of 150 words, on the designated writing genres. Students had to exhibit proficiency in writing skills across four distinct domains: content, organization, language, and mechanics. The specific criteria within these domains varied depending on the assigned genre.

4.2. Writing genres

The genres selected for both experimental groups in the present study were derived from the students' official curriculum. These genres included biographies, book reviews, and essays discussing advantages and disadvantages. The choice of these specific genres was based on their perceived level of difficulty, as assessed by TEFL professionals, teachers and students. Moreover, these genres were shown to be more functional in fostering the development of students' writing skills. In contrast to other genres, such as emails, narrative essays and blogs, they proved to be

conducive to the development of a wide range of writing skills that can be generalized to various other genres.

4.3 The teaching/learning approach:

4.3.1 Instructors:

To minimize any confounding factors stemming from variations among instructors, the regular classroom teacher was responsible for teaching both experimental groups, so ensuring consistency in the treatment delivery. The teacher had completed a graduate diploma in education, and possessed 10 years of teaching experience. Before the intervention was carried out, the teacher was granted a one-week training workshop by the researchers in order to acquaint him with the adopted FC models and the implementation of Google Classroom as the learning management system (LMS). Furthermore, he was directed to engage in practical application of the instructional materials to familiarize himself with the platform and enhance his proficiency in utilizing it as an educational tool to convey meaningful feedback to students and facilitate communication with them.

4.3.2 The learning management system (LMS):

The LMS platform selected for this research was Google Classroom, which is free and user-friendly for both teachers and students. The platform served as a means to present the instructional materials relevant to the assigned writing genres and provide students with a space to engage in online writing activities and communicate with the teacher and their classmates. The teacher employed the platform to evaluate the students' engagement beyond the classroom, offer them feedback, especially on challenging sections of video lessons, and evaluate their performance. Subsequently, he used this input to create suitable classroom activities. Throughout the experiment, the researchers constantly monitored the platform, tracked students' online progress, and provided further guidance to the teacher.

The following steps were taken to launch the platform:

1. Setting up the platform: The researchers set up two online classrooms for both experimental groups through Google Classroom website (classroom.google.com), entered the classes' names, sections, and subject, and customize the settings according to certain preferences.
2. Designing instructional materials: The researchers chose video tutorials from YouTube -spanning from 5-17 minutes each- for teaching the specified writing genres. The videos level of difficulty

was determined by analyzing them and submitting them to jury members of (10) school teachers and supervisors.

3. **Creating assignments:** The researchers developed assignments that students were required to complete either before or after the class session. They entered specific information for each assignment, including the title, directions, due date, and added relevant video from YouTube or other websites.
4. **Enrolling students:** The teacher added students-in both classes- by sharing the class code with them.
5. **Accessing online materials:** For each writing genre, students in both experimental groups were required to watch the uploaded materials, do the embedded tasks, adhering to deadlines specified for each. Announcements and reminders were usually posted to activate students and keep track of their learning.
6. **Communicating with students:** The teacher interacted with students, using two kinds of asynchronous communication methods. The first was an email feature that was part of Google Classroom platform, while the second was the "Stream" page on which students could either post a question to the whole class or to the teacher, regarding the parts of the video or the activities they had trouble with.
7. **Grading and feedback:** After students submitted their assignments, the teacher accessed them by clicking on the "Classwork" tab. He reviewed and graded the assignments and provided feedback through comments, or by using the built-in grading tools.

4-3-3 Teaching strategy:

On February 19th, at the beginning of the treatment, the teacher conducted two face-to-face sessions to introduce the students in both experimental groups to the treatment and explain its procedures. During these sessions, he explained the FC strategy, described how it worked, provided the students with the code to access Google Classroom, delivered instructions on its utilization, and collected their email addresses to facilitate dissemination of notifications regarding instructional materials.

The lesson plan- for both groups- was designed according to the FC teaching strategy; it comprised eight phases. However, the lesson plan for the first group (EFA) included an additional step, referred to as the "Explore" stage, which was introduced into phase one. However, the next stages were mostly comparable for both groups, with just minor variations. The lesson plan in its final version, students hand outs (writing

planner and useful expressions, peer revising checklist, peer editing checklist), and jury members' names are included in Appendix (E). The lesson plan was as follows:

4. 4. Experimental procedures

Phase 1: Pre-writing stage

1-1 Assigning the writing task

The teacher provided both groups with a concise overview of the assigned genre. He modelled how to use Google classroom and all students' questions were answered.

1-2 Exploration (only EFA group):

In comparison to the second group (TFC), which did not receive any further instructions regarding the writing task, the first group (EFA) was provided with a writing prompt relevant to the assigned genre and encouraged to independently attempt the assignment, exploring different strategies they deemed appropriate. Students grappled with the writing task while the teacher's help was intentionally limited to promote student autonomy, leading to some uncertainties and inquiries about the appropriate methods for handling the assignment.

Phase 2: Pre- class preparation (similar for both groups)

- Students in both experimental groups were asked to preview an online YouTube video on Google classroom about the genre assigned to them- at home or at school- two days before the scheduled classroom session. The video comprised an explanation of the writing genre, elucidating its distinct structural and organizational features, and critically examining exemplar texts. The length of video was kept small (from 5 to 10 minutes), making it easier for students to watch and memorize new information.
- To assess students' comprehension, the researchers incorporated a set of three to five questions on Google classroom, which were to be answered subsequent to watching the videos to help them identify the difficult points which should be solved in the class.
- Students had to access the "online discussion" on the "stream" page on Google classroom to discuss the material. The teacher responded to students queries via CMC tools.
- Using the online planner, students were asked to plan the necessary parts of the writing genre and were asked to gather relevant information and arrange it in the appropriate place in the worksheet.

Phase 3- Presentation and discussion (Partly distinct for both groups):

This phase was considered a phase for “teaching after learning”. Taking into account the challenges identified by the students during the pre-class activities, the teacher-with the help of researchers- devised some activities for face-to-face sessions. Thus, in both groups, the students participated in active learning inside the classroom setting, which included peer instruction, problem-based learning, and collaborative writing activities. However, whereas the first group was provided with the writing prompt before watching the video, the second group was given the prompt during this stage. This phase comprised the following steps:

- Students who did not watch the online lecture before class were asked to do so at the start of the lesson and then join the class to participate in active learning.
- The teacher made a quick review of the genre with the writing planner, including its key features.
- The students reflected on the knowledge acquired from the video, shared information they had collected and discussed difficult points with classmates and the teacher. Based on this discussion, the teacher helped them reach conclusions about the writing genre.
- The teacher engaged students in the prewriting stage by encouraging them to brainstorm ideas with their peers about the assigned topic.
- The first **group only** was tasked with independently composing a preliminary draft of the writing assignment- either by hand or computer- with a primary focus on ensuring the coherence and comprehensibility of the content. The researcher circulated the classroom to check on students, answer questions, and provide feedback.

Phase 4 - Drafting (Partly distinct for both groups):

- At home, students in both groups were required to watch two or three videos about drafting the assigned genre. The first group was asked to finish the first draft at home in light of what they have learned in class and post it on Google classroom, so that the teacher can have a look at it and give them some preliminary feedback about their skills.
- Since students in the first group had already started writing their first draft prior to watching the video, they were asked to revise

their original draft, reconstruct it and make necessary modifications.

- The teacher provided formative assessment, responded to students' enquiries via CMC tools and prepared challenging activities for high performers.

Phase 5- Revising and feedback (both groups)

- At the beginning of this phase, the researcher checked students' understanding and attended to any questions they may have had.
- The teacher divided the class into pairs and asked the students to watch some online videos as power point presentation about revising the assigned genre.
- The teacher gave the students 20 minutes to think and work by themselves to review their first draft in terms of content and organization using a checklist designed for that purpose.
- The students exchanged drafts with their classmates, followed the instruction to employ a peer-revising checklist in order to provide constructive comments to one another.
- To facilitate the learning activity, the teacher circulated through the classroom, observed students, and offered feedback.
- Due to the limited duration of the in-class session, it was expected that students would complete their second drafts outside of class prior to next session. The teacher was accessible for assistance, either offline or online.

Phase 6- Production (Second draft)

- At home, students were urged to watch a video about editing the assigned genre. Using CMC tools, the teacher answered questions raised by the students.
- Subsequent to receiving the teacher's feedback, students finished the second draft and sent it to the teacher via email.
- The teacher evaluated students' drafts, gave personalized feedback to students with difficulties, guided them to the remedial lessons and discussed their common mistakes

Phase 7- Editing (final draft)

- In class, the teacher divided the students into pairs, gave them an editing checklist and asked them to peer edit their drafts within a time limit of 25 minutes, focusing on grammar and mechanics.
- Each student proceeded to compose the final draft of their writing.
- The teacher monitored the students, and addressed inquiries.
- Students published their final drafts on Google classroom.

Flipped classroom writing instruction: Investigating the moderating effect of EFL students' resilience

Phase 8- Evaluation

- The teacher assigned students another writing task belonging to the same genre, and instructed them to submit it by email. The teacher evaluated the students' writings and, if necessary, designed individualized learning activities for students with difficulties. Table (2) shows the stages students went through in both FC treatments.

Table 2

Treatment followed by both experimental groups for each genre

Weeks	Lesson phases					
	First exp group (EFA)	Second exp group (TFC)	Place	Time	Procedures	Materials & Digital tools
Week (1) Phase 1&2	Phase (1): 1-1 Explaining the task			15 min	-The teacher assigned the genre -The teacher modeled how to use Google classroom. -Students' questions were answered	white board, data show
	1-2 Explora tion		In class	30 min	Hands-on activities to engage students in experimenting with the genre, and activate their previous knowledge.	Papers, pencils, white board
	Phase (2): Pre-class Preparation		At home	(3 days)	-Students watched a video-on LMS and answered embedded questions. -The teacher answered students' questions via CMC tools.	YouTube videos, genre samples, planning Sheets.
Week (2) Phase 3, 4 and 5	Phase (3): Presentation & discussion		In class	45 min	-A remedial lecture to respond to questions not answered online. -Engaging students in the writing activity (prewriting and planning).	Planning sheet
	Phase (4): Production (drafting)		At home	(2 days)	- In the first group, students completed the first draft at home. - In the second group, students revised their first draft in light of teacher's feedback. -Teacher responded to students' enquiries via CMC tools.	Videos about drafting, Expression's box
	Phase (5): Revising		In class	45 Minutes	- The class was divided into pairs and students were asked to watch videos about revising the text.	YouTube Video + content & organization checklist

Weeks	Lesson phases					
	First exp group (EFA)	Second exp group (TFC)	Place	Time	Procedures	Materials & Digital tools
					<ul style="list-style-type: none"> - The students were given 20 minutes to think and work with their partner to review their first draft in terms of content and organization. - The teacher went through the class to facilitate the learning activity, and provided feedback. 	
Week (3) Phase 6, 7 & 8	Phase (6): Production (second draft)		At home	(Almost 4 days)	<ul style="list-style-type: none"> - Students watched a video about editing the genre - The teacher responded to students' enquiries via CMC tools. - Students finished the second draft at home. 	YouTube video; Peer editing checklist
	Phase (7): Editing & feedback (final draft)		In class	45 min	<ul style="list-style-type: none"> - The students edited their drafts, using the peer editing checklist. - Students wrote final drafts. - The teacher gave feedback. - Students published final drafts on Google classroom. 	Peer editing checklist
	Phase (8): Evaluation		At home	(Max 2 days)	<ul style="list-style-type: none"> - The teacher assigned another writing task as homework. - The teacher evaluated students' compositions. - The teacher prepared personalized learning activities. 	-----

4-5 Treatment for the control group:

While both experimental groups received the assigned treatments, the control group, on the other hand, received regular instruction by their classroom teacher. The themes allocated to them were identical to those provided to the experimental groups. Prior to the writing task, students were provided with a set of pre-writing activities in class, as outlined in their prescribed textbook. They were instructed to compose an essay for each topic independently at home to be evaluated by the teacher later.

4-6 Duration of treatment:

The experimentation for both groups began on February 21st, 2023, and concluded on April 25th, 2023. The duration of the implementation of the FC models spanned a period of 9 weeks.

IV- Results

1. Distribution of Students

Descriptive analysis showed that the distribution of students as high versus low in resilience in both treatments was as in table (3).

Table 3

Distribution of Students in Both Treatment Groups

Treatments	high Resilience		Low Resilienc		Total/treat ment	
	N	%	N	%	N	%
Experimenta 1 1 EFA	14	48.3	15	51.7 %	29	49.2 %
Experimenta 2 TFC	15	50%	15	50%	30	50.8 %
Total/ Resilience	29	49.2 %	30	50.8 %	59	100 %

Note:

EFA=Explore-Flip-Apply group, and TFC= Traditional flipped group

2. Equivalence of groups

The analysis included calculating the skewness and kurtosis coefficients to evaluate the normality of data distribution for the three study samples: the first experimental group, the second experimental group and the control group. The skewness coefficient for the three study sample scores in the writing skills pre-test was determined to be -0.128, while the kurtosis coefficient resulted in a value of 0.493. Hence the values in the dataset fall within an acceptable range of ± 1 , which suggests normality of data and supports the use of parametric statistical methods for data analysis.

To assess the homogeneity among the three samples, one way ANOVA was utilized to determine whether there were any significant differences between them on the writing skills pretest. Results showed that there were no statistically significant differences between the mean scores of students, in the three groups, on the writing test prior to the treatment, including the four main skills. This shows that the three groups were statistically homogenous prior to the treatment.

3. Examining study hypotheses

The study hypotheses dealt with the effect of students' resilience and both FC treatments on their writing skills. Thus, the main effects and interactional effects pertinent to the study objectives were assessed in light of the study hypotheses.

First, to compare the writing performance of both experimental groups and the control group one the post test, one way ANOVA was utilized as shown in table (4).

Table 4

One way ANOVA comparing the two experimental and the control groups on the post-test on writing skills

	<i>Control</i> <i>N=37</i>		<i>EFA</i> <i>N=29</i>		<i>TFC</i> <i>N=30</i>		<i>F</i> <i>(2,39)</i>	<i>P</i>
	<i>Mean</i>	<i>SD</i>	<i>Mean</i>	<i>SD</i>	<i>Mean</i>	<i>SD</i>		
<i>Overall writing</i>	19.86	1.44	32.76	8.14	30.90	2.99	69.94**	0.00
<i>Content</i>	5.54	0.90	8.86	1.98	8.43	1.25	56.03**	0.00
<i>Organization</i>	4.97	0.83	8.14	2.23	7.80	0.96	49.94**	0.002
<i>Language</i>	4.68	0.78	7.86	2.117	7.43	0.86	60.17**	0.00
<i>Mechanics</i>	37	4.68	7.90	2.18	7.23	0.94	50.47**	0.003

**p < .001

It is clear from table (4) that there were statistically significant differences at 0.01 level between the three groups in overall writing $F(2, 39) = 69.941$, $p < (0.05)$ as well as in writing sub skills, $F(2, 39) = 56.3, 49.94, 60.17$ and 50.47 , $p < (0.05)$ for content, organization, language and mechanics respectively. To further explore the differences between groups, Scheffé post hoc tests were performed on overall writing and writing subskills; table (5) shows the significance of the differences between the groups:

Table 5

Scheffé Multiple Comparison Test for Examining differences in both treatments in writing skills

Dependent Variable	(I) group	(J) group	Mean Difference (I-J)	Sig.
<i>Post- Overall</i>	EFA	TFC	1.859	.344
		control	12.894	.000
	TFC	control	11.035	.000
<i>Post-Content</i>	EFA	TFC	.429	.507
		control	3.322	.000
	TFC	control	2.893	.000
	EFA	TFC	.338	.665

Flipped classroom writing instruction: Investigating the moderating effect of EFL students' resilience

Dependent Variable	(I) group	(J) group	Mean Difference (I-J)	Sig.
<i>Post-Organization</i>		control	3.165	.000
	TFC	control	2.827	.000
	EFA	TFC	.429	.451
<i>Post-Language</i>		control	3.186	.000
	TFC	control	2.758	.000
<i>Post-Mechanics</i>		TFC	.663	.193
	EFA	control	3.221	.000
	TFC	control	2.558	.000

Note. CON= control group, EFA=Explore group, and TFC= Traditional flipped group

As shown in table (5), The post hoc test shows that statistically significant differences were located between the control group and both EFA and TFC groups in favor of both experimental groups, mean differences were (12.894, 11.035) for both groups respectively. This demonstrates that both experimental groups outperformed the control group in overall writing skills. Yet, no statistically significant difference was found between both experimental groups in overall writing.

Similarly, for content, the post hoc test shows that statistically significant differences were located between the control group and both EFA and TFC groups in favor of both experimental groups, mean differences were (3.322, 2.893) for both groups respectively. Likewise, for organization, the post hoc test shows that statistically significant differences were located between the control group and both EFA and TFC groups in favor of experimental groups, mean differences were (3.165, 2.827) for both groups respectively. This demonstrates that both experimental groups outperformed the control one in content and organization. Yet, no statistically significant difference was found between both experimental groups in both skills.

Likewise, for language, the post hoc test shows that statistically significant differences were located between the control group and both EFA and TFC groups in favor of both experimental groups, mean differences were (3.186, 2.758) for both groups respectively. Yet, no statistically significant difference was found between both experimental groups. In the same way, for mechanics, the post hoc test shows that statistically significant differences were located between the control group and both EFA and TFC groups in favor of experimental groups, mean differences were (3.221, 2.558) for both groups respectively. This demonstrates that both experimental groups outperformed the control group in language and mechanics. Yet, no statistically significant difference was found between both experimental groups in both skills.

To compare the progress students could achieve from the pretest to the post test, paired sample t-tests were applied as shown in table (6).

Table 6

Paired Sample T-test Comparing Students' writing performance on the Pre and Posttest

Resilien	Dependent variables	EFA					TFC				
		Pre-test	Post-test	T	F	Effect size	Pre-test	Posttest	T	F	Effect size
		M (SD)	M (SD)				M(SD)	M(SD)			
	Overall	11.44(1.82)	25.3	21.1	0.00	5.3	11.5(1.45)	28.7(2.4)	24.1	0.00	6.22
	Content	2.94(0.68)	7.25(1.34)	10.6	0.00	2.7	2.7 (0.62)	8.07(1.5)	11.85	0.00	3.1
Low	Organization	3.10 (0.61)	6.6 (0.77)	14.3	0.00	3.6	3.13 (0.52)	7.1(0.70)	17.2	0.00	4.4
	Language	3 (0.68)	6.13(0.50)	13.8	0.00	3.4	3.07(0.70)	6.5(0.64)	14.6	0.00	3.8
	Mechanics	2.44(0.81)	5.9 (0.44)	13.6	0.00	3.4	2.67 (0.61)	6.5(0.64)	15.1	0.00	3.9
	Overall	11.50(1.4)	40.8	45	0.00	12	11.8(1.52)	33.1(1.51)	37.12	0.00	9.6
	Content	2.8 (0.7)	10.6(0.51)	36.3	0.00	9.7	2.87	8.8(0.8)	22.3	0.00	5.8
	Organization	3.07 (0.73)	10.3	25.7	0.00	6.8	3.3 (4.6)	8.5(0.52)	28.9	0.00	7.5
High	Language	2.8 (0.58)	10 (0.87)	22.7	0.00	6.1	2.9 (0.70)	7.9 (5.9)	18.11	0.00	4.7
	Mechanics	2.9(0.66)	10 (0.88)	28.155	0.00	7.5	2.7 (0.70)	7.9 (5.9)	26	0.00	6.7

Note. The maximum score for each writing skill = 12.

As far as low resilience students are concerned, table (6) shows that there were statistically significant differences between students' mean scores on the pretest and posttest in overall writing skills, in favor of the posttest in both EFA and TFC treatments, $T=21.1$, and $T=24.1$, $F < 0.05$ for both treatments respectively. Similarly, for content skills, there were statistically significant differences in favor of the posttest in EFA and TFC, $T=10.6$, and $t=11.8$, $F < 0.05$ for both treatments respectively. In the same way, there were statistically significant differences between students' mean scores in organization in favor of the posttest for both treatments respectively, $T = 14.3$, and $T = 17.2$, $F < 0.05$. In language also, there were statistically significant differences in favor of the posttest in EFA and TFC treatments, $T = 13.8$, and $t=14.6$, $F < 0.05$, for both treatments respectively. Finally, in mechanics, there were statistically significant differences in favor of the posttest in EFA and TFC treatments, $T=13.6$, and $T=15.1$, $F < 0.05$, for both treatments respectively. Comparing effect sizes, it seemed that low resilience students performed somehow better in the TFC treatment.

Turning to high resilience students, table (6) shows that there were statistically significant differences between students' mean scores on the pretest and posttest in overall writing skills, in favor of the posttest in both EFA and TFC treatments, $T=45$, and $T=37.1$, $F < 0.05$ for both treatments respectively. Similarly, in content skills, there were statistically significant differences in favor of the posttest in EFA and

Flipped classroom writing instruction: Investigating the moderating effect of EFL students' resilience

TFC treatments, $T=36.3$, and $T=22.3$, $F < 0.05$ for both treatments respectively. Statistically significant differences were also found in organization in favor of the posttest in both treatments respectively, $T=25.7$, and $T=28.9$, $F < 0.05$.

In language, there were statistically significant differences between students' mean scores on the pretest and posttest in favor of the posttest in EFA and TFC treatments, $T=22.7$, and $T=18.11$, $F < 0.05$, for both treatments respectively. Finally, in mechanics, statistically significant differences existed between students' mean scores on the pretest and posttest in favor of the posttest, $T=28.1$, and $t=26$, $F < 0.05$, for both treatments respectively. Comparing effect sizes, it seemed that high resilience students performed better in both treatments compared to low resilience students. Yet, their performance in the EFA group surpassed that in TFC group.

3.1 Main Effects

Hypothesis (3) and (4) tackled the main effects of: a) the treatment, and b) resilience respectively. Hence, to verify the study hypotheses, univariate ANOVA (F) tests were used to look at each dependent variable to see if the two independent variables have a significant impact on them as displayed in table (7).

Table 7

Univariate Analysis of Variance: Main effect on Dependent Variables

Source	Dependent Variable	Sum of Squares	df	Mean Squares	F	P	Partial Eta Squared
Treatment	<i>Overall writing</i>	82.045	1	82.045	37.410	.000	.405
	<i>Content</i>	3.016	1	3.016	21.188	.000	.278
	<i>Organization</i>	3.826	1	3.826	10.491	.002	.160
	<i>language</i>	6.503	1	6.503	23.958	.000	.303
	<i>Mechanics</i>	7.925	1	7.925	18.470	.000	.251
Resilience	<i>Overall writing</i>	1946.52	1	1946.5	887.5	.000	.942
	<i>Content</i>	155.886	1	155.886	109.19	.000	.952
	<i>Organization</i>	124.752	1	124.752	342.091	.000	.861
	<i>Language</i>	99.439	1	99.439	366.353	.000	.869
	<i>Mechanics</i>	110.101	1	110.101	256.590	.000	.823
Error	<i>Overall writing</i>	402.508	1	402.508			
	<i>Content</i>	7.829	55	.142			
	<i>Organization</i>	20.057	55	.365			
	<i>Language</i>	14.929	55	.271			
	<i>Mechanics</i>	23.600	55	.429			

Table (7) shows that there was a significant univariate main effect for the treatment on overall writing ($F = 1, 55) = 37.410, p=.000$, partial eta squared=.405. Moreover, there were significant main effects for the treatment on content ($F (1, 55) = 21.188, p=.000$, partial eta squared=.278, on organization ($F= 1, 55) = 10.491, p=.002$, partial eta squared=.160, on language ($F= 1, 55) =23.958, P=0.00$, partial eta squared =.303; and on mechanics ($F =1, 55) =18.470, p=0.00$, partial eta squared= .251. Thus, the third hypothesis was partly confirmed. Similarly, there was a significant univariate main effect for resilience on overall writing ($F =1, 55) = 887.5, P=.000$, partial eta squared=.942. Also, there were significant univariate main effects on content ($F =1, 55) = 109.19, P=.000$, partial eta squared=.952, on organization ($F =1, 55) = 342.091$, partial eta squared=.861, on language ($F =1, 55) =366.35$, partial eta squared=.869, and on mechanics ($F=155) =256.59, P=0.001$, partial eta squared = 0.823. Thus, the fourth hypothesis was partly confirmed.

3.2 Effects of Interaction

The interactional effect of FC treatment and resilience is shown in table (8)

Table 8

Univariate Analysis of Variance: interactional effect on dependent variables

Source	Dependent Variable	Sum of Squares	df	Mean Squares	F	P	Partial Eta Squared
Treatment* resilience	Overall writing	402.508	1	402.508	183.53	.000	.769
	Content	23.114	1	23.114	162.39	.000	.747
	Organization	22.764	1	22.764	62.42	.000	.532
	Language	28.786	1	28.786	106.05	.000	.658
	Mechanics	26.199	1	26.199	61.057	.000	.526
Error	Overall writing	402.508	1	402.508			
	Content	7.829	55	.142			
	Organization	20.057	55	.365			
	Language	14.929	55	.271			
	Mechanics	23.600	55	.429			

As shown in table 8, univariate two- way interaction effect of treatment and resilience was found on overall writing ($F =1, 55) =183.53, P=.03$, partial eta squared=0.769, on content ($F =1, 55) =162.39, P=.00$, partial eta squared=0.747, organization ($F =1, 55) =62.42, p=.00$, partial eta squared=0.532, and language ($F=1, 55) = 106.054, P=0.00$, partial eta squared= 0. 658. Similarly, two-way interaction was found in mechanics at 0.01, ($F =1, 55) = 61.057, P=.00$, partial eta squared=0.526. Thus, the fifth hypothesis was confirmed.

3.3 Analyzing interaction

Since there was a two-way interaction in terms of content, language, organization and mechanics between resilience and treatment, it was further investigated by comparing the mean scores of low and high resilience students on the four main skills at each level of resilience, using one way ANOVA, as in table (9).

Table 9

One-way ANOVA comparing low and high resilience students in both groups

		Sum of Squares	df	Mean Square	F	Sig.
<i>Post- Overall</i>	Between Groups	1944.592	3	648.19	158.902	.000
	Within Groups	224.357	55	4.079		
	Total	2168.949	58			
<i>Post-Content</i>	Between Groups	85.830	3	28.610	21.948	.000
	Within Groups	71.695	55	1.304		
	Total	157.525	58			
<i>Post-Organization</i>	Between Groups	142.675	3	47.558	103.563	.000
	Within Groups	25.257	55	.459		
	Total	167.932	58			
<i>Post-Language</i>	Between Groups	123.930	3	41.310	88.769	.000
	Within Groups	25.595	55	.465		
	Total	149.525	58			
<i>post-Mechanics</i>	Between Groups	140.942	3	46.981	109.489	.000
	Within Groups	23.600	55	.429		
	Total	164.542	58			

Table (9) indicates that there were statistically significant differences at 0.01 level among the four groups (EFA high resilience; EFA low resilience; TEC high resilience and TFC low resilience) on the post test. In overall writing, $F(3,55) = 158.902$, $P < 0.01$; in content, $F(3, 55) = 21.948$, $p = 0.00$; in organization, $F(3,55) = 103.563$, $p < 0.01$; in language, $F(3,55) = 88.769$, $p < 0.01$, and in mechanics, $F(3.55) = 109.489$, $p = 0.00$.

To compare specific group differences, Scheffe post hoc for pairwise group comparisons, was used for each skill as shown below.

Table 10

Scheffé Multiple Comparison Test for Examining-low Vs. high resilience students' differences in both treatments in overall writing

Dependent Variable	(I) groups	(J) groups	Mean Difference	Sig.
<i>Post- Overall</i>	EFA_Low	EFA_high	-15.519	.000*
		TFC_low	-3.400	.000*
		TFC_high	-7.867	.000*
	EFA_high	TFC_low	12.119	.000*
		TFC_high	7.652	.000*
		TFC_low	-4.467	.000*

*. The mean difference is significant at the 0.05 level.

Table (10) shows that there was a statistically significant difference at the level of 0.05 between the mean scores of low and high resilience students in the EFA treatment in favor of high resilience students, where the mean differences between them were (15.519). This shows that high resilience outperformed low resilience students in the EFA treatment. A statistically significant difference was also found between the scores of both low resilience students in both EFA and TFC treatments in favor of the second treatment, where the mean difference was (3.400). Likewise, a statistically significant difference was found between the mean scores of low resilience students in the EFA treatment and high resilience students in the TFC treatment in favor of second group, as the mean difference was (7.86). This shows that high resilience students performed better in the TFC treatment than low resilience students in the EFA treatment.

Similarly, statistically significant differences were found between the mean scores of high resilience students in the EFA treatment on the one hand, and both low resilience and high resilience students in the TFC treatment on the other hand, in favor of the high resilience students in the EFA treatment, as the mean differences were (12.119, 7.652) for both comparisons respectively. In the same way a statistically significant difference was found between the mean scores of low and high resilience students in the TFC treatment in favor of low resilience students, which means low resilience students' performance in the TFC treatment surpassed that of high resilience students.

Table 11

Scheffé Multiple Comparison Test for Examining-low Vs high resilience students' differences in both treatments in content

	(I) groups	(J) groups	Mean Difference	Sig.
Dependent Variable				
<i>Post-Content</i>	EFA_low	EFA_high	-3.305	.000
		TFC_low	-2.800	.001
		TFC_high	-1.533	.007
EFA_high		TFC_low	2.505	.000
		TFC_high	1.771	.002
TFC_low resilience		TFC_high	-.733	.386

Regarding content, table (11) shows that there was a statistically significant difference at 0.05 level between the mean scores of low and high resilience students in the EFA treatment in favor of the high resilience students, where the mean difference between them was (3.305). This shows that the high resilience group performed better than the low resilience group in the EFA treatment. Yet, it seems that low resilience students' performance in the TFC treatment surpassed their counterparts in EFA treatment, the mean difference between both groups was (2.800). Also, there

was a statistically significant difference at the 0.05 level between low resilience students in both EFA and TFC treatments, in favor TFC treatment; the mean difference was (2.800). This shows that low resilience students' performance in the TFC treatment exceeded that of their counterparts in EFA treatment. Similarly, statistically significant differences were found between the mean scores of high resilience students in the EFA treatment and both low and high resilience students in TFC treatment in favor of high resilience students in EFA treatment, as the mean differences were (2.505, 1.77) for both comparisons respectively. This means that high resilience students performed better than low and high resilience students in the TEC treatment. Yet, there was no a statistically significant differences between low and high resilience students in the TFC treatment.

Table 12

Scheffé Test for examining low Vs high resilience students' differences in both treatments in organization

Dependent Variable	(I) groups	(J) groups	Mean Difference	Sig.
<i>Post-Organization</i>	EFA_Low	EFA_high	-4.152-	.000
		TFC_low	-.933-	.005
		TFC_high	-2.400-	.000
	EFA_high	TFC_low	3.219	.000
		TFC_high	1.752	.000
		TFC_low	-1.467-	.000

Regarding organization, table (12) indicates that there was a statistically significant difference at the level of 0.05 between the mean scores of low and high resilience students in the EFA treatment, in favor of high resilience students, where the mean difference between them was (4.152). This means that high resilience students performed better than low resilience students in the EFA treatment. Similarly, there was a statistically significant difference between the mean scores of low resilience students in both treatments in favor of the TFC treatment, as the mean difference between both groups was (0.933). In the same way, a statistically significant difference was found between the low resilience group in EFA treatment and high resilience group in TFC in favor of the high resilience students in the TFC treatment, where the mean difference between them was (2.400), which means that high resilience students performed better in the TFC treatment than low resilience students in the EFA treatment.

Similarly, statistically significant differences were found between the mean scores of high resilience students in the EFA treatment on the one hand, and both low and high resilience students in TFC treatment on the other hand, in favor of high resilience students in the EFA treatment, as the

mean differences were (3.219, 1.752) for low and high resilience students respectively, which shows that high resilience students’s performance in EFA treatment exceeded the performance of both low and high resilience students in TFC treatment. In the same way, a statistically significant difference was found between the means scores of low and high resilience students in TFC treatment in favor of high resilience students, which shows that high resilience students did better than low resilience students in TFC treatment.

Table 13

Scheffé Multiple Comparison Test examining-low Vs high resilience students in both treatments in language

Dependent Variable	(I) groups	(J) groups	Mean Difference	Sig.
<i>Post-language</i>	EFA _Low	EFA_high	-3.995	.000
		TFC_low	-1.067	.001
		TFC_high	-1.933	.000
	EFA _high	TFC low	2.929	.000
		TFC_high	2.062	.000
		TFC_low	TFC_high	-.867

Table (13) shows that

regarding language, there was a statistically significant difference at 0.05 level between the mean scores of low and high resilience students in the EFA treatment, in favor of high resilience students, where the mean difference was (3.99). Similarly, there was a statistically significant difference between the mean scores of low resilience students in both treatments in favor of the TFC treatment; the mean difference was (1.067), which means that low resilience students performed better in the TFC treatment. In the same way, a statistically significant difference was found between the mean scores of low resilience students in EFA treatment and high resilience students in TFC treatment in favor of high resilience students in the TFC treatment, the mean difference was (1.933); this means that high resilience students performed better in the EFA treatment than low resilience students in the TFC treatment.

Similarly, significant differences were found between the mean scores of high resilience students in the EFA treatment on the one hand, and both low and high resilience students in TFC treatment on the other hand in favor of high resilience students in the EFA treatment; the mean differences were (2.929, 2.062) for both comparisons respectively. This shows that high resilience students’ performance in language skills in the first group exceeded the performance of both high and low resilience students in the TFC treatment. Nonetheless, there was no statistically significant difference between the mean scores of low and high resilience students in TFC

treatment, which shows that both groups performed similarly in both treatments in terms of language skills.

Table 14

Scheffé Multiple Comparison Test for Examining-low Vs. high resilience students' differences in both treatments in Mechanics

Dependent Variable	(I) groups	(J) groups	Mean Difference	Sig.
<i>Post-Mechanics</i>	EFA_Low	EFA_high	-4.067	.000
		TFC_low	-.600	.111
		TFC_high	-2.000	.000
	EFA_high	TFC_low	3.467	.000
		TFC_high	2.067	.000
	TFC_low	TFC_high	-1.400	.000

Regarding mechanics, table (14) shows that there was a statistically significant difference at 0.05 level between the mean scores of low and high resilience students in EFA treatment in favor of high students, where the mean difference between them was (4.067). This gives an indication that the high resilience students performed better in the EFA treatment. Nevertheless, there was no a statistically significant differences at the level of 0.05 between the mean scores of low resilience students in both EFA and TFC treatments, which means that low resilience students performed in the same way in both treatments. However, statistically significant differences were found between mean scores of low resilience students in the EFA treatment and high resilience in the TFC treatment in favor of high resilience students in the TFC treatment, as the mean difference was (2.00), which means that high resilience students performed better in the TFC treatment compared to low resilience students in EFA treatment.

Similarly, statistically significant differences were found between high resilience students in the EFA treatment and both low and high resilience students in TFC treatment in favor of the high resilience students in EFA, as the mean differences were (3.467, 2.067) for low and high resilience students respectively. This shows that high resilience students' performance in mechanics in EFA treatment exceeded their counterparts in the TFC treatment and exceeded low resilience in the TFC treatment as well. In the same way, a significant difference was found between low and high resilience students in the TFC treatment in favor of high resilience students, which shows that high resilience students did better than low resilience students in TFC treatment.

V. Discussion

The study aimed to examine the impact of two proposed models of flipped classroom on the development of students' writing skills. In specific, the primary objective was to examine variations in the responses of students, categorized according to their resilience level, to two distinct FC instructional models. Generally speaking, the findings of the study demonstrated that the utilization of the FC yielded favourable outcomes in terms of students' written performance. However, the study proved that the strategy requires an efficient design that caters for students' different learning styles and characteristics.

Obviously, in both FC models, instructional materials were disseminated via an online platform; this afforded the teacher with opportunities to interact with students on an individual or small group basis. In this setting, the cognitive feedback and praise, provided by him might have contributed to positive learning outcomes. Students also acquired some time management, and self-regulated learning skills.

According to the researchers' observations of both experimental classrooms, the students demonstrated an ability to comprehend the writing genres, the principles underlying their structure and the various ways in which they might be presented, all without the need for a lot of direct teacher guidance. They also exhibited increased engagement, and a greater adherence to the requirement of preparing questions related to the learning material before class sessions. It seemed that because students were exposed to the content prior to class, their stress level decreased and they felt more engaged in in-class activities. These results corroborate the work of Elfatah and Ahmed, (2016); Hung, (2017); Chen et al., (2018), Wang et al., (2018), Jdaitawi, (2019) and Gustian et al., (2023) ; who stressed the positive effect of pre-class activities in ameliorating students' stress and emotional inhibition.

Moreover, from an instructional viewpoint, Google classroom- as the LMS used in the current study- might have helped the teacher in both treatments track students' activities outside of school, including the parts of the video-lesson that they found challenging. This might have provided him with insights that facilitated the planning of in-class lessons to target students' weaknesses. Other scholars also have emphasized the importance of monitoring students' activities online prior to face-to-face classes (Chatta and Haque, 2020; Putra, 2021; Soltanpour, & Valizadeh, 2018).

Furthermore, peer learning, both online and offline, was an important strategy used in both FC strategies to improve students' learning experiences, engagement, and cooperative learning. The researchers

observed that students guided their classmates online and were able to collaboratively generate, edit, and revise their written texts during face-to-face sessions; this resulted in an improvement of their writing skills. This was also found by previous studies, which indicated that cooperation among students was associated with enhanced performance, improved social competence, and higher self-esteem (Aji, 2017; Cevikbaş & Argün, 2017; Munir et al., 2018; Strayer, 2012).

The findings of this study, hence, suggest that implementing the FC strategy can result in increased levels of classroom engagement and can improve writing skills development. This was supported by previous studies (Danker, 2015; Wang and Qi, 2018; Zhang et al., 2022; Ziegenfuss, & Furse, 2021). Yet it contradicts the results of other research studies, like Strayer's (2012), which showed that students tend to express lower levels of satisfaction with the FC compared to traditional classroom settings. In addition, it deviates from the conclusions of other studies, such as Cheng et al (2019) which showed a negligible impact of FC instruction.

Comparing both groups:

Although the improvement was noticed for all students in both groups; low resilience students' performance did not improve much in the EFA treatment. This could be due to the increased stress and uncertainty in the learning environment, which may have made it difficult for them to adapt to. Low resilience students may have preferred a controlled setting with less exploration, as they usually struggle with stress, low tolerance of ambiguity, lack of self-dependency, and risk-taking. This aligns with previous research suggesting that procedural learning and direct instruction can improve the achievement of low resilience students (Kim, et al., 2017; Kim et al., 2019).

Nonetheless, notably, the study found that despite the improvement low resilience students achieved in the second TFC treatment, they still could not achieve as much as high resilience students in both treatments. This is because even the TFC treatment demanded a great deal of perseverance and resilience from the students, who were confronted with the unpredictability of navigating the instructional material without excessive teacher guidance. Therefore, addressing these characteristics and providing tailored support may be essential to enhance the performance of low-resilience students in FC settings. This adheres to the results of the studies of Hao (2017) and Sun et al. (2018) which proved that students' self-regulation -a variable related to resilience- is paramount in enabling them to cope with the FC treatment. It also supports results that Andewi

and Hastomo (2022) reached regarding the impact of motivation in shaping students' response to FC.

Notably, content, organization and language skills were impacted more by the both FC treatments in comparison to mechanics, where no observable distinctions among both treatments were discerned. This observed result can be ascribed to the fact that students in both groups employed digital built-in tools to edit essays, and so skills related to mechanics were not affected much by the intervention.

Conversely, it was observed that students characterized by higher levels of resilience consistently outperformed their counterparts with lower resilience levels across both treatments, particularly in terms of content, language, and organization skills. The enhanced performance exhibited by those learners can be attributed to their inherent capacity to embrace and endure linguistic challenges while demonstrating a tendency to take risks. This propensity is notably underpinned by their positive disposition, adaptability, and unwavering commitment to persevering through obstacles, which led to positive outcomes in both instructional settings. Evidently, these students exhibited an ability to set well-defined goals, and effectively regulate their learning, particularly beyond the classroom milieu.

Evidently, high resilience students exhibited an ability to set well-defined goals, motivate themselves, and effectively regulate their learning, particularly throughout the pre-writing phase, beyond the classroom milieu. Furthermore, in both face-to-face and online instructional contexts, their willingness to embrace feedback and utilize peer interactions was manifest. These attributes might have contributed to their good performance in both treatments.

Notwithstanding the favourable outcomes of students exhibiting high resilience in both FC treatments, it seemed that they favoured the EFA treatment, which bolstered their cognitive motivation and tendency to seek knowledge independently. This was supported by previous research, such as Ortega and Saavedra, (2014), Mahesar and Jokhio (2021) and Saunders, (2020). However, it seems that the TFC treatment did not expose them to the same challenge due to its highly procedural instruction, which may have sounded boring and unchallenging to them.

With the same token, low resilience students might have viewed the uncertainty provided by the initial exploration stage in the EFA treatment as overwhelming, and disorganized, and so they tended to resort to their latent tendency of cognitive effort avoidance and over-reliance on the teacher or less risky contexts. That is why they could perform somehow better in the more structured TFC strategy which could make up for their

tendency to avoid risk taking. This corroborates with other studies about low resilience students, such as Li et al. (2020) and Zhang (2022).

VI. Conclusions

The current results underscore the importance of effectively designing and implementing activities in order to maximize the advantages of FC in EFL writing instruction. The primary objective of this research was to investigate the effective implementation of differentiated writing instruction in a TEFL context through the utilization of FC. It was posited that the adoption of various FC models can effectively support the fulfilment of this objective by purposefully targeting students of various resilience levels, using strategies that cater for their learning styles and preferences.

In essence, the study's findings suggest that the FC strategy can effectively improve EFL learners' writing skills, irrespective of their level of resilience. This is supported by the fact that EFL learners demonstrated enhanced writing performance and higher levels of engagement in both FC interventions when compared to the control group. Specifically, the study provides empirical evidence that the utilization of online platforms to deliver instructional materials- in FC contexts- can afford teachers a greater opportunity to interact with students individually or in small groups during the writing process. Furthermore, by monitoring students' writing performance beyond the classroom, teachers may gain valuable insights that aids in planning and organizing remedial instructional activities conducted within the classroom. This can empower them to customize instruction to suit students' needs and provide personalized feedback to each one.

Therefore, it can be concluded that the incorporation of technology into writing instruction constitutes a paradigm shift in the learning process, by transforming it from a passive to a dynamic, interactive, and learner-centered experience. In the context of this specific framework, students are afforded the opportunity to engage in active learning. By affording them the opportunity to engage with the educational materials autonomously prior to class, this methodology helps to accommodate their unique learning needs, preferences, and distinct pace of learning. Furthermore, throughout the phases of process writing, the incorporation of collaborative problem-solving, peer learning, and feedback into writing instruction, conducted in-person or virtually, can encourage students' engagement in profound cognitive processes; this may ultimately lead to improved writing skills, encompassing aspects such as organization, content, and grammar.

Nevertheless, this study provides some evidence that it is crucial to take into account learners' characteristics when deciding which FC model to adopt. By and large, the study proposes the potential for tailored instruction by applying two distinct FC writing instructional models to specifically address students with varied levels of resilience. In particular, it suggests that the decision to incorporate teacher-led instruction versus autonomous learning in FC writing contexts must be guided by students' learning styles and personal characteristics.

Generally speaking, it seems that low resilience students' difficulty adapting to new learning environments, tendency to give up quickly and avoidance of risk-taking can limit their ability to fully engage with the FC approach. Because those students are more apt to receive direct instruction instead of being left to their own devices, they might require more guidance and feedback during writing instruction. On this basis, it would appear that they would not benefit from an FC model that incorporates an inquiry-based writing phase. It can hence be argued that students who possess low resilience may be less responsive to the EFA treatment compared to their high resilience counterparts.

On the other hand, as far as writing instruction is concerned, although high resilience students can perform well in both FC treatments, it seems that they perceive the EFA treatment as more conducive. These students often opt for self-directed learning and are willing to take calculated risks prior to receiving instruction. Therefore, given that the EFA strategy offers them a relatively unstructured, exploratory setting, there is some evidence that it may enhance their cognitive motivation and tendency to independently pursue knowledge, thereby improving their writing skills.

On the whole, results of the present study support the contention that flipped classroom various strategies are not for everyone in terms of promoting writing skills; the effect might differ across various groups of students categorized according to their level of resilience. In this way, the study emphasizes the significance of differentiated writing instruction within FC settings as a means to accommodate various students' needs, characteristics and learning styles (Anwar, 2017; Chuang et al., 2018; Saunders, 2020; Wang et al., 2018).

VII. Implications and recommendations

With previous considerations in mind, teachers and curriculum designers should consider including a range of flexible and customised FC models, rather than adhering to a one-size-fits-all strategy, to effectively cater to the different needs of students, including their level of resilience. It is our contention, however, that certain teacher-led instruction may be deemed important, based on the learning needs of

students and their level of preparedness for a flipped learning methodology. Furthermore, interactive and task-oriented activities should be integrated into pre-class sessions to facilitate the evaluation of students' comprehension via verbal communication as well as alternative methods, such as polling and breakout groups.

Certainly, this can place extra demands on EFL teachers as crucial collaborators in the process of designing, implementing, and evaluating such instructional models. Teachers should adjust the degree of guidance, autonomy, and risk-taking in accordance with the students' level of resilience and perseverance, with the ultimate goal of optimising learning outcomes for every student. For this reason, in order to efficiently plan and integrate both virtual and physical FC activities, teachers must possess a diverse range of competencies related to blended learning.

Furthermore, the findings indicate that the FC strategy necessitates students to assume control over their own learning, a responsibility that may prove challenging for students with low level of resilience. Consequently, those students may require a transitional phase during which they adjust to less structured, independent learning environments. They must also develop the ability to reflect on their own learning, recognise obstacles during the learning process, and contemplate how these experiences might shape their future learning.

Furthermore, the study results unveil some challenges pertaining to technical issues that students might confront when attempting to access online videos and participate in collaborative and individualised writing tasks. Therefore, it is recommended that future studies integrate learner training pertaining to resource access, LMS utilisation and imbedded features. One solution is to adopt a mobile-friendly learning management system (LMS). Another concern relates to the lack of engagement of students in virtual discussions preceding or following face-to-face sessions. Thus, future research should look into more effective strategies for fostering student engagement in virtual and in-class discussions that occur both before and during the writing process in FC contexts.

Regarding the study limitations, it is important to acknowledge that the current findings lack generalizability due to the restricted sample size and its exclusive focus on secondary school students. Future research may consider including a diverse group of participants, and a broader range of variables. Further research is also warranted to address a wider range of writing genres and adopt a more extensive temporal scope. Notably also, the results in this study are primarily quantitative, and so future studies

should utilize more qualitative methods to explore the effect of the FC on writing skills.

To advance future academic research, the potential effect of the two proposed FC models on other language skills, such as reading, speaking and listening, and among students of diverse proficiency levels should be explored. Additionally, it would be of interest to assess the effects of these strategies from other perspectives, including the nature of collaborative dynamics between teachers and students, students' learning styles, their self-efficacy, and levels of anxiety related to the learning process. The utilization of diverse learning strategies to enhance the engagement of students with low resilience in FC settings can also be explored. Further research is needed to be conducted to examine the impact of other moderator variables -other than resilience- such as learners' self-efficacy, need for cognition and locus of control, on the writing performance of EFL students.

References

- Abd El-Aziz, A. (Feb. 2023). The effect of a protocol based on reflective writing on developing the EFL writing performance and critical thinking of the secondary school students. *مجلة القراءة والمعرفة. (Reading and Knowledge Journal) Ain Shams University*, 256, 1-31. doi: 10.21608/MRK.2023.289231
- Abedi, P. & Namaziandost, E., Akbari, S. (2019). The impact of flipped classroom instruction on Iranian upper-intermediate EFL learners' writing skill. *English Literature and Language Review*, 5 (9), 164-172. <https://doi.org/10.32861/ellr.59.164.172>
- Ahmed, M. (2016). The effect of flipping classroom on writing skill in English as a foreign language and students' attitude towards flipping. *China Foreign Language*, 14, 98 – 114. doi:10.17265/1539-8080/2016.02.003
- Aji, K.M. (2017). Promoting flipped classroom model in teaching writing of EFL learners. The 4th International Conference on Language, Society and Culture in Asian Contexts, *KnE Social Sciences*, 279–291. doi: 10.18502/kss.v1i3.748
- Alamri, M. M. (2019). Students' academic achievement performance and satisfaction in a flipped Classroom in Saudi Arabia. *International Journal of Technology Enhanced Learning*, 11, 103-119. <https://doi.org/10.1504/IJTEL.2019.096786>
- Andewi, W. & Hastomo, T. (2022). Effect of using flipped classroom for teaching writing based on students' motivation: A quasi-experimental research. *Premise: Journal of English Education and Applied Linguistics*, 11(3), 615–631. <https://doi.org/10.24127/pj.v11i3.5511>
- Anjomshoaa, H., Hashemi, G., Alsadaji, A., Mohammed, Z., Masoudi, S. (2022). The effect of flipped classroom on student learning outcomes: An overview. *Med Edu Bull*; 3(2): 439-48. doi: 10.22034/MEB.2022.332357.1052
- Anwar, C. (2017). Flipped classroom in teaching vocabulary to EFL young learners. *The 2nd TEYLIN International Conference Proceedings*, 109-115. <http://eprints.umk.ac.id/7007/14/The-2nd-TEYLIN-ilovepdf-compressed-118-124.pdf>
- Anwar, C. & Pratama, A. (2016). Flipped classroom in teaching speaking to young learners. *Proceeding of the 63rd TEFLIN International Conference: Creativity and Innovation in Language Materials Development and Language Teaching Methodology*, 1, 285-289.
- Barakat, F. (2021). The Effect of using flipped classroom on developing essay writing skills and attitude towards writing in English for university students. *مجلة كلية التربية (Faculty of Education Journal)*, Beni Suef University, 18(103), 699-756. doi: 10.21608/jfe.2021.161977

- Baranovic, K. (2013). Flipping the first-year composition classroom: Slouching toward the pedagogically hip. Master's thesis, Southeast Missouri State University. Retrieved February 10, 2024 from <https://www.learntechlib.org/p/126266/>.
- Beatty, B. J., Merchant, Z., & Albert, M. (2019). Analysis of student use of video in a flipped classroom. *Tech Trends*, 63, 376-385. <https://doi.org/10.1007/s11528-017-0169-1>
- Bennett, B., Spencer, D., Bergmann, J., Cockrum, T., Musallam, R., Sams, A., Fisch, K., and Overmyer, J. (2011). *The flipped class manifest. The daily rift*. Retrieved January 15, 2015, from <http://www.thedailyriff.com/articles/the-flipped-class-manifest-823.php>.
- Bhowmik, S., (2021). Writing instruction in an EFL context: Learning to write or writing to learn language? *BELTA Journal*, 5 (1). 30-42, doi:10.36832/beltaj.2021.0501.03
- Bouchefra, M. (2017). The use of the flipped classroom in EFL writing classroom. *TRANS Internet- journal for cultural studies*, 22. Retrieved 26 September from: <http://www.inst.at/trans/22/the-use-of-the-flipped-classroom-in-efl-writing-classroom/>
- Buitrago, C., & Diaz, J. (2018). Flipping your writing lessons: Optimizing time in your EFL writing classroom. In J. Mehring & A. Leis (Eds.), *Innovations in flipping the language classroom* (pp.69-91). Springer. https://doi.org/10.1007/978-981-10-6968-0_6
- Çevikbaş, M., & Argün, Z. (2017). An innovative learning model in digital age: Flipped classroom. *Journal of Education and Training Studies*, 5, 189 – 200. <https://doi.org/10.11114/jets.v5i11.2322>
- Chai, A., Hanim, A., & Hamid, A. (2023). The impact of flipped learning on students' narrative writing. *International Journal of Advanced Research in Education and Society*, 4 (4), 159-175. doi:10.55057/ijares.2022.4.4.15
- Chatta, B. & Haque, M. (2020). Improving paragraph writing skills of Saudi EFL university students using flipped classroom instruction. *Arab World English Journal (AWEJ) Special Issue on CALL*, 6, 228- 247. <https://dx.doi.org/10.24093/awej/call6.15>
- Chen, K., Monrouxe, L; Lu YH; Jenq, C., Chang, YJ, Chang YC, & Chai PY. (2018). Academic outcomes of flipped classroom learning: A meta-analysis. *Med Educ.* 25; 52(9):910–24. doi: 10.1111/medu.13616.
- Chen, X., & Padilla, A. M. (2022). Emotions and creativity as predictors of resilience among L3 learners in the Chinese educational context. *Curr. Psychol.* 41, 406–416. doi: 10.1007/s12144-019-00581-7
- Cheng, L., Ritzhaupt, A. D., & Antonenko, P. (2019). Effects of the Flipped Classroom Instructional Strategy on Students' Learning Outcomes: A Meta-Analysis. *Educational Technology Research and Development*, 67, 793-824. <https://doi.org/10.1007/s11423-018-9633-7>

- Chuang, H., Weng, C., & Chen, C. (2018). Which students benefit most from a flipped classroom approach to language learning. *British Journal of Educational Technology*, 49, 56-68. <https://doi.org/10.1111/bjet.12530>.
- Cockrum, T. (2014). *Flipping your English*. Routledge, New York.
- Danker, B. (2015). Using flipped classroom approach to explore deep learning in large classroom. *The IAFOR Journal of Education*, 3 (1), 171-186.
- Dewaele J-M, Chen X, Padilla AM and Lake J (2019). The Flowering of Positive Psychology in Foreign Language Teaching and Acquisition Research. *Front. Psychol.* 10:2128. doi: 10.3389/fpsyg.2019.02128
- Din, W. A., Swanto, S., Abd Latip, N. A. & Ismail, I. Z. (2021). The process approach to the teaching of writing: Focus on process rather than product. *Journal of Information System and Technology Management*, 6 (23), 63-71. doi: 10.35631/JISTM.623005
- Dooly, M. & Sadler, R. (2020). If you don't improve, what's the point? Investigating the impact of a "flipped" online exchange in teacher education. *ReCALL*, 32(1), 4-24. <https://doi.org/10.1017/S0958344019000107>
- ElQersh, A. (March 2021). A proposed strategy based on service learning to develop English functional writing skills for secondary stage learners. *International Journal of Curriculum & Technological Education*, 2, 194-230. doi: 10.21608/IJCTE.2021.71062.1013
- Elmaadaway, M. (2017). The effects of a flipped classroom approach on class engagement and skill performance in a blackboard course. *British Journal of Educational Technology*, 49 (3). 479-491. doi:10.1111/bjet.12553
- Embi, M. A. & Panah, E. (2014). Overview of flipped learning. Blended and flipped Learning: case studies in Malaysian HEIs. Selangor: *Centre for Teaching & Learning Technologies*, Universiti Kebangsaan Malaysia.
- Erbil, D. (2020) A review of flipped classroom and cooperative learning method within the context of Vygotsky theory. *Frontiers in Psychology*, 11:1157. doi: 10.3389/fpsyg.2020.01157
- Fathi J, Naghshbandi Z, Mohamadi P. (2021). The effect of a flipped writing classroom on writing performance and self-regulation of Iranian EFL learners. *LRR* 2021; 12 (4) :627-659 <https://doi.org/10.29252/LRR.12.4.20>
- Florence, E. A. (2020). Investigating the flipped classroom model in a high school writing course: Action research to impact student writing skills and engagement. (Doctoral dissertation). Retrieved from <https://scholarcommons.sc.edu/etd/6166>
- Ghafar, Z. (2023). Teaching writing to students of English as a foreign language: The challenges faced by teachers. *Journal of Digital Learning and Distance Education*, 2(2), 483-490. <https://doi.org/10.56778/jdlde.v2i1.123>.

- Gerstein, J. (2011). The flipped classroom model: A full picture. Retrieved from: <http://usergeneratededucation.wordpress.com/2011/06/13/the-flippedclassroom-model-a-full-picture>.
- Ghufron, M. & Nurdianingsih, F. (2021). Flipped classroom method with computer assisted language learning (CALL) in EFL writing class. *International Journal of Learning, Teaching and Educational Research*, 20 (1), 120-141, <https://doi.org/10.26803/ijlter.20.1.7>
- Guo, N. & Li, R. (2022). Measuring Chinese English-as-a-foreign-language learners' resilience: Development and validation of the foreign language learning resilience scale. *Front. sychol.* 13:1046340. doi: 10.3389/fpsyg.2022.1046340
- Gürlüyer, M. & Elkılıç, G. (2020). Examining EFL students' achievements and perceptions in terms of writing skills in flipped classroom environment. *Kastamonu Eğitim Dergisi* , 28 (3) , 1471-1486 . doi: 10.24106/kefdergi.4190
- Gurung, R. (2023). Teaching writing skills in EFL classes, especially in lower classes. *International Journal of English and Studies (IJOES)*,5 (6), 65-95. doi: 10.47311/IJOES.2023.6.95.
- Gustian, K., Aridah, A., & Rusmawaty, D. (2023). The benefits of flipped classroom model for EFL learners. *Journal on Education*, 5(4), 13918-13935. <https://doi.org/10.31004/joe.v5i4.2411>
- Hao, Y. W. (2016). Exploring undergraduates' perspectives and flipped learning readiness in their flipped classrooms. *Computers in Human Behavior*, 59, 82–92. <https://doi.org/10.1016/j.chb.2016.01.032>
- Hidaya, K. (2018). Teaching writing to EFL Learners: An investigation of challenges confronted by Indonesian teachers. *LANGKAWI, Journal for the association for Arabic and English*, 4 (1), 21- 31. <http://dx.doi.org/10.31332/lkw.v4i1.772>
- Hidayat, L. & Praseno, M. (2021). Improving students' writing participation and achievement in an Edpuzzle-Assisted flipped classroom. *Education of English as Foreign Language Journal (EDUCAFL)*, 4 (1) 1-8. <https://doi.org/10.21776/ub.educafl.2021.004.01.01>
- Hung, H. (2017). The integration of a student response system in flipped classrooms. *Language Learning & Technology*, 21(1), 16-27. <https://dx.doi.org/10125/44593>
- Hyland, K. (2003). *Second language writing*. Cambridge University Press.
- Ibrahim, M. (April 2020). Using E-portfolio to develop EFL fluency skills among secondary school students. *Journal of Faculty of Education, Benha University*, 122, (2), 56-84. doi: 10.21608/JFEB.2020.142991
- Indayani, W., Arifani, Y., & Ma'rifah, U. (2022). The use of flipped classroom to improve students writing skill using WhatsApp group. *Journal of English Teaching, Literature, And Applied Linguistics*, 6(1), 19-24. doi:10.30587/jetlal.v6i1.3827

- Jdaitawi, M. (2019). The Effect of flipped classroom strategy on students' learning outcomes. *International Journal of Instruction*, 12, 665-680. <https://doi.org/10.29333/iji.2019.12340a>
- Kawinkoonlasate, P. (2023). The use of flipped classroom technology approach with E-writing program to develop writing and promote active learning environment of Thai EFL learners. *English Language Teaching*, 16 (12), 39-57. doi: 10.5539/elt.v16n12p39
- Khan, R. N., & Watson, R. (2018). The flipped classroom with tutor support: An experience in a level one statistics unit. *Journal of University Teaching & Learning Practice*, 15(3). <https://doi.org/10.53761/1.15.3.3>
- Kim, T. Y., Kim, Y. M., & Kim, J. Y. (2019). Role of resilience in (De)motivation and second language Proficiency: Cases of Korean elementary school Students. *Journal of Psycholinguistic Research*, 2, 371-389. doi: 10.1007/s10936-018-9609-0
- Lee, S.; Verezub, E. & Adi Badiozaman, I. (2019). Practices and challenges in a flipped EFL writing classroom. In Y. W. Chew, K. M. Chan, and A. Alphonso (Eds.), *Personalized learning. diverse goals. One Heart*. ASCILITE (pp. 186-195). Singapore.
- Li, C., & Dewaele, J. (2021). How do classroom environment and general grit predict foreign language classroom anxiety of Chinese EFL students? *The Journal for the Psychology of Language Learning*, 3, (2), 1-23. <https://doi.org/10.52598/jpll/3/2/x>
- Li, C.; Dou, R. & Zhang, S. (2020). A correlational study on psychological resilience and L2 demotivation among Chinese EFL learners. *Revista Argentina de Clínica Psicológica*, XXIX (3), 670-681. doi: 10.24205/03276716.2020.770
- Liebenberg, L. (2020). Reconsidering interactive resilience processes in mental health: Implications for child and youth services. *Journal of Community Psychology*, 48 (5), 1365-1380. <https://doi.org/10.1002/jcop.22331>
- Lin, Y. (2021). An analysis of the flipped classroom based on the Bloom's taxonomy of the educational objectives. *Advances in Social Science, Education and Humanities Research*, 615, Proceedings of the 2021 4th International Conference on Humanities Education and Social Sciences (ICHESS 2021), 679-685. 10.2991/assehr.k.211220.116
- Lin, C., Hwang, G., Fu, Q., & Chen, J. (2018). A flipped contextual game-based learning approach to enhancing EFL students' English business writing performance and reflective behaviors. *Journal of Educational Technology & Society*, 21(3), 117-131. <http://www.jstor.org/stable/26458512>
- Lo, C. K., Lie, C. W., & Hew, K. F. (2018). Applying "First principles of instruction" as a design theory of the flipped classroom: Findings from a collective study of four secondary school subjects. *Computers & Education*, 118, 150-165. <https://doi.org/10.1016/j.compedu.2017.12.003>

- Lou, N., & Noels, K. (2020). Language mindsets, meaning-making, and motivation. In M. Lamb, K. Csizér, A. Henry & S. Ryan (Eds.). *The Palgrave Handbook of Motivation for Language Learning* (pp.537–559). Palgrave Macmillan.
- Luthar, S. (2013). Resilience at an early age and its impact on child psychosocial development. *Encyclopaedia on Early Childhood Development*. Retrieved from: <https://www.child-encyclopedia.com/pdf/expert/resilience/according-experts/resilience-early-age-and-its-impact-child-psychosocial-development>.
- Mahesar, I. & Jokhio, A. (2021). Investigating the impact of resilience on learners' motivated behavior of L2 and proficiency in English of university students at Karachi. *Pakistan Ethical Lingua*, 8(2), 333-345. doi. 10.30605/25409190.
- Mahmood, A. M., & Mohammadzadeh, B. (2022). The effectiveness of ICT-supported flipped learning in an EFL context: A case of northern Iraq. *Frontiers in psychology*, 13, 943956. <https://doi.org/10.3389/fpsyg.2022.943956>
- Mireille, F. (2014). *The Impact of using flipped classroom instruction on the writing performance of twelfth grade female Emirati students in the Applied Technology High School (ATHS)*. Unpublished M.A. dissertation, Faculty of Education, The British University, Emirates. <http://bspace.buid.ac.ae/handle/1234/676>
- Maltby, J., Day L; Flowe, H., Vostanis P., Chivers, S. (2019). Psychological Trait resilience within ecological systems Theory: The resilient systems scales. *J Pers Assess*, 101(1):44-53. doi: 10.1080/00223891.2017.1344985.
- Mohamed, H.; Saleh, E.; Ahmad, E., Al-Tonsi, H. (2022). The effect of virtual reality in developing Al-Azhar secondary stage students' EFL writing skills. *Journal of Positive School Psychology*, 6(9), 4349-4365.
- Mohammedeen, E., Shehata, G., Ali, A. (January 2023). The effect of a connectivism-based program on developing secondary school students communicative writing skills. *Sohag university International Journal of Educational Research*, 7(7), 95-121. doi: 10.21608/SUIJER.2023.283015
- Muluk, S., Zainuddin, Z., & Dahliana, S. (2022). Flipping an IELTS writing course: Investigating its impacts on students' performance and their attitudes. *Studies in English Language and Education*, 9(2), 591-612. doi: 10.24815/siele.v9i2.23314
- Munir, M. T., Baroutian, S., Young, B. R., and Carter, S. (2018). Flipped classroom with cooperative learning as a cornerstone. *Educ. Chem. Eng.* 23, 25–33. doi: 10.1016/j.ece.2018.05.001
- Musallam, R. (2013). A pedagogy - first approach to the flipped classroom. Retrieved from <http://www.cyclesoflearning.com/>.
- Nguyen, K., Stanley N., Stanley L., Wang Y. (2015). Resilience in language learners and the relationship to storytelling. *Cogent Educ.* 2, 1-16. <https://doi.org/10.1080/2331186X.2014.991160>

- Ortega, M.& and Saavedra, S. (2014). Resilience: physiological assembly and psychosocial factors. *Procedia - Social and Behavioral Sciences*, 132 (2014) 447 – 453. doi: 10.1016/j.sbspro.2014.04.335
- Putra, M. (2021). The use of flipped classroom in teaching writing: An experimental study. *Advances in Social Science, Education and Humanities Research*, 579, 289-294. doi:10.2991/assehr.k.210914.055
- Qader, R.O., & Arslan, F.Y. (2019). The effect of flipped classroom instruction in writing: A case study with Iraqi EFL Learners. *Teaching English with technology*, 19, 36-55.
- Rahimi, M., & Zhang, L. (2018). Effects of task complexity and planning conditions on L2 argumentative writing production. *Discourse Processes*, 55(8), 726-742.
- Roohani, A. & Rad, H. (2022). Effectiveness of hybrid-flipped classroom in improving EFL learners' argumentative writing skill. *TEFLIN Journal - A publication on the teaching and learning of English*, 33(2),349-366. doi:10.15639/teflinjournal.v33i2/349-366
- Rostamian, M., Fazilatfar, A. & Jabbari, A. (2018). The effect of planning time on cognitive processes, monitoring behavior, and quality of L2 writing. *Language Teaching Research*, 22(4), 418-438. <https://doi.org/10.1177/1362168817699239>
- Sakulprasertsri, K. (2017). Flipped learning approach: Engaging 21st century learners in English classrooms. *Learn Journal*, 10 (2), 132-143.
- Saleh, M. (January 2022). Enhancing secondary school students' EFL writing skills and engagement using successful intelligence. *Journal of Faculty of Education Benha University*, 125 (3), 40-86.
- Sarani, A., Jalil, M., Zarei, M., Navidinia, H. (2020). Effect of online flipped classroom on students' writing development at senior high school. *Journal of English Language Teaching and Learning*, 12(26):495-515. doi: 10.22034/elt.2021.44600.2348
- Saunders, D. (2020). Flipping the classroom to enhance opportunities for differentiated instruction. *Journal of the Foundation Year Network*, 3, 31-42. Retrieved from: <https://jfyfyn.co.uk/index.php/ukfyn/article/view/61>
- Sengul, F., Bostanci, HB. & Kurt, M. (2022). Online in-class vs. out-of-class flipped learning models in English as foreign language writing classes. *Front. Psychol.* 13:1009800. doi: 10.3389/fpsyg.2022.1009800
- Sergis, S., Sampson, D. G., & Pelliccione, L. (2018). Investigating the impact of flipped classroom on students' learning experiences: A self-determination theory approach. *Computers in Human Behavior*, 78, 368-378. <https://doi.org/10.1016/j.chb.2017.08.011>
- Soltanpour, F., & Valizadeh, M. (2018). A Flipped writing classroom: Effects on EFL learners' argumentative essays. *Advances in Language and Literary Studies (ALLS)*, 9(1), 5 – 13. doi: 10.7575/aiac.all.s.v.9n.1p.5

- Sun, Z., Xie, K., & Anderman, L. (2018). The role of self-regulated learning in student's success in flipped undergraduate math courses. *The Internet and Higher Education*, 36,41-53. <https://doi.org/10.1016/j.iheduc.2017.09.003>
- Sung, K. (2015). A case study on a flipped classroom in an EFL content course. *Multimedia-Assisted Language Learning*, 18(2), 159-187.
- Sze, C., & Hamid, A. (2022). The Impact of Flipped Learning on Students' narrative Writing. *International Journal of Advanced Research in Education and Society*, 4 (4) 159-175 <https://doi.org/10.55057/ijares.2022.4.4.15>
- Toland, J., & Carrigan, D. (2011). Educational psychology and resilience: New concept, new opportunities. *School Psychology International*,32(1), 95-106. <https://doi.org/10.1177/014303431039728>
- Tomas, L., Evans, N., Doyle, T., & Skamp, K. (2019). Are first year students ready for a flipped classroom? A case for a flipped learning continuum. *International Journal of Educational Technology in Higher Education*, 16, 1-22. <https://doi.org/10.1186/s41239-019-0135-4>
- Wang, J., An, N., & Wright, C. (2018). Enhancing Beginner Learners' Oral Proficiency in a Flipped Chinese Foreign Language Classroom. *Computer Assisted Language Learning*, 31, 490-521. <https://doi.org/10.1080/09588221.2017.1417872>
- Wang, Y., & Qi, G. Y. (2018). Mastery-based language learning outside class: Learning support in flipped classrooms. *Language Learning & Technology*, 22(2), 50-74. <https://doi.org/10125/44641>
- Yang, J., Yin, C. X., & Wang, W. (2018). Flipping the classroom in teaching Chinese as a foreign language. *Language Learning & Technology*, 22(1), 16-26. <https://dx.doi.org/10125/44575>
- Youssif, M. (April 2021). Using literature circles-based program for developing EFL creative short story writing skills among secondary stage students. *Journal of Faculty of Education, Benha University*, 32(126), 79-120. doi: 10.21608/jfeb.2021.233065
- Yousofi, N., & Bashiri, S. (2023). Exploring the impact of mobile flipped classrooms on Iranian EFL learners' writing proficiency. *Journal of Modern Research in English Language Studies*, 10 (2), 91-117. doi: 10.30479/jmrels.2022.17525.2093
- Zainuddin, Z., Haruna, H., Li, X., Zhang, Y., & Chu, S. (2019). A Systematic Review of Flipped Classroom Empirical Evidence from Different Fields: What Are the Gaps and Future Trends? *On the Horizon*, 27, 72-86. <https://doi.org/10.1108/OTH-09-2018-0027>
- Zhang, B. (2022). The Relationship between Chinese EFL learners' resilience and academic motivation. *Frontiers in psychology*, 13, 871554. <https://doi.org/10.3389/fpsyg.2022.871554>
- Zhang, Y, Dai, C, Pi, Z. & Yang, J. (2022). Pre-class teacher feedback in the flipped classroom: Cognitive or praise feedback is better than mitigating

Flipped classroom writing instruction: Investigating the moderating effect of EFL students' resilience

feedback. *Innovations in Education and Teaching International*, 60 (4), 1-11. doi: 10.1080/14703297.2022.2052932

Ziegenfuss, D. & Furse, C. (2021). Flipping the feedback: Formative assessment in a flipped freshman circuits class. *Practical Assessment, Research, and Evaluation*, 26 (8). <https://doi.org/10.7275/007t-dj06>