



Using Discovery Learning via Flipped Classroom for Developing EFL Writing Coherence Skills for Secondary School Students

Prepared By

Eman Samir Mohammed Ramadan

An English Language Teacher

Supervised by

Dr. Fatma Sadek Mohammed

Professor of EFL Curriculum, Instruction, & Educational Technology Faculty of Education ,Benha University

Dr. Abeer Ali Mahmoud Diab

Assistant professor of EFL Curriculum, Instruction, & Educational Technology Faculty of Education, Benha University

Using Discovery Learning via Flipped Classroom for Developing EFL Writing Coherence Skills for Secondary School Students

ABSTRACT

This study aimed at investigating the effectiveness of using Discovery Learning via Flipped Classroom Learning to develop EFL Writing Coherence skills. The study followed the quasi-experimental design. The participants were 30 first-year secondary school students. To identify the most important and required EFL Writing Coherence skills for the participants, a checklist was developed and validated by some EFL jury members. Pre and post-EFL Writing Coherence skills tests were developed. Students were pre-tested, to determine their entry level of EFL Writing Coherence. Then, they were trained in using discovery learning via flipped classroom learning on how to develop their skills. The post-test was administered to the participants to assess the progress in their level of EFL writing coherence skills. Findings of the research proved that there is a statistically significant difference at the (0.01) level between the mean scores of the experimental group that of the control group in post-administration test in favor of the experimental group.

Keywords: Discovery Learning, Flipped Classroom, Writing Coherence Skills

هدفت هذه الدراسة إلى التحقق من فاعلية استخدام التعلم بالإكتشاف عبر الفصل المعكوس لتنمية مهارات ترابط الكتابة لمتعلمي اللغة الإنجليزية كلغة أجنبية . ولقد تم استخدام التصميم الشبه تجريبي ذو المجموعتين (قياسي قبلي وبعدي) . وقد بلغت عينة الدراسة ٣٠ طالبا في الصف الأول الثانوي . وقد تم تصميم قائمة بمهارات ترابط الكتابة الازمة لهؤلاء الطلاب لمعرفة مدي توافر هذه المهارات لديهم ، وتم التحقق من صحتها وتحكيمها من قبل عدد من المحكمين الخبراء والمتخصصين في المناهج وطرق التدريس . وتم تصميم الاختبارات القبلية والبعدية . وتم تطبيق الاختبار القبلي للطلاب ، وتم تدريبهم على استخدام التعلم بالإكتشاف عبر الفصل المعكوس لتطوير هذه المهارات . وتم إجراء الاختبار البعدي لتقييم مدي التقدم في مستوى مهارات ترابط الكتابة للغة الإنجليزية كلغة أجنبية والمجموعة الضابطة الدراسة أن هناك فرقًا مهمًا إحصائيًا عند ١٠٠٠ بين المجموعة التجريبية والمجموعة الضابطة لصالح المجموعة التجريبية مما يدل علي فاعلية استخدام التعلم بالإكتشاف عبر الفصل المعكوس لتنمية مهارات ترابط الكتابة.

الكلمات مفتاحية :التعلم بالإكتشاف ، الفصل المعكوس ، مهارات ترابط الكتابة

Introduction

English language is a global language education, communication, career, culture, and technology. EFL learners do not have the ability to make sense of or understand their surroundings without it. English language has two types of skills productive skills and receptive skills. Listening and reading are known as receptive skills. While speaking and writing are considered as productive skills as they both require some form of language output.

Writing is considered as an important means of communication. It is also the most challenging skill for learners and teachers. Writing has many definitions. For instance, Celik (2019) and Rahmawati (2018) gave a definition of writing as the process of collecting ideas and organizing them into clear sentences and coherent paragraphs. In addition, Hanane (2015) defined it as an artistic way of conveying and sharing thoughts. Alfaki (2015) and Klein and Boscolo (2016) pointed out that writing can be defined as the language output which aims to share ideas, thoughts, opinions, attitudes, feelings, and convince others.

In addition, writing can be defined as one of the productive skills which is also known as the most difficult skill among other skills (Haerazi et al., 2020). This is because it has complex writing activities foe example: organize the ideas or information, avoiding ambiguity, making grammatical use, and choosing an appropriate vocabulary (Laili & Muflihah, 2020). Rao (2018) asserted that writing is seen as the most challenging of the four skills and requires more time for practising it. Nordin (2017) defined writing as a process that involves research, reviewing and reorganizing thoughts on a piece of paper.

Harmer (2012) stated that writing is a continuing activity that comes from the writer's mind about what they want to say and how to say it. The writer should read and correct their writing after ending writing the text. Therefore, there are several steps of writing: planning, drafting, editing, and final version. However, Wijaya (2014) ensured that good writing commonly attracts a reader to pay attention to the text. Therefore, the learners need to use correct the grammatical rules, choose suitable vocabularies, and consider the coherent and cohesion. It also will afford good sentences with exact meaning. Lestari (2018) mentioned that wring requires the writer to deliver what to think and what to write to the reader.

Writing has skills rather than knowledge. The writing skills are acquired through practice. Additionally, learners can learn to sort, limit and organize their thoughts, as well as determine the purpose of writing and apply rules (Celik, 2019). Rajesh (2017) pointed out that writing skills are a way to express one's thinking and feeling on paper. That is why every text in engineering, medicine, and international education primarily uses English as their language for these purposes. Writing skills assist learners train in developing ideas and arranging them into more detailed writing so that they are easily understood by readers.

Ndruru (2020) ensured that writing skills require persistence and creativity. Learners are required to find ideas and assemble words to produce good writing. In writing skills, learners can add insight and knowledge about a topic. As the author looks for sources of information about the topic, a means of developing thinking or reasoning power by gathering facts, connecting them, then drawing conclusions about the topic. Yamin (2019) asserted that through writing skills, the learners can articulate, discuss and describe their thoughts, feelings, and experiences.

Anggraini (2019) acknowledged that writing has certain characteristics which seem to make it difficult for learners to master. These characteristics contained many things such as its stages, sentence construction, mechanics, diction, punctuation, paragraph coherence etc. Maulida et al. (2022) mentioned that there are three characteristics which can allow students to develop their writing. They are cohesion, coherence and unity.

Figure (1)

The characteristics of writing skills

Coherenc

e
Unity

nal)

The first characteristic is coherence. Coherence can be defined as a property that should exist between the words of related and ordered sentences in a precise sequence. Yamin (2019) points out that coherence addresses one central and crucial concept in each paragraph. It also notes

that the continuity of paragraph writing makes the flow of one sentence to another in a paragraph smooth.

The second characteristic is cohesion. Wali and Madani (2020) pointed out that cohesion is a method of linking sentences. It is related to support sentences to each other in support of the topic sentence. The four main coherent structures are connectors for example (but not only), , personal pronouns such as (he/him/his/her), introduction article(s), and demonstrative pronouns, among other things (i.e., this, those). The last thing is unity. Wijaya (2014) mentioned that paragraph writing has a unity characteristic when supporting sentences are linked to the topic.

Writing coherence is a main skill in writing. It contains a multitude of readers and text-based features (Mensah & Tabiri, 2020). Poudel (2018) defined writing coherence as the connection and the organization of ideas in a text to create unity. If writer and the reader's cognitive process and cueing system break, then there would not be any relationship or interconnectedness between the elements in the texts. Dhanya and Alamelu (2020) added that writing coherence is the contextual fitness in the text which contributes in understanding the meaning or message.

Writing coherence has an important role to play in the text. When there is a coherence between the elements of the text, these elements are thereby integrated into a text. This means that coherence is one component of textual function. By its role, writing provides texture for creating a text and expressing the continuity that exists between the parts of the text (Collins et al., 2017).

Writing coherence has an essential role for creating unity between or among the propositional units in the text which moves smoothly between ideas. It also helps the reader through an argument or series of points through using signposts and connectors (Karadeniz, 2017; Yang & Sun, 2012). Additionally, writing coherence involves a clear structure and consistent tone, with little or no repetition. The text which is not coherent jumps between ideas without making clear connections between them. It is often very difficult to follow the argument. Deane and Philippakos (2024) pointed out that readers may find themselves unclear about the writer's point of view or even whole sections of the writing. There may be odd sentences that are not suitable for the previous or following sentence, or paragraphs which repeat earlier ideas.

Despite the importance of writing coherence, many learners find a lot of challenges. This is caused by many factors. For example, there is

a lack of time allocation provided by the teacher to practice writing. The lack of teachers' creativity in using learning models which can stimulate students to write is another factor. The low of students' reading habits may be also a reason for learners' writing coherence low (Cahyani & Yulindaria, 2018). There are some approaches which help to overcome these challenges. Discovery learning via flipped classroom is considered as effective in developing writing coherence for learners.

Discovery learning is known as the best form of inquiry —based learning approach. It needs learners to investigate a topic , issue or problem by active means . They also obtain relevant information , interpret causes and effects where pertinent , and get to conclusions or solutions (Westwood , 2008). Bruner in 1961 had a definition of discovery learning as an inquiry-based, constructivist learning theory which takes place in problem solving situations. In constructivism, the learner depends on her or his own previous experience and existing knowledge to discover facts , relationships and new truths to be learned .

Bruner (1961) pointed out that the act of making sense of the learning experiences depended actively on an internal cognitive structure. He added that discovery learning is an inquiry, which takes place in problem-solving situations. He explained that the act of "discovery" should not be regarded as "the act of finding out something that before was unknown to mankind, but rather [included] all forms of obtaining knowledge for oneself by the use of one's own mind" (Bruner, 1961, p. 22). He stated that discovery learning prioritizes reflection, thinking, experimenting, and exploring.

Discovery learning has many definitions. Anggraini (2019) and Satriani et al. (2022) defined the discovery / inquiry learning as an approach which has an aim to intuitively understand concepts, meanings, and relationships before coming to a definitive conclusion. When someone uses his / her mental processes to find some notions and principles, this is when discovery takes place. By observation, categorization, measurement, prediction, determination, and inference, discovery is accomplished. The aforementioned procedure is seen as the cognitive process, whereas the actual discovery is a mental integration of ideas and principles in the mind.

Rahayu and Mustika (2021) stated that discovery learning is a teaching method to the concept of learning that is purposeful, to

understand the meaning and their relationship intuitive process to finally reach a conclusion.

Discovery learning has several advantages. It increases learners' active participation in the learning process. It fosters learner's curiosity. It also enables the development of lifelong learning skills. It gives learners the chance to experiment and find something for themselves and this makes them highly motivated. Cahyani and Yulindaria (2018); NDRURU (2020) and Zalvianin and Zainil (2021) ensured that it constructs knowledge based on the initial knowledge which the learner already has so that they can have a deeper understanding. In addition, it develops self-reliance and autonomy in learners. Overall learning using discovery learning improves learner reasoning and the ability to think freely and to think critically to describe objects in an interesting way.

Discovery learning plays an essential role in developing writing coherence. Anggraini (2019) confirmed that by using the discovery learning in English language teaching, teacher can help students who have a fear feeling and little enthusiasm in writing class (many things such as its stages, sentence construction, mechanics, diction, punctuation, paragraph coherence etc. This approach also can improve vocabulary and grammar. Cahyani and Yulindaria (2018) asserted that discovery learning brings creativity and imagination of students as well as allows them to be able to write better fiction stories. It also improves students' ability in understanding the concept of fiction writing as well as minimizing the difficulty level of writing. Rahayu and Mustika (2021) added that discovery learning helps students write text procedure and learn creative, collaborative, and good responsibility.

Discovery learning has a lot of advantages. It enhances active engagement of students in learning process for higher achievement. It also fosters students' curiosity to learn and investigate. It enables students' autonomy in developing their own inquiry procedures. It enables learners to take the responsibility of their own learning. It increases one's use of creativity and higher order thinking skills. It encourages learners to master problem-solving skills. Finally, it fosters life-long learning.

The integration of Information and Communication Technology (ICT) into the discovery learning has a learning objective achievement. Discovery-based "Constructionist" learning approach is often offered in blended learning contexts. This approach can increase student engagement, autonomy, social relatedness and knowledge-building

(Hmelo-Silver et al., 2007). Blended learning gives more time to study so that it has a significant effect on students' learning outcomes. It is similar to guided inquiry learning, where teachers provide guides for students to organize intellectual skills or thinking skills which are related to the reflective thinking process (Rosamsi et al., 2019).

Arnold-Garza (2014) stated that the "Flipped classroom", also known as the inverted classroom, is one of the learner-centered approaches which depend on active techniques and modern technologies to engage students in the learning process. Danker (2015) pointed out flipping the teaching process in which learners study the content of the lesson at home by themselves via educational websites while learners use the class time to do the homework to support their comprehension of important knowledge. Persky and McLaughlin (2017) confirmed that flipping the classroom represents an ongoing paradigmatic shift in education from teacher-centered instructional strategies (e.g., lecturing) to learning- centered instructional strategies (e.g., active student engagement).

Çevikbaş and Argün (2017) mentioned that flipped classroom applies 21st century skills. As the learners can use their critical thinking and problem solving skills when the teachers give them a task at home. Meanwhile, the learners can communicate and discuss their tasks in pair or group in the classroom. They are also expected to be creative students to create their task by utilizing technology. Then, explain that the higher-order thinking skills of the students are increased by implementing flipped classroom. They have the ability to use their higher levels of cognitive domain such as applying, analyzing, evaluating, and creating in the process of writing.

The main advantages of flipped classroom are that the learners have a lot of time to learn and understand the material given. They also have more chance to express and discuss the material that had been learned (Putra , 2020) . According to Bergmann and Sams (2012), Ahmed (2016), Soltanpour and Valizadeh (2018), Sze and Hamid (2023) there are many advantages of using flipped classroom. First, learners get help on difficult topics. By the flipped classroom, the learners can relearn the material and review the instruction from time to another. Therefore, they can understand by themselves about what have to do about the assignment, the instructions, and the material. Second, flipped classroom enhances teacher-student interaction. By flipped classroom, the materials deliver through online so that the teacher has more time to

interact in small groups with students or one-on-one. Simply, the teacher can talk or interact with the learners directly.

The integration of discovery learning with the flipped classroom approach made them both effective when combined. This integration helps transfer learners from passive to active learners. Flipping changes the control over the learning experience from teachers to students. It transfers the role of teachers from a transmitter of knowledge to a learning facilitator. As the teacher gives discussions, guides students, and helps them discover knowledge. Students are creative in discovering knowledge when guided by the teacher. (Persky & McLaughlin, 2017 and Lestari et al., 2020).

Context of the Problem

Despite the importance of EFL writing coherence skills among secondary school students, many studies have shown that it has always been a weakness. El-Sharkasy (2021), Fayed (2020), Hasssan (2021), Hussien (2021), Soliman (2021) are examples of studies that show weakness of writing coherence skills. According to these studies, writing coherence skills continue to be ignored in English classes. The current study presents discovery learning via flipped classroom for developing EFL writing coherence skills.

The researcher's experience as an English language teacher for 'years led her to notice the low level of some EFL writing coherence skills in secondary school students. It's also possible that the teachers had difficulty teaching the students some EFL writing coherence skills. As a result, both learners and teachers have difficulty learning EFL writing coherence skills.

Consequently, the researcher attempted to determine to what extent first-year secondary school students have poor writing coherence skills. As a result, the researcher conducted pilot study to investigate the level of iting coherence skills among first-year secondary school students. During the second term of the academic year 2021/2022, the researcher conducted the pilot study on a random sample of 25 first-year secondary-stage students. An EFL writing coherence test was adopted from (Fayed, 2020 : 197-198). The results of the pilot study revealed the low level of the students' EFL writing coherence skills. Therefore, this research used discovery learning via flipped classroom for developing secondary school students' EFL writing coherence skills.

Statement of the Problem

The problem of the present study lies in the lower level of the EFL reading and writing skills and self-regulation of first year secondary school students. Therefore, there is a need to investigate the effectiveness of the discovery learning via flipped classroom for developing EFL reading and writing skills and self-regulation of first year secondary school students.

Questions of the Research

To face this problem, the present research attempted to answer the following questions:

- 1 What are the EFL writing coherence skills required for first-year secondary school students?
- 2 What are the features of Discovery Learning via Flipped Classroom for developing some EFL writing coherence skills among first-year secondary school students?
- 3 To what extent is using Discovery Learning via Flipped Classroom effective for developing some EFL writing coherence skills among first-year secondary school students?

Method

Participants of The study

The participants of the study were (30) students assigned as the study group from first-year secondary school.

Instruments and Materials of the Research

The following instruments were developed to measure the dependent variables of the research:

- a) An EFL writing coherence skills checklist.
- b) An EFL writing coherence skills pre-post tests and rubric.
- c) The Discovery Learning via Flipped Classroom.

The EFL writing coherence skills pre-post tests

A. The purpose of the pre and post EFL writing coherence skills tests

The EFL writing coherence skills test was prepared by the researcher to measure students' EFL writing coherence skills. It was used as a pre-test to identify first year secondary school students' level before the treatment. Furthermore, there was also an equivalent form used as a posttest in order to investigate the effectiveness of the discovery learning via flipped classroom. Thus, the purpose of the test was to determine the students' level before and after the experiment.

B. Description of the EFL writing coherence skills pre-post tests

The test items cover the EFL writing coherence skills identified by jury members. The EFL writing coherence skills test consisted of writing about 200 words on one the following:

- 1) Imagine a fisherman describing the sport of fishing to you. Write the first person account.
- 2) The day I went fishing.

C. Validity of the EFL writing coherence skills test:

1. Face validity

The EFL writing coherence skills test was administered to (10) TEFL jury members to estimate content validity. They were asked to give feedback on the test's difficulty level and length, the extent to which each item measures the skill intended to be measured and the test instructions' clarity. The jury members confirmed the relevance of the test items to the skills to be measured. The test's suitability to learners' academic levels was reported. The clarity of the test instructions and questions, as well as the illustration of the targeted skills, were also praised. Clarity of the test instructions and questions and illustrations of the targeted skills were also commended for the final form.

2. Internal consistency validity

The internal consistency between the score of each sub-skill and the total score of the main skill was identified by estimating the Correlation Pearson coefficient between the students' score in each sub-skill and the total score for the main skill.

Reliability of The EFL Writing Coherence Skills Test:

For estimating the reliability of The EFL Writing Coherence Skills test, the following two methods were used:

1. Cronbach's Alpha method

Cronbach's alpha coefficient was estimated for the main skills of the test, and for the test as a whole. The results are shown in the following table:

Table (1)

Cronbach's Alpha Coefficient For The Writing Coherence Test, The Pre- Test

Test Dimensions	Test Dimensions	
Writing Coherence Skills	0.912	

The previous table shows that the value of Cronbach's alpha coefficient is high, which reveals that the test has a high degree of reliability.

1. Test-Retest Method:

The researcher administered a writing coherence skills pre-test at the beginning of the second semester of the academic year 2023-2024 to a group of participants rather than the research sample of first-year secondary school students (n=30). The test was re-implemented after two weeks to the same participants.

The correlation coefficient (r) between the mean score of the first and the second administration of the test was calculated by using the Pearson formula. The value of the correlation coefficient between the two applications, in each of sub-skills and in the test as a whole, was appeared in the following table:

Table (2)
Reliability of the EFL writing coherence skills test

Tremasiney of the Li L William Const energy similar teles							
Test Dimensions		Correlation Coefficient	Level of Significance				
Writing skills	Coherence	0.769	0.05				

Stages of discovery learning via flipped classroom learning

Discovery learning can be used to develop all language learning skills. It has an essential impact on the teaching-learning process (Zalvianin & Zainil, 2021). Krisnawati (2015) stated that there were two procedures for implementing discovery learning. They are:

Figure (2)

The procedures of implementing discovery learning

Preparation procedures

Implementation procedures

(Source: Original)

Kemendikbud (2013) presented seven steps in applying the first procedures (preparation stage). The procedures contain determining learning objectives, identifying learners' characteristics, selecting the subject matter, deciding the topics, developing learning materials, organizing learning topics, and evaluating learning processes and outcomes. Prawerti (2014); Mufidah, Hafifah, and Mayasari (2015); Mushtoza (2016); Susanto (2016); and Apriyanti (2019) pointed out seven steps that included in the second procedure (implementation stage). The seven steps are Stimulation, Problem Statement, Data Collection, Data Processing, Verification, and Generalization.

Fahmi et al. (2019) presented another form of implementing the discovery learning. They are one-way communication or two-way communication according to the number of the class. One-way approach is concentrated on one-way presentation by the teacher. The presentation structure based on an effort to stimulate students to do the discovery process in front of the class. The teacher mentions a problem, and then solves the problem through discovery steps. Where two-way systems involve students in answering teacher questions. Students do discovery, while the teacher is a guide for them in the right or right direction. Prasetya and Harjanto (2020) presented five steps in implementing discovery learning. These steps contain simulation, problem statement, data collection, verification and generalization.

The flipped classroom learning happens through using Google Classroom as a platform for learners to develop their writing coherence. Hussaini and Libata (2020) pointed out that Google Classroom is an effective way in improving learners' access and attentiveness towards learning. Knowledge and skills gained through Google Classroom helps learners be active learners . As a Digital Tool, it gives meaningful feedback to both learners and parents. Google Classroom should also be a form of evaluating learners' assessment through online assignments

and quizzes. Therefore, it makes learners to participate actively in educational technology classes.

The Evaluation of Discovery Learning via Flipped Classroom Learning

The evaluation used in the implementation contained two types of evaluation formative and summative. The formative evaluation was used by the researcher during the sessions. The researcher asked the students to read their handouts and do the tasks which followed the skill that was being confirmed at the end of each session, to ensure that they had mastered it.

The second type of evaluation was assumptive evaluation. This type was used after the discovery learning via flipped classroom was administered to determine the extent to which the objectives of the discovery learning were met and to investigate its effectiveness in developing the participants' EFL writing coherence skills through the administration of the EFL writing coherence skills post-test.

Results and Discussion of the Research:

The goal of using discovery learning via flipped classroom was to develop the writing coherence skills of EFL secondary school students. Participants' EFL writing coherence skills were pre- and post-tested to assess the effectiveness of the discovery learning via flipped classroom. The researcher used the two-sample t-test to compare the participants' initial and final mean scores in the overall EFL writing coherence skills to see if there was a statistically significant difference between them in the pre-and post-test assessment of the tests. The research findings are presented below, along with the research hypotheses.

Findings of the Hypothesis:

The hypothesis states that "there is a statistically significant difference between the mean scores of the participants in the experimental and control groups of EFL writing coherence skills in favor of the experimental group." For testing this hypothesis, the two samples' t-test was used to compare the participants' mean scores in EFL writing coherence skills on the-post administration of the EFL writing coherence skills test. Table (4) shows the t-value and level of significance of the treatment between the experimental group and the control group in the post-test of the main skill of writing coherence skills.

Table (3)

The t-value and level of significance of the treatment between the experimental group and the control group in the post-test of the main skills of writing coherence skills.

Skills	Group	Mean	Std. Deviation	t- value	a sig
Writing	Control	9.113	2.932	8.819	0.05
Coherence	Experimental	16	3.096		
Skills					

Table (4) shows that there is a statistically significant difference between the mean scores of the experimental group and those of the control group in writing coherence skills in post-test in favor of the experimental group. The t-value is (8.819) which is significant at the (0.05) level of significance. Thus, the first sub-hypothesis was supported.

Discussion and Interpretation of the Research Findings Concerning the hypothesis

The hypothesis revealed that there is a statistically significant difference between the mean scores of the participants in the experimental and control groups of EFL writing coherence skills in favor of the experimental group. The present research aimed to improve EFL writing coherence skills through discovery learning via flipped classroom. The current study's findings are positive because it shows that EFL writing coherence skills were improved and their sub-skills. This development can be attributed to a variety of factors. One of these factors was related to the nature of discovery learning via flipped classroom. Teaching writing coherence skills requires a special environment which is the most important factor and involvement level required for the learners. Discovery learning via flipped classroom provides a supportive classroom environment that is relatively full of engagement.

Conclusion

Acquiring EFL writing coherence skills is still something of a mystery. Many students aim at write coherently; however, they still face obstacles in learning these skills. Writing coherence skills need higher-order thinking skills (HOTS) to have the ability of discrimination and

analysis. In addition, Writing coherence is essential for students inside and outside the classroom. Inside the classroom, the students should be able to distinguish between facts and opinions and accurate from inaccurate ideas.

Thus, it can be argued that discovery learning via flipped classroom offers unique opportunities for students to increase their abilities to learn according to their abilities. Discovery learning via flipped classroom motivates students to learn, encourages achievement, as well as inspires creative thinking. It develops high-level thinking skills during discovery learning via flipped classroom environments. Students know themselves and gain self-confidence which motivates them to learn.

Discovery learning via flipped classroom promotes student exploration and collaboration. It also allows students to direct their own inquiry and be actively involved in the learning process. It increases engagement, autonomy, and independence. It encourages critical thinking, problem-solving skills, and self-directed learning.

One of the main benefits of discovery learning via flipped classroom is that it allows learners to have a greater role in their own education. As they become more independent and self-motivated. This keeps them further engaged and encourages them. It is their responsibility to master each level before moving forward. For insistence, to engage in problem-solving, even when working in groups or participating in small talks, students must first think independently and creatively.

Recommendations and Suggestions for further research:

In the light of the findings of the study the following recommendations and suggestions may be presented:

- 1. EFL reading and writing skills should be major concern in teaching EFL in our classes as the lack of reading and writing skills affects all other elements of EFL negatively.
- 2. Utilizing discovery learning via flipped classroom should be included in the EFL listening courses.
- 3. It is recommended that the discovery learning via flipped classroom complements the textbooks of EFL in schools.
- 4. It is recommended that EFL teachers may design and develop their own using of discovery learning via flipped classroom which suit their students' needs and educational levels.

Reference

- Ahmed, M. (2016). The Effect of a Flipping Classroom on Writing Skill in English as a Foreign Language and Students' Attitude Towards Flipping. *US-China Foreign Language*, 14(2), 98-114. doi:10.17265/1539-8080/2016.02.003
- Alfaki, I. M. (2015). University students' Eglish writing problems: Diagnosis and remedy. *International Journal of English Language Teaching*, 3(3), 40–52.
- Anggraini, R. (2019). The Discovery Learning in Teaching Writing Skill in Junior High School. *GLOBAL EXPERT JURNAL BAHASA DAN SASTRA VOLUME*, 8 (2), 52-56.
- Bergmann, J., & Sams, A. (2012). Flip Your Classroom: Reach Every Student in Every Class Every Day. Washington DC: International Society for Technology in Education, 120-190.
- Bruner, J. (1961). The Process of Education. Cambridge, MA: Harvard University Press.
- Cahyani, I., & Yulindaria, L. (2018). The effectiveness of discovery learning model in improving students' fiction writing. *Indonesian Journal of Learning and Instruction*, 1(1), 37-46.
- Celik, B. (2019). Developing Writing Skills Through Reading. *International Journal of Social Sciences and Educational Studies*, 7(1), 206-214.
- Çevikbaş, M., & Argün, Z. (2017). An Innovative Learning Model in Digital Age: Flipped Classroom. *Journal of Education and Training Studies*, 5, 189 200.
- Collins, J. L., Lee, J., Fox, J. D., & Madigan, T. P. (2017). Bringing together reading and writing: An experimental study of writing intensive reading comprehension in low-performing urban elementary schools. *Reading Research Quarterly*, 52(3), 311–332.
- Danker, B. (2015). Using Flipped Classroom Approach to Explore Deep Deane, P. & Philippakos, Z. (2024). Writing and Reading Connections: A before, during, and after Experience for Critical

- Thinkers. *International Literacy Association*, 77(5), 770-780. https://doi.org/10.1002/trtr.2284
- Dhanya, M. & Alamelu .C (2020). Methods And Significance of Pre Writing Activities In Acquisition of Writing Skills. *Solid State Technology*, 63(2), 6763-6773.
- Fayed, H. (2020). Using Some Web 2.0 Tools for Developing EFL Writing Skills among Secondary School Students. Unpublished MA, Thesis,. Faculty of Education, Benha University.
- Haerazi, H., Irawan, L. A., Suadiyatno, T., & Hidayatullah, H. (2020). Triggering preservice teachers' writing skills through genre-based instructional model viewed from creativity. *International Journal of Evaluation and Research in Education (IJERE*), 9(1), 234-244 DOI: http://doi.org/10.11591/ijere.v9i1.20395
- Hanane, D. (2015). Students' Attitudes towards Academic Writing: Challenges Facing EFL Learners Case of study. Third year LMD students at Biskra University, Algeria.
- Harmer, J. (2012). Essential Teacher Knowledge: Core Concepts in English Language Teaching. In: Pearson Longman.
- Hasan, A. (2018). The effect of communicative language teaching (clt) through small group discussion on students' reading comprehension and writing ability for senior high school. *International Journal of Development Research*, 08 (04), 19968-19976.
- Hmelo-Silver, C. E., Duncan, R. G., & Chinn, C. A. (2007). Scaffolding and achievement in problem-based and inquiry learning: A response to Kirschner, Sweller, and Clark (2006). *Educational Psychologist*, 42(2), 99–107. https://doi.org/10.1080/00461520701263368
- Houssein, E.H. A. (2018). The Effect Of Using A Training Program Based On The Whole Language Approach On Developing Literacy Skills Of Primary Three In The Experimental Language School In Aswan. Unpublished Master Thesis, Faculty Of Education, Minia University.
 - $https://doi.org/10.33394/jollt.v\%vi\%i.2929\ .$

- Hussaini, I. & Libata, I. (2020). Effectiveness of Google Classroom as a Digital Tool in Teaching and Learning: Students' Perceptions. Journal of English Language, Literature, and Teaching, 4(4):51-54
- Karadeniz, A. (2017). Cohesion and Coherence in Written Texts of Students of Faculty of Education. *Journal of Education and Training Studies*. 5 (2). 93-99.
- Klein, P. D., & Boscolo, P. (2016). Trends in research on writing as a learning activity. *Journal of Writing Research*, 7(3), 311–350. doi: 10.17239/jowr-2016.07.
- Laili, E. N. & Muflihah, T. (2020). The effectiveness of google classroom in teaching writing of recount text for senior high school. JOLLT Journal of Languages and Language Teaching. 8(4), 348-359, DOI:

 Learning in Large Classrooms. The IAFOR Journal of Education. III (I), 171-186.
- Lestari , W., Mawaddah , U., Kareviati, E. (2019). THE INFLUENCE OF DISCOVERY LEARNING AND SNOWBALL THROWING METHOD IN IMPROVING WRITING SKILLS OF HIGH SCHOOL STUDENTS. Professional Journal of Engligh Education ,2(3) 331-339
- Maulida, D., Rahman, M., Handrianto C., Rasool, S. (2022). A Review of the Blended Learning as the Model in Improving Students` Paragraph Writing Skills. Abjadia: International Journal of Education, 07 (01): 59-72.
- Mensah, I & Tabiri, M. (2020). Review of Literature on Coherence and Cohesion in Text Quality among ESL Students. Journal of Educational Research, (54). 171-186.
- NDRURU, N. (2020). THE EFFORTS TO IMPROVE STUDENTS'ABILITY TO WRITE EXPOSITION TEXT WITH DISCOVERY LEARNING METHOD BY CLASS X (TENTH) STUDENTS OF SMA NEGERI 1 HILIMEGAI. ALoES: Al'ADZKIYA INTERNATIONAL OF EDUCATION AND SOSIAL, 133-140. ISSN: 2721-8716.

- Nordin, S. M. (2017). The Best of Two Approaches: Process / Genre-Based Approach to Teaching Writing. The English Teacher, 11(3), 1-16.
- Persky, A. & McLaughlin, J. (2017). The Flipped Classroom From Theory to Practice in Health Professional Education. Am J Pharm Educ. 81(6) , 100-118. doi: 10.5688/ajpe816118. PMID: 28970619; PMCID: PMC5607728.
- Poudel, A, (2018). Academic Writing: Coherence and Cohesion in Paragraph. Educational Leadership, 65(4), 60–73.
- Rahayu, R. & Mustika, I. (2021). Application of Discovery Learning Method Learning to Writing Procedure Text in Vocational School Students 1 Soreang. Journal of Language Education Research (JLER), 4 (2), 114-120. E ISSN 2621-0169.
- Rahmawati, S. (2018). The Implementation of Mind Mapping in Teaching Writing of Recount Text to Eighth Graders of Junior High School. RETAIN, 6 (2), 195-205.
- Rajesh, D. (2017). Teaching writing: The problems encountered by the rural students. Research Journal of English (RJOE), 2, (Special Issue-3), 134-137.
- Rao, P. S. (2018). The significance of writing skills in ELL environment. Academician: An International Multidisciplinary Research Journal, 9(3), 5-17.
- Rosamsi, S., Miarsyah, M. & Ristanto, R. (2019). Interactive Multimedia Effectiveness in Improving Cell Concept Mastery. Journal of Biology Education 8 (1) (2019): 56-61.
- Satriani, Razaq, Y., Nurhidayanti, Muzkiyah, N. (2022). THE IMPACT OF USING DISCOVERY LEARNING ON EFL STUDENTS' WRITING SKILL. Indonesian Journal of Research and Educational Review, 1(3), 389-397
- Soltanpour, F., & Valizadeh, M. (2018). A Flipped Writing Classroom: Effects on EFL Leaners' Argumentative Essays. Advances in Language and Literary Studies (ALLS), 9(1), 5 13.
- Sulaiman, D, T, A. (2019). Using Lexical Approach For Developing EFL Literacy Skills Among Preparatory School Pupils.

- Unpublished Doctoral Dissertation, Faculty Of Education, Benha University.
- Sze ,C. , & 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. http://myjms.mohe.gov.my/index.php/ijares .
- Wali, O., & Madani, A. Q. (2020). The importance of paragraph writing: An introduction. Organization, 3(7), 44-50.
- Westwood, P. (2008). What teachers need to know about teaching methods. Camberwell: Acer Press
- Wijaya, A. K. (2014). The Effect of Using Mind Mapping on the Writing Comprehension Ability of the Tenth Grade Students at SMA Tiga Maret Yogyakarta in the Academic Year of 2014/2015. (S1), Yogyakarta State University, Yogyakarta.
- Yamin, M. (2019). Learning from students' experiences in writing paragraph. Metathesis: Journal of English Language, Literature, and Teaching, 3(2), 188-202.
- Yang, & Sun, (2012). The use of cohesive devices in argumentative writing by Chinese EFL learners at different proficiency levels.
- Linguistics and Education. (23) 31–48. Retrieved from http://www.sciencedirect.com/science/article/pii/
- Zalvianin, N. & Zainil. Y. (2021). The Implementation of Discovery Learning for Reading Skill in EFL Classroom at SMPN 8 Padang. Journal of English Language Teaching, 10. (1): pp. 61-74, DOI:10.24036/jelt.v10i1.1113786.