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والعشرون

دراسة أثر الأداة الانعكاسية في تطوير التفكير النقدي لدى طلبة المرحلة الرابعة دارسي اللغة
الانكليزية بوصفها لغة أجنبية في كتابة اليوميات

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المستخلص

يحلل هذا البحث مزايا الاحتفاظ بكتابة اليوميات الانعكاسية في تنمية التفكير النقدي لدى الطلبة وتعزيز الإبداع وتطوير مهارة الكتابة لديهم، تعمل الكتابة الانعكاسية على تعزيز الإبداع والدافعية للتفكير النقدي لدى طلبة الجامعة. لذلك تم استعمال طريقة مختلطة للتحقيق وجمع البيانات في البحث هما: الاستبيان Google form عبر الإنترنت وكتابة المجلة الانعكاسية في الصف. المشاركون هم طلاب المرحلة الرابعة من كلية التربية الأساسية / قسم اللغة الإنجليزية / جامعة صلاح الدين – أربيل. اذ أجاب ٧٢ طالبا وطالبة على الاستبيان عبر الإنترنت. يتكون الاستبيان من (١٩ سؤال مغلق و ١٠ أسئلة مفتوحة). وقد اظهرت النتائج وجهة نظر إيجابية للطلبة الذين يستعملون كتابة اليوميات الانعكاسية في تحفيز وتنمية التفكير النقدي للطلبة، مما يعزز أيضاً ثقتهم بأنفسهم. ولكن من الناحية الاخرى أشارت النتائج الى تحليل مستوى الانعكاسية في يوميات الطلبة وفق نموذج هاتون وسمت الى ان الطلبة جميعهم تقريبا ظلوا في المستوى الوصفي وليس النقدي وهو أدنى مستوى في الانعكاسية. ثمانية طلاب فقط وصلوا إلى أعلى مستوى من الانعكاسية (المستوى النقدي) في كتابة المجالات اليومية.

Investigating the Role of Reflection Tool in Developing EFL Fourth-Grade Students' Critical Thinking in Journal Writing

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English Language**Abstract:**

This study investigate the advantages of keeping reflective journal writing on cultivating students' critical thinking and enhancing creativity. Moreover, it evaluated the impact of writing reflective journals on developing students writing skills. Reflective journal enhances creativity, motivation and critical thinking among university students. A mixed method is adapted to investigate the research aims: by using an online Google questionnaire and reflective journal writing as research tools. The participants are from the College of Basic Education/ English department/ Salahaddin University-Erbil .72 male and female students have responded to the online questionnaire. The questionnaire consists of (19 close-ended questions and 10 open-ended questions). The result shows a positive view of students using reflective journal writing in motivating and developing students' critical thinking, which also boosts learners' self-confidence. In contradiction, the result of analyzing the level of reflection of the journals based on Hatton and Smith model indicated that almost all the students remained at the descriptive level. Only 8 students reached the highest level of reflection.

Key word: Critical Thinking, Journal Writing and Reflection Tool.

1. INTRODUCTION

Studies have revealed the significance of reflective journal writing in developing university students' critical thinking. Journal writing, which is an active learning strategy, in a reflective record allows students to enhance their English writing skills. Journals can be utilized by students for different tasks; including writing about appealing subjects, evolving their imaginations, and making links between recent material and what they previously knew (Mohammed, 2015). According to Sen (2010), journal writing is a central factor of knowledge processing since it allows students to articulate networks between current information and what they recently



know. Besides, reflective journal writing provides students the chances to connect with their teachers with motivation and confidence (Park, 2003).

Moreover, due to the chance to consider what they have learned; this strategy supports learners in cultivating their learning. Furthermore, keeping a reflective journal boosts critical thinking. Journal reflection, according to Priest and Sturgess (2005), is a meaningful experience that enables students to retrieve their self-evaluation. Involving the learner in self-evaluation, according to Williams (2008), learners need to acquire how to be a critical observer at their own skills and knowledge. In the view of Graham (2003), reflective journal writing aids students in gaining self-assurance, writing proficiency, and a sense of their own writing identity.

Numerous studies carried out on impact of reflective journal writing in elevating students' English writing proficiency. However, no research has been conducted on this research topic in EFL context at College of Basic Education, in Salahaddin University-Erbil. Therefore, the current study is significant to be carried out so as to fill in this gap. Thus, the purpose of this study is to explore the extent of reflection (reflection tools) is effective for pre-service teachers in this college in supporting their English language writing proficiency and developing students' critical thinking in classroom practices. To achieve the research aims, the following questions have been formed:

-To what extent they are familiar with the term reflection journal writing and its significance on developing students' critical thinking?

- Are Kurdish EFL senior students' able to write reflective journals critically?

2. LITERATURE REVIEW

2.1 Reflection

GilGarcia and Cintron (2002) claimed that reflection is a vital component of the learning process because it services the learners to consider their views and actions. Hence, reflection generates a meta-awareness through reflecting on students' feelings, thoughts, and behaviors which are the underpinning of critical thinking skills (GilGarcia and Cintron ,2002). Meanwhile, a critical thinker naturally has the aptitude to interpret, evaluate problems using



evidence, thoughts, and standards that can be used as the foundation for making a decision (Carriger, 2015).

2.2 Reflection and Critical Thinking

The term reflection has many definitions, it aids students' progress their intellectual and metacognitive capabilities (Gilstrap, D and Dupree, 2008). Students who employ critical language are talented to think critically, build intangible frameworks, and understand the genres and structures of texts (Muhammad, 2015).

Reflection involves students to be critical thinkers, examine concepts, and problems (Rhodes, 2010). The main objective of higher education (Rhodes, 2010) is the expansion of lifelong learning. Researchers resist that self-examination is the key aspect of lifelong learning namely, metacognition, self-awareness, and reflection are the first stages in learning because they permit students to identify the impacts on their own thinking (Park, 2003).

The researchers chose 70 reflective journals at random and analyzed them using Hattan and Smith's (1995) model of level of reflection. Three criteria descriptive, reflective, and critical writing were used to evaluate them. To ensure their anonymity, codes were assigned to each diary. At the first level, the writers' points of view, background, sentiments, and events are described. The second stage is reflective writing, when the writer reviews the circumstances and events they have encountered and considers the concerns, problems, and difficulties that need to be resolved. The author is asked to evaluate or judge choices and provide substitutes. The circumstance or event is the main emphasis. The third tier, which represents the goal of the greatest level of reflection is to help students become more critical thinkers. The emphasis is on broader discussions, presumptions, weighing options, and the effects of choices and actions (Hattan & Smith, 2018).

Observation is an additional key aspect associated to critical thinking. (Brown, 2001). Critical thinking is becoming gradually significant due to the complication of the modern world. Learners must increase the strategies and abilities that will qualify them to perform in the difficult scenarios needed at numerous workplaces. Learners that use reflective thinking can attach their



prior knowledge to new information and engage several learning approaches to achieve various objectives.

2.3 Reflective Journal Writing

The significant idea behind reflective journal writing is the influence on critical reflection abilities (Carter & Kurtts, 2019). Therefore, writing reflective journals is a feasible technique that supports students to examine new ideas, select themes, observe their own behaviors and deliberate feelings that is necessary for the plentiful strategies to expand reflective writing. Hence, critical reflection empowers learners to access to transformative learning as well as to engagement, self-discovery and self-confidence (Carter & Kurtts, 2019).

Moreover, reflective writing through reflective journals embraces better learning conclusions, nurturing a positive learning environment for students, and offering chances for professional development (Allan & Driscoll, 2015). Furthermore, reflective journals have been utilized as a learning tool, providing specific written discourses on the events in which Students' direct opinions, notions, and feelings while the teacher reads and offers feedback (Brown, 2001). Reflective journal writing allows students to involve in long-lasting writing skills.

2.4 Reflective Journal Writing across Academic Disciplines

Frequent studies (Ibarreta & Mcleod, 2004; Thorpe, 2004) looked at journals as resources for students to reflect on their learning. The researchers acknowledged a number of substantial benefits of writing reflective journals, including (Carson & Longhini, 2002; Porto, 2007):

2.4.1 Enhancing Course-work.

In many academic contexts, reflective journals were used to improve students' learning. Reflective journaling was frequently found to expand academic achievement, according to numerous studies (Bisman, 2011). Similar findings were found in Watson's (2014); they showed that in an academic writing course, students enhanced their performance in class and involved in deeper reflection on various activities. Reflective journals offer students the chance to reexamine how the lesson was set up, and what the



students learnt. Through writing about their classroom learning, the learners in this case concentrated more on their in-class learning (Watson, 2014).

2.4.2 Enhancements in Evaluative and Analytical Capabilities

Studies indicate that by assisting students in enhancing their analytical and evaluative abilities, reflective journal writing improves critical thinking. For instance, writing reflective journals encourages students to ask questions and think critically, which helps them create more complex opinions (Hiemstra, 2001). According to studies, writing exercises, especially those that require reflection, encourage students to contribute more actively and help them sharpen their reasoning abilities (Ramsay & Sorrell, 2017). Thorpe (2004) also revealed that students who write reflectively had better skills in identifying assumptions, identifying biases, and methodically evaluating ideas.

2.4.3 Increasing Self-awareness and Confidence.

The value of self-awareness and esteem has been shown by a large number of experiential research on reflective journal writing. According to Chirema (2007), students were skilled and conscious of oneself to recollect learning experience activities, for instance, detecting challenges, confusions and interests in learning. For instance, Thorpe (2004) carried out a study which presented that students were capable of identifying their shortcomings in reflective journals when they documented how their learning had been conducted.

Alongside these lines, numerous studies found that keeping reflective journals allowed students to understand about their own learning. This was positively connected to improve performance during the learning process which leads the learners to boosts their self-confidence and freely express their feelings and opinion.

2.4.4 Improves the Capabilities for Solving Problems

Writing in a reflective journal is primarily connected to improve problem-solving abilities, which are an essential part of critical thinking. Regular reflection enables students to evaluate difficult problems, look at potential answers, and weigh the effects of various strategies (Thorpe, 2004) Chirema (2007) found that writing reflectively encouraged them to think more



critically about the learning experiences by taking into account different decisions and their results. Similar advantages were found in another study on engineering students conducted by Mair (2012), who discover that reflection helped students critically assess technical issues and come up with creative solutions.

2.4.5 Developing Critical Thinking Skills

Writing reflective journals assisted Learners' progress their critical thinking abilities as well as self-awareness of their own learning (Lee, 2013). The students exercised critical thought (thinking) by challenging it and applying it to real situations. In addition, Lindroth (2015) found out that students were encouraged to create reflective journals in a foreign language classroom; they released critical views by uttering opinions about classroom activities. Categorizing, defining, evaluating, comparison, and summarizing are some samples of reflective critical writing strategies (Liang et al., 2016). Critical reflective writing inspires the progress of students' higher-order cognitive abilities, for example inference, perspective-taking and monitoring. As well as their reflective abilities, which illustrate expressions of ideas, deep thinking, and sentiments (So et al., 2018).

Nevertheless, the idea of writing reflective journals critically could not avoid the criticism that takes enough time to reflect critically. According to Epp (2008), "it (journal writing) can take up to three years for students to refine their critical reflection skills" (p. 242). Therefore, developing critical thinking skills through journaling may require some time and effort. Regardless of the obstacle that he put forward; critical thinking may help in figuring out a better strategy to develop the learning process.

2.4.6 Growth of Metacognitive and Self-Reflective Skills

By encouraging metacognition and self-reflection, reflective journaling contributes to encourage students in recognizing their own intellectual progressions, biases, and knowledge gaps. In the opinion of Phan (2009) and Pavlovich (2007), journal writing stimulates self-examination since it allows students to critically evaluate their own thinking in addition to processing information. Self-awareness is vital to critical thinking because it empowers



students to challenge their preconceptions and prejudices, leading to more careful decisions. These practices develop a pattern of critical introspection.

3. METHODOLOGY

3.1 Participants

The participants are seniors from college of Basic Education/English Department, Salahaddin University-Erbil. Seventy-four seniors have participated in responding an online questionnaire. Basically, they are required to write reflective journals in micro-teaching module to observe and provide feedback to their classmates while their peers present their micro-lesson.

3.2 Research Tools (Instruments)

3.2.1 Online Questionnaire

Questionnaire was utilized for obtaining the quantitative data. There has not been a specific survey in EFL context regarding university students' perceptions about the impact of reflective journal writing in developing students' critical thinking. Therefore, researchers have constructed an online questionnaire based on several sources (journal articles and research articles). There are several benefits of using this form (Leftwich, 2007). Firstly, everyone can use it for free because it is an online version that helps the researcher customize the questionnaire for their needs. Secondly, it is incredibly advantageous for researchers to share the questionnaire's URL with anyone. An additional advantage is the ability to gather data digitally and provide basic statistical findings, such as pie charts, bar charts, and diagrams showing the percentage rate for each question. Furthermore, it spares the important time for the researcher to combine the responses in a limited time frame (Dörnyei, 2007).

➤ The Description of The Sampling Questionnaire

The participants are from the College of Basic Education/ English Department/ Salahaddin University-Erbil. Data collected from 72 male and female students who have responded to the online questionnaire. The questionnaire consists of 19 open-ended and 10 close-ended questions. The internet tool (google form) is used to share the questionnaire with students. The questionnaire consists of 3 sections. The first section consists of 6



general questions including the extent students use reflective journal writing and the amount of time they need to write a journal. Also, the ways that reflective journal writing boosts their critical thinking skill. The second section is close-ended questions, which consist of 14 questions to share opinion about the extent they agree or disagree with each statement. The last section, which is an open-ended question, consists of 10 questions so as to share their personal experiences based on the questions. For analyzing the quantitative data, application program SPSS V27 is adopted.

Recently, one of the most popular methods for gathering data is the online questionnaire, whose dependability can be readily evaluated by the researcher. According to Leftwich and Sabir (2014), relative reliability is the ability of the questionnaire to produce results that are consistent and dependable across various applications. Students were assessed based on a Five-Likert scale of positive statements (strongly agree 5, agree 4, undecided 3, disagree 2, strongly disagree 1) and versus for negative statements on the scale from 1-5.

➤ Face Validity Test

A validity test is one that measures the construct it claims to measure and does not assess anything else instead or in addition to it. Ebel (1972) indicated that validity face is an effective technique for ensuring the correctness of test items, reached by having a group of experts evaluate their appropriateness for measuring the future construct. Consequently, the researcher employed the validity face method by presenting the test to a panel from eight experts in educational and specialist, as well as teachers. The experts were requested to provide their opinions on the relevance of each item, assess its appropriateness for the domains from which it was derived, and suggest any necessary modifications to the items. Moreover, they were asked to evaluate the clarity of each item. The Chi-square (χ^2) value was calculated for the respondents who agreed and disagreed. The computed Chi-square test value was greater than the critical value of tabulated 3.84 at a significance level of 0.05 and a given degree of freedom. This indicates that the difference between the values is statistically significant. Consequently, a set of questionnaire items was accepted, while



another set (9 out of 36 items) were removed. The researcher adopted a criterion of 80% or higher agreement for determining the validity of each item, as illustrated in the as can be seen in Table (1).

Table 1: Chi-square test for goodness of fit for apparent validity of the research tools (questionnaire items).

Questionnaire numbers	Number of Experts	Agree		Disagree		test χ^2		Significant level at 0.05
						Cal	tab	
3, 4, 5, 6, 7, 8, 22, 24, 26, 28, 29, 30, 31, 32	8	8	100%	0	0%	8	3.841	Significant and remained items
9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 21	8	7	88%	1	13%	4.5		Significant and remained items
1, 2, 20, 23, 25, 27, 33, 34, 35, 36	8	3	38%	5	63%	0.5		Non-Significant Removed

➤ Reliability of the Questionnaire

The questionnaire reliability coefficient is presented. The finding shows that all the Cronbach Alpha Coefficient of the questionnaire is high (0.812), which represents a high degree of internal consistency after reforming the questionnaire, subsequently, offering a prominently reliable tool which as shown in Table 2.

Table 2: Reliability Statistics

Cronbach's Alpha	N of Items
0.812	14

➤ Construct validity

Construct validity was tested by assessing the internal consistency of the test items after removing items based on expert judgment and validity face. The researcher utilized Pearson's correlation coefficient to measure construct validity. Pearson's correlation was computed between each item score and the total score of the scale, the results show that in table (3) the values



ranging from (0.306 to 0.782), all of which were positively statistically significant at the 0.01 level. Furthermore, one item had a correlation coefficient of 0.274, which was significant at the 0.05 level.

Table 3: Pearson correlation between each item and Overall average
as Construct validity test

Pearson correlation between each item and Overall average		Sig. (2-tailed)
Overall average of items	1	
Reflective Journal writing aided me to share my experiences	.714**	0.000
Reflective Journal writing assisted me to express my opinions	.783**	0.000
Reflective Journal writing assisted me to reply to my feelings and thoughts	.666**	0.000
Reflective Journal writing enthused my critical thinking skills	.695**	0.000
Reflective Journal writing was a mean of thinking to discover my learning	.711**	0.000
Reflective Journal writing is a chance to increase self-knowledge	.671**	0.000
Reflective Journal writing permitted me to describe what I understood	.782**	0.000
Reflective Journal writing was a chance to grow and strengthen my writing skills	.677**	0.000
Reflective Journal writing boosted my communication skills	.719**	0.000
Regular journal writing improved my creativity	.505**	0.000
I could not comprehend what I should write in my reflective journal.	.274*	0.020
I did not have adequate time to write my journals	.306**	0.009
I found it easy to write my journal.	.344**	0.003
I would prefer to share my writing to my classmates	.345**	0.003
**Correlation is significant at the 0.01 level (2-tailed).		
*Correlation is significant at the 0.05 level (2-tailed).		

3.2.2 Document Analysis



Document analysis is a kind of qualitative research that contains analyzing written materials including information about facts (Şimşek& Yıldırım, 2016).

Document analysis is a form of qualitative tool in that documents are interpreted by the researcher to give voice and meaning (Bowen, 2009). The documentary analysis includes analyzing the levels of reflection in the reflective journals which were written by seventy seniors in the English Department - College of Basic Education at Salahaddin University to keep reflective journals, and share thoughts and feelings. They also critically evaluate their classmates' micro-lessons. The journals were investigated based on Hattan and Smith's (1995) level of reflection and then categorized under reflective models (Taggart & Wilson 2005)

The journals written by students were selected randomly. The students' journals coded so as to keep confidentiality, and the journals were not be used for any further purposes. For analyzing the journals, they were grouped conferring to their topics. Also, the sentences were highlighted with an appropriate level of reflection based on of Hattan and Smith's (1995) reflective styles.

4. Finding and Discussions

4.1 Analysing Online Questionnaire

Table 4: Illustrate 6 general questions, Descriptive Statistics of some general variables

	1-Do you believe that reflection	2-How confident are you to	3-In what way has reflection helped you	4-How much you rate the quality of your critical thinking skills	5-How significant do you believe critical thinking skills	6-Do you believe that reflection should be
Mean M	3.58	3.53	3.79	3.53	3.85	3.19
Mode MO	4	3	5	4	4	3
St.d.	1.135	1.007	1.433	1.150	1.070	0.850

As it can be shown in Table (4), all of the items recorded high ratings, starting with the item 5 remained at the highest rating average (Mean) is



($M=3.85$). This illustrates the belief of students that critical thinking is a substantial skill to be learned in college parallel to the first open-ended question (see Appendices 1). Also, it reveals that most of the students commented that reflection contributes to improving students' critical thinking abilities. To support this, the followings are some examples from students' open-ended responses:

("A lot, students are responsible while writing to elaborate most things that the student teacher has to do. The elaboration helps think creatively, reflecting on their learning experiences can greatly enhance students' critical thinking abilities. It allows them to analyze and evaluate their own thoughts, actions, and knowledge, leading to deeper understanding and the development of analytical skills", "Reflection plays a significant role in enhancing critical thinking abilities by encouraging introspection and self-analysis", "It assists in finding new improved ways to enhance your own learning experience"

Accordingly, these results support Cogni (2019) statement that reflective journal writing is a decent means to express reflective and critical thinking.

Figure 1 shows that the averages of all 6 questions in the first section are similar and above average value 3, which effectively tend to agree and strongly agree for these questions.

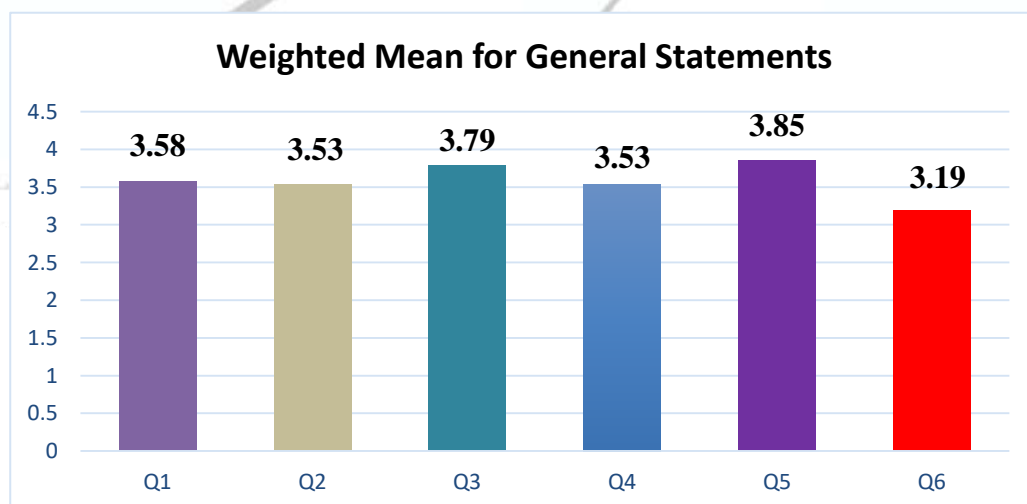


Figure 1: Weighted Mean for General Statements



As it can be seen, the graph demonstrates that the second-highest weighted mean for question 3 (Table 4), which remained at (3.79), shows that the majority of the students responded positively to the question. They claimed that reflection helped them to improve their critical thinking and enhanced their ability to evaluate and analyze information also categorize assumptions effectively.

As a piece of evidence, the 8th open-ended questions describe a situation where students gained new insights or perspectives that they had not considered before writing the journals. Some examples are:

“Yes while reflecting on other students teaching role in micro-teaching when teacher asked us to write our reflection on a paper, it made me focus on the students’ learning ways and their mistakes or good points and that really improved the way I used to teach students before, I mean when we take teachers role in some lectures”, “Yes it helped me to observe everything even the things that I never considered to be observed”, “Reflecting on a topic has definitely helped me gain new perspectives and insights. One time, when I was reflecting on a disagreement I had with a friend, I realized that I had been too focused on my own point of view. Through reflection, I was able to see things from their perspective and understand why they felt the way they did”.

The third highest rating questions (2 and 4) which stands at (3.58) exposes the students’ positive responses of the questions; they strongly believe that reflective writing develops critical thinking. Therefore, reflective journal writing can boost students’ critical insights and the capability to solve problems as well as enrich learning experiences (Laqaei, 2015). Furthermore, question 4 stands at (3.53), shows that students’ levels of reflection have changed before and after incorporating reflective writing in college. Students noticed great changes in their style of writing.

To support this, one of opened-ended question (see appendix 1 question 5) (Have you noticed any changes in a student’s critical thinking abilities after they have reflected on their learning? Give example) it shows that most of the students notice the changes in their critical thinking ability after they



have written reflective journal in micro-lesson some statements are as follows:

“it’s clear students will be more creative if they learn about reflective journal and they all have their own way to reflect on their learning”,” Yes, I have seen students' critical thinking

Table 5: The table represent students perspective on each item, descriptive statistics of main variables based on percentage, mean, standard deviation and relative importance

Statements code	Statements	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree	Mean	Std. Deviation	Relative Importance	Relative Importance level
Y8	Reflective Journal writing assisted me to express my opinions	25.00%	33.33%	22.22%	16.67%	2.78%	3.61	1.12	0.72	High-Medium
Y13	Reflective Journal writing permitted me to describe what I understood	23.61%	31.94%	26.39%	11.11%	6.94%	3.54	1.174	0.71	High-Medium
Y12	Reflective Journal writing is a chance to increase self-knowledge	15.28%	29.17%	34.72%	15.28%	5.56%	3.33	1.088	0.67	High-Medium
Y10	Reflective Journal writing enthused my critical thinking skills	9.72%	34.72%	37.50%	9.72%	8.33%	3.28	1.051	0.66	High-Medium
Y11	Reflective Journal writing was a mean of thinking to discover my learning	8.33%	34.72%	37.50%	9.72%	9.72%	3.22	1.064	0.64	High-Medium
Y14	Reflective Journal writing was a chance to grow and strengthen my writing skills	15.28%	30.56%	25.00%	18.06%	11.11%	3.21	1.233	0.64	High-Medium
Y7	Reflective Journal writing aided me to share my experiences	18.06%	18.06%	37.50%	13.89%	12.50%	3.15	1.241	0.63	High-Medium
Y9	Reflective Journal writing assisted me to	5.56%	37.50%	29.17%	15.28%	12.50%	3.08	1.12	0.62	High-Medium



	reply to my feelings and thoughts					%		3		m
Y1 5	Reflective Journal writing boosted my communication skills	11.11%	25.00%	31.94%	16.67%	15.28 %	3	1.22 2	0.60	High- Mediu m
Y1 6	Regular journal writing improved my creativity	9.72%	25.00%	29.17%	27.78%	8.33%	3	1.12 6	0.60	High- Mediu m
Y1 8	I did not have adequate time to write my journals	15.28%	16.67%	27.78%	18.06%	22.22 %	2.85	1.36	0.57	Mediu m
Y1 9	I found it easy to write my journal.	6.94%	11.11%	47.22%	26.39%	8.33%	2.82	0.98 3	0.56	Mediu m
Y2 0	I would prefer to share my writing to my classmates	8.33%	16.67%	25.00%	15.28%	34.72 %	2.49	1.34 3	0.50	Mediu m
Y1 7	I couldn't comprehend what I should write in my reflective journal	6.94%	9.72%	20.83%	37.50%	25.00 %	2.36	1.16 6	0.47	Mediu m
					Overall		3.14	0.10 2		

The table above consists of 14 items. The items were recorded based on the highest positive to least positive answers of the participants, with 10 of the items (Y8, Y13, Y12, Y10, Y11, Y14, Y7, Y9, Y15, Y16) receiving a very high rate, the mean starts at (3.61 to 3). In addition, Relative Importance index RII (Vishal and Gomatesh, 2019) the higher value RII Y7=0.72 indicate that **High-Medium level**.

This table illustrates almost all the students have agreed positively to the questions. They totally believe that reflective journal writing assists them in expressing their ideas and thoughts, describing scenes, empowering students' self-knowledge, and it is a mean to explore their way of learning.

Item Y10, the mean is 3.28 and relative importance index is 0.66. It demonstrates that reflective journal writing stimulates critical thinking. Reflective journal writing promotes critical thinking. Priest and Sturgess (2005) suggest that reflection delivers a vigorous experience; it helps



students to theme their personal views to critical analysis. Furthermore, reflective journal writing inspires students to keep a vital record for their feelings, thoughts, personal values, experiences, and beliefs. As clarified by Dymment and O'Connell (2003), reflective journal writing is a daily recording events, questions, personal reflections, and reactions to experiences in life.

Item (Y16 and Y15) with the high medium mean 3 and relative importance index is 0.60 that means most of the students got a *High-Medium* agreement on both items. It reveals that reflective journal writing boosts students' creativity, assists learners to think deeper and critically, likewise increases students' communication skill. O'Connell and Dymment (2006) inspected the profits of writing journals as a mean to boost students' critical thinking on reflecting on their own experiences and learning and communication skills. According to Sen (2010), the most significant benefit was obvious when students were very critical in writing and expressing the reflection creatively and intensely.

It is noticed in Table (5) that the average values of items (Y18, Y19, Y20, Y17) begin with 2.85 to 2.36, which have recorded a negative response due to the mean bellow 3. Furthermore, items (Y18, Y17) expose that students have not had sufficient time to write the journals. In addition, they didn't properly digest the questions; meanwhile, they would not be able to write the journals conveniently. On the other hand, students' response in items (Y19, Y20) indicate a contradiction that they found it easy to write reflective journal writing in class. In addition, they would like to share their writings with the class, which illustrates that students are highly confident to write creatively and critically. Greiman and Convington (2007) observed the writing of students' journal to gain vision into the progression of evolving reflective writing. Researchers initiate that learners were to a certain degree comfortable with writing the journals analytically and several supposed that writing journals went well.

4.2 Analyzing the Level of Reflection of Student's Journal Writing;

Seniors in the micro-teaching module are required to write 15 reflective journals, which are assessed by the instructor at the end of the course.



Various questions are set by the instructor to be answered in order to guide the reflective journal writing. Student-teachers were assigned to deliver a micro lesson and the rest of the students were observing the lessons. Fifteen to twenty minutes were provided to write the reflective journals based on the questions. The following are some examples of reflective questions by the instructor:

- How does the teacher encourage students' participation and collaboration during the lesson? Why?
- Can you share an example of a lesson or an activity that you found engaging? Evaluate?
- What techniques she/he used to provide constructive feedback to students?
- How were learning and understanding assessed during the lesson?
- What changes will you make if you reteach the lesson?
- Do you incorporate technology into your teaching to enhance students' engagement and learning outcomes?
- Describe and evaluate the activity which was new to you. Highlight the advantages and disadvantages, and so on.

The journals are analyzed based on Hattan and Smith's (1995) model of level of reflection; the researchers randomly selected 70 reflective journals. They have evaluated them based on three levels (descriptive writing, reflective writing, and critical writing). Codes were given to each of the journals to keep them anonymous.

The first level focuses on describing events, feelings, context and points of views of the writers. The second level is reflective writing, at this level the concentration is primarily on review situations and events faced by the writer and deliberates the issues and questions, problems that need to be addressed. The writer is enquired to assess or judge decisions also provide alternatives. The focus is on a specific situation or occurrence. The third level, which is the highest level of reflection, seeks to develop student's critical thinking. The focus is on wider debates, assumptions, considering alternatives, and the consequences of action/ decision.

The researchers found that the majority of the journals (53 journals) student-teachers remained at the description level rather than critical reflection;



students tended to highlight the main aspect of the lesson rather than evaluating the lesson critically. As evidence, the statements from the students' reflective journal writing:

‘He used new activity and it was interesting’ (Student 30C)

‘I didn’t notice any creative activity it as just a simple presentation,’
(5A student)

‘She was comfortable and nice and clear’ (student 21B)

‘The activity was about describing pictures “the students were engaged by doing variety of activities that excited the students” (student 5B) etc.

Only eight reflective journals out of seventy journals stand at the highest level of reflection as they pretend to provide suggestions, alternatives, and evidences of the journals are (17C, 3A, 30A, 26A, 23A, 23B, 22C, 19A):

‘If I were him, I would use more engaging activities’

” I would try to simplify them and give them more examples”, “instructions should be short and clear”

‘His voice was good and he could control the class because he was aware of students’

‘He could bring an activity which is effective and useful for the students’

‘The teacher was not active; I would be an active teacher to make the students more engaged’

‘If I reteach the lesson, I will try to add a creative or interesting game about the topic’

‘I only suggest to care about the little grammar and pronunciation mistakes that she had’.

As it can be noticed that 9 reflective journals reached the second level (reflective writing) of reflection. The writer evaluated the micro-lessons by providing reasons to judge the incidence; the journals are (19B, 7B, 1C, 32A, 32B, 27A, 27B, 27C, 19C) some of the students' statements for example:

‘I liked the activity because not only it was enjoyable but it could adapt different levels’



“It will not be useful because perhaps they cannot find the directions easily”

“The pair work was good to me because students felt more secure and they enjoyed this activity more”

“The video that she brought was interesting because it included cartons that students like”

“They will be motivated and want to participate a lot”, “they may get confused because of the video”.

The last open-ended question (Do you think students need initial training on writing a reflection journal? Why or why not?) clarifies that students require further training to write reflective journals critically; for instance, students stated that:

“Yes, because there are some students who doesn't know how to start or write a reflection and they don't know why the need to write it and how share their reflection with others”

” Yes, because some students don't know how to express their opinion and share their experience”

” Providing initial training on writing a reflection journal can be beneficial for students. Reflection writing is a unique skill that requires practice and guidance to develop effectively. Many students may not be familiar with the structure, format, or expectations of a reflection journal. Training can help them understand the purpose of reflection writing”

” Yes, I believe students can benefit from initial training on writing a reflection journal. It helps them understand the purpose, structure, and techniques for effective reflection”

Spaulding and Wilson (2002) studied 34 journals. They suggested that writing reflective journals can help four purposes. They stated that journal writing is significant for students; it aids to record thoughts and experiences, creates and preserves a connection with the lecturer. Accordingly, reflective journal writing can serve in encouraging students' critical thinking competence once students practice the writing procedure to examine classroom challenging matters also, to launch substitute tackling to those issues (Dyment, and O'Connell, 2003).



Dymont and O'Connell (2010) pursued to discover the incompatible outcomes, the majority of journals encompass generally descriptive levels of actions, with slight to no critical reflection. They acknowledged a sequence of aspects that might bound or aid high quality of reflection. The factors are precision of expectations, responses, training, and assessments.

5. CONCLUSIONS

The results of this research conclude that reflection is one of the most beneficial tools that can be utilized to improve learning and endorse critical thinking skills in students. It is revealed that student-teachers have positive attitudes towards reflection journal writing. It appears that keeping journals offers an opening opportunity for learners to reflect on their learning experiences, enhance writing skills, and expose to diverse learning strategies that they might use in the future. It was also claimed that it is a vital tool to empower critical thinking.

Furthermore, the results indicate that reflection writing has several benefits in the classroom in terms of categorizing the present state of knowledge gained and support them to become more self-independent learners. Journals results presented a contradictory view compared to the questionnaire that the level of reflection was primarily remained at a descriptive level, which is the lowest level of reflection according to the Hatton and Smith model. Surprisingly, only 8 reflective journals out of 70 journals stand at the highest level of reflection as they pretend to provide suggestions, alternatives, and evidence. Also, 9 reflective journals reached the second level (reflective writing) of reflection the writer evaluated the micro-lessons by providing reasons to judge the incidence. Therefore, further trainings need to be organized for students to develop writing reflective journals critically.

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Appendix 1 Questionnaire Section One

1. Do you believe that reflection develops critical thinking?

not at all a little somewhat quite a bit a great deal

2. How confident are you to evaluate and analyze information critically?

Not confident

little confident

Somewhat confident

Quite confident Very confident

3. In what way has reflection helped you improve your critical thinking skills? (select all that apply)

improved ability to analyze and evaluate information

Improved ability to identify biases and assumptions

Improved ability to think creatively and generate ideas

Improved ability to communicate effectively

4. How much you rate the quality of your critical thinking skills before and after incorporating reflection into your learning experiences in college?

Much worse before reflection

Slightly worse before reflection

About the same before and after reflection

Slightly

better after reflection



Much better after reflection

5. How significant do you believe critical thinking skills are for your academic success?

Not at all important A little important

Somewhat important

Very important Extremely important

6. Do you believe that reflection should be incorporated into various stages in college?

Yes, definitely Yes, but only in certain situation No, not necessarily

No, not at all

Second Section

7. Reflective Journal writing assisted me to express my opinions

8. Reflective Journal writing permitted me to describe what I understood

9. Reflective Journal writing is a chance to increase self-knowledge

10. Reflective Journal writing enthused my critical thinking skills

11. Reflective Journal writing was a mean of thinking to discover my learning

12. Reflective Journal writing was a chance to grow and strengthen my writing skills

13. Reflective Journal writing aided me to share my experiences

14. Reflective Journal writing assisted me to reply to my feelings and thoughts

15. Reflective Journal writing boosted my communication skills

16. Regular journal writing improved my creativity

17. I did not have adequate time to write my journals

18. I found it easy to write my journal.

19. I would prefer to share my writing to my classmates

20. I could not comprehend what I should write in my reflective journal.

Section Three

Open-Ended Questions

1. How much does reflection contribute to enhance students critical thinking abilities?

2. Have you noticed any changes in a student's critical thinking abilities after they have reflected on their learning? Give example

3. Do you believe reflection increases students' autonomy? WHY

4. Do you believe reflections helps students to articulate thoughts and ideas.



5. Do you believe that reflection develop thorough understanding of complex topics or issues
 6. Do you believe reflection foster the ability to make informed decision as result of practicing reflection regularly
 7. What strategies do you use when reflecting to encourage deeper thinking
 8. Can you describe a time when reflecting on a topic helped you gain a new perspective or insight that you had not considered before
 9. What do you think of utilizing reflection paper as a major assessment tool? Why? Why not?
- Do you think students need initial trai

