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Self -Assessment and Reflection on Iraqi EFL University Students Critical Thinking

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A B S T R A C T

Self-Assessment and Reflection is a strategy used to develop metacognitive skills particularly critical thinking. The current study aims at finding out: to what extent that the Self-Assessment and Reflection strategy effect on the level of university students' critical thinking. The effect using Self-Assessment on Iraqi EFL university students in critical thinking. The effect of Reflection on Iraqi EFL university students in critical thinking. The correlation between Iraqi EFL university students Self-Assessment and Reflection for the two groups. The using of Self-Assessment and Reflection on the experimental group students' achievement at the recognition and production levels. The sample of the study is 60 students have been randomly selected from department of English- third stage. It is divided into two equal groups, experimental and control groups. The experimental group has been taught according to the Self-Assessment and Reflection strategy, while the control group has been taught by the conventional method. An achievement test has been constructed and applied to the two groups. Metacognitive Inventory awareness questionnaire is used to assess students' self-assessment. Kember Reflection questionnaire is used to assess students'' reflection. The results indicate that using Self-Assessment and Reflection in the classroom is more effective than using the conventional method for developing critical thinking skill.

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التقييم الذاتي والتأمل في التفكير النقدي لطلبة الجامعة دارسي اللغة الإنكليزية لغة اجنبية

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الخلاصة:

التقييم الذاتي والتأمل هي استراتيجية تستخدم لتطوير المهارات ما وراء المعرفية وخاصة التفكير النقدي. تهدف الدراسة الحالية إلى معرفة: إلى أي مدى تؤثر استراتيجية التقييم الذاتي والتأمل على إنجاز التفكير

النقدي لدى طلاب الجامعة. تأثير استخدام التقييم الذاتي على طلاب الجامعة العراقيين الذين يدرسون اللغة الإنجليزية لغة أجنبية في التفكير النقدي. تأثير التأمل على طلاب الجامعة العراقيين الذين يدرسون اللغة الإنجليزية لغة أجنبية في التفكير النقدي. العلاقة بين التقييم الذاتي والتأمل لدى طلاب الجامعة العراقيين الذين يدرسون اللغة الإنجليزية لغة أجنبية للمجموعتين. استخدام التقييم الذاتي والتأمل على إنجاز طلاب المجموعة التجريبية في مستويات التعرف والإنتاج. عينة الدراسة هي 60 طالبًا تم اختيارهم عشوائيًا من قسم اللغة الإنجليزية – المرحلة الثالثة. تم تقسيمها إلى مجموعتين متساويتين، تجريبية وضابطة. تم تدريس المجموعة التجريبية وفقًا للاستراتيجية، بينما تم تدريس المجموعة الضابطة بالطريقة التقليدية. تم بناء اختبار تحصيلي وتطبيقه على المجموعتين. تم استخدام استبيان الوعي بالمخزون ما وراء المعرفي لتقييم التقييم الذاتي للطلاب. يُستخدم استبيان كمبر للتأمل لتقييم قدرة الطلاب على التأمل. وتشير النتائج إلى أن استخدام التقييم الذاتي والتأمل في الفصل الدراسي أكثر فعالية من استخدام الطريقة التقليدية في تنمية مهارات التفكير النقدي.

الكلمات المفتاحية: التقييم ,تقييم الذات ,التأمل ,التفكير النقدي ,التفكير.

Section One: Introduction

1.1 Statement of the Problem

Reflection and self-assessment are valuable processes that facilitate learning from experiences, but they serve different purposes. Reflection involves revisiting past experiences to uncover insights about oneself, behaviors, values, or knowledge, without specific performance criteria. Its main aim is to clarify uncertain situations (Dewey, 1938) and fully process what has occurred, leading to a sense of closure rather than endless rumination. This process often includes divergent thinking and may involve journaling. In contrast, self-assessment focuses on evaluating one's performance to enhance it. It is more proactive, as it establishes performance criteria before the action is taken or reviewed, and during this process, individuals note their strengths, areas for improvement, and insights (Wasserman & Beyerlein, 2007) based on those criteria.

Self-assessment and reflection is used in learning to enhance a student's learning potential and educational outcomes. Self-assessment and reflection is a powerful way to enhance a student's learning experience. It plays an important role in

teaching students not just what to learn, but also how they learn and what they can do to improve their learning outcomes. By incorporating tasks that require students to critically reflect on their work, processes and learning style; they are given the opportunity to identify gaps in their knowledge or skill set and achieve greater autonomy and deeper learning and metacognition. Self-assessment and reflection involves students reviewing their work and reflecting on their learning progress. This helps students participate in and take ownership of their own learning.

The study aims to investigate the effect between EFL university students' self-assessment and reflection and their critical thinking. Encouraging reflection and self-assessment helps students develop important cognitive and metacognitive skills that help them track their thinking and learning. Students learn to think about thinking. In this strategy, students are able to think about whether the content is useful or new to them. Reflection helps them think about how the content makes sense.

Thinking and reflection among students who provide valuable feedback that makes the teacher aware of how to benefit from it or participate in the learners' abilities in each new topic with its success.

1.2 Aims of the Study

The current study aims at finding out:

1. To what extent that the Self-Assessment and Reflection strategy effect on the achievement of university students' critical thinking.

2. The effect using Self-Assessment on Iraqi EFL university students in critical thinking.

3. The effect of Reflection on Iraqi EFL university students in critical thinking.

4. The correlation between Iraqi EFL university students Self-Assessment and Reflection for the two groups.

5. The using of Self-Assessment and Reflection on the experimental group students' achievement at the recognition and production levels.

1.3 Hypotheses of the study

To verify aims of this study, the following hypotheses are proposed:

1-There are no statistically significant differences between the mean scores of the experimental group, which is taught by using self-assessment and reflection strategy in achievement (written test) and the control group, which is taught by conventional method in posttest.

2-There are no statistically significant differences in the mean scores of the students' achievement in the pretest and posttest.

3-There are no statistically significant differences between the mean scores of the students' achievement at the recognition level and the production level of the Posttest.

4- There are no statistically significant differences between the mean scores of the experimental group and the control group in Self-Assessment Questionnaire.

5- There are no statistically significant differences between the mean scores of the experimental group and the control group in Reflection Questionnaire.

1.4 Value of the Study

The value of the present Study can be stated as following:

1. Promoting self-assessment and reflection enable students to improve their own critical thinking skills that are important for their academic success, to identify their strengths and weaknesses, and to encourage students' sense of responsibility in learning.

2. Providing deep insights to the educational context, Teachers adapt self-assessment and reflection in their teaching practices to understand students' perceptions and skills.

3. Providing curriculum designers with valuable insights for enhancing students' self-awareness of their critical thinking abilities.

1.5 Limits of the Study

The study is limited to Iraqi EFL third year university students at Tikrit University/Collage of Education for Humanities/English Department during the academic year 2024-2025 to study "Self -Assessment and Reflection of Iraqi EFL

University Students Critical Thinking" in teaching *Longman Academic Writing Series Essays.*

Section Two: Theoretical Background

2.1 The Concept of Self-Assessment

Since there is no universally accepted meaning of the term, the idea of self-assessment is up for debate. The evolving idea incorporates a number of viewpoints from different authors and scholars. Dickinson (1987), for instance, defined self-assessment as a technique that allows students to evaluate and monitor their proficiency, performance, and understanding levels in order to have a comprehensive view of their academic development. This description situates self-evaluation within a constructivist framework. But according to Underhill (1991), self-assessment is the simplest, least expensive, and fastest method of assessment since it can motivate students to participate in the examination of their oral or expressive abilities.

According to Underhill's definition, self-evaluation is consistent with behaviorist beliefs. Blatchford's (1997) formulation gives self-evaluation a comparative component. Blatchford specifically describes it as the method by which students are able to assess and gauge their own progress in comparison to their peers' achievement. Others, on the other hand, have rejected the idea that self-assessment is in any way comparative, arguing that it solely entails pupils evaluating their own accomplishments or shortcomings in a way that increases self-awareness. Dikel (2005), for instance, argued that self-assessment is a means by which students become aware of their individual learning preferences, learning characteristics, and reactions to specific learning situations.

In particular, self-assessment is a learner's subjective judgment of their linguistic proficiency and their capacity to use the target language in a variety of contexts, according to Mousavi (1999). However, the majority of definitions of self-assessment describe it in terms of one's skills, methods, or outputs, which might make the phrase more difficult to define. Epstein et al. (2008), for instance, described self-assessment as an ongoing process of self-monitoring from one moment to the next; it involves observing our own behaviors, being curious about the consequences of those behaviors, and being willing to change our behavior and way of thinking by taking note of what we see.

It is a descriptive and evaluative act that a student does in regard to their own academic talents and development, according to Brown and Harris (2013). It is defined as a "wide variety of mechanisms and techniques through which students describe (i.e. assess) and possibly assign merit or worth to (i.e. evaluate) the qualities of their own learning processes and products" by Panadero, Brown, et al. (2016). There is also disagreement on the phrase itself, as evidenced by the variety of definitions for the concept of self-assessment.

Self-assessment is also known as self-appraisal, self-rating, or self-evaluation. These phrases are frequently used interchangeably in the literature and are frequently applied differently to indicate self-assessment. The assessment or appraisal of performance value and the identification of both good and negative characteristics with the goal of improving future learning outcomes is what Klenowski (1995) defined as self-evaluation. Compared to other self-assessment definitions, which are more limited, Klenowski's definition is a little more expansive and focuses on the procedures that students employ to calculate their mark.

Klenowski's term and Dickinson's (1987) definition are similar in that they are both situated within a constructivist framework that emphasizes assessment and data collection on areas that need improvement. Students who use a scale to rate their performance and growth are generally referred to as self-rating (Behar-Horenstein et al., 2018; Cheng et al., 2010; Goh et al., 2010; Taheri et al., 2014; Williamson, 2007). Although the phrases self-assessment and self-appraisal are frequently used interchangeably, other authors, including Van Praag et al. (2017), use the term self-appraisal to refer to their own assessment of their own success.

Some academics, such as Haughton and Dickinson (1988), Oscarson (1989), and Bachman (2000), have attempted to define self-assessment based on its goal because it is a difficult concept to define. Similarly, Andrade and Cizek (2010) and Andrade (2018) contended that the majority of definitions fail to include the goal of self-evaluation. The two forms of self-evaluation that have been recognized in the literature are formative and summative assessment .

Self-assessment is intended to produce feedback with the goal of fostering learning and enhancing performance, according to Andrade and Cizek (2010), and Andrade (2018), who argued that "self-assessment is feedback" and that the purpose of feedback is to direct changes that enable deep and enhanced learning and achievement. As covered in the next section, this argument highlights feedback as

an essential component of the student self-assessment process and may assist steer clear of flimsy self-assessment implementations.

Self-assessment means that students make judgements about their own achievement and learning processes and take part in decisions about action for further progress in learning. (Sebba, Crick, Yu, Lawson, Harlen, & Durant, 2008).

The operational definition: Self-assessment is the process of evaluating one's own skills, knowledge, and performance. It involves an honest appraisal of one's strengths and weaknesses, often with the goal of identifying areas for improvement and setting personal goals.

2.2 Self-Assessment and Critical Thinking

Self-assessment can enhance critical thinking and self-regulated learning because it establishes a connection between the two, which improves learning (Watson, 2002). A learner who can think critically is able to observe, evaluate, appraise, and choose the most effective learning methods; as a result, a critical thinker is a superior self-assessment (Paul et al., 1997).

Actually, self-assessment means giving students the chance to track their progress and focus only on their education (Harris, 1997). Students should take advantage of this chance by applying critical thinking skills. Self-assessment allows students to participate actively in the evaluation process and to think critically; it stimulates the development of cognitive abilities like critical thinking, teamwork, decision-making, self-monitoring and regulation, and problem-solving; it invites students to offer constructive criticism, suggest modifications, reflect, and make wise choices (Sluijsmans et al., 1998; Sung et al., 2005).

Similarly, Paul emphasized the importance of self-assessment and contended that it helps students develop into autonomous learners, who in turn exhibit critical thinking as one of their characteristics. A good critical thinker is also a good self-assessor, according to Paul et al. (1997), who said that self-assessment is an essential component of critical thinkers, who are able to observe, evaluate, judge, and choose the most productive way of thinking. Accordingly, it is argued that giving students the chance to evaluate their own performance could improve their capacity for self-regulated learning and critical thinking.

2.3 Reflection

Learning is greatly aided by self-reflection, or just reflection. According to Moon (2004), reflection is not just a "part of learning" but also a mental process or "secondary learning" that leads to learning. As students try to make (new) sense of what they have learned thus far or new information, reflection is triggered, which frequently results in new insights and understandings. Furthermore, according to Moon 2004 notes that students might cultivate "a sense of ownership of the material of learning." Critical thinking, theory development, problem solving, decision making, empowerment, emotional growth, and other positive outcomes are only a few of the potential benefits of reflection (Moon, 2004).

Since Dewey's (1991) major work, which highlighted the beneficial roles that reflection might play in fostering students' self-reflection, critical thinking, and the demonstrable development of professional values or skills, interest in the role of reflection in education has increased among educators and researchers. There are many definitions of self-reflection (or just reflection) in the literature from various sources. "Active, persistent, and careful consideration of any belief or supposed form of knowledge in the light of the grounds that support it and the further conclusion to which it tends" is how Dewey described reflection in his work.

Mann et al. (2009) contend that there are parallels between our conception of critical thinking and Dewey's definition of reflection. "Those intellectual and affective activities that individuals engage into explore their experience, which leads to new understanding and appreciations" is how Boud et al. (1985) aptly define reflection in the context of learning, with a focus on one's own personal experience as the object of reflection. On the other hand, Moon's (1999) definition of reflection integrates reflection into the learning process and places greater emphasis on the relationship between reflection and learning. Regarding relatively complex or unstructured concepts for which there is no clear answer, she defines reflection as "a form of mental processing with a purpose and/or anticipated outcome".

Despite concentrating on various contexts, all three definitions stress the importance of critically analyzing knowledge and experience with a purpose in order to gain a deeper understanding and meaning. Despite their differences, the definitions of self-reflection all support enhancing student learning. These interpretations have an impact on self-reflection in the current study. It describes

the procedures a student goes through to reflect on his prior learning experiences and the actions he took to facilitate learning (i.e., self-reflection on how learning occurred) and the investigation of links between the taught knowledge and the student's own perceptions of it (i.e., self-reflection on what was learned). It is argued that because these kinds of activities can result in serious and educated reflections on one's actions and behaviors, they help students improve their self-reflection skills, which in turn improves their academic performance.

Reflection in teaching is a deliberate and structured process in which teachers critically examine their own beliefs, assumptions, and practices to gain insights and improve their teaching. Farrell emphasizes that reflection involves a deep analysis of the entire teaching experience, including planning, teaching, and assessment, to promote professional growth and responsiveness to students' needs. (Farrell, 2015)

The operational definition: Reflection is the practice of thinking deeply about one's experiences, actions, and learning processes. It involves analyzing past events to gain insights, understand their impact, and inform future behavior. Reflection can enhance personal growth and learning by fostering a greater awareness of one's thoughts and feelings.

2.4 Reflection and Cognitive and Metacognitive Processes

Both cognitive and metacognitive processes are involved in self-reflection, which enables in-depth contemplation and evaluation of one's own ideas, experiences, and behaviors (Dewey, 1933; Schön, 1983). Mental Functions: The active use of mental abilities such attention, perception, memory, and reasoning is a component of cognitive processes in self-reflection (Moon, 1999).

Attention: People focus their awareness on pertinent information for reflection by selectively attending to particular components of their experiences or stimuli.

Perception: By identifying patterns, connections, and contradictions, they analyze and make meaning of their observations, experiences, and perceptions (Gibbs, 1988).

Memory: To guide their reflective process, people access pertinent information from memory, such as prior experiences, knowledge, and acquired techniques (Schwartz & Perkins, 2018).

Reasoning: They examine and assess their ideas, convictions, and behaviors in light of their objectives and values by applying logical reasoning and critical thinking (Zeichner & Liston, 2013).

Methods of Metacognition Higher-order thinking abilities known as metacognitive processes allow people to keep an eye on, control, and assess their cognitive processes (Flavell, 1979).

Monitoring: During self-reflection, people keep an eye on their thoughts, feelings, and behaviors while also being aware of their exterior behaviors and interior experiences (Locke & Latham, 1990).

Regulation: By establishing objectives, formulating plans, and modifying their strategy in response to feedback and self-evaluation, they control their cognitive processes (Deci & Ryan, 2000).

Evaluation: People evaluate how well their reflective processes are working by taking into account the caliber of their insights, the breadth of their analysis, and the degree of their learning and development (Hattie, 2009).

In conclusion, meaningful learning, critical analysis, and in-depth introspection are made possible by the intricate interaction of cognitive and metacognitive processes that occur during self-reflection (Brooke-ield, 2017). By utilizing these methods, people can learn more about their attitudes, actions, and experiences, which promotes self-awareness, growth, and career advancement.

2.5 Critical Thinking

According to Schafersman (1991), Critical thinking means correct thinking in the pursuit of relevant and reliable knowledge about the world. Critical thinking is another way to describe its reasonable, reflective responsible and skillful thinking that is focused on deciding what to believe or what to do. A person who thinks critically can ask questions, gather relevant information and creatively sort through this information, reason logically from this information, and come to reliable and trustworthy.

Critical Thinking is a mode of thinking about any subject, content or problem. It is an ability with which students can develop their thinking skill by manager their thinking structures and intellectual criteria around them. It as intellectually disciplined process in which students actively apply, synthesis and evaluate information by observation, reasoning, reflection and communication. Critical thinking is not an expect students to answer questions in classroom, but instead of improves students‟ ability to solve problems, making decisions and higher order thinking (Case, 1995).

Critical thinking is an ability to justify and reflect on what a student believes. It is as reasonable and reflective thinking that focuses on deciding what to believe or

do. Critical and creative thinking are connected to each other, in producing effective thinking and problem solving so that it is as a family of higher order thinking skills, creative thinking and decision making. For this reason, teaching higher order cognitive thinking like critical thinking has always been ultimate aim of education (Spendlove, 2008).

Critical thinking is a mental process of analyzing or evaluation information, particularly statement or propositions that are offered as true critical thinking can be described as " a gradual progression from the superficial to increasingly complex ". Critical thinking is the understanding of a problem and how to evaluate it in different situation (Mendelman, 2007).

Thinking is the base of all cognitive activities and is unique to human beings. It involves analysis of information that it receive from environment, such analysis occur by means of abstracting, reasoning, imaging, problem solving, judging and decision making. The mind is the idea while thinking process of the brain involves in processing information such as when individual form concept, engage in problem solving to reason and make decisions. Thinking is the manipulation or transportation of some internal representation (Halpern, 2003a). One of the main aims of education should be improving students" thinking skills as well as motor skills, which is a basic goal of contemporary approaches in education. Thinking ability is a basis case of students" life because all of them need to achieve an objective. It is the reasoning, and that reason is a chain of simple ideas linked by applying strict rules of logic (McGregor, 2007).

Critical thinking is the process of thinking this questions ideas and it is a way to ascertain whether a claim is true, false, or partly true. " It is a self-guided, self-disciplined thinking which attempts to reason at the highest level of quality in a fair-minded way" (Mathews and Lowe, 2011).

The operational definition: Critical thinking is a fundamental process that involves the ability to analyze, evaluate, and synthesize information in a systematic and logical process. It involves questioning assumptions, considering alternative perspectives, and making reasoned judgments based on evidence. Critical thinking is essential for problem-solving and decision-making in various contexts.

Section Three: Procedures

3.1 Population and Sample of the Study

The target population for this study consists of EFL university students enrolled in (English Department at Tikrit University/ College of Education for Humanities), (English Department at Tikrit University/ College of Education for Women) and (English Department at Samara University/ College of Education) third stage students in Salah Al-Din Governorate. During the academic year (2024/2025) The total number of students in third stage is (264).

The sample of the current study chosen randomly from university of Tikrit / third stage in English department (60) students in Tikrit city, during the academic year (2024/2025). The students are distributed into two sections (A and B). These sections have been chosen randomly to present the experimental and control groups, section (B) has been chosen to be the experimental group which consists of (30) students, while section (A) has been chosen to be the control group, which consist of ()students, (20) student have chosen from section(A and B) to be the pilot study. Thus, the total number of the sample participants is (80) students, as shown in the table(3.1)

Table (3.1)

The Sample of the Study

Group	Section	Number	Total
Control	A	30	60
Experimental	B	30	

3.2 Instructional Materials

The same instructional material has been taught to the two groups of students from the textbook *Longman Academic writing series Essays* for third stage students .The two groups experimental and control are study the 4 and 5 chapters .

The researcher herself has been taught the two groups i.e. the experimental group and the control group. The experimental group is taught according to the Self-assessment and Reflection in teaching essay whereas, the control group is taught according to the conventional method. The experiment of this study has been carried out in the second semester of the academic year 2024-2025 .It started in the

28th of January 2025 and ended up in the 11th of March 2025 .It lasted for 6 weeks .The lectures are arranged to be on Sunday and Tuesday for the two groups.

In the present study, two questionnaires are used to measure self-assessment with critical thinking and Reflection with critical thinking. Self-assessment questionnaire is Metacognitive Inventory awareness adapted from Schraw & Dennison (1994) with some modification. Reflection questionnaire is Kember Reflection questionnaire adopted from Kember et al. (2000).

The first questionnaire is about Self-assessment, divided into two main categories; self-assessment in EFL and critical thinking in EFL. It consist of 20 items.

The second questionnaire is about Reflection, contain four major domains: habitual action, understanding, reflection and critical reflection. It contains 16 items, each domain contains four items.

Section Four: Analysis of Data, Discussion of Results and Conclusion

4.1 Comparison Between the Mean Scores of the Experimental Group and that of the Control Group in the Posttest

The mean scores and standard deviation of the two groups have been obtained. Results show that the mean scores of the experimental group is (75.40) and the standard deviation (5.28). While the mean scores of the control group is found to be (55.96) and the standard deviation is (7.08).By using the t-test formula for two independent samples, the calculated t-value is found to be(12.661), while the tabulated t-value is to be(2.00) at the degree of freedom (58) and the level of significant (0.05). As shown in table (4.1).

Table (4.1)

The Mean Scores, Standard Deviation, T-value of the Two Groups in the Posttest

Group	No. of Students	Mean	SD	T-value		DF	Level of Significant
EG	30	75.40	5.28	Calculated	Tabulated	58	0.05
CG	30	55.96	7.08	12.661	2.00		

4.2 Comparison Between the Achievement of the Experimental Group in the Pretest and the Posttest

To find out if there is any significant difference between the mean scores of the experimental group in the pretest and the posttest achievement, the mean scores and the standard deviation have been obtained.The mean scores of the experimental group in the pretest is (45.53) and the standard deviation is (6.82). While the mean scores of the experimental group in the posttest is (76.40) and the standard deviation is (5.28). The calculated t-value is (19.799), which is found to be higher than the tabulated t-value which is (2.00), at the degree of freedom (58) and the level of significance (0.05), as shown in table (4.2)

Table (4.2)

The Mean Scores, Standard Deviation, T-value of the Two Groups in the Pretest and Posttest

Experimental Group	No. of Students	Mean	SD.	T-value		DF	Level of Significant
Pretest	30	43.53	6.82	Calculated	Tabulated	58	0.05
Posttest	30	76.40	5.28	19.799	2.00		

4.3 Comparison Between the Mean Scores of the Experimental Group and the Mean Scores of the Control Group at the Recognition and Production Levels

The mean scores of the Experimental group at the recognition level is (45.70) and standard deviation (3.22), while the mean scores of control group at the recognition level (33.60) with standard deviation (4.22). The mean scores of the Experimental group at the recognition level is (30.70) and standard deviation (2.08), while the mean scores of control group at the production level (22.33) with standard deviation (2.88). At the recognition level, the calculated t-value is (12.435) which is higher than tabulated t-value (2.00), at the degree of freedom (58) and the level of significance (0.05). At the production level the calculated t-value is (12.882) which is higher than tabulated t-value(2.00), at the degree of freedom (58) and the level of significance(0.05). As shown in table (4.3)

Table (4.3)

The Mean Scores, Standard Deviation, T-value of the Two Groups at the Recognition and Production Levels

Level	Group	No. of Students	Mean	SD.	T-value		DF	Level of significance
					Calculated	Tabulated		
Recognition	EG	30	45.70	3.22	12.435	2.00	58	0.05
	CG	30	33.63	4.22				
Production	EG	30	30.70	2.08	12.882	2.00	58	0.05
	CG	30	22.33	2.88				

4.4 Comparison Between the Mean Scores of the Experimental Group and the Mean Scores of the Control Group in the Self-Assessment Questionnaire

To find out whether there is any significant difference between the mean scores of the experimental group and the mean scores of the control group in the Self-Assessment questionnaire. The mean scores and standard deviations have been obtained.

The mean scores of the experimental group is (78.10) with standard deviation (6.62). While the mean scores of the control group is (64.73) and the standard deviation is(7.93). The calculated t-value is (7.083), which is higher than the tabulated t-value (2.00), at the degree of freedom (58) and the level of significance(0.05). As shown in table (4.

Table (4.4)

The Mean Scores, Standard Deviation, T-value of the Two Groups in Self-Assessment Questionnaire

Group	No. of Students	Mean	SD.	T-value		DF	Level of significance
EG	30	78.10	6.62	Calculated	Tabulated	58	0.05
CG	30	64.73	7.93	7.083	2.00		

4.5Comparison Between the Mean Scores of the Experimental Group and the Mean Scores of the Control Group in the Reflection Questionnaire

To find out whether there is any significant difference between the mean scores of the experimental group and the mean scores of the control group in the Reflection questionnaire. The mean scores and standard deviations have been obtained.

The mean scores of the experimental group is (68.43) with standard deviation (4.95). While the mean scores of the control group is (47.50) and the standard deviation is(6.88). The calculated t-value is (13.516), which is higher than the tabulated t-value (2.00), at the degree of freedom (58) and the level of significance(0.05). As shown in table (4.5)

Table (4.5)

The Mean Scores, Standard Deviation, T-value of the Two Groups in Reflection Questionnaire

Group	No. of Students	Mean	SD.	T-value		DF	Level of significance
EG	30	68.43	4.95	Calculated	Tabulated	58	0.05
CG	30	47.50	6.88	13.516	2.00		

4.6 Discussion of the Obtained Result

The findings from the analysis of critical thinking abilities among EFL university students reveal the effectiveness of the Self-Assessment and Reflection strategy compared to conventional methods.

The obtained result from the experimental and control groups indicate that the experimental group showed a statistically significant improvement in their critical thinking. The mean score of (76.4) for the experimental group not only exceed the mean score (55.96) for the control group but also suggests that students have an adequate level in critical thinking. This does not aligns with the first hypothesis that indicate there are no statistically difference on students‘ ability of critical thinking in the posttest. Given this results from the experimental group, educators may consider cooperating Self-Assessment and Reflection across other educational contexts. Such strategies could foster deeper understanding and enhancing overall academic achievement.

The analysis of the data related to the second hypothesis reveals a statistically significant difference in critical thinking abilities between the experimental group, which taught by Self-Assessment Strategy , and the control group, which followed a conventional method in the pretest and posttest.

The mean score of the posttest (76.4), while mean score of the pretest (43.53). The significant differences observed between the pretest and posttest does not support the second hypothesis of this study. The findings highlight the effectiveness of the Self-Assessment and Reflection in improving critical thinking among EFL university students, suggesting that this approach should be integrated into methods of language teaching.

The findings from the experimental group and control group T-test provide valuable insights into the achievement of the experimental group at both the recognition and production levels. The mean scores indicate that the students scored higher scores in the recognition level which is (45.7) compared to the production level which is(30.70). The statistical analysis reveals that the difference between these means is significant.

This does not stand with the third hypothesis which indicates that there are not statically significant difference at the recognition and production levels.

The findings from the Self-Assessment questionnaire indicate a statistically significant difference among EFL university students. The mean scores of the experimental group (78.1) while the mean scores of control group (64,73).

This does not stand with the fourth hypothesis which indicates that there are not statically significant difference in Self-Assessment questionnaires because obtaining this result indicate that Self-Assessment contributes in developing EFL university students' critical thinking.

The findings from the Reflection questionnaire indicate a statistically significant difference among EFL university students. The mean scores of the experimental group (68,43) while the mean scores of control group (47.50). This does not stand with the fifth hypothesis which indicates that there are not statically significant difference in Reflection questionnaires because obtaining this result indicate that Reflection contributes in encourage students to think critically and enhance their cognitive higher talents in order to generate new ways of thinking and facilitate their implementations.

Conclusions

The following conclusions can be formed based on the findings of the study:

1- The self-assessment and reflection strategy has a significant role in developing EFL University students' critical thinking.

2- The use of self-assessment in the EFL Classroom encourages students' autonomy and responsibility about their learning.

3- The use of reflection in the EFL Classroom supports students' deeper understanding and thinking.

4- The students have positively interacted with the self-assessment and reflection strategy as it is foster in their learning process.

5- Self-assessment and reflection enable university students to have better critical thinking abilities than those who use the conventional method

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