

A Transformative Learning Theory and Self-Assessment Based Program to Develop EFL Critical Reading, Reflective Writing Performance, and Learner-Autonomy of Formal Language Secondary Schools' Students

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Abstract

The current study targeted at developing EFL critical reading, reflective writing performance, and learner-autonomy of the second year secondary schools students through the transformative learning theory and self-assessment based program. To achieve the purpose of this study, the researcher adopted the mixed-method design. The study participants involved (70) students from the second year secondary stage students from Hehia Formal Secondary School, Hehia Educational Directorate, Sharkia Governorate, Egypt. They were randomly allocated in two groups. A number of (35) students represented the study participants in the experimental group and (35) students for the control group. The study was conducted over a period of (8) weeks, along (16) sessions from "New Hello Book" assigned for the second year secondary stage students over the first semester of the scholastic year (2023/2024). To gather data, the researcher designed three main instruments to be validated represented in, an EFL critical reading performance test, an EFL reflective writing performance test, and a five-point Likert scale for learner-autonomy. These instruments were administrated before and after the treatment to both the treatment and non-treatment groups. Data were collected and analyzed statistically. Results revealed to the transformative learning theory and self-assessment based program had a positive effect on developing the experimental group critical reading, reflective writing performance, and learner-autonomy of the experimental group. In the light of these findings, some relevant recommendations and suggestions for further research were provided.

Key Words: EFL Critical Reading, EFL Reflective Writing, Learner-Autonomy, Transformative Learning Theory, Self-Assessment

1.1. Introduction

Language is recognized as an essential way of keeping relations with others' thoughts and cultures. These relations are shown through reading and writing as two importance language skills people use to exchange information, interact socially, investigate areas of critical analysis, and demonstrate their reflection. Besides EFL teachers have to supply their learners with pivotal knowledge and skills to be more autonomous learners.

AlSereidi (2019) pointed out that reading is the backbone of proficiency in any language. It is a basic yet influencing skill for 21st century learners, as the academic success both locally or globally is dependent on mastering reading skills. It can be said that reading is an essential language skill as it has a positive effect on obtaining knowledge and improving experience. It includes different levels of comprehension such as critical reading (CR). Chaichompoo (2017) reported that while individuals read critically, they make an attempt to translate, interpret and analyze what is explicitly and implicitly presented in the text to understand what the

writers mean and the messages they attempt to put across. In reading, students should learn how to separate main ideas from supporting details. This skill helps them to focus mainly on the gist of the reading passage.

Moreover, Kosimov (2022) stated that in EFL classrooms, reading exercises commonly include finding new words, reading relevant texts, finding answers to multiple-choice questions, true/false statements, or short discussions about reading choices. Beyond these practices, it is seldom to expand to other standards or to study critical reading in EFL books. Moreover, Khodary & Abd-Allah (2014) asserted that the importance of critical reading lies in making reading more than an act of gazing over a page of words, but a way to enhance analytical skills and expand intelligence. Therefore, it is crucial for teachers of English to help their students become critical readers.

Since reading and writing are interrelated skills, enhancing them is of a deep importance for students in EFL field. For reading critically, it is important not only to go through meanings included in texts, but also to interpret, go deeper, and reflect upon what is read through writing and analysis. Hence, developing students' critical reading is not only highly demanded in today's learning but also greatly connected to developing their reflective writing performance.

Crème (2005) defined reflective writing (RW) as the visual representation of one's reflective thinking and a mental processing of one's internal problem-solving activity. Unlike other writing genres, RW is more open-ended, questioning and exploratory, raising rather than answering questions, and enabling exploration of connections between ideas encountered in the course and the writer's experience.

Stark & Krause (2009) highlighted that when writing reflectively, student-writers begin to internalize what they learn, to take action as learners, and to develop their ability to think. The idea is to get student-writers to question what they know and learn, and to think about that knowledge in relation to their world. Reflection takes student-writers past and writing what they remember or what they were told. They must think about what they are thinking (metacognition) and then formulate their own meaning and understanding. Writing reflectively promotes reflective thinking, inquiry, and transcends simple memorization and recall.

Promoting critical reading and reflective writing is tightly integrated to promoting other psychological variables such as learner-autonomy. When students are able to perform such skills appropriately, their sense of autonomy in thinking and language performance will automatically increase.

Gavrilyuk (2015) referred to learner autonomy as a fundamental component of lifelong learning. Little (2015) defined learning autonomy as the extent to which learners demonstrate the ability to take control of their learning. It is a process that requires insight, a positive attitude, a capacity for reflection, and a readiness to be proactive in self-management. This belief is based on the premise that autonomy can increase motivation to learn and consequently, increase learning effectiveness. Zreagat & Kaur (2012) stated that one of the main factors influencing the process of learning foreign language, especially in English language classrooms is language learning autonomy.

Tran & Duong (2018) believed that in autonomous language learning environment learners can learn to be responsible for their learning; learn to be self-directed and make decisions about their learning; are autonomous individually or within groups; and focus on being independent and collaborative. Besides, Onozawa (2010) gave three reasons for the importance of autonomy in education; developing a lifelong ability to cope with the rapid social changes, fostering the learner's individuality, and developing the diversity of the learner's educational and cultural background.

Based on this review, two important elements are confirmed. First, students are expected to become critical readers, reflective writers, and more autonomous in their language learning process. This requires today's students be perform more critical and reflective practices, and feel more autonomy. It is necessary to develop such skills as they are intertwined with other language skills deeply. Second, although there are numerous strategies/theories used to develop these skills, more studies are needed to be carried out to investigate other theories that prove high levels of achievement and performance. Base on this conclusion, transformative learning theory and self-assessment are hoped to be beneficial in this concern.

The Transformative Learning Theory (TLT) was originally developed by Jack Mezirow in the mid of 1970s. It is described as being constructivist theory which holds that the way learners interpret and reinterpret their sense experience is central to making meaning and hence learning. It has two basic kinds of learning: instrumental and communicative learning. Instrumental learning focuses on learning through task-oriented

problem solving and determination of cause and effect relationships. Communicative learning involves how individuals communicate their feelings, needs and desires. It is defined as the process of effecting change in a frame of reference. A frame of reference includes a student's habit of the mind, as well as a personal point of view. Habits of mind refer to habitual ways of feeling, thinking, and doing that can be influenced by cultural, social, educational, economic, political, and psychological codes. Points of view are the student's personal beliefs and attitudes that can be changed over time and tend to be more accessible than habits of mind (Mezirow, 1991).

Albert (2018) indicated that in transformative learning, learners' beliefs are challenged and they become critical of their ways of thinking, thus affecting how they see the world. In a transformative learning classroom, students are presented with ideas or problems that are disruptive or contrary to their existing models. The students are guided to critically examine this idea or problem, reflect on their own assumptions, and engage in discourse. These processes take students on a journey, facilitating growth in new thinking experiences.

Ten phases of transformative learning theory students should go through. They are identified by Mezirow (1978) as follows:

1. **Disorienting a dilemma:** students are given new information that does not fit with their understanding of the world. This is known as a disorienting dilemma because it challenges their world view.
2. **Self-examination:** students examine and question their beliefs after learning that they do not fit with the information they have just been given.
3. **Critical assessment:** students re-assess their fundamental beliefs and assumptions in the light of the new information.
4. **Recognition:** students realize that others have gone through similar experiences.
5. **Exploration:** students consider how changing their beliefs will impact their lives.
6. **Action planning:** students look at what changes they will make to reflect their new beliefs.
7. **Knowledge acquisition:** students explore any knowledge and understanding they will need to reflect and expand their new outlook.
8. **Trying new roles:** students explore seeing things from a new perspective.
9. **Building confidence:** students become more confident with their new identity.
10. **Reintegration:** students understand the changes they have gone through and can apply their new knowledge and understanding to future challenges.

Mohammad et al. (2019) stated that learning English is not just memorizing grammar rules or acquiring a vocabulary; it involves representation of self and culture through language. Through transformative learning learners are involved in a kind of discourse that enables them to immerse in culture and use the language they learnt in a deep free manner. Moreover, they go on what we call self-explanation to understand their past experiences and plan for future actions.

Self-assessment (SA) is a powerful mechanism for enhancing learning. It encourages students to reflect on how their own work meets the goals set for learning concepts and skills. It promotes metacognition about what is being learned, and effective practices for learning. It encourages students to think about how a particular assignment or course fits into the context of their education. It imparts reflective skills that will be useful on the job or in academic research (Gehring, 2017).

Moqbel (2018) investigated the implementation of self-assessment in EFL grammar classroom to identify the attitudes of EFL learners at the Centre for Languages and Translation, towards self-assessment, their perceptions of the advantages of self-assessment, and the problems or difficulties that EFL learners may face while carrying out self-assessment activities. Findings indicated that learners perceive the benefits of self-assessment and have positive attitudes towards it. Results also reported that the participants did not have any

problems or difficulties while carrying out self-assessment activities, which may be due to the nature of the self-assessment technique and activities used and the sufficient training and guidance that the EFL learners received.

Khonamri et al. (2021) investigated self-assessment as a helpful technique for facilitating teaching and learning in language classrooms and EFL learners' oral performance. Findings showed self-assessment was helpful in improving students' oral performance. The qualitative analysis of the students' self-assessment report also revealed that students found self-assessment as a helpful technique to monitor themselves and reflect on their own work.

Statement of the Problem

The problem of this study could be stated in the poor performance of the second year secondary stage students' EFL critical reading, reflective writing, and low sense of learner-autonomy as confirmed by a pilot study results conducted by the researcher. Therefore, this study was an attempt to develop their critical reading, reflective writing, and learner-autonomy through the transformative learning theory and self-assessment which proved to be useful in this regard.

2.1 Questions of the Study

The present research tried to answer the following main question:

“What was the effect of a transformative learning theory and self-assessment-based program on developing EFL critical reading, reflective writing performance, and learner-autonomy of formal language secondary schools students?”

The following sub-questions were drawn from this main question:

1. What were EFL critical reading skills required for second year language secondary schools students?
2. To what extent did the second-year language secondary schools students perform EFL critical reading skills successfully?
3. What were EFL reflective writing skills required for second year language secondary schools students?
4. To what extent did the second year language secondary school students perform EFL reflective writing skills successfully?
5. What were the dimensions of EFL learner-autonomy required for second year language secondary schools students?
6. What were the features of a transformative learning theory and self-assessment-based program to develop EFL critical reading, reflective writing performance, and learner-autonomy of language secondary stage students?
7. What was the effect of a transformative learning theory and self-assessment-based program on developing EFL critical reading of second year language secondary schools students?
8. What was the effect of transformative learning theory and self-assessment-based program on developing EFL reflective writing of second year language secondary schools students?
9. What was the effect of a transformative learning theory and self-assessment-based program in developing learner-autonomy of second year language secondary schools students?

3.1 Aim of the Study

This study mainly aimed at developing EFL critical reading, reflective writing performance, and learner-autonomy of the second year formal language secondary schools students through a transformative learning theory and self-assessment based program.

4.1 Significance of the Study

Results drawn from this study were hopefully being beneficial to the following categories:

4.1.1 EFL Students

It would assist EFL secondary schools graders in:

- A. developing their performance levels in EFL critical reading and reflective writing through different tasks included in this program.
- B. Giving them chances to make sense of transformation experience in relation to themselves, others, and the conditions that shaped that experience.

4.1.2 EFL Teachers and Supervisors

It would be helpful in:

- A. Providing a thorough view of EFL critical reading and reflective writing skills and how to train secondary stage students on practicing them efficiently.
- B. Suggesting an effective solution for ending such classroom problems i.e. (transformative learning theory and self-assessment).
- C. Introducing appropriate instruments to assess learners' EFL critical reading, reflective writing, and learner-autonomy.

4.1.3 EFL Curriculum Designers and Textbook Developers

It would be helpful in:

- A. Confirming the importance of transformation in EFL curriculum for secondary school students.
- B. Providing them with successful-proven program that develop three (critical reading, reflective writing, and learner-autonomy).
- C. Supplying them with the beneficial standards to theorizing EFL methods of teaching, instructional instruments, activities, and the suitable assessment techniques for secondary stage.

4.1.4 EFL Researchers

It would inspire EFL researchers through:

- A. Opening new horizons and giving insight to conduct further research in EFL critical reading and reflective writing.
- B. Supplying them with research ideas regarding developing such skills through integrating them with psychological variables such as learner-autonomy.
- C. Paving the way to investigate the effect of transformative learning theory and self-assessment in relation to developing other language skills for other educational stages.

5.1 Instruments of the Study

In implementing the current study, the following instruments were designed and utilized:

1. An EFL critical reading pre-posttest and a rubric for scoring it.
2. An EFL reflective writing pre-posttest and a rubric for scoring it.
3. A five point Likert learner-autonomy scale.

6.1 Design of the Study

The mixed-method design was adopted in which a pre-experiment was conducted and supplemented by collecting qualitative data on an interview.

7.1 Hypotheses of the Study

Based on the abovementioned review of literature and previous related studies, the study formulated as follows:

1. There would be a statistically significant difference between the mean scores of the experimental group in the pre- and post-administrations of the EFL critical reading test favoring the post-administration.
2. There would be a statistically significant difference between the mean scores of the experimental group and the control group in the post-administration of the EFL critical reading test favoring the experimental group.
3. The transformative learning theory and self-assessment would have a positive effect on developing the experimental group EFL critical reading skills.
4. There would be a statistically significant difference between the mean scores of the experimental group in the pre-and post-administrations of the EFL reflective writing test favoring the post-administration.
5. There would be a statistically significant difference between the mean scores of the experimental group and the control group in the post-administration of the EFL reflective writing test favoring the experimental group.
6. The transformative learning theory and self-assessment would have a positive effect on developing the experimental group EFL critical reading skills.
7. There would be a statistically significant difference between the mean scores of the experimental group in the pre-and post-administrations of the learner-autonomy scale favoring the post-administration.
8. There would be a statistically significant difference between the mean scores of the experimental group and the control group in the post-administrations of the learner-autonomy scale favoring the experimental group.
9. The transformative learning theory and self-assessment would have a positive effect on developing the experimental group learner-autonomy.

8.1 Findings and Discussion

To determine whether students' critical reading, reflective writing performance, and learner-autonomy skills were developed after implementing the experimental treatment using the transformative learning theory and self-assessment based program, the hypotheses of the study were tested by using the Statistical Package for Social Sciences (SPSS) Program. Cohen's formula (Eta squared value (η^2)) was used to calculate the effect size of the intervention on the study participants. The Paired samples t-test was used to test the differences between the mean score of the experimental group participants in pre and post administrations of EFL critical reading performance test, EFL reflective writing performance test and learner-autonomy. Independent samples t-test was used to test the differences between the mean score of the experimental and control group students in the post administrations of the EFL critical reading performance test, EFL reflective writing performance test and learner-autonomy. **The general results of the current study confirmed that:**

1. There is a statistically significant difference between the mean scores of the experimental group in the pre and the post EFL critical reading test administration, in favor of the posttest administration. The researcher used the paired samples t-test to compare the mean scores of the experimental group students who were instructed through the transformative learning theory and self-assessment based program. The results are shown in Table 1

Table 1**Comparing the Pre and the Post Results of the Experimental Group EFL Critical Reading Performance Test**

No.	Main Skills	Test	N	Mean	SD.	df	t. Value	Sig
1.	Previewing	Pre	35	5.5	1.1	34	10.8	0.05
		Post	35	8.3	1.2			
2.	Making Inferences	Pre	35	6	1.3	34	12	0.05
		Post	35	9.4	1.5			
3.	Interpretation	Pre	35	4.3	1.1	34	7.9	0.05
		Post	35	6.8	1.2			
4.	Annotation	Pre	35	4.8	1.3	34	11.2	0.05
		Post	35	7.5	1.6			
5.	Analysis	Pre	35	2.9	0.85	34	10.7	0.05
		Post	35	5.4	0.87			
6.	Summarization	Pre	35	5	1.4	34	9.5	0.05
		Post	35	8	1.5			
7.	Evaluation	Pre	35	5.3	1.4	34	12.5	0.05
		Post	35	6.6	1.8			
	Overall EFL Critical Reading Skills	Pre	35	32	3.8	34	17.4	0.05
		Post	35	50	3.1			

*Significant at (0.05)

Table 1 indicated that there is a statistically significant difference between the pre and the post administration of the experimental group in favor of the latter one in the EFL overall critical reading skills and its sub-skills where t-value is (17.4) for overall critical reading skills. These differences can be attributed to the transformative learning theory and self-assessment based program.

- There is a statistically significant difference between the mean scores of the experimental and the control groups in the post EFL critical reading test, in favor of the experimental group. The researcher used a one sample t-test was used as shown in Table 2.

Table 2**T-test of the Mean Scores of the Post-Measurement of the Control Group and the Experimental Group**

No.	Skills	Group	N	Mean	SD.	df	t. value	Sig
1.	Previewing	Control	35	7.5	1.4	68	10.8	0.05
		Experimental	35	8.3	1.2			
2.	Making Inferences	Control	35	8.3	1.8	68	12	0.05
		Experimental	35	9.4	1.5			
3.	Interpretation	Control	35	5.6	1.1	68	7.9	0.05
		Experimental	35	6.8	1.2			
4.	Annotation	Control	35	6.8	1.2	68	11.2	0.05
		Experimental	35	7.5	1.6			
5.	Analysis	Control	35	5	0.86	68	10.7	0.05
		Experimental	35	5.4	0.87			
6.	Summarization	Control	35	7.2	1.7	68	9.5	0.05
		Experimental	35	8	1.5			
7.	Evaluation	Control	35	6.5	2.3	68	12.5	0.05
		Experimental	35	7.6	1.8			
	Overall EFL Critical	Control	35	41.5	2.8	68	18.3	0.05

	Reading Skills	Experimental	35	50	3.1			
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*Significant at (0.05)

Table 2 indicated that that the mean scores of the experimental group students were higher than those of the control group in the EFL overall critical reading main skills and its sub-skills, where t-value is (18.3) for overall critical reading skills. These differences were attributed to the transformative learning theory and self-assessment based program.

3. A transformative learning theory and self-assessment based program has a positive effect on developing formal language secondary schools students' EFL Critical Reading performance. Cohen's (1988) equation was used as shown in Table 3.

Table 3

Results of Cohen's Equation Comparing the Pre to Post Administrations of the Experimental Group in EFL Critical Reading Performance Test

No.	Main Skills	Test	N	Mean	SD.	t. value	Effect size	Value
1.	Previewing	Pre	35	5.5	1.1	10.8	0.78	Large
		Post	35	8.3	1.2			
2.	Making Inferences	Pre	35	6	1.3	12	0.79	Large
		Post	35	9.4	1.5			
3.	Interpretation	Pre	35	4.3	1.1	7.9	0.77	Large
		Post	35	6.8	1.2			
4.	Annotation	Pre	35	4.8	1.3	11.2	0.79	Large
		Post	35	7.5	1.6			
5.	Analysis	Pre	35	2.9	0.85	10.7	0.78	Large
		Post	35	5.4	0.87			
6.	Summarization	Pre	35	5	1.4	9.5	0.76	Large
		Post	35	8	1.5			
7.	Evaluation	Pre	35	5.3	1.4	12.5	0.75	Large
		Post	35	7.6	1.8			
	Total	Pre	35	32	3.8	18.3	0.84	Large
		Post	35	50	3.1			

*Significant at (0.05)

As indicated in table 3, the final value of Cohen's equation for the experimental group, comparing its pre to the post administrations in EFL reflective writing performance test was (0.89). So, it was concluded that a transformative learning theory and self-assessment based program was effective on developing the second year formal language secondary school students' EFL reflective writing performance.

4. There is a statistically significant difference between the mean scores of the experimental group in the pre- post reflective writing performance test results, in favor of the post-test administration. A paired samples t-test was used as shown in Table 4

Table 4

T-test Results of Comparing the Pre -Post Administration of the Experimental Group Reflective Writing Performance Test

No.	Main Skills	Test	N	Mean	SD.	df	t. value	sig
1.	Providing evidence to support opinions	Pre	35	3.5	1.1	34	12.3	0.05
		Post	35	6.5	1.09			
2.	Demonstrating descriptions	Pre	35	2.9	0.84	34	9.6	0.05

	of contexts	Post	35	4.9	0.83			
3.	Identifying issues insightfully	Pre	35	1.5	0.51	34	15.8	0.05
		Post	35	3.5	0.50			
4.	Analyzing different topics	Pre	35	2.6	0.89	34	10.9	0.05
		Post	35	4.5	0.87			
5.	Synthesizing new perspectives	Pre	35	1.7	0.54	34	14.8	0.05
		Post	35	3.9	0.52			
6.	Showing depth of critical reflection	Pre	35	2.3	0.83	34	12.8	0.05
		Post	35	4.8	0.80			
7.	Inferring logical connections among ideas	Pre	35	2	0.79	34	14.5	0.05
		Post	35	4	0.75			
8.	Evaluating the author's point of view	Pre	35	2.7	0.85	34	11.4	0.05
		Post	35	4.8	0.84			
	Total	Pre	35	24.4	2.8	34	23.6	0.05
		Post	35	38.3	2.3			

*Significant at (0.05)

From table 4, it can be noticed that the obtained t value is (23.6) which is significant at (0, 05).

5. There is a statistically significant difference between the mean scores of the experimental and the control groups in the post administrations of EFL reflective writing performance test in favor of the experimental group. T-test was used as shown in Table 5

Table 5

T- test Results of Comparing the Control and the Experimental Group in the Reflective Writing Performance

No.	Dimension	Group	N	Mean	SD.	df	t. value	Sig
1.	Providing evidence to support opinions	control	35	5.8	1.1	68	10	0.05
		experimental	35	6.5	1.09			
2.	Demonstrating descriptions of contexts	control	35	4.5	0.87	68	12.4	0.05
		experimental		4.9	0.83			
3.	Identifying issues insightfully	control	35	3	0.54	68	13	0.05
		experimental		3.5	0.50			
4.	Analyzing different topics	control	35	3.9	0.84	68	9.8	0.05
		experimental		4.5	0.87			
5.	Synthesizing new perspectives	control	35	3	0.54	68	13.6	0.05
		experimental		3.9	0.52			
6.	Showing depth of critical reflection	control	35	4.2	0.86	68	14.5	0.05
		experimental	35	4.8	0.80			
7.	Inferring logical connections among ideas	control	35	3.5	0.78	68	10.9	0.05
		experimental	35	4	0.75			
	Evaluating the author's point of view	control	35	3.5	0.90	68	8.4	0.05
		experimental	35	4.8	0.84			
	Total	control	35	30.8	2.6	68	18.5	0.05
		experimental	35	38.3	2.3			

*Significant at (0.05)

From table 5, it could be noticed that the obtained t. value was (18.3) significant at (0, 05) level.

6. A transformative learning theory and self-assessment based program had a positive effect on developing formal language secondary school students' EFL reflective writing performance. Cohen's equation was used as shown in Table 6.

Table 6

Results of Cohen's Equation Comparing the Pre to Post Administrations of the Experimental Group in EFL Reflective Writing Performance Test

No.	Main Skills	Test	N	Mean	SD.	t. value	Effect size	Value
1.	Providing evidence to support opinions	Pre	35	3.5	1.1	12.3	0.82	Large
		Post	35	6.5	1.9			
2.	Demonstrating descriptions of contexts	Pre	35	2.9	0.84	9.6	0.89	Large
		Post	35	4.9	0.83			
3.	Identifying issues insightfully	Pre	35	1.5	0.51	15.8	0.84	Large
		Post	35	3.3	0.50			
4.	Analyzing different topics	Pre	35	2.6	0.89	10.9	0.86	Large
		Post	35	4.5	0.87			
5.	Synthesizing new perspectives	Pre	35	1.7	0.54	14.8	0.83	Large
		Post	35	3.9	0.52			
6.	Showing depth of critical reflection	Pre	35	2.3	0.83	12.8	0.85	Large
		Post	35	4.8	0.80			
7.	Inferring logical connections among ideas	Pre	35	2	0.79	14.5	0.87	Large
		Post	35	4	0.75			
8.	Evaluating the author's point of view	Pre	35	2.7	0.85	11.4	0.84	Large
		Post	35	4.8	0.84			
	Total	Pre	35	24.4	2.8	23.6	0.89	Large
		Post	35	38.3	2.3			

*Significant at (0.05)

As indicated in table 6, the final value of Cohen's equation for the experimental group, comparing its pre to the post administrations in EFL reflective writing performance test was (0.89). So, it was concluded that a transformative learning theory and self-assessment based program was effective on developing the second year formal language secondary school students' EFL reflective writing performance.

7. There is a statistically significant difference between the mean scores of the experimental and the control groups in the post learner-autonomy scale administration in favor of the experimental group. A one sample t-test was used to as shown in Table 7.

Table 7

T-test of the Mean Scores of the Post-Measurement of the Control Group and the Experimental Group

No.	Dimension	Group	N	Mean	SD.	df	t. value	Sig
1.	Taking Initiatives	Control	35	35	6.3	68	9.6	0.05
		Experimental	35	44	6.9			
2.	Self-Management	Control	35	42	6.8	68	11.8	0.05
		Experimental		48	7			
3.	Responsibility	Control	35	47	7.5	68	12.5	0.05
		Experimental		52	7.6			

4.	Self-Monitoring	Control	35	64	10.7	68	13.6	0.05
		Experimental		70	11			
5.	Self-Awareness	Control	35	55	7.5	68	16.8	0.05
		Experimental		60	8.2			
6.	Problem-Solving	Control	35	50	8.7	68	18.4	0.05
		Experimental	35	56	9			
7.	Evaluation	Control	35	60	9.4	68	15.3	0.05
		Experimental	35	70	9.5			
	Total	Control	35	250.5	8.3	68	32.5	0.05
		Experimental	35	319.3	8.9			

*Significant at (0.05)

Table 7 confirmed that there was a statistically significant difference between the control and the experimental groups in favor of the later in the post administration of learner-autonomy with t. value being (32.5) and significant at (0,05).

8. There is a statistically significant difference between the mean scores of the experimental group in the pre and the post learner-autonomy scale administration, in favor of the post scale administration. A paired samples t-test was used as shown in table 8:

Table 8

T- test Results of Comparing of the Pre- and Post-Measurements of Learner-Autonomy Scale

No.	Dimension	Administration	N	Mean	SD.	df	t. value	Sig
1.	Taking Initiatives	Pre	35	23.5	11.2	34	9.6	0.05
		Post	35	44	6.9			
2.	Self-Management	Pre	35	25	10.5	34	11,8	0.05
		Post	35	48	7			
3.	Responsibility	Pre	35	28	9.8	34	12.5	0.05
		Post	35	52	7.6			
4.	Self-Monitoring	Pre	35	45	9	34	13.6	0.05
		Post	35	70	11			
5.	Self-Awareness	Pre	35	32	13.4	34	16.8	0.05
		Post	35	60	8			
6.	Problem-Solving	Pre	35	30	14.5	34	18.4	0.05
		Post	35	56	9			
7.	Evaluation	Pre	35	35	12.8	34	15.3	0.05
		Post	35	70	9.5			
	Total	Pre	35	158.9	28.4	34	32.5	0.05
		Post	35	319.3	18.9			

*Significant at (0.05)

Table 8 indicated that there was a statistically significant difference between the pre and the post of the experimental group in favor of the latter in the learner-autonomy scale administration with t-value being (32.5). It was significant at (0, 05) level.

9. A transformative learning theory and self-assessment based program had a positive effect on developing formal language secondary school students' learner-autonomy. Cohen's equation was used to verify this hypothesis as shown in Table 9.

Table 9

Results of Cohen's Equation Comparing the Pre to Post Administrations of the Experimental Group in Learner-Autonomy Scale

No	Dimension	Administration	N	Mean	SD.	t. value	Effect size	Value
1.	Taking Initiatives	Pre	35	23.5	11.2	9.6	0.86	Large
		Post	35	44	6.9			
2.	Self-Management	Pre	35	25	10.5	11.8	0.85	Large
		Post	35	48	7			
3.	Responsibility	Pre	35	28	9.8	12.5	0.83	Large
		Post	35	52	7.6			
4.	Self-Monitoring	Pre	35	45	9	13.6	0.84	Large
		Post	35	70	11			
5.	Self-Awareness	Pre	35	32	13.4	16.8	0.86	Large
		Post	35	60	8			
6.	Problem-Solving	Pre	35	30	14.5	18.4	0.87	Large
		Post	35	56	9			
7.	Evaluation	Pre	35	35	12.8	15.3	0.84	Large
		Post	35	70	9.5			
	Total	Pre	35	158.9	28.4	32.5	0.88	Large
		Post	35	319.3	18.9			

*Significant at (0.05)

According to the findings of Cohen's formula and the interpretations of the effect size in table 9, the percentage (0.88) indicated that the transformative learning theory and self-assessment program had an impact on developing the students' learner-autonomy.

Consequently, it can be concluded that the transformative learning theory and self-assessment based program was effective in enhancing EFL critical reading, reflective writing performance, and learner-autonomy of the second year language secondary stage students.

9.1 Recommendations of the Study

In the light of the study findings, the following recommendations can be presented:

For EFL Teachers:

1. EFL teachers should adopt the transformative learning and include critical reflective activities in their teaching instructions. This may encourage students to form a positive self-image, develop their autonomy, and increase their critical and reflective thinking to participate in the classroom activities.
2. The teacher should encourage students' participation, engage them in discussing, analyzing, rethinking of what they listen to or read and lead them to predict the future and take actions based on their new experience.
3. It would be useful if teachers always ensure students understand that self-assessment is about learning and improvement, not being right or wrong. This could be achieved through using a range of classroom tasks to enable students to gradually take increasing responsibility for their own learning and progress.

For EFL Curriculum Designers

1. Curriculum designers should provide both teachers and students with up-to-date means and facilitations to implement critical and reflective activities. They should collaborate with teachers and supervisors to ensure that teachers are well-trained to develop learner-autonomy and activate the techniques of teaching self-assessment. They should also provide a consistent and flexible framework that can be used by EFL teachers to plan in any discipline or level.

2. The present study gives stakeholders, curricula designers, and teachers the chance to shape their curriculum on skills with more emphasis and develop material

For EFL Students:

1. EFL students' critical reading and reflective writing performance should be emphasized and developed through the use of the transformative learning and self-assessment.
2. EFL students should be given current issues that related to their ages, needs, interests, and prior knowledge.

10.1 Suggestions for Further Studies

In the light of the study findings, the following suggestions can be presented:

1. Identifying the possible relations between other genres of EFL reading/writing i.e. creative, descriptive, narrative, expository, etc...) performances and the transformative learning theory.
2. Examining the relationship between integrating critical and reflective practices and the students' literary analysis studies is suggested for further research.
3. Recognizing the effectiveness of the transformative learning in developing other EFL performances, such as (oral proficiency, vocabulary acquisition, and translation skills).
4. Studying the learner-autonomy role in developing linguistic competences performance of EFL learners.
5. Conducting studies based on learner-autonomy and its role in elevating responsibility and reducing EFL learners' dependence in other language skills (listening, speaking, grammar, vocabulary acquisition, translation, etc...).

References

1. Albert, A. B. (2018). Transformative Learning: Changing ESL Students' Research Methods through the Examination of the Processes of Information Creation. In M.K. Oberlies & J. Mattson (Eds.), *Framing Information Literacy: Teaching Grounded in Theory, Pedagogy, and Practice 4* (pp. 393-405). Chicago, IL: ACRL.
2. AlSereidi, M. (2019). *Exploring Critical Reading Experience in English of Emirati 11th Grade Students* [Published doctoral dissertation]. United Arab Emirates University Electronic Theses and Dissertations https://scholarworks.uaeu.ac.ae/cgi/viewcontent.cgi?article=1106&context=all_dissertations
3. Chaichompoo, C. (2017). Using E-Mapping to Improve Reading Comprehension and Summary Skills of EFL Students. *NIDA Journal Language and Communication*, 22(30), 129- 138. <https://so04.tci-thaijo.org/index.php/NJLC/article/view/94738>
4. Crème, P. (2005). Should Student Learning Journals Be Assessed? *Assessment and Evaluation in Higher Education*, 30(3), 287-296. <https://www.tandfonline.com/doi/full/10.1080/02602930500063850>
5. Gavriluk, O. A. (2015). Autonomy as a Core Value of Lifelong Learning. *Journal of Siberian Federal University. Humanities & Social Sciences*, 8(11), 2283- 2290 <https://core.ac.uk/download/pdf/38647083.pdf>
6. Gehringer, E. F. (2017, June). *Self-assessment to improve learning and evaluation* [Paper Presentation]. ASEE Annual Conference & Exposition, North Carolina State University, U.S.A.
7. Khodary, M. M., & AbdAllah, M. M. (2014). Using a WebQuest Model to Develop Critical Reading Achievement among Languages and Translation Department Students at Arar College of Education and Arts. *International Interdisciplinary Journal of Education*, 1(1522), 1-11. <https://www.semanticscholar.org/paper/Using-a-Webquest-Model-to-Develop-Critical-Reading-Khodary-Abdallah/10165c6fb8b1c0156dfa5e39e4f802b40a80a2d3>
8. Khonamri, F., Králik, R., Vítecková, M., & Petrikovicová, L. (2021). Self-Assessment and EFL Literature Students' Oral Reproduction of Short Stories. *European Journal of Contemporary Education*, 10(1), 77-88. <https://eric.ed.gov/?id=EJ1294674>
9. Kosimov, A. (2022, February 30-34). *The Role of Critical Reading Strategies on Reading Comprehension in EFL Students and Its Impact to Second Language Acquisition* [Paper

- Presentation]. International Journal of Conference Series on Education and Social Sciences. Bursa, Turkey.
10. Mezirow, J. (1978). Perspective transformation. *Adult Education Quarterly*, 28(2), 100-110 <https://journals.sagepub.com/doi/abs/10.1177/074171367802800202>
 11. Mezirow, J. (1991). *Transformative Dimensions of Adult Learning*. San Francisco, CA: Jossey-Bass.
 12. Mohammad, S.G., Abdel-Haq, E. M., & Al-Hadi, T. M. (2019). A Transformative Learning-Based Strategy for Developing Critical Reflection and Reflective Writing Skills of Secondary School EFL Students. *Journal of Faculty of Education, Benha University*, 119 (2), 64-102. <https://pdfs.semanticscholar.org/afbf/89d7801501616d66462afe74ffebea545915.pdf>
 13. Moqbel, M. S. S. (2018). Self-assessment in EFL grammar classroom: A study of EFL learners at the Centre for Languages and Translation, Ibb University. *International Journal for Research in Education*, 42(2), 289-324. <https://scholarworks.uaeu.ac.ae/ijre/vol42/iss2/9/>
 14. Stark, R., & Krause, U. (2009). Effects of Reflection Prompts on Learning Outcomes and Learning Behaviour in Statistics Education. *Learning Environments Research*, 12, 209-223. <https://link.springer.com/article/10.1007/s10984-009-9063-x>
 15. Tran, T. Q., & Duong, T. M. (2018). EFL Learners' Perceptions of Factors Influencing Learner Autonomy Development. *Kasetsart Journal of Social Sciences*, 1, 1-6. https://www.researchgate.net/publication/323631504_EFL_learners'_perceptions_of_factors_influencing_learner_autonomy_development
 16. Zreagat, M., & Kaur, S. (2012). Language Learning Autonomy among Jordanian EFL University Students. *Asian Journal of University Education*, 8(1), 1-24. <https://www.semanticscholar.org/paper/Language-Learning-Autonomy-among-Jordanian-EFL-Zreagat-Kaur/920872fcc37f3ea60aba333051bf0ea544c04657>