Using Portfolio for Developing Critical Thinking Skills in EFL Classroom

By:

Prof. Dr. Awatif Ali Sheir
Professor of Curriculum & Instruction of English,
Institute of Educational Studies,
Cairo University.

Weaam Muhammed Abdel Khalk
EFL Instructor

Dr. Eman El Nabawy
Lecture of Curriculum Instruction of English,
Faculty of Education,
Al Azhar University.
Using Portfolio for Developing Critical Thinking Skills in EFL Classroom

Dr. Awatef Ali Sheir, Weaam Muhammed Abdel Khal, Dr. Eman El Nabawy

Introduction:

Learning how to be critical is a vital element of becoming an independent learner and an integral part of a lifelong process of becoming educated. Today, many institutions as one of their teaching goals acknowledge critical thinking, now that it is accepted as a skill that is teachable (Reichenbach, 2001; Sternberg, Roediger III, & Halpern, 2007). Critical thinking, a rapidly growing concept in education has stimulated a flood of recent research and publications. Nowadays, critical thinking is one of the major concepts under consideration in education. It has been mostly used for first language education in the United States, but today, its role in second and foreign language learning and teaching is of great importance Moon asserts that critical thinking and its relationship to the educational process has become a central issue and it is time to explore the term. She adds since critical thinking is a process, which is involved in any research activity; it can be considered as a principal concept to education, especially at higher levels. In fact, it is a fundamental goal of learning (Taylor, 2010).

A review of the pedagogical literature reveals that a growing number of studies focus on critical thinking, on what critical thinking skills can and should be taught, and on the most effective and appropriate framework for fostering it. Nevertheless, most educators and researchers agree that an important aspect of critical thinking is the

*This Paper is Based on The Researcher's Thesis Submitted in Fulfillment of the Requirement for the Degree of Ph.D. in Education Curriculum and Instruction.
ability to collect, evaluate and make use of information effectively and appropriately (Beyer, 1985). As far as definitions for critical thinking are concerned, definitions that draw upon philosophy often stress the metacognitive element of critical thinking, arguing that it can be defined as “thinking about your thinking while you're thinking to make your thinking better” (Paul, 1993, p. 91). Similarly, Paul and Elder (1994) argue that critical thinking means that thinkers take charge of their own thinking. This also presupposes that people develop sound criteria and standards for analysing and evaluating their own thinking processes and use of these criteria to improve the quality of their thinking (Uden & Beaumont, 2006).

Portfolio development is an ongoing process. It does no evaluate progress and performance of the learners through an impromptu paper and pencil test or enable instructors evaluating their student's performances within a very short and limited period of time. According to Gosselin (1998) an ongoing development is a learning process that examines and document learner progress at a certain intervals. The main goals of portfolio development are encouraging learners to become more autonomous, take the control of their learning, make decisions, participate in the evaluation of their own work and solve the problem they may face, individually.

Portfolio development has been used for a very long time. The portfolio is a useful teaching and learning tool in language learning classrooms. Portfolio development deals with any kind of acquired learning – knowledge, skills and abilities acquired through formal, informal, accidental and incidental learning. Although most teachers might be aware of the importance of a good development strategy, say, portfolio, rarely do they use it for any kind of development regarding the learning of grammatical points.
Critical Thinking:

Critical thinking (CT) is an important skill, which should be applied to all aspects of learning (Mason & Washington, 1991). Students need to be able to think critically about the resources and information they use in their studies; they need to be critical when reading the work of others; their writing needs to show they have the ability to weigh up different arguments and perspectives and can express their own opinions based on sound judgements (Spratt, 2005).

Additionally, Damer (2005, p.64) posited that critical thinking (CT) can be used to make value deductions against the information provided. As van Gelder (2005, p.1) said that, “almost everyone agrees that one of the main goals of education, at whatever level, is to help students develop general thinking skills, especially critical thinking skills”. In other word, critical thinking is a learned skill that requires practice and instruction (Watson, & Glaser, 2002).

CT has been recognized as essential in all levels of education for several years. In the same time, teaching CT in some ways remains a mystery (Chaisuriya, 2000; Nimkannon, 2007; Rfaner, 2006). However, Wallace (2003, p.70) declared, "One important factor to successful teaching of CT is the teachers' understanding of the concept of CT. Thus, it is necessary to conceptualize the concept of CT". Researchers have stressed the importance of CT skills for students (Kovalik, & Kovalik, 2007; Facione, 2011; Guiller, &Durndell, & Ross, 2008). Now CT enters into important decisions in students' daily life and affects their growth process in school and work. The term CT describes the deliberate thinking that helps students to decide on what to believe and how to act. It helps students examine a problem.
or issue from many angles to arrive at the best possible solution.

CT is known as the art of analyzing and evaluating thinking with the intent to improve it. In a world filled with conflicting and complex decisions, it is important that individuals develop intellectual skills that allow them to reason through tasks with meaningful thought. CT is the tool by which to do so. Through use of critical thinking skills, people can better understand the structures involved in systematic thinking which improve the quality of problem-solving in any subject or area of life (Lyutykh, 2009). According to Santos and Fabricio (2006) the development of critical thinking presupposes an ongoing questioning of taken-for-granted assumptions, while according to Schumm and Post (1997), critical readers display the following characteristics: a) base their judgments on evidence, b) ask penetrating questions and evaluate ideas, c) distinguish between opinions and facts, and d) reflect on their ideas.

Scriven and Paul (2003) defined critical thinking as an intellectually disciplined process in which students actively and skillfully conceptualize, apply, synthesize, and evaluate information generated by observation, experience, reflection, reasoning, and communication. Critical thinking does not expect students to answer the questions put in the class, but instead develops students’ sound judgment for problem-solving, decision-making, and higher-order thinking (Case, 2002; Taylor & Patterson, 2000). FACIONE (2000) believes that critical thinking is a cognitive process of developing reasonable, logical, and reflective judgment about what to believe or what to do. In the same line, Watson and Glaser (2002), the authors of Watson-Glaser Critical Thinking Appraisal, define critical thinking as a composite of attitudes, knowledge and skills. They point
out that this composite includes: (1) attitudes of inquiry that involve an ability to recognize the existence of problems and an acceptance of the general need for evidence in support of what is asserted to be true; (2) knowledge of the nature of valid inferences, abstractions, and generalizations in which the weight or accuracy of different kinds of evidence are logically determined; and (3) skills in employing and applying the above attitudes and knowledge.

Finally, Robert Ennis mentions 13 characteristics of thinkers with the ability to think in a critical manner. More specifically, he argues that they share the following features. According to Ennis (1989), they tend to:

a) be open-minded,
b) take a position (or change a position) when they are convinced by evidence,
c) take into account the entire situation, adopting a holistic approach,
d) seek precision and objectivity in information, making use of credible and reliable sources of information,
e) deal in an orderly manner with the elements of a complex whole,
f) search for options and alternative solutions,
g) look for reasons,
h) seek a clear statement of the issue,
i) keep the original problem in mind,
j) remain relevant to the point, and be sensitive to the feelings and knowledge level of others.

Benefits of Teaching Critical Thinking (CT) Skills in EFL Classrooms:

Many benefits can result from aiding students to become better thinkers and in making better decisions. Students can gain autonomy in forming their own conclusions through the process of listening to various possibilities of thought. Students can build a greater sense
of curiosity and humility by looking closely at other people’s insights and understanding their value (Rivas, 2011). Also, students will be able to develop respect for good reasoning by developing a framework to distinguish between the many influences they are exposed to. The first step for a successful critical thinker in English is to understand the differences in the way native English speakers use and manipulate language in order to convey their ideas. This means looking at how native speakers approach cohesiveness in their communication by looking at compare and contrast, giving opinions, narratives, cause and effect and many other functional parts of language that lead to successful communication with a native speaker (Brown & Keeley, 2010).

Unfortunately, it is very difficult to increase a student’s CT skills with the lecture format. Topics are discussed sequentially rather than critically, and students tend to memorize the material since the lecture method facilitates the delivery of large amounts of information. The student is placed in a passive rather than an active role since the teacher does the talking, the questioning, and, thus, most of the thinking (Maiorana, 1992). According to Winn (2004, p.6), few teachers are using tools that build a student’s mental state for CT skills. Teachers do an excellent job transmitting academic content but fail to teach students how to think effectively about subject matter. By increasing the amount of CT skills used in the classroom, students are more likely to perform higher on standardized tests (Beyer, 2008); and in the future, students could have a better chance of being prepared for the real world (Abrami et al, 2008).

**Critical Thinking (CT) Skills and Sub Skills:**

For Thomson (2002, p.65) "CT is the ability to analyze facts, generate and organize ideas, defined opinions, make comparisons, draw inferences, evaluate
arguments and solve problems". In addition, Paul & Binker (1990, p.185) have developed a list of dimensions of critical thought as follows:

A. Affective Strategies:
   1. thinking independently
   2. developing insight into egocentricity or sociocentricity
   3. exercising fair-mindedness
   4. exploring thoughts underlying feelings and feelings underlying thoughts

B. Cognitive Strategies--Macro-Abilities:
   1. refining generalizations and avoiding oversimplifications,
   2. comparing analogous situations: transferring insights to new contexts,
   3. developing one's perspective: creating or exploring beliefs, arguments, or theories.

C. Cognitive Strategies--Micro-Skills:
   1. comparing and contrasting ideals with actual practice
   2. thinking precisely about thinking: using critical vocabulary,
   3. noting significant similarities and differences,
   4. examining or evaluating assumptions,
   5. distinguishing relevant from irrelevant facts,
   6. making plausible inferences, predictions, or interpretations.

Portfolio:
Research evidence also suggests portfolios as a potent device to gauge students' effort, achievement, improvement, and self-evaluation (e.g. Chen, 1999, 2000; Far & Tone, 1994; Hamp-Lyons & Condon, 2000; Hsieh et al., 2000; Newman & Smolen, 1993; Smolen et al., 1995). Hamp-Lyons (1994) labels portfolio an excellent pedagogical tool interweaving development with instruction: it provides chances to integrate more forms of evaluation into teaching,
Using Portfolio for Developing Critical Thinking Skills in EFL Classroom

such that evaluation will become “a less threatening and more supportive activity” (p. 54) to learners. Moya and O’Malley (1994) claim portfolios can be used as a systematic development tool in instructional planning and student evaluation. Matching development to teaching and supplying a profile of students’ learning and growth in multiple domains or skills, portfolios are thus recommended as an alternative to standardized testing and all problems found with such testing.

**Importance of Portfolio:**

According to (McNamara, 2000), this new change from summative development to formative development has called authentic or alternative development, which stresses the need for development to be integrated with the goals of the curriculum and to have a constructive relationship with teaching and learning. It includes a variety of development procedures such as learner-centered development, student designed tests, portfolio development and self-development that the teacher and students can collaboratively choose and use successfully in language classrooms. Genesee and Upshur, (1996) mention that Among these, portfolio development, as the most effective, interesting and popular alternatives to standardized tests, is widely recognized and used in the domain of teaching and learning of EFL writing. It is defined as "a purposeful collection of students' work that demonstrates to students others their effort, progress and achievement in given area.

As (Moya & O'Malley, 1994) mention, portfolio development is a kind of portfolios; whereas a portfolio is a collection of collection of a student assignment samples, portfolio development is the process of creating, collecting, and evaluating contents of the portfolio. Inclusion of this technique is not to be ignored by any teacher (Herman & Winters, 1994).
In this section some advantages of portfolios are mentioned. Apple and Shimo (2005), Hamp-Lyons and Condon (2000) list the following benefits for portfolios:
1) Since students learn many new things every week through feedback, having development every time is more beneficial than simply studying for a test.
2) Learners have the chance reflect over their learning processes.
3) Portfolios can make it possible to make a continuous development over a long time period.
4) Learners can make their original products and they can feel a sense of achievement more compared to traditional tests.
5) Learners are able to take control over their learning and feel more responsibility for it.
6) Learners can develop weaknesses and strong points, and progress in their ability, and reset goals more effectively by looking over their work.

When portfolios are used in their classes, students are often able to receive more feedback to their work in progress, such as easy drafts, from their teacher and classmates (Lang, 2012). Furthermore, portfolios can help promote learner autonomy particularly when the portfolio assignments include a) decision-making or choice making tasks, which enable students to plan and organize their learning, b) language tasks related to both in- and outside-class activities, and c) optional tasks to cover students at different levels of motivation and proficiency (Lang, 2012).

Types of Portfolio:
There is no doubt that the portfolio is a useful teaching and learning tool in language learning classrooms. According to O’Malley and Valdez Pierce (1996), there are different kinds of portfolios, such as development portfolios, showcase portfolios, and collections portfolios.
Development portfolios consist of items students choose to include according to certain development criteria. Showcase portfolios contain students’ best pieces of work. Collections portfolios, often called working folders, are collections of all the pieces of work during a certain period. In other words, development portfolios can occasionally mean the same content as showcase portfolios if the criterion given was to choose the best work O’Malley and Valdez Pierce (1996). The most important in creating a portfolio, however, is the activity of making selections or choices and making reflections over the learning processes (Hamp-Lyons & Condon, 2000; Shimo, 2003; Apple & Shimo, 2005). The criteria given for any development portfolios should aim to encourage these activities mentioned earlier.

**Portfolio Development in a Writing Context:**

Perhaps no other skill has been considered important in the realm of portfolio development. Teachers nowadays tend to apply a process-oriented technique in writing instruction. Using these techniques, students spend time to select the topics, gather information, write about the topics and therefore before submitting a final piece of writing, draft, correct and edit it. This new trend in teaching writing in EFL classrooms is concentrating on writing processes to create a certain product, therefore, it is necessary to apply an development technique that advocates and encourages such trend since development and teaching are two inseparable parts (Shimo, 2005).

This authentic innovative technique of development provides a tool of developing the processes of writing as well as the end product of writing. This technique is used to improve students’ writing performance. Students are asked to choose their best pieces of writing to put in portfolio to submit development. Students can also include those samples of writing that represent the development of
writing process, including planning, drafting, revising and editing. According to (weiser, 1992), portfolio development can develop students' autonomy, critical thinking and linguistic competence. Moreover, it supports the notion that writing is process that involves growth, development, and learning as well as a product.

Definition of Terms:
1- Critical Thinking Skills:
   1. According to Scriven (1996,p.7) critical thinking referred to "The intellectually disciplined process of actively and skillfully conceptualizing, applying, analyzing, synthesizing, and/or evaluating information gathered from, or generated by, observation, experience, reflection, reasoning, or communication, as a guide to belief and action."
   2. The present research adapted this definition of critical thinking, which is "an ability to present, evaluate, and interpret data, to develop lines of argument and make sound judgements".

2-Protifilio:
   1. Khaira (2012) viewed portfolio as "a systematic collection of student work and related material that depicts a student's activities".
   2. According to the present research portfolio means, collections of students’ work over a course or a program and can be an effective method of demonstrating student progress in the area of critical thinking (Carey, 2000, p.65).

Statement of the Problem:
   In Egypt, most students of secondary stage suffered from weakness of critical thinking skill in English. Thus, this a suggested research based of Portfolio, as a method of developing critical thinking skills for first secondary stage students.
Purpose and Research Questions
The purpose of this study was to investigate the implementation of portfolio in an attempt to examine its effect on the students "critical thinking skills through writing, especially. Taking the above purposes into consideration, the present study addressed the following research questions:
1) To what extent do EFL students develop critical thinking skills in their writing by the treatment of portfolio?

Hypotheses of the Research:
The present research tries to verify the following hypotheses:
- There is statistically significant difference between the mean scores of the experimental group students and the mean scores of the control group students who were taught via traditional methods on the post administration of the critical thinking skills in favor of the experimental group.

Delimitations of the Research:
Some delimitations of the research were imposed by the nature of the problem. They are as follows:
1- The researcher used a group of 60 first year secondary school students (30 for control group & 30 for the experimental group) of El Zahraa secondary school for girls in Hellwan:
2- Critical thinking skills are (explanation- analyses- interpretation).

Method:
In order to provide plausible answers to the aforementioned questions, a quasi-experimental study was conducted which will be described and delineated below.

Participants:
The participant of the research was sixty students selected from El Zahraa Secondary School for Girls in
Hellwan in the school year 2012-2013. (thirty students for the control group and thirty students for the experimental group).

**Instruments:**

The present research aims to develop critical thinking skills by using portfolio in the light of authentic development. Therefore, the researcher used the following main instruments:

1. Critical thinking skills checklist to determine the critical thinking sub-skills necessary for first secondary student.
2. A pre–posttest to measure the level of students’ critical thinking skills.
3. A rating scale rubric for scoring critical thinking skills test

**Content of the Checklist:**

1. **Explanation**
   - Expressing about the logical connections between ideas.
   - Identifying the relationship between the heading and the content.

2. **Inference**
   - Drawing alternatives of meaning.
   - Predicting upcoming events.

3. **Analysis**
   - Establishing cause-and-effect relationships in what he/she writes
   - Identifying the problems expressed in the text, and finds different solutions for the problems

4. **Interpretation**
   - Clarifying the meaning
   - Identifying authors' point of view

5. **Evaluation**
   - Expressing his/her feelings, thoughts and opinions verbally and in writing.
Using Portfolio for Developing Critical Thinking Skills in EFL Classroom

6. Self-Regulation
- Self-Correction of the mistakes.
- Self Reflection

Procedures:
1- The researcher reviewed the previous studies that dealt with critical thinking skills, portfolio.
2- Identifying appropriate topics of reading from student textbook for first secondary school, Hello6!. These topics are (The Kangaroo-Wonders of The Modern World-Who needs Satellites?-Phobia- the Hound of the Bakervills)
3- The control group and the experimental group were administrered

Results:
t-test for independent samples was used to compare the mean scores of the two groups in the posttest. The t-test paired sample results proved to be statistically consistent with hypothesis. See table (8)

Table (2)

<table>
<thead>
<tr>
<th>Groups</th>
<th>N</th>
<th>M</th>
<th>S.D</th>
<th>D.F</th>
<th>'t' value</th>
<th>Level of sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>EXP. Group</td>
<td>30</td>
<td>31.93</td>
<td>6.977</td>
<td>58</td>
<td>7.311</td>
<td>sig. at 0.01</td>
</tr>
<tr>
<td>CON. Group</td>
<td>30</td>
<td>21.00</td>
<td>4.291</td>
<td>58</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The previous table showed that the mean score of the experimental group students (31.93) to be higher than the mean score of the control group students (21.00) on the post administration of the critical thinking test. Therefore, students' progress in critical thinking skill in general due to the use of the portfolio activities as a teaching method.
That prove the verify of the first hypothesis. Moreover, the above table showed that the estimated t. value (7.311) is statistically significant at (0.01). Thus, it can be safely said that there is statistically significant difference between the experimental and control group in the post critical thinking test in the favor of the experimental group, it indicates the effectiveness of portfolio in developing critical thinking skills, so the first hypothesis is accepted.

The previous table indicated that the experimental students' mean scores of each critical thinking skill were increased as follows (6.07-6.27-3.07-6.67-6.53-3.33). These results implied that the higher means are for the post administration of the experimental group in critical thinking test. The t-test results about the difference between the mean scores of experimental group students and control group on the favour of the experimental group. This difference was significant for all skills except (interpretation and self-regulation) it may be due to the lack of activities in the application or it may reveals to the shortage of students' attention to the activities in the application. But in general these two skills are still bigger that those of control group. Moreover, effect size of critical thinking skills it calculated by using Eta square.

To conclude, the experimental group outperformed the control group in improving students critical thinking skills, this result could be due to the use of portfolio in teaching critical thinking skills, so portfolio proved to be better than the via traditional method in teaching critical thinking skills. It means that portfolio are an effect method, which helps students to acquire the critical thinking skills in secondary stage.
Using Portfolio for Developing Critical Thinking Skills in EFL Classroom

Figure (1) analysis of Effect Size Results Comparing Experimental and Control Groups' Mean Scores of each critical thinking skills in the post test.

It is worth mentioning that, the previous results of the study are in line with those of (e.g., Teasdale & Leung, 2000; Shohamy, 2001; Lynch, 2005; Leung & Lewkowicz, 2006; Lam & Lee, 2009). as they all stated that the portfolio are an effective method in developing critical thinking skills.

Discussion:

Concerning the first null hypothesis, the finding confirmed significant difference between experimental and control groups. That is, portfolio affected the participants’ overall critical thinking skills through writing ability to a large extent in the experimental group. By further observing the portfolio, it can be said that it not only provides improved information about students’ achievement in writing but also makes a positive influence on teaching and student learning. This explanation confirms the argument by Hancock (1994) and Omalley & Valdez Pierce (1996) that portfolio has a useful backwash effect on teaching and
learning. The results can also be explicated in the sense raised by Genesee and Upshur (1996). That is, using portfolio assessment in second language classroom can have a very specific focus, such as writing, or broad focus that includes examples of all aspects of language development.

Furthermore, step by step observation of the written portfolios of the students in the experimental group indicates that the holistic ratings they received after the instructor's assessment were highly correlated to their scores obtained on the last writing sample given to them as post-test. This finding implies that participants in the experimental group had a significant achievement in their writing ability through using portfolio.

When holding a comparison between the experimental and the control group students' mean scores on the post administration of the critical thinking skills test the estimated value of ‘t’ (31.93) was highly significant at the (0.00) level of significance. Thus the experimental group students, that used the portfolio, outperformed the control group students on the post administration of the critical thinking test in spite of their being of the same level on the pre- administration of critical thinking test.

The data analysis has revealed that that the portfolio activities proved to be effective in developing students' (the experimental group) critical thinking skills. This was clear in verifying the two main hypotheses of the research. The effect size of the portfolio in developing the critical thinking skill of 1st secondary school students (experimental group) was 0.787, It was large. This results proved the positive effectiveness of the portfolio as an active learning method for developing critical thinking skill and sub skills such as the studies of (e.g., Teasdale & Leung, 2000;

**Conclusion and Recommendation**

On the basis of the findings above, the following conclusions can be drawn:

1. Portfolio encourages the use of critical thinking because it involves analyzing and problem solving; therefore, the portfolio is a cognitive learning method.

2. Portfolio teaches many lessons; some of the most important lessons it teaches are lessons that are needed in society; i.e., competition, cooperation.

3. Portfolio enhances students' written expression language in English language.

4. Teacher is also able to see the various capabilities of students at the same time allowing introverted students to speak out. It helps to break down "cliques".

5. Portfolio encourages students centered learning, which make students more active and participate effectively and that made them gain the target.

6. The use of portfolio assessment in the classroom in an EFL context affected participants achievements in their overall writing ability and hence led them to create types of discourse appropriate to academic settings.

7. The metadiscourse awareness of the participants in the experimental group overed to be significantly enhanced compared with the comparison group.

8. The use of alternative assessments (portfolio assessment in case of this study) demonstrated a more useful backwash effect on instruction than the traditional methods such as paper-and-pencil tests.

These results support the results of other studies done before; such (e.g., Crismore, 1984; Vande Kopple, 1985; Hyland, 1998), it assured that portfolio is an effective method for developing critical thinking skills.
In light of the present research significant results, the following recommendations are made:
- design EFL secondary school course with regard to the importance of critical thinking skills and should supply the course with more activities to develop this skill.
- give the balance of implantation of critical thinking skills in the four language skills of English equally in the schoolbook.
References


The researcher made use of 6th edition of the APA research Documentation manual (2011) in listing the references of the research.


http://www.criticalthinking.net/SSConCCTApr3.html(accessed on August 1, 2007)

Everson, C. M., & Harris, A. H. (1999). Support for managing learning-centered classrooms: The
Using Portfolio for Developing Critical Thinking Skills in EFL Classroom

classroom organization and management program. In H. J. Freiberg (Ed.), Beyond behaviorism: Changing the classroom management paradigm (pp. 59–74). Needham Heights, MA: Allyn and Bacon


Lang, T (2012) "An examination of the relationship between Elementary Education Teacher Candidates' authentic assessments and performance on the Professional Education Subtests on the Florida Teacher Certification Exam (FTCE)"


Using Portfolio for Developing Critical Thinking Skills in EFL Classroom

Language Testing, 18,351-72.


