Critical thinking in the Arab College in Israel

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Abstract: Students who practice critical thinking change their perception and improve it around critical thinking and become critical people, so there is a need for ongoing training sessions in critical thinking. This action research aimed to Understand the change in students' perceptions around critical thinking during training sessions. The sample contains 40 students in a teaching theory course. The researcher Used two tools, first, the observation and focus group 'with a semi-structured interview to collect data. The study results indicated how students understood the nature of critical thinking, how it is taught, and its contribution to their personality development.

Keyword -Critical thinking, perception of critical thinking, character of critical thinking, empowering critical thinking the contribution of critical thinking.

Introduction

From the time of Socrates until the modern era, education was important for good citizenship; Education for critical thinking is the strategy for good citizenship. The importance of critical thinking has already been seen in Sumner's work since the beginning of the last century (1929) in Remedied et al. (1992), the literature on critical thinking indicates that there is no definition and understanding of the unified concept of critical thinking (Paul, 1993, 2006); also, there are different uses for the term, like high order thinking, or critical thinking is generic thinking (Lois & Smith, 1993; Sternberg 1987). Coy & Cheah (2009) argue that

there is a need for one definition to understand the concept of critical thinking to teach it (Lia,2011).

Critical thinking has two components: first, information and belief generating and processing skills; second, the habit and Tendencies based on intellectual commitment, of using those skills to guide behavior.

The skills contain discussion, argument, or evidence, reasoning using inductive reasoning or thinking inductive judgment, assessment, decision-making, asking questions and answer these questions to Clarify the subject, Definition of terms and identification make correct inferences from data, deduce conclusions from information (Ennis, 1985), identifying assumptions (Paul, 1993), an explanation and clarification (Facion, 1990), verbal reasoning, especially when talking about the probability (Halpern, 1998), uncertainty, and saw both side of the subject (Willingham, 2007).

The Tendencies contains, Open-mindedness: It expresses that one may be tolerant of divergent opinions with sensitivity to his or her own biases and respects and values differing opinions', the tendency to look for reasons, to be curious Inquisitiveness: It reflects one's direction of learning new things, having intellectual curiosity values, and being well-informed to be up-to-date, flexible, to respect the opinions of others. Systematicity: It is a tendency of being organized, orderly, focused, and diligent in inquiry (Harpaz, 2005: Lia, 2011).

(Black, 2005), and teachers do not understand the essence of the concept of critical thinking so teaching critical thinking will be by a teacher who has understanding and deep knowledge of the components of critical thinking, skills, and tendencies (Vaske, 2001), Teachers' perceptions of how students think critically affect their teaching in the classroom. The lack of understanding of the teacher, of requirements to help students think critically. many teachers think they are helping students to think critically, but they focus on their understanding of the subject being studied, so it is important to consider the method and their personal beliefs before they try to combine critical thinking with their lessons.

It means that the teacher should improve his perception of critical thinking and change his perception regarding the teaching of critical thinking and use strategy, which enables critical thinking (Choy, 2009).

The teacher's perception of the essence of his role, whether this role is knowledge transfer or a mediator for learning, influences the development of critical thinking among students; teachers usually perceive their role as knowledge transitions. This concept is traditional, and the teaching will be structured teaching.

William & Barnett (1997) noticed how the teacher perceives himself in the process of teaching. This perceiving has implications; if the teacher perceives himself as a mediator, it encourages students to learn as an active partner in learning. Therefore, it occurs in interactions between the student and the student and teacher and student.

Black (2005) found that students improve their critical thinking if they learn how to think and do critical thinking processes, such as investigation, interpretation, analysis, and sensible critical thinking judgment (Doron et al., 2006).

In the present study, the researcher perceived herself as a mediating teacher ،this perception allowed her to observe ،document and analyze the students' thought processes.

The purpose of the study - to understand the change processes of student perception of critical thinking During training sessions of the course. The researcher wanted to understand how students perceive the essence of critical thinking, what is its contribution, and what are its features?

Methodology

Sample- A group consisting of forty Arab students in the first year of college and studied teaching theory.

Methods - Action research and insider researcher

This study is action research, the teacher researching her own practice with improvement in mind. The researcher examined change processes of the participants' critical thinking (Kurt Lewin, 1890-1947). Teachers use this method to improve teaching practices and students' outcomes.

Susman (1983) identifies five stages in action research, identifying the problem; collecting data; suggesting several possible solutions leading to a single plan of action, which is implemented; collecting and analyzing data from the intervention, and Interpreting them based on the success of the action; and re-evaluating the problem to start the process again.

Lewin (1890-1947) described the cycle as having three stages: Unfreezing, where the individual or group realizes that change is required; Changing, where new models are explored and tested; and Refreezing, where the change is evaluated and either adopted or reconsidered (Clem,1993).

In the current study, the researcher used the following five stages: first, Planning – identifying the issue that required change, research questions, and methodology to be used in the research. Second, Action, implementing the research intervention third, Observing and collecting the data resulting from it. Fourth, analyze the findings\ evaluating, discussing with a colleague, and writing a report on the study. Fifth, Reflecting the research and its findings and considering how to continue the process of improvement.

Research tools.

The researcher used two tools, first, the observations, second, focus group with a semi-structured interview to answer qualitative research questions.

1.1 **Participant Observations** -The researcher participates actively in the participants' daily life as a visible or hidden observer. The researcher observed and recorded the behavior during the observations and naturally described the interactions and phenomena, to accumulate experience and knowledge (Marshall & Rossman, 1989; Creswell, 2009).

1.2 **The lateral observation** or non-participant, the researcher tries to observe the participants in the study without contact with them and usually without even knowing that he is watching them. The researcher observed phenomena and processes of thinking, learning, and accompanying processes during the training sessions and recorded them during the class sessions she teaches.

2.1 The **A focus group** is a research technique based on group dynamics. The current study was used small groups (4-5 students) during the collaborative learning; the students were asked to describe the learning process and the development of their critical thinking; the researcher also conducted interviews with the groups participating in the study. She used a semi-structured interview with focused questions and an open question to enable participants to discuss their learning and thinking during classes and meetings.

The Researcher used three questions to guide students while learning. First, describe your learning process and thinking during training sessions! Second, what are the things and factors that have helped you during learning? Third, what is critical thinking, and What are its characteristics?

Management of the research and use of the intervention program

The researcher used an Intervention program and use the infusion method(Ennis,1992), the training assignments focused on the components of critical thinking and the contents of the course Theory of Teaching, the two components are important. the training assignments based on Kuhn's model (1999); the number of training assignments during the study was the same as the number of sessions per semester. The training sessions focused on the empowerment of skills and the thinking tendencies determined by the Delphi team (Facione, 2015). Each task has a clear purpose and structure (Ennis 2011), enabling critical thinking and the change in knowledge.

Learning Strategies -The researcher used several strategies, and these are, Small Groups "Collaborative Learning," and Discussion Topics and Ideas; in addition, individual learning methods, the role of the researcher as a teacher is to bridge the gaps between the hidden curriculum, ideas and beliefs, and the teaching by interacting with the curricular and learner texts (Silberstein, 1984). The researcher focused on modeling the activities of critical thinking (Lipman, 1988), (Abrami, 2008: Higgins et al., 2004: Facione, 1990: Moon, 2008).

Findings- During teaching-learning, the interactional processes allowed the teacher to observe ،describe, and understand the perception process change among student critical thinking.

The researcher used the deductive approach in processes determined by Thomas (2006). These are, first, the preparation of data in the files that the students wrote during the meetings, the observation and interviews in focus groups, and a semi-structured interview as a self-case report (Shulman, 1992).

Second, precise reading of the hard text with notes and encoding. Third, creating categories and themes identified and defined during the hard text in real expressions; fourth, encoding into several overlapping categories. Fifth, Combining the overlapping categories, seeking contradictory perspectives and new perspectives and insights. The findings were divided into three topics, each helping to answer one of the research qualitative questions.

The first topic - The contribution of critical thinking

Students perceived the contribution of critical thinking on two levels, personal level, and professional level.

Personal level -This sub-category consists of three themes: Self-confidence, social adaptation, and self-acceptance. The students made the following statements:

A) Self-confidence- "During the lesson, I felt that I was learning independently, and I began to link the content and the concepts with life," said the student, Minas, who studied the students' documents. Through the learning process, I learned how to analyze the subject into small units: "self-acceptance, self-confidence, the satisfaction that gives the need for perseverance, the realization of goals and the end of self-realization and development.

B) Social adaptation -researcher's observation of the groups Salwa said, "I feel more able to adapt within the group, even outside the classroom." Noel said: "I began to think about how to change the thoughts, attitudes, and behavior that are appropriate to norms and traditions to cope and adapt to the group to realize the goals.

C) Self-acceptance from the analysis of student documents (Hanaa) said: "Self-acceptance gives self-confidence satisfaction that gives rise to the need to persevere in realizing the goals and the end of the realization and development of the ego." Noel said: I mean the appropriate change to working situations and requests for instruction; I must understand myself, accept my abilities, and develop them accordingly.

The students perceived that the intervention program contributed to them having - self-acceptance, self-learning Self-confidence, which enabled them to become flexible and adapt to new criteria and norms.

The intervention program allowed participants to develop the ability to understand their abilities, to accept themselves, to understand the environment, and to change their attitudes. These are components of Personal Development (Facion, 2013: Ennis, 2011)

2) Professional level

This sub-category consists of four themes: Content analysis, self-adaptation, organization of thoughts, and decision-making. A) From the content analysis, Sara said, "I felt that I wanted to be more focused on reading and analyzing the material accurately. “The training helps us

organize the ideas and concepts,” To define freedom of thought. "Minas said," Through the learning process, I learned how to analyze the subject into small units.

B) Self-adaptation "I helped myself to organize my thoughts about the future how to integrate into the work." Fadia said: "I learned the essence of content, planning, learning, teaching, and matching the goals and needs of the individual." Adala said: "This learning process is a process that is experienced every day in a residential area or a workplace.

C) The organization of thoughts –from the analysis of documents, ayah said: "This operation gives the individual freedom of thought and the ability to organize from his answers." Dulat said: "It helped me to organize my thoughts about the future how to integrate into the work.

D) Decision Making - Analysis of the Student Documents, Rowan said: "In my opinion, the person has to adapt to new situations, but he has to decide for himself on personal issues."

Student Alaa said: "To perform the tasks, my personal decision is to participate in the others' opinions when making the decision.

Summary, the students perceived that the intervention program contributed to students reading, synthesizing the material, understanding the subject, articulating, organizing content, and opinions, and contributing to developing capacity for decision-

The second topic- Empowering Critical Thinking

Students perceived that several factors enhance.

critical thinking, and these are: 1) varied teaching-learning methods, 2) Various learning tasks, 3) Dynamic teacher and a guide,4) clear goals, 5) an encouraging and open educational atmosphere.

2.1. **varied teaching-learning methods;** this theme is divided into sub-themes: 2.1.1) Diversification of methods, 2.1.2) explicit instruction, 2.1.3) group work 2.1.4) discussion.

2.1.1 Diversification of methods - From the analysis of the documents, the student (Alaa) said, the questions focused on the verbs to understand, to conclude to appreciate the joke, to connect between thoughts, such concepts helped me and directed me what to do during the

learning, the duration of learning I would think, the students in the class allowed me to understand the text and to divide it according to the main ideas.

2.1.2 **Explicit Teaching**

Explicit Teaching: From The analysis of the student documents (Mayar) said, we easily learned the text because the teacher asked him to focus on a particular subject at a time, such as basic concepts, important ideas, guiding principles writing the text. (Duaa) said: each time, the teacher explained what we wanted to learn and know. (Arin) During the group learning, there was a discussion on the course topics related to our work as teachers. (Ayat) The teacher suggested and encouraged us to conduct a discussion and dialogue around the topics of the summation.

2.1.3 **Group learning** the students' analysis shows that the student Ahlam said: "In the joint mission within the group, I felt the essence of the process of interaction during the activity, activity, and activity. It is fun and useful.

“Alaa said: "The lesson was enjoyable, because of the cooperation of the group members."

2.1.4 Discussion. From The analysis of the documents, Alaa said: "My personal decision is to participate in the opinions of others." Student Duluth said: "Your approach to my teacher makes me want to discuss more deeply social issues; I release stress and spend some things that bother me in this lesson.

The use of the "Variety of method, Explicit Teaching and the use of group learning, enabling discussion and collaboration that encourages the enjoyable and successful performance of the task, and enable the development and the Empowering of critical thinking (Brookfield, 2012: Garrison, 1992: Kuhn, 1992 Ennis, 1989, Abrami, 2008).

2.2 **Various learning tasks** - This theme is constructed from three categories, reading and writing, a map of concepts and graphic organizers, and a question-and-answer question. 2.2.1- **Reading and Writing** - An analysis of the students' claims shows "when I read the material several times, I understood it ... I encourage such activities!" Suha said: "At first, it was difficult, after an intensive reading of the text, I began to understand the concepts and how they relate to each other." Hanaa said, "After reading the ceremony, I am sure I have more curiosity to read more about similar subjects." Reading the text made me think about the

society in which we live and whether we are true and respect our principles and values (Ramsay et al., 2009).

2.2.2 **Concept's map and graphic organizers**. When analyzing the documents, the student (Abir) said, when I made a sketch showing the connection between the terms, I understood the meaning of the concept. The student (Ala) said that when I made a mapping of the connection between the ideas in the text, I felt that I was very active, thinking and understanding the student's knowledge. The use of graphic organizers is an important tool. (Van Gelder, 2005).

2.2.3 **Asking questions** - from the analysis of the data (Lama) said, the questions in the lessons guided us to think and understand things, each process, I asked additional questions to understand. The student (Ranin) said the teacher would ask and explain the question to help us understand the question and think about the answer. Arin said the question helped me connect the parts of the text and write convincingly (Browne. & Keeley, 2010).

3) **Dynamic lecturer** -From the observer's observation of the groups, "the researcher continued to walk between the groups to guide and guide them during the deliberations and misunderstandings." The researcher felt an ethical and moral conflict with the learners, the researcher "appears to listen to the student in the third balance of the students' pronouns and to register them as quickly as possible during the lesson or at the end of the lesson (Dewey, 1933: Brooks & Brooks, 2005). "From the analysis of the student documents, Daulat said:" All thanks to the dynamic approach of the lecturer.

Malach said: "I learned that there are various methods of transferring the material to the students; the teacher's summary, guidance, and explanation allowed bridging the gaps in understanding the material and provided the student with the opportunity to understand how to deal with the material.

(Brooks & Brooks, 2005: Moon, 2008: Robert, Barbara, and Wendy, 2006).

4) **Clear Goals** - from the analysis of the documents, the student (Sirin) said that it was important to learn and think, the teacher asked to evaluate the lessons to assess the lesson, the thinking was needed.

The student (Nora) learned during the lessons to think about how to perform the student tasks.

It was important for the teacher to read and think and connect the ideas. The student (Zeinab) announced that the lesson's goal is to introduce thought processes and describe these

processes. The intervention program contributed to the empowerment of critical thinking, and the students found that it was important to set a goal in explicit thinking classes (Fashion, 2013. This finding reinforces the statistical finding clear goals in critical thinking class enable its empowerment among students.

5. **Open learning atmosphere and encouraging climate -** From The student document analysis (Samar) said during the lessons, I enjoyed it because I understood and developed my knowledge of the subject without fear. In the end, I was pleased that I could explain my understanding of the subject. Rana said: The teacher helped me to do the task at my own pace. Abir said that working in groups allowed for good cooperation among the group members, which allowed them to think and learn. The intervention program intensified students' critical thinking through an encouraging climate that does not threaten (Brookfield, 2012).

Summary

These qualitative findings aroused that the students perceived that the use of diverse methods empowerment critical thinking, as explicit teaching, group learning, discussion, various learning tasks, reading and writing, Concept's map, graphic organizers, and asking questions, dynamic lecturer, clear goals, open learning atmosphere, and encouraging climate, the use of these elements allowing the empowerment of critical thinking. This qualitative finding answers the research question: which factors helped to empower critical thinking during the lessons?

Third topic - Characteristics of Critical Thinking

This topic consists of six subcategories:

3.1 self-learning, 3.2personal expression, 3.3understanding, 3.4 challenge,3.5 curiosity, and3.6 logical link between ideas and concept.

3.1 **Self-learning** - from the observer's observation of the groups: "During self-learning, the students seem absorbed in the thought and listening to the material, the texts and the solution of the questions as if they are competing, with external and internal challenges." (Fink) said:" It is a difficult process when we move from the learning phase of the lecture to the independent learning stage, but I prefer a process like this (self-learning). "(Fink) said:" In the lesson there is something new, learning independently, the lesson is enjoyable; in analyzing

the documents, student Asala said: "We conducted a self-learning process, an important process; I hope to succeed again without fear of failure."

Amani said: "At first, the mission was difficult. We used to get the material in the lecture method. In classes, I began to read individually and thus succeeded in performing the task through self-learning (Bandura, 1997).

3. 2 **Personal opinions expression** - from the researcher's observation of the groups: "During the discussion, all the girls in the group listen to the student speaking, she raises her opinions and opinions with confidence, Samar wrote in her self-learning before the discussion feels that this is an opportunity, she must take advantage of." "The most important thing is the free expression of opinions, and I felt comfortable when I wrote what I felt."

3.3 **Understanding**, the analysis of the documents revealed that the student Raida said: "At first it was difficult to draw the conceptual map because we did not get used to this method, but after reading the text, I understood from the context How to draw a map of concepts adapted to the new method of learning and I had the ability to understand. “The student Iman said:" The teacher's explanations helped to understand the text and perform the tasks during training.

3.4 **The challenge**: From the researcher’s observation of the groups, she said, "I feel that the lesson is a challenge for change for every student. Each one tries to cope with this challenge." The analysis of the documents indicates that the student Shadia said: "I had a desire to do the task of drawing a conceptual map. More challenging than the open questions, "Duluth said." I feel full of energy and feel that I can resist any challenge. "The analysis of the documents revealed that the student said:" While solving problems, you can cope with the challenges in life. “Ability to face challenges and difficulties Look for ways to cope with challenging tasks.

3.5 **Curiosity**- The researcher's curiosity on the groups Samira said the subject intrigues me to know more because it is a subject close to life.

" from the analysis of the student documents, Duluth said:" The subject stimulates curiosity, the contents of the subject revolve us in everyday life. "The student said:" After reading the text, I am sure that I have more curiosity to read more about similar topics. "Student Asala said:" The reading caused a lot of curiosity.

3.6 **A logical link between ideas and concept** - from the researcher's observation of the groups, "the students are integrated into the performance of the assignments, they need to understand the texts (which read the text and return to focus on the questions), which is repeated several times." "I learned a new method, new concepts, and found myself in the learning process Hanan said: "From an internal motive, I analyzed the article and organized the concepts according to a logical connection. This organization immediately helps me to remember the whole text well. These findings indicate that the use of an intervention program during the lessons and training sessions in thinking enabled the students to acquire several characteristics of critical thinking; these are self-learning ability, the ability to express personal opinions, the ability to understand and reflect on a long time, the ability to withstand challenges, curiosity, logic, and logic (Facion, 2015). This finding strengthens the What are critical thinking characteristics?

Summary - The findings of the study reflect the effect of the intervention program on the development of the critical thinking of the students and their perception about critical thinking , who trained in training sessions (Terenzini, Springer, Pascarella, & Nora, 1995The use of the infusion method enabled the development of the students' critical thinking, through direct and explicit instruction, The field enables the development of both cognitive and affective because the field of knowledge contains facts, beliefs, attitudes and correlative potential (Ben Peretz, 1995), which ensures the learner's reflection both in the cognitive and the affective domains, attitudes and habits of thought (Masson, 2007: Ennis 2011: 1985: MecPec, 1981).

The students discovered that they developed on two levels, the personal level, and the professional level. As a result of the training, the students gained self-confidence and became self-adaptive, and understood their own thinking, learning, personal disability, and ability. have become owners of the media to develop content on the subject studied, have acquired adaptability according to their expressions on the working level as future teachers who can organize their thoughts during the tasks and when they encounter a problem to cope (Facion, 2015: Costa, 1991: Ennis, 1991): Tishman Jay and Perkins, 1994), These components are the components of critical thinking (Ennis, 1982: Facione, 2015). The use of strategy, an open learning environment, the formulation of clear goals, and constructivist learning positively affect the development of critical thinking (Abrami, 2008, Faction, 2001); the study raises the need to use an intervention program with special components and characteristics (Facione, 2013: Ennis, 2011: Brooks & Brooks, 2005 This study is associated with previous research and literature in the field.

The findings of this study **reinforce** the findings of previous studies in the field of teaching, empowering, and developing critical thinking, such as the study of Solon (2003), Ennis (1989), and Abrami (2008), found that the use of instructional teaching strategies enables the empowerment of critical thinking. The study pointed to the important role of the teacher in developing critical thinking tendencies and skills.

The teacher helped them.to understand the material by using the various strategies and made them scaffolds by explanation and direction. During the lessons, the teacher explained to the students how to approach the assignments (Kuhn & Dean, 2004).

The study's findings reinforce Brookfield ‘s observation (2012) that the development of critical thinking is a social process. Brookfield (2012). Both approaches emphasize the importance of social interaction to encourage cognitive development (Dilenburg, et al. 1996).

Limitations- The present study has limitations. The sample is small. The sample belongs to only one institution, the Arabic college, And the intervention program was implementing one semester, for this the researcher cannot generalize the finding.

Challenge in Research is related to the validity of the research that the main research tool is the researcher himself (Lincoln, & Guba, 1985), this has many implications, such as inclusiveness, and the external validity of the study is low because the findings cannot be generalized on a whole population.

To overcome the validity of this study, it was important to focus on the participants and the effects of their interactions with the group members and the performance of the training sessions during the collection of the qualitative data (Lincoln & Guba, 1985).This study ensured reliability through these factors, a common semi-structured observation, and a focus group with a semi-structured interview.The general inductive approach to analysis, the data collected, was associated with guiding and research-oriented questions (Shinton, 2004).

The researcher recommends Future research that will examine the teachers' perceptions of various disciplines on the meaning and detentions of critical thinking. Studies examine the development of critical thinking in the various methods of teaching critical thinking.

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