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Critical Thinking in Iranian Students for Pedagogical Reason

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Abstract
Critical thinking is the ability or disposition that would let students to discern certain kinds of falsehood, inaccuracies, and distortions limit freedom in the society that they are living. There is a direct relationship between critical thinking and critical pedagogy which they share some common concerns and barriers. A critical thinker is also a critical pedagogue, wants pose problems for finding suitable solutions for population especially in Iran's educational system. It is mostly banned by different authorities or programs which are not made upon pedagogical reasons, but they are made upon political views. Fostering a critical thinker can be utilized in critical pedagogy to sift students being more critical in thought and action and help them to see the world with progressive minds. The aim of this study is to find out the benefits of CT through many classroom observations and interviews that how students' perception is going to find solutions, and raising questions in many schools and colleges .The investigation of this study shows that CT is obviously a teaching tool in pedagogical programs to find solutions for the problems which is performed in the mind of students and it has many benefits for pedagogical programs, it also finds out that open-minded approach will help students toward CT programs but there is not enough CT curriculums by specialist designers in educational system to teach CT.
Keywords: critical thinking, pedagogical reason, educational system, teaching, environmental learning

INTRODUCTION

Most of students are objectives and they are not critical thinkers around the globe these days, to be a critical thinker, first it is needed to get familiar with the definition of CT as Halpern (1996) defines it as a cognitive skill or strategy which increases the probability of desired outcome, it evaluates factors which can be used in making decision, raising vital questions that are caused to solve complex problems. As Mulnix (2010) defines critical thinking is the intellectually disciplined process of actively and skillfully conceptualizing, applying, analyzing, synthesizing, and/or evaluating information

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gathered from, or generated by, observation, experience, reflection, reasoning, or communication, as a guide to belief and action, it is a set of intellectual virtues possessed by good thinkers. CT can develop the mind of students for specific purpose, and put them in a debate process to follow and making rules, to question different views, to challenge right statements, to be pessimistic in order to find balance for the relationship of thoughts and environment, and to investigate some experiences to challenge mind logically or evoke emotions.

There has been a growth interest on CT in the 80s. Authors such Aristotle and Plato are the first founders for the movement of the term CT, and it goes back to starting first days of education system around the world. From the primordial days of education it is felt to have a critical mind toward social injustice and inequities. Richards Paul believes that people need to know how to criticize logic of arguments and underpin everyday life. Harvey Sigel (1988) points out that CT aims at self-sufficiency, and a sufficient person is searching liberation, free from control of unjustified ideas.

L2 professional literature on CT argues that it is the ability of mind to examine thought in detail, it requires an active mental effort that should be ascribed meaning to the world (Barak, Ben-Chaim and Zoller, 2007; Dam, Volman, 2004; Gun, Grigg & Pmahac, 2007). CT is central part of the idea in education system and the social basis for understanding equal rights and to be a free citizen, within democratic countries (Hare, 1999). To sustain this argument that CT as an objective, is interested in education system now a days. Several education systems look at CT as an objective that is essential to be achieved within the context of several subjects in different schools and colleges (Vieira & Tenriero-Vieira, 2005). There are many books and articles which are being written on CT and many of them are related to the education system. The historical roots of CT can be traced to the Socrates and Socratic which was followed by Plato, Aristotle then Greek skeptics who believed that the things are mostly different from what they seem to be, we look on the surface of the things which is needed to train our mind to see through and beneath the surface (Paul, Elder & Bartell, 1997). In many Asian countries there is no curriculum or pedagogical model for critical thinking, there are several reasons that we expect to see critical thinking become more conspicuous part of education system, and it is needed a lot of changes in curriculum and teaching methodology in schools (McGuire, 2002). Many students travel abroad to promote their education knowledge to be in higher level of education, and they think the degree from foreign countries is much more valuable from the degree of their own country.

As Michael Macguire (2002) also said in Asian countries CT is not an important part of a curriculum in teaching a second language in EFL classrooms, it has a historical view and goes back to many years ago which leads to the minds of learners because pedagogical programs at school in pre-university do not encourage critical education in students, and their teachers do not provide that situation for the learners to test it in reality. So, it seems that it will be necessary to promote CT in higher education and start from high schools and colleges to develop in higher education at universities. When we talk about CT we mean both inductive and deductive forms of thinking with decisions about beliefs and actions, and it is sometimes synonyms with reflection, it is a little complicated because it

has different meanings and perspectives used by contemporary scholars. Siegel (1991) believes that critical thinking has two distinct features, firstly there are the skills and criteria of reason assessment. Second, there is epistemology underlying CT. According to Siegel some may disagree about such epistemology in CT because it can provide rationality, assessment, rational justification, and truth. That is our intentions which explore the implications for the mind of the teacher to take CT seriously in her class. It is mostly dependent on teachers' authority to apply CT process and it is teachers' plausibility to understand situations to work with students in authentic tasks, arose students' feelings and thoughts to be such a critical thinker. In most cases in classroom observations, teachers are not able to discriminate the situation correctly to pose the problem and being a proper leader to help the students to find the solutions. There are some investigations in CT for pedagogical reasons that are successful programs at their own time and place.

Critical thinking in current teacher education

According to recent observations and findings, it is believed that CT is a major part of education, and the teacher should expand her knowledge and skills and modify her pedagogy in major ways. That will not happen easily particularly in national schools that force teachers to do unwilling performances. So the teacher should adopt herself to the situations of national schools and private institutes and prepare for professional development to have her own curriculum which can be best in that situation. It seems this is the job of the teacher to do action research and preparing herself not to be separate from students that CT could be used in various subject areas, if the teacher develop CT in her education how we can help the teacher to facilitate such transition, especially for traditional teachers who may not believe in changes. Various findings are available about teacher thinking that we do not know the exact relationship between an effective teacher of a subject and being a critical thinker in the subject, and it seems that CT is closely connected to teacher thinking. Teacher is largely subject-specific. If the teacher tends to be a competent teacher in one subject, the teacher will provide sufficient knowledge in whatever they teach. So CT is a significant part of the process of effective teaching, aspects of teaching are directly connected to CT and it will help students to work on projects and content analysis, prepare them being in study centers and counseling.

Teaching for critical thinking

In recent findings, the idea of deficits in CT skills resulting from classroom environments is not foreign, it is the evidence which suggests that such phenomena may represent an unintended consequence of course design (Andreou et al., 2014; Sullivan, 2012). It is believed that students could have been taught to be critical thinkers by their teachers in a course design, despite of the facts that many researchers have been written course designs about teaching CT which should have been done in content, quizzes, exams, discussions, assignments. As Zimmerman (1990) obviously obtained that self-regulated learning helps to understand need for cognition and it sometimes overlap this phrase , it is evident that need for cognition is related to "reflective learning" and integrative learning (Wang, 2013), need for cognition has also been identified as being related to both higher-order learning and critical thinking (Bensley & Spero, 2014; Heijltjes et al., 2014;

Ku & Ho, 2010; Ku, 2009; Wang, Pascarella, Nelson Laird, & Ribera, 2015; Wang, 2013). So need for cognition would help us to connect it with the specificity of subject. Here the specificity of subject would help students to be better thinkers and transferability, and we need more empirical research on methods of teaching CT which are most effective. Teaching of thinking in specific subject with explicit teaching of CT would apply in the subject area leading to emerge concentrating only teaching of thinking within a specific subject. This is the most important issue in teaching CT explicitly in EFL classrooms. First teach the students how to think deeply in a specific subject area to reflect their ideas in that matter to profound their thought deeply in the mind of a critical thinker to do differently or at least to look at a matter with open mind and consider all aspects of the subject.

There is essential to work deeply on the mind of students to be a critical thinker that would generate new ideas around the subject and would lead them toward a better understanding of that subject matter to distinct new features for that matter. It will also help the teacher to take up to date knowledge to support students feeling and transferability to be reflective. Transferring of CT from one domain to another is desirable and teaching should aim to maximize this transferability. There will be a misunderstanding here about the domain itself. Those scholars such as Mcpeck (1990) believed that CT is subject specific they argued that CT is equivalent to the epistemology of a discipline. But when we talk about education system and teaching, there is no place for CT in education system and teaching, the problem is that we have two activities in the same or different domains. Transfer across domain means that transfer from one academic discipline to another academic or nonacademic world.

In the domain of critical thinking we have another problem about assessing critical thinking. Success in assessing CT is mostly depended on sophistication of language development and use. It is necessary to make a link between language ability and CT. CT is closely associated with interpersonal communication especially in a social cognition perspective. If it is well established in intera-interpersonal communication competence it is grounded in level of control, and CT will develop control over self and over one's environment. With such confidence about the relationship between language ability and CT, it is better to suggest the other ways to assess CT not in paper and pencil tests. If CT can be taught, it is imperative that those who teach others to be critical thinkers are themselves well developed in CT. By so many observations in EFL classes, we concluded that a research agenda should be justified for the study of the relationship and place of CT in vocational teacher education. It requires paradigmatic shift in thinking of subject matter and we hope that employers and bureaucrats in high places would have sufficient vision in education system to recognize potential opportunities to develop a workface of more autonomous and self-reliant critical thinkers. Although we have many names in high level thinking such as reasoning, problem solving, decision making, and many others, it is essentially mental processing that uses one's knowledge and intellectual capacities to achieve certain goals. The importance of thinking in humankind hardly disputed these days to reinforce the mutual relationship between language and thought and make the foundation of our success as species.

Managing CT for pedagogical reason

Managing CT in teaching concepts and techniques that are directly went toward the goal of organizational effectiveness. We should arose students' feelings for problematizing experiences and questioning assumptions in classroom among them and promote their critical spirit in the subject area. Critical management for pedagogical reason is opposed to vocationalism and structuralism of traditional management in education system. We cannot implement a program exactly to manage for CT. It is more related to ideological assumptions and it is needed to focus on ends rather than means. Critical management is more an expression of ideology than a means of thinking critically. In education system in Iran there is no critical written text specifically for students' social and academic needs. We should write critical assignment for CT and put them in the content of school lessons and teach the students the quality of management for critical thinking through assignments and classroom activities for promoting critical thinking course. Firstly, we should prepare the students to develop a critical spirit to look at their courses then encouraging students to be reflective and evaluative through many different contexts that exactly made for persuading their critical spirit. An educational environment which provides critical thinking as a good thing will promote education system in many teaching aspects, and prepare them for a challenge prevailing worldviews and assumptions. There is limited interest in students to have a critical spirit and no instruments for encouraging them toward critical thinking in education system and we should manage teachers to be critical first to make a change among their students to follow their techniques as a critical student to create some rules, questioning some opinions, making decision about hard situations, solving problems, diagnose problems, design a new program, and negotiate with other peers in education system that will lead them to be a critical thinker, so critical management is also an important issue that we should make our class upon it.

RESEARCH QUESTIONS

There are three main questions which are done in this study:

1. Is there a necessity to apply CT in educational system for pedagogical programs?
2. What are the benefit issues regarding CT programs in classroom activities?
3. What are the disadvantages regarding CT programs in classroom activities?

METHOD

Procedure

They were asked to answer to the research questions by for and against questions about disadvantages, the benefits and advantages of CT, then the researcher analyzed the responses to categorize them into two categories which were specified for the benefits category and disadvantages category of CT. It is also prepared a question for the necessity using of CT in pedagogical programs in schools and colleges, and they were supposed to answer the question then recording their responses to gather those information which was more similar among participants for analyzing data to provide the result of this study.

Participants

There were at least 250 students and teachers in different levels of school teaching and colleges to participate in this study to answer research questions and gave us permission to have observations of 20 classes which were used to apply CT programs as a tool for teaching process in an environmental learning especially in English language classrooms and school classrooms.

RESULT AND DISCUSSION

There were some programs in CT classroom activities which were aimed to follow self-study programs that is one of the aspects of students' personality to make them have more confidence in learning process and it gave motivation toward students that learning was not only referred to score achievement but it was something that was learned. Group working was another procedure which was mainly used by teachers in their classrooms that emphasized on active thinking process, interacting each other and the feedback of learning by doing, so learning process could be made cognitive thinking patterns in learning experience in group working. It showed that CT ability by self-study was high among students and those group of students who worked a group authentic task would be more eligible for CT programs to be more successful than the others. As Lu (2017) mentioned about open-minded approach to posing the problem of Chinese students, here we examined that open-minded approach programs in curriculum assignment were more successful to push forward them to posing the problem then finding the solution as a real critical thinker in an environmental learning process. Assessment in CT is a difficult duty to do, because it needs more time and structured programs exactly based upon CT programs to achieve and it is a necessity qualification of this study to assess at glance what comes out and categorize each specification in column to understand that CT really happened in an environmental learning process. Educational syllabus should be developed to some extent in CT programs for pedagogical reasons. Therefore, it is felt the necessity of CT programs in curriculum design should be worked in schools and colleges and specify them based on students' age and gender to arise their feeling for why questions and finding solutions. These results can be easily replicated to other areas of public administration.

The necessity of pedagogical program

Gruenfeld (2010) argued that persons who think creatively also think critically. This is an important program in our classroom principles to teach them how to think critically, and in what ways they will be critical thinkers. We should make a specific critical skill program that regards all thinking skills, and we should make our decision primarily what are thinking skills courses and how we should be taught them. Many scholars have been involved in educational program for a long time to focus on CT that how we can make it for educational system, and in the fields of practice what can be made through domain – specific that thinking strongly will shape by content and how is it possible to produce those kinds of contents which promote CT rules in classroom assignments. Authoritarians and policy makers in educational system would make such changes in education to produces critical content and use it for specific subject to promote CT in

education from high school to higher education level in different majors according to their specific needs occupationally or academically. We are still lack of pinpointing problems in this field. We should find useful thinking skill to use it in many contents, reasoning by analogy and evaluating sources of information that are examples of general CT. We should make the program that will cover all kinds of material for domain-specific thinking skills. We should support our student with creativity in thinking to be critical as much as they can in problem solving programs, and filling their mind always with an open-ended question to answer that question by their own creativity. Treffinger and Isaksen (2005) delineated that creative thinking includes two stages; first is the divergent phase of producing ideas, and then the critical convergent stage for evaluation. This creative thinking process consists of understanding the problem, generating ideas, and planning for action. In terms of understanding the problem, mess finding, data finding, and problem finding are three elements in this phase.

At least we can manage the students how to think by three approaches: the general approach, the infusion approach, the immersion approach. In the general approach CT is taught in dedicated course that is separate from disciplinary content. In the infusion approach CT content is included in subject matter courses and is taught explicitly with disciplinary subject. In the immersion approach subject matter content is taught in thought-provoking way but skills are not explicitly taught.

In educational program there is needed to highlight critical thinking content and we can provide a situation for students to learn and transfer thinking through explicit skills. An ideal program requires students to take a long semester to have CT course as general education class in all levels of school, this course will cover all fundamentals and CT topics. We need to have some thinking skills courses that have been made by professional and reflective teachers for the school curriculum and this content would be a salient part of learning program at schools. We also as teachers should stimulate students' insights to use class time for practicing thinking skills and developing good mental habits in our students. By giving our students thinking skills programs, there is essential to have a connection between writing skill to their thoughts and it will lead to create new instructions by writing program in class that we can assess our students from their writing papers, and spending less time for lecturing will help us to give more time for students for more instructions to guide our students to write their thoughts critically, we may ask them by asking an open-ended question to write an essay. We can also use a modeling effective thinking practice and habit to activate their minds. Instructional materials are not ready to use at our hand, so we can program a valuable assignment for teaching problem identification and definition of skills to have a comprehensive case study of an organization to write a paper identifying major problems of course by policy makers' agreement. Problem-based learning programs can be utilized in our educational program to make our students to be effective critical thinkers using their own experiences but we cannot use two experiences at the same time, and each student must be able to conceive experienced phenomena in more fundamental and abstract terms. Any course that is designed for the purpose of promoting CT should involve instructional strategies and activities that will serve this purpose (Ok & Toy, 2011). Several education

systems include the development of CT as an objective to be achieved within the context of several subjects at different school levels (Vieira & Tenreiro-Vieira, 2005).One pedagogical implication that we can make here is to focus on depth of understanding, on foundational ideas, on intellectual synthesis, and on intellectual experiences that develop and deepen the most basic intellectual skills, abilities, concepts, and virtues as Paul (1993) argued in this field in his article. Moreover, those who are responsible for the education policy should recognize that teaching practices should be consistent with the philosophy and objectives established for curricula, such as science education (Tenreiro-Vieira, 2000).

Limitations of critical thinking

As Gerald F. Smith (2003) points out, although many beneficial aspects of CT and many scholars agreed to promote CT spirit that is not sufficient to the task, it is certainly needed to have managers to be reflectively skeptical of conventional wisdom, of information and reports they receive, and of taken for granted policies and practices, it is also necessary to manifest cognitive virtue as a clarity precision, and rigor in thought. An effective thinker knows a lot about thinking, as an activity we should develop a skill for thinking that entails the acquisition considerable amounts of declarative and procedural knowledge. Effective thinkers can use their concepts, principles, strategies, and methods in a domain-specific to apply it across multiple practices. The next important issue that is another limited field of CT is to avoid such errors that students make in problem solving strategies or deductive reasoning, we should be able to become aware of the characteristics for sources of information, help them to be an effective thinkers. The material which is highly relevant to CT activities are not existed, in this field we should construct and evaluate arguments for example in deductive reasoning practices, and we should have taught CT explicitly from the past until now. The students should also learn about CT to compare their thoughts traditionally and existence mind in present time. Managers in educational system need to know about thinking, it is kind of limitation that is related to the policy of education system in Iran and authoritarian people will make rules and regulations upon them. CT is not enough learnt in schools and colleges in Iran and if we can use it in our classrooms there is no creativity or it is just limited to verbal or fantasy dreams that is highly faraway to reach from the reality. Assessment of CT is another limited issue that we cannot decide which is true and real assessment of CT in our classrooms because there is specific regulation system in our practices and it is hard to believe to follow up such techniques for making thinking evaluative and critical. That is a limitation of our education system that will not lead us to have a concept like that to be creative in CT as an activity for schools, and even higher education at universities. Another, related reason is that, beyond an agreement on the broad objective, it is not clear how thinking skills can be visibly and tangibly articulated by teachers, students and policy makers, especially as part of the curriculum (Lancrin, 2015).

CONCLUSION

Traditionally, CT is conceived, fails to address many thinking tasks and it was a challenge for managers, teachers and many staffs who were involved in education system, but now

it is widely used as an alternative by teachers. We still have lack of critical contents in our education system to promote CT schools. We need a framework for teaching CT but it is broad in decision making and CT. We can make this framework in terms of representative concepts, skills, heuristics, and techniques. Problem-solving centered classroom especially those which are connected to writing skill and thinking skills would be a challenge for creating the spirit of CT in the minds of students. Designing thinking skills programs should be worked across curriculum classroom to reinforce pedagogical reasons to promote CT. Pedagogical issues are pertinent aspects to the teaching of CT. Problem-based learning programs would help students learn to think in a language for abstract terms. We can also teach our students a technique that is theoretically well-grounded, and it is easy to teach for all kind of students. Although it is not easy to teach how to think, the pedagogical tasks are able to do so and students would learn how to think critically in every aspect of their life, at least for identifying a problem, to pose the problem, and making decision for solving the problem. As Gomes (2015) said that many scholars have been thinking and studying critical thinking as a step forward to public administration the advancements seems to be a little timid being very optimistic at the moment. So students must be guided to become producers of knowledge, and it is necessary to design activities or to create an environment for students to engage in higher order thinking.

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