

Necessity To Foster Critical Thinking And Problem-Solving Skills In Higher Education

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Abstract: This paper aims to argue the reasons to add Critical Thinking and Problem-Solving Skills in the higher education for the academic excellent and employability of the graduates. It is undeniable that the traditional academic knowledge from textbooks, lectures by the professors, and the scholarly resources create the base of learning in various fields. But at the same time this academic bases alone are insufficient as this has to be complemented by few other forms of learning additionally in order to prepare the student community with well-rounded or integrated education. The bookish knowledge actually equips students with the theoretical understanding wherein practical experience is almost ignored. The ability to communicate, work in team, lead when required and emotional intelligence are also very much important in the actual world. The higher education today is so busy with the completion of syllabus and there is very less or no time and option for the students to be trained in Critical thinking and Problem-solving skills. Practically, the memorized facts from the books for the examination do not support the students in real life to think critically, analyze complex situations, and propose creative solutions in real life scenarios. There is an inadequacy of cognitive skill on the whole in the higher education as it concentrates more on theoretical knowledge. In order to analyze information, to solve problems and make decisions, to communicate effectively, and for the career readiness, the higher education should concentrate on inculcating Critical Thinking in their curriculum consciously and widely. Otherwise, the educational institutions would continue to produce graduates who are unemployable.

Keywords: Critical Thinking, Problem-solving skills, Higher Education

INTRODUCTION

It is extensively known among educational theorists, educators and policy makers since John Dewey's conception of reflective thought (Dewey 1933; Scheffler 1973; Siegel 1988) that Critical thinking should claim a prominent place in the educational system. The last few decades have witnessed Critical thinking becoming one of the defining conceptions of Western University. (Barnett 1977, 3) As change is among the few certainties of the world, whether it is in the field of technological advancement, discoveries, inventions and even in the field of politics, our social scenario faces new challenges and problems constantly. The education has a role to prepare younger generation to the unknown and unpredictable changes that are increasing. The younger generation need to increase with the effort to develop creativity, independence and scientific thinking. In order to have ability to find solution to the problems, to find relevant answers, one needs Critical thinking. Critical Thinking is an important crucial skill in the current academic conditions. It is considered as one of the key competences of university students (Hasanah & Malik, 2020; Lloyd & Bahr, 2010) The significance of supporting critical thinking in higher education is also connected with their ability to face the demands and challenges coming in front of them in the 21st century which is growing intensely.

Meaning of Critical Thinking

Delphi Report of 1990 is one of the commonly cited definitions of critical thinking which is written by the American Philosophical Association. The resulting definition maintains that critical thinking is "Purposeful, self-regulatory judgement which results in interpretation, analysis, evaluation, and inference as well as an explanation of the evidential, conceptual, methodological, criteriological, or contextual considerations upon which that judgement is based (Facione 1990, 3). In Addition, Fisher (2011) Fisher (2011) by exploring several definitions of critical thinking identified commonalities present in as a skill-based activity which must meet various intellectual standards, including clarity, relevance, adequacy, coherence and that it requires the interpretation and evaluation of observations. Its purpose is oriented towards the thinker making decisions and judgements about what to believe and how to act.

Fisher and Scriven (1997) propose that thinking is not critical simply because the thinker aims to be, but that they must be competent in the associated skills. This is a significant development in the understanding of critical thinking; the implication is that for thinking to be considered critical, it must meet specific criteria and that a person can demonstrate different levels of competency. Critical thinking has also been conceptualized as a multidimensional construct which includes cognitive, dispositional, motivational, attitudinal and metacognitive functions. Bensley (2014) and Spero define metacognitive as an awareness and control of one's cognition and they position this self-awareness as central to critical thinking, enabling learners to assess their knowledge and skill levels.

Characteristics of a Critical Thinker

Critical thinkers are the people who can move beyond “ typical “ thinking models to an advanced way of thinking. Critical Thinkers produce both more ideas and improved ideas than poor thinkers. (Ruggiero, 2012) Critical thinkers usually (Ruggiero, 2012) acknowledge personal limitations, see problems as exciting challenges, have understanding as a goal, use evidence to make judgements, are interested in others' ideas, are skeptical of extreme views, think before acting, avoid emotionalism, keep an open mind, and engage in active listening. By the practice of their thinking skills like any other skills, the effective thinkers make more magic in the results.

Purpose and Rationale of Teaching Critical Thinking

“We should be teaching students how to think, Instead, we are teaching them what to think.” (Clement and Lochhead, 1980, Cognitive Process Instruction) There are two different things transmitted in all education. One is the subject matter of the course “ What to think”, and the second one is the correct way to understand and evaluate this subject matter “ how to think”. There is an excellent attempt to transmit the content of the respective academic disciplines but there is often a failure to teach students how to think effectively about the subject matter they are taught or how to properly understand and evaluate. This ability is termed critical thinking.

Critical Thinking in Higher Education

The origin of the modern conception of critical thinking can be attributed to John Dewey's (1933) philosophy about reflective thinking. Dewey's thinking became a starting point by many important theorists in education over the decades which has articulated various dimensions and components of critical thinking. It is easy to identify some important perspectives and critical thinking movements emerging in higher education out of these different perspectives.

Teaching Critical Thinking

The students should not accept anything for granted. They should have an effective skill of critical thinking. The Foundation for Critical Thinking (2019) claims that without the intervention and structured support good thinking habits cannot be taught. There are many ways to organize instruction in critical thinking. Many authors draw on Ennis (1989) when they consider right approaches to teaching critical thinking. Ennis categorized four different approaches. They are namely General, Immersion, Infusion, and Mixed. The general approach to teaching critical thinking as defined by Ennis (1989, 4) includes ‘attempts to teach critical thinking abilities and dispositions separately from the presentation of the content of existing subject-matter offerings, with the purpose of teaching critical thinking’. The general approach to teaching critical thinking as defined by Ennis (1989, 4) includes ‘attempts to teach critical thinking abilities and dispositions separately from the presentation of the content of existing subject-matter offerings, with the purpose of teaching critical thinking’. The infusion approach is also subject matter driven and includes a thoughtful approach to subject matter instruction which leads to deep understanding (Ennis 1989). However, this approach also involves encouraging learners to think critically about the subject matter they are exploring through an explicit focus on the principles of critical thinking dispositions and skills (Ennis 1989). Finally, the mixed approach involves a combination of the general approach with either the infusion or immersion approaches.

Benefits of Critical Thinking in Higher Education

It is proven that critical thinking and problem-solving are indispensable cognitive skills that play an important role in the formation of the students not only for the academic success, but also for the professional competence, and responsible citizenship.

In view of the academic performance enhancement, critical thinking encourages deeper understanding, analytical reading and evidence - based writing. Critical thinking skills definitely supports students to evaluate information, differentiate between credible and biased sources, and formulate well-reasoned

arguments. CT also builds independent and reflective thinkers with the encouragement of self – awareness and reflection that are essential for continuous learning.

Most of the problems people face today are complex and do not have vivid and clear – cut answers. These skills undoubtedly help the students to find out issues, look for alternatives, and make well informed decision in the unsure and dynamic contexts. The universities and the colleges are producing graduates in every academic year. But employers search for the candidates who are not only expert in subject knowledge but employees who with the abilities to adapt change, take initiative, and contribute in one or the other way to the growth and development of the organization.

In a morally distracted society, critical thinking skills enables the students to think through moral dilemmas and the social issues logically. The students are prepared to show responsibility in the democratic societies and global communities. The challenges do not hinder the critical thinkers. On the contrary, they explore new means and possibilities. When faced with problems the critical thinkers apply problem-solving skills and generate creative ways and novel solutions.

Be it law or business or any technical field, the success in any field depends on the capacity of the candidates to think critically in navigating complex issues and creating sound decisions. The world today is full of information, and critical thinking skills equip the students to evaluate the credibility of the information, and discern the facts and determine the genuineness of information shared.

Critical thinkers do not stop learning at any point in their life. It fosters love for learning and the capacity to learn personally. This paves way for the students to continue to grow in the realm of intelligence all throughout their life. Communication is not just the play of language. An effective communication demands clear and well-reasoned arguments. The persuasive expression of ideas, effective collaboration, and the active participation in the civic life requires critical thinking.

Higher education is the preparation of the candidates to the work place where employees and managers observe different situations, consider all the possible solutions, then to proceed with the chain of actions. Critical thinking will come to aid in this process. Some people make good decisions that move the organization forward and wrong decisions hurt the business and decrease the profit of the organization.

Role of educators to foster Critical Thinking

The colleges and universities need to integrate critical thinking with content learning in many disciplines. Such a integration will not neglect content in favor of process. On the contrary, they need the students to use content in projects that require critical thinking. The fostering of critical thinking abilities and intellectual development in the students requires the participation and support of faculty in each and every discipline. The educators can include critical thinking in freshman-year programs, cross-curricular models, and assessment-based strategies. The lectures, laboratories, homework, quantitative exercises, term papers, and exams all can include and integrate critical thinking. The administrators also must acknowledge that the faculties who are involved in this process of testing new teaching methods and skills require support in the form of encouragement, time, training, and resources.

CONCLUSION

As proposed by Meyer (1976) the aim of education is to nurture the individual, to help, to realize the full potential that already exists inside him or her. Taking measures to strengthen the thinking ability of the students should be the major business of the educational organizations and not just an incidental outcome by rote learning. As Cotton indicates (1991) “ if the students are to function successfully in a highly technical society, then they must be equipped with life long learning and thinking skills necessary to acquire and process information in an ever changing world”. Critical thinking is a life skill and the higher education should foster it throughout the learning.

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