The Criticality of Critical Thinking Skills in Higher Education

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ABSTRACT

Critical thinking is widely regarded as a fundamental skill in the twenty-first century that learners of all ages should possess, especially, higher education learners. It is vital to improve the cognitive abilities of the learners of this era. The learners in higher education are the foundation of society, as they are at the ideal age to expand their thinking abilities by broadening their understanding of the world. Thus, this study examines the importance of critical thinking within the context of higher education and elucidates some strategies used to foster the development of critical thinking skills among learners.

Keywords—Critical thinking skills, Higher Education, Cognitive abilities

I. INTRODUCTION

The origin of critical thinking dates back to the ancient Greek civilization, particularly during the era of Socrates, and the significance of critical thinking in the domain of education may be traced back to the roots of the educational system itself. Socrates regarded critical thought as the means by which one may attain wisdom and virtue. The Socratic method, characterized by its focus on debate and the use of inquiry, played a vital role in establishing the educational framework in the ancient era. Even at present, the Socratic method is employed to develop the critical thinking skills of the learners of the 21st century. This proves the relevance of critical thinking skills throughout the centuries (Moore, 2011).

Critical thinking is regarded as the core foundation of higher education, and it acts as a key indicator of one's level of education and professional success. In order to effectively address the demands of this era, the learners who belong to higher education should be acquainted with the critical thinking. In addition, it is also essential to improve their cognitive and linguistic abilities. The cultivation of critical thinking among the learners leads to profound human development, where the teachers feel motivated and honored while teaching a critical thinking course as it holds significant importance in shaping the learners' individual identities. The critical thinking skills of the learners also have an impact on the principles that they employ to make decisions in the real world and the subsequent consequences of their actions on society (Chaffee, 2017).

Paul and Elder (2007) define critical thinking as the ability to critique and analyze ideas with the goal of upgrading them. A refined critical thinker engages in the process of posing significant questions, evaluating pertinent data, comprehending the information, and ultimately formulating well-reasoned resolutions. Hence, it is crucial for a learner in higher education to possess the critical thinking abilities to achieve scholastic and professional success.

Critical thinking is widely recognized as a crucial skill in the realm of higher education. It is consistently promoted and included in the educational experience of students at the university level; for instance, the Australian Higher Education Council (1992) launched the concept of "graduate attributes" which comprises a collection of desirable competencies that should be possessed by higher education learners. The first and foremost skill mentioned in the Australian government report is critical thinking (Moore, 2011). Furthermore, the National

Education Policy (NEP) of India, the first education policy of the 21st century formulated in 2020, accentuated the importance of critical thinking among young learners. NEP 2020 encompasses several key ideas, including the reduction of curriculum content to cultivate critical thinking abilities in learners. Furthermore, the policy highlights that educational approaches among undergraduates should concentrate more on critical thinking skills. It also stated that the education system should give importance to higher-order cognitive capacities like critical thinking and problem solving, as these skills illuminate innovation among learners.

Optimizing Assessment for All (OAA), a project carried out by the Centre for Universal Education at Brookings to enhance the teaching strategies of 21st century skills. It developed new methodologies to assess and improve the evaluation process of these skills. Besides, it identified the crucial skills and competencies necessary for learners in the 21st century to effectively navigate and cope with the demands of the contemporary world. It is also found that communication, creativity, critical thinking, and problem-solving are the four predominant skills that have been consistently highlighted in national policy documents across various countries. Other essential skills include technological, social, and entrepreneurial abilities, indicating that countries place an emphasis on a vast array of abilities beyond academics.

Some of the countries, like Australia, China, Hong Kong, India, Japan, the Republic of Korea, Malaysia, Mongolia, Thailand, Vietnam, and the Philippines, recognized the value of 21st century skills such as critical thinking, communication, collaboration, and physical and psychological health. In the national policy documents of the nations mentioned above, critical thinking is the most frequently cited skill in their policies (Care et al. 2018). Therefore, the role of critical thinking skills in the sphere of education is inevitable in today's world.

II. REVIEW OF LITERATURE

A study found the mediating role of critical thinking and co-operation among other 21st century skills such as algorithmic thinking, creativity, digital literacy, effective communication, and problem solving. The subjects of the study are the higher education learners who volunteered to participate. The scales used in the study consist of computational thinking, effective communication, and digital literacy. The study disclosed a considerable correlation between twenty-first century skills, especially critical thinking skills which played a crucial role among them (Kocak, 2021). Zuluaga et al. (2020) proposed a specific diagnosis of critical thinking skills among higher education students. The aim of the study is to enhance critical thinking among higher education learners who belong to the schools of Administration, Health Sciences, Engineering and Architecture, Social Sciences, Humanities and Theology through reading and writing strategies. The study enabled the learners to evaluate their own reading and writing processes and aided teachers in including critical reading in their curricula.

Critical thinking is one of the important goals of higher education, yet the definitions employed to elucidate critical thinking vary in their usage in different contexts. The study expounds that there is a lack of clarity when it comes to the definitions of critical thinking. Therefore, a qualitative content analysis was carried out to find the gaps among the various definitions. Professors and academicians can use this study's mapping technique to evaluate the differences and overlaps between these definitions. Thus, this exploratory analysis sought to comprehend the relationship between the definitions of critical thinking employed in various contexts (Stassen et al. 2011).

A small-scale investigation was carried out to find out the disparities that existed among academic staff and students in terms of their perspectives on critical thinking. The aim of the research is to find out the importance and perceptions of critical thinking between students and academic staff. The study focused on examining the assumptions held by both learners and academic staff within university classes during the implementation of higher-order thinking strategies. The qualitative study through a survey discovered that the learners and staff share similar definitions and understandings of critical thinking in higher education (Bahr, 2010).

Davies (2015) provided a comprehensive understanding of the diverse theoretical perspectives on critical thinking in the context of higher education. He developed a model of critical thinking with six dimensions such as skills, judgements, dispositions, actions, social relations, and critical being. He believes that these six dimensions have the ability to acknowledge the concerns about critical thinking that are present in the field of higher education in the present day. He asserts that the term "critical thinking" is a traditional expression that is frequently applied amongst the learners of higher education and expresses it in terms of "criticality". He claims that criticality is all about involving higher education learners to develop powers of critical thinking, critical self-reflection, and critical action. Accordingly, the study focused on the models of critical thinking in the contemporary context of higher education.

In a rapidly changing world, critical thinking has transcended its role as a mere component of academic discourse and has become a part of the modern labor market. The aim of this study is to disclose the attitude towards critical thinking in the modern labor market from the perspective of numerous stakeholders, such as lecturers, students, employers, and employees. This quantitative study, with the help of a questionnaire, discovered that critical thinking plays a dynamic role in both higher education and the labor market (Indrasiene et al. 2021).

III. STRATEGIES EMPLOYED TO FOSTER CRITICAL THINKING SKILLS AMONG HIGHER EDUCATION LEARNERS

A. Digital tools

The realm of education was positively impacted by the technological revolution, otherwise known as the digital revolution. The proliferation of digital technologies and blended learning has altered the way education is taught. Similarly, digital tools play a prominent role in enhancing critical thinking skills for the learners of the twenty-first century. The digital tools enabled learners to collaborate, perform tasks, and present data in a graphical form. Students perform better while using digital tools such as Online Test Pad, which creates various tests, and Mindmeister, a website that allows real-time collaboration, which assist learners in upgrading their critical thinking skills. Thus, digital tools have a positive impact on developing learners' critical thinking skills (Meirbekov et al., 2022).

B. Problem-Based Learning (PBL)

The Problem-Based Learning model is utilized to develop critical thinking skills among the learners in higher education. Instead of employing a traditional instructional approach, the PBL paradigm enhances critical thinking skills and self-efficacy among them. Hence, PBL is highly recommended when it comes to developing critical thinking skills in higher education learners (Saepuloh, 2021). Susan et al. (2021) imply that the learners of generation Z are not aware of critical thinking skills and perseverance, as they tend to give up or avoid situations while facing challenges in their lives. Therefore, they suggest using Problem-Based Learning as a pedagogical approach to develop their perseverance and critical thinking skills to face the real world.

C. Reading Activities

The implementation of an extensive reading program facilitated the enhancement of learners' critical thinking abilities. The program integrated all four language skills and conducted a critical thinking test after engaging learners in an extensive reading activity. Reading as a strategy could aid in the development of students' decision-making, as they will be able to apply those skills to construct a logical framework to address real-world problems. The extensive reading activities, such as reading novels, articles, workbooks, and biographies, had a positive influence on the development of the learners' critical thinking skills (Husna, 2019). Good comprehension in reading could improve learners' critical thinking skills. Furthermore, reading activities such as line-by-line analysis of a poem enhanced learners' critical thinking skills by making them understand that even a single phrase can have multiple meanings and allowing them to derive meaning from the phrase by applying it to real-world problems. Therefore, it is understood that reading activities help students improve their critical thinking skills (Tabackova, 2015).

D. Writing Activities

Traditional writing assignments fall short of helping college students develop their critical thinking skills. Instead, two-stage writing assignments can be designed to equip them with critical thinking. Thus, a well-designed writing assignment encourages students to critically evaluate their assumptions and enables them to revise their writing. The two-stage writing assignments can act as an effective way to teach critical thinking skills to learners in higher education. Writing is chosen to hone critical thinking skills because the thoughts on paper provide opportunities to revisit their thoughts, and students can pay attention to the instructor's feedback. Writing activities involve them by making them write a first draft and a final draft, where the final draft requires a small editing process that needs revision. Therefore, writing activities instill revision practice among novice learners and cultivate critical thinking skills among them. Writing activities can be further extended beyond the traditional way of writing, where a postscript can be attached that provides students with a space to reflect and self-assess their skills (Cavdar & Doe, 2012).

E. Integrated reading and writing activities

The processes of reading and writing elucidate an interdependent relationship. In order to provide the necessary skills for learners in higher education, teaching and learning activities should integrate reading and writing so that students can interact with the text, as integrated skill instruction promotes the acquisition of critical thinking skills. Similarly, when learners engage in reading and writing activities simultaneously, they become better readers, writers, and thinkers. Thereupon, it is believed that integrated skill instruction strengthens learners' critical thinking (Tilahun et al. 2019).

F. Creative writing activities

A study employed an intense writing program to facilitate critical thinking skills by posing 10 open-ended questions, which were later analyzed using deductive thematic analysis. The study revealed that the writing activities gradually improved the critical thinking skills of the higher education learners (Masuku & Mupawose,

2022). Khulamikhina et al. (2018) concentrated on writing activities using abstracts, essays, and reports. The creative writing tasks presented aim to impart knowledge and skills to learners in higher education, specifically focusing on the acquisition of information and the ability to discern between factual statements and opinions. Given the significance of writing in university education, when learners engage in writing activities, it results in the growth of their critical thinking skills. Another study used 10 items of essay questions to analyze the learners' creative and critical thinking skills within the higher education setting. Therefore, writing is used to assess the learners' level of critical thinking skills (Janata & Sudira, 2022).

Poce & Amenduni (2019) infer that peer interactions and creative writing activities aided by the use of technology advanced the critical thinking of learners in higher education. The creative writing sessions were based on the critical analysis of literary texts and figurative arts. Learners can collaborate, compare their ideas, and write their creative stories. These creative writing activities guided learners to enrich their critical thinking skills.

G. Prior academic performance and socio-economic background

A study utilized open-ended questions to analyze higher education learners' writing and critical thinking levels. It is found that the learners' higher secondary school grades and scholarly background such as parents education served as predictors to determine their critical thinking skills. Therefore, socio economic variables and prior academic performance determine the critical thinking skill level of the learners (Kleemola et al. 2022).

IV. CONCLUSION

In light of the demands of the current era, critical thinking development among undergraduates is one of the primary objectives of higher education. Learners who exhibit a high level of critical thinking skills perform better in class, the workplace, and society; likewise, they make better personal and professional decisions. In addition, critical thinking optimizes language skills and social abilities. Thus, higher education learners who are equipped with critical thinking skills become more confident and successful in their studies and professions.

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