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Critical Thinking and Higher Education: A Historical, Theoretical and Conceptual Perspective

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Abstract

Purpose: The purpose of this Study is to analyze the historical, theoretical and conceptual basis of the critical thinking in relation to higher education.

Methodology: The methodology used is a review of existing literature on critical thinking and higher education.

Findings: The study shows that critical thinking is embedded in Bloom's Taxonomy and institutions of higher education that implement the higher levels of Bloom's taxonomy embrace critical thinking in their curriculum.

Unique contributor to theory, policy and practice: The study presents a unique contribution to theory by relating Bloom's Taxonomy to critical thinking.

Keywords: *Critical Thinking, Higher Education, Bloom's Taxonomy*

INTRODUCTION

Critical thinking skills have gained prominence over the years as some of the essential employment requirements for 21st-century graduate employment (Alfonsi et al., 2017; Nakirijja et al., 2020). Inculcating critical thinking in the educational processes is increasingly becoming of critical importance today, and graduate schools are increasingly questioning the existence of these skills in their processes. Institutions are keen on knowing and appreciating the meaning of critical thinking, and its historical and theoretical basis in Education, and how it can be implemented in institutions of higher learning.

Critical thinking is defined differently, depending on the theoretical approach used. Philosophical theorists like Ennis (1985) define critical thinking as that which relates to reflective thought: where, when applied, one can use clear and logical analysis from the beginning of the problem, the relevant facts and the conclusions reached based on existing information and reasonable logic. Psychological theorists like Sternberg define critical thinking as the "mental processes, strategies, and representations people use to solve problems, make decisions and learn new concepts" (Sternberg, 1986: p.2). Educational theorists like Bloom (1956) relate critical thinking to higher-order thinking skills. Fisher & Scriven describe it as an academic competency like reading and writing, a "skilled and active interpretation and evaluation of observations and communications, information and argumentation (1997, p. 21). It is this educational approach to critical thinking that is the basis of this paper, as it is what relates critical thinking to higher education.

Several educators believe that the goal of education is to teach students how to think and reason (Dewey, 1938; Hatcher, 2011; King Jr, 1947) and that critical thinking and higher-order reasoning are essential components of higher education (Quitadamo et al., 2011). Even though there are different approaches to the definition of critical thinking, generally, there is consensus on the skills that constitute critical thinking, even though they are named differently in the different approaches. All the approaches address learning, comprehending, and deductive and inductive reasoning as some of the competencies of critical thinking (Hitchcock, 2020; Sternberg, 1986).

There are some theorists have come up with a converging definition of critical thinking. For example, the definition by John Dewey, one of the greatest American philosophers, psychologists, and educators, who is also regarded as the "father" of the modern critical thinking tradition (Lai, 2011). He defined critical thinking as "the active, persistent and careful consideration of a belief or supposed form of knowledge in light of the grounds which support it and the further conclusions to which it tends" (Dewey, 1933, p.9). in this definition, Dewey defines critical thinking as an

action (active, persistent consideration) and reflective thought (a belief). He also addresses the education component of it (a form of knowledge), thereby encompassing all three approaches (Sternberg, 1986). As Fisher (2001) noted, Dewey's meaning shows critical thinking is an active process where the learner thinks things through themselves rather than passively learning from someone else. Scholars today have defined critical thinking as a type of high-order thinking that involves controlled and measured thinking processes, as opposed to low-order thinking and mere perceptions (Calma & Davies, 2021; Widana et al., 2018). In this paper, I seek to relate the educational approach to critical thinking to higher education, by looking at the historical development of critical thinking, and the theoretical and conceptual basis in education.

Why critical thinking? Ahrari et al., (2016) argued that critical thinking skills are 21st-century skills. We are living in a period where the structure and the way of learning significantly determines our lives as never before (Vero & Puka, 2018). The conventional accumulation of technical knowledge and competencies is now less prioritized than critical intelligence, openness to change, and quick adaptation to new competencies (Civici, 2013). In the fast-growing, industry-driven global economy, higher education institutions are directly linked to economic growth through the skills and productivity of their graduates (Baird & Parayitam, 2017). The skills students acquire lead to organizational efficiency through the production of ideas, the invention of technologies, and competencies that increase productivity and create demand, thus resulting in economic growth (Finch et al., 2016; Schleyer et al., 2016). Therefore, critical thinking is believed to be an influential attribute to achieving quality employees worldwide (Moeti et al., 2017). Employers expect students to be equipped with critical thinking skills by the time they leave university, which skills lend them competence to perform in the job. As such, Butler et al., (2017**)** plead for more instruction and attention to critical thinking skills in education. This study seeks to build onto how institutions of higher learning can perceive and conceptualize critical thinking in their educational processes.

HISTORICAL PERSPECTIVE

'Critical thinking' has its roots in Greek history, denoting *"kriticos"* (discerning judgment) and *"kriterion"* (standards)" literally meaning sound judgment based on standards (Paul et al., 1997, p.2). The documented first use of the term 'critical thinking' in reference to an educational goal was by the American educational philosopher John Dewey (1910). He referred to it as reflective thinking and defined it as the 'a*ctive, persistent, careful consideration of a belief or supposed form of knowledge in light of the grounds that support it and the further conclusions to which it tends" (Dewey, 1933, p. 9).* Dewey proposed the development of critical thinking as a

scientific attitude of mind that should be an outcome of education (Hitchcock, 2018). Since then, there has been an advancement of knowledge on critical thinking. For example, in 1990, Facione (1990), another American philosopher, insisted on including critical thinking in education curricula and pedagogy. His focus was on fostering students' attention to inquiry and analysis as a habit that would, in turn, create critical thinking skills. To Facione, an effective education system was pinned on the inclusion of critical thinking. As a result of his work, higher education institutions in America and elsewhere started introducing critical thinking in their education programs, curricula, and testing, making it the primary requirement for educational courses.

Facione's work was complemented by another American philosopher Halpern (1990), who poised that university students should be taught how to think critically through real-life applications. A landmark development of critical thinking happened in 1993 when Ennis (1993), another American philosopher, noted how critical thinking was represented in the three upper levels of Bloom's Taxonomy. Ennis poised that each of the levels and all of them together represented what ought to be education goals. By 1994, leaders in the business world were increasingly demanding for competent workers with high-order thinking skills (Bruer, 1994).

The situation was different in sub-Saharan Africa (SSA), where educational pedagogy was based on the policies of colonial masters. Throughout the 19th and 20th centuries in SSA, there was not much critical thinking content in the curriculum, which had been tailored to the needs of missionary societies and colonial administration (Vavrus et al., 2011). Classroom instruction was almost exclusively teacher-centered, with little attention given to higher-order thinking skills (Vavrus et al., 2011). The shift in Africa towards a more learner-centered pedagogy that instilled critical thinking arose from the Structural Adjustment Programs (SAPs) in the 1980s, which specified reform in the education sector (Chisholm & Leyendecker, 2008; Peet, 2003). Some multilateral and donor agencies also advocated for the learner-centered pedagogy, which they saw as an expansion of democracy (Chisholm & Leyendecker, 2008; Vavrus et al., 2011). By the early 2000s, educational reforms with elements of learner-centered pedagogy had started taking root, thereby contributing to the development of critical thinking in SSA (Limbach & Waugh, 2014). In most SSA, however, education practice became dominated by drilling students with basic information and testing their ability to recall it (Altinyelken, 2010; Magelah & Ntambirweki-Karugonjo, 2014; Vavrus et al., 2011). For example, in a Ugandan study by Allen et al., (2016), it was found that several students who succeeded in school needed to learn more skills and knowledge aligned to the needs of employers and the development of Uganda's economy. The existing teaching methods were based on rote learning (Allen et al., 2016; Mitana et al., 2018).

According to the Programme for International Student Assessment (PISA, 2018), there is a global drive to reconfigure student learning goals to address the 21st-century skills demands (see also Care et al., 2018). This shift emphasizes the need for change in curricula and the need to utilize relevant pedagogies in education. A study conducted in Uganda (Mitana et al., 2019) showed that there is demand in the labor market for a workforce with soft skills and higher-order thinking skills for employability. Critical thinking skills and abilities are now some of the most sought-after employability skills in workplaces (Persky et al., 2019). Even employers in Uganda are looking for employees who can use critical thinking skills to solve problems effectively (Alfonsi et al., 2017; Nakirijja et al., 2020; Magelah & Ntambirweki-Karugonjo, 2014). As such, institutions of higher learning are paying closer attention to teaching critical thinking in their learners, before they go out to the world in search for employment (Onen, 2019; Makerere University Learning and Teaching Policy).

THEORETICAL PERSPECTIVE

There are generally three vital broad theoretical approaches to critical thinking: the philosophical approach, the psychological approach, and the educational approach (Lai, 2011; Lewis & Smith, 1993; Sternberg, 1986). These approaches are discussed subsequently.

The Philosophical Approach to critical thinking includes the discussions of Socrates, Plato, Aristotle, Dewey, Ennis, and others and focuses on a critical philosophical thinker: notably, the thoughts and nature of the thinker (Ennis, 2015; Lai, 2011; Lewis & Smith, 1993; Thayer-Bacon, 2000); and not the thinker's actions. Lai (2011) identifies this perception of a critical thinker as inquiring, open-minded, flexible, unprejudiced, and unbiased, seeking to be well-informed, appreciating various perspectives, and considering all perspectives before making a decision or judgment. The approach emphasizes the disposition and character of the critical thinker instead of the processes associated with critical thought. Institutions of higher learning benefit more from understanding the processes of instilling critical thought, as opposed to identifying a critical thinker. The critical thinker is important, but knowing to groom one is more important. As such, the limitation of this approach, for higher education institutions that seek to know how to instill critical thinking in learners is that it principally focuses on the thoughts or intentions of the thinker and not the actions of the thinker. For not all philosophical thinkers are, in reality, practicing what they philosophize (Atabaki et al., 2015; Sternberg, 1986). Sometimes, one's actions are at variance with their thoughts or thinking. For purposes of higher education, one is interested in exploring the teachers' actions as they implement the curriculum. Therefore, the philosophical approach is not the best approach for analyzing the process of instilling critical thinking in learners of higher

institutions of education.

The Psychological Approach to critical thinking is founded in the discussions of Bruner, Feuerstein, Sternberg, and others and focuses on how people think: the thought process that the thinkers go through to conclude an issue (Atabaki et al., 2015; Lai, 2011). Sternberg, for example, emphasized that critical thinking principally relates to the mental processes, strategies, and actions people use to solve problems, make decisions, and learn new ideas (Sternberg, 2007). The psychological approach is limited for purposes of appreciating how to inculcate critical thinking in learners of higher education, because it principally looks at the mental behavior or actions of the thinkers; the cognitive processes, and components (Atabaki et al., 2015; Lai, 2011; Sternberg, 1986), as opposed to the processes that the institution can go through to instill critical thinking in its learners.

The Educational Approach includes discussions by Bloom, Gagne, Romiszowski, Anderson, Krathwohl, Marzano, and others. It focuses on the learners' skills to groom future problem-solving and decision-making skills (Sternberg, 1986). One of the commonly quoted sources of the educational approach to critical thinking is Bloom's Taxonomy (Dwyer et al., 2014) which was created to classify the thinking acts that result from educational experiences (Dwyer et al., 2014; Grieco, 2016). Bloom's taxonomy highlights the different levels of higher-order thinking that learners should experience as they go through higher levels of education (Calma & Davies, 2021).

A learner that exercises the higher levels of Bloom's taxonomy applies critical thinking dispositions (Calma & Davies, 2021). These top order qualities of Bloom's Taxonomy that include application, critical appraisal, evaluation, and synthesis have been noted to be the aspects of critical thinking of self-regulatory judgment, analysis, evaluation, inference, explanation, and contextual consideration. Indeed Facione (2000) points to the cognitive abilities of inference, interpretation, analysis, evaluation, explanation, monitoring, and correcting one's reasoning as the foundational competencies of critical thinking. Thus, the top-order qualities of the revised Bloom's taxonomy of 2001 of creating, evaluating, analyzing, and applying are aspects of critical thinking that need to be emphasized by institutions of higher learning. Where they are prevalent in an educational curriculum, the facets of critical thinking will be noted to be prevalent. However, it is not automatic that a learner from an institution of higher learning has higher-order reasoning skills and, therefore, the facets of critical thinking. Not all institutions of higher learning teach or assess critical thinking skills (Paul & Elder, 2008). In fact, many students graduate without these skills (Quitadamo et al., 2011). As such, if institutions of higher education can deliberately incorporate the above top order skills of Bloom's Taxonomy in their curriculum, they will be noted to instill critical thinking in their learners. This is important in today's world where employers are increasingly seeking

employees who can use critical thinking skills to solve problems effectively (Harvey & Green, 1994; Robles, 2012).

CRITICAL THINKING IN HIGHER EDUCATION PRACTICE

How can one know that critical thinking is taught in an institution of higher education? There are several pedagogical approaches that have been noted to yield critical thinking skills in learners. In Cheung & Jhaveri (2016) students noted that they developed critical thinking through four different ways of learning: (1) By receiving insights that inspire their thinking (2) By learning frameworks that enaallble independent critical thinking (3) Through repeated practice and emphasis (4) Through both general and topic-specific means. Classes with narrow, specific learning objectives had the potential to 'cover' larger amounts of subject knowledge, while classes with more flexible learning objectives have greater potential to develop critical thinking as subject knowledge in use (Lee, Wang & Lim, 2021).

The Socratic Learning Method has also been noted to enhance students' higher order thinking skills by reducing the impact of personally-held misconceptions, aiding the organizing of knowledge, and helping students monitor their learning (Belluigi & Cundill, 2017; Gaigher, Lederman, and Lederman 2014). The Socratic method makes room for vigorous thinking which cultivates scientific habits of mind that cannot be handed down authoritatively, but are developed implicitly through active, repetitive processes of learning (Etkina and Planinsic 2014). These typically involve knowing how to formulate a problem, collecting and analyzing data, identifying patterns, testing ideas, evaluating assumptions and solutions, distinguishing evidence and arguing scientifically (Belluigi & Cundill, 2017).

Collaborative learning has also been deemed to foster critical thinking skills in learners (Kim, 2013). The quality of students' thinking and writing improve as they engage in group discussion and reflect on assessment tasks, writing and rewriting group discussions, as well as participating in class discussions. This was noted to be true even with respect to online group discussion forums. Course staff felt there was evidence of critical thinking skills being applied in online discussion forums as both factual and thought-provoking questions were posed. This is consistent with previous studies (e.g., Angeli, Valanides, & Bonk, 2003; Yang, Li, Tan, & Teo, 2007), and it indicates that teaching methods that incorporate online discussion and face to-face interaction can be effective and conducive to the development of critical thinking skills (Whiley, Witt, Colvin, Arrue & Kotir, 2017). In Espey (2018) where students worked in the same team of five to seven students throughout the semester, with daily interaction and engagement with course material

involving both graded and ungraded activities, Espey found that students felt that Team Based Learning (TBL) significantly enhanced specific critical thinking skills in comparison to the 'typical' college course, and even more so in comparison specifically to lecture-based courses (also see Carter, Creedy & Sidebotham, 2016; Popil, 2011). TBL sharpened critical thinking skills through peer feedback without imposing an excessive grading burden or need for continuous instructor feedback, as students provided feedback to each other. Discussion also changed the focus of the learning process from the single view of the instructor to the diversity of views within a group of students. It was noted however that there is need to put a lot of thought and time in the designing of activities to stimulate productive discussion and generate the desired learning. In conclusion, Espey (2018) noted that improved outcomes, particularly in terms of critical thinking skills and experience in working in teams, should make students more employable upon graduation.

Loes & Pascarella (2017) however found otherwise, with respect to collaborative learning. They noted that the critical-thinking benefits derived from exposure to collaborative learning did not accrue equally to all students. Students from historically underrepresented racial/ethnic groups did not exhibit gains in critical thinking as a result of learning collaboratively. In their study, collaborative learning was only effective in positively influencing the end-of-1st-year critical thinking skills of white students who comprised 80% of the sample. This nevertheless shows that the use of such this approach can be beneficial in the effort to enhance students' critical-thinking skills.

Espey (2018), Carter et al., (2016) and Popil (2011) were also contradicted by Zamir, Zhang, Sarwar, Maqbool, Fazal, Zafeer, and Arif (2021) who advocate for the *lecture method* as the most common and effective method used by university teachers to instill critical thinking, through telling lectures and storytelling. In fact, Dumitru, Bigu, Elen, Ahern, McNally, & O'Sullivan (2018) posit that Lecture-Discussion Teaching (LDT) and Problem-Based Learning (PBL) are the most used strategies reported both in the literature and by the teachers for instilling critical thinking in learners. They suggest that engaging students with active learning methodologies seems to help achieve higher critical thinking results. However, there needs to be clear identification and definition of the critical thinking skills to be developed and the critical elements for the effectiveness of critical thinking interventions.

Simulations have also been noted promote recursive learning that results into higher critical thinking outcomes than the more passive learning used in case studies. In Samaras, Adkins & White (2021), it was noted that the use of simulations in the capstone strategy course was a solid platform from which to develop, reinforce, and assess critical thinking ability. Unlike case studies,

the simulation actively engaged students in a changing competitive environment and led them through abstract conceptualizations, active experimentation, concrete experience, and reflective observation. The process then repeats itself which according to Kolb's Learning Cycle (Kolb, Boyatzis & Mainemelis, 2014) is a pedagogically sound learning method. Samaras, Adkins & White (2021) however categorically stated that they were are not suggesting that case studies no longer have a place in the capstone curriculum. Case studies do allow for a more in-depth analysis of situational factors; factors that cannot be programmed easily into a simulation. Thus, a combination of simulation and case studies may be effective. Mahdi, Nassar & Almuslamani (2020) also emphasized the importance of *case studies*; stating that the critical thinking skills of students in their research had been a consequence of the case study method. If the case studies method is used in teaching, it will greatly contribute to the development of students' critical thinking skills and decision-making skills, as case studies have significant effects on teaching and learning.

Reflective writing is another pedagogical approach through which critical thinking can be instilled in learners. In answering the key aim of a review conducted in Woldt & Nenad (2021), 12 of the 13 studies determined that reflective writing had a positive impact on students' critical thinking, judgment, and/or learning. Key findings included positive effects of reflective writing on student growth in reflection, reflection skills, self-assessment, critical thinking, clinical reasoning, problem solving, and motivation to change after evaluated experiences. The review indicated that dental education programs, which implemented reflective writing as an assessment tool within the curriculum as a means of developing and deepening critical thinking skills and learning; were by and large successful in their effort.

Technology based interventions were also noted to be key pedagogical approaches that fostered critical thinking in learners (Terblanche & de Clercq, 2020). Research, however, noted that educators in the accounting and auditing profession were slow to adopt educational technologies in their teaching practices (Watty, McKay, & Ngo, 2016) as traditional lecturing remained the predominant method of teaching auditing at higher education institutions (Viviers & de Villiers, 2020) although it is well documented that the traditional lecture method is not optimal for critical thinking development (Carter et al., 2016; Popil, 2011). *Integrated assessments*, based on real world problems have also been noted to infuse critical thinking skills in learners. Cloete (2018) noted that integrated assessment conducted with the students in the Department of Management Accounting enhanced the critical thinking skills of the students. Contextualized integrated assessments allow students to experience workplace requirements without physically being in the work environment, where they practice to think like practitioners and not like students.

The *constructivist approach to teaching and learning* has also been linked to the teaching of critical thinking (Thompson, 2011). Constructivism, which supports lifelong learning, learner-centeredness, participative teaching and problem-based learning, has become an integral part of higher education systems in Africa. Unfortunately, even though the constructivist approach is consistently emphasized today in institutions of higher learning in Africa, the teacher-centered / traditional approach which stifles critical thinking is still dominating classroom and assessment practices (Cloete, 2018; Lombard & Grosser, 2008). *Virtual exchange and internationalization of curriculum* has also been noted to promote critical thinking in learners (Duffy, Stone, Townsend and Cathey, 2020). Where learners are able to go to other institutions in different parts of the world, they are able to learn and analyze new elements in their environment that foster critical thinking.

Inquiry Based Learning (IBL) has also been noted to effectively impart critical thinking skills in learners (Kwan & Wong, 2015; Qing, Jing, Yazhuan, Ting, W & Junping, 2010; Thaiposri & Wannapiroon, 2015). For instance, Qing et al. (2010) showed that pre-service teachers' inquiry-based experiences in chemical experiment course positively affected their critical thinking dispositions. These findings are however variant from those of Arsal (2017) who argue that IBL does not foster critical thinking. The discrepancy between Qing et al. (2010) and Arsal (2017) might be related to the main structure of course that the IBL activities were implemented. Qing et al. implemented inquiry-based learning activities in the chemical experiment course, but Arsal (2017) used the Educational Psychology course whose content is more theoretical with fewer practical science learning activities.

Several factors hinder the ability of teachers to teach critical thinking skills at university. Ongesa (2020) argues that learners' prior educational experiences and their family beliefs about the value of critical thinking plays a role in the effectiveness of critical thinking education. Lui (2011) also notes that student learning of critical thinking skills at an institution may be influenced by both individual and institutional factors. In a study conducted by Roohr, et al., (2020), it was noted that institutional variability accounted for 15% of the variance in estimated critical thinking scores. It was found that there may be inherent differences within institutions with regard to their focus on critical thinking. For instance, what are institutions doing as part of their curriculum to improve critical thinking skills? Are particular disciplines (e.g., humanities, social science, natural science, etc.) placing more emphasis in their curriculum to foster these skills, or are the efforts to improve critical thinking skills a campus-wide effort? Mahdi et al., (2020) on the other hand add that the effectiveness of a critical thinking lecture is based on the teacher's performance, which might change in different classes and also change as the lectures proceed. Sellars, Fakirmohammad, Bui,

Fishetti, Niyozov, Reynolds, Thapliyal, Liu-Smith, & Ali, (2018) also argue that critical thinking, as a skill is contested in meaning. Different people, cultural traditions, ideological and economic discourses, including religious ones, all give it a different meaning. Those who claim to be promoting it, give it different meanings and use it for their various purposes. It is neither a neutral and nor objective, solid and immutable construct.

Sellars et al., (2018) further posit that human interaction, power relationships and pedagogical perspectives that comprise teaching and learning may not be conducive to the development of critical thinking skills. It is important to be conscious of the possible 'distance' between the policymakers' conceptual approach and the realities of the limitations and constraints that may be present in the diverse teaching and learning contexts. There are polices which support the implementation of strategies to develop critical thinking at a theoretical level. There exist curriculum documents which attempt to address these conceptual requirements practically into discipline content, knowledge and skills.

Bezanilla, Galindo-Domínguez & Poblete (2021) also build on to this side to the debate. The different difficulties faced by teachers in the process of teaching critical thinking are also now more pronounced. Although the vast majority of teachers consider that teaching critical thinking at university is possible, some of them point out, amongst the main difficulties, the lack of prior training and interest in the subject on the part of the students, as well as the lack of experience and training of teachers in this competence. The complex nature of the critical thinking also appears as one of the difficulties in working with it in the classroom as well as the lack of interest and support from the university institutions themselves. In a study conducted by Schendel, McCowan, Rolleston, Adu-Yeboah, Omingo & Tabulawa (2020), it was noted that only some of the institutions were ensuring significant gains in students' critical thinking, even when endorsing learner-centred methods and the teaching of critical thinking skills.

How else can the teaching of critical thinking be defeated through practice? Teaching methods do matter, as there are approaches that would never be expected to encourage critical thinking skills (for example rote memorization of facts) Ongesa (2020). However, simply requiring teaching staff to use new methods will not necessarily result in different learning outcomes for students. Lecturers' underlying philosophies play a role in whether or not the active methods used in class bring about change. For example, teachers may apply a 'learner-centered' approach, but use active learning methods only as a way of filling in the time or reducing the monotony of a lecture (Schendel et al., 2020).

Where the State controls the pedagogy and curriculum, and the State is not interested in developing critical thinking, critical thinking will not be developed by the learners (Sellars et al., 2018). Education systems in several countries have deliberately developed policies and practices that limit the opportunities for students to authentically participate in the discussions, debates, and evaluative thinking that serve to develop the skill set and mindset of critical thinkers. For example, in (Zhang, 2017), it was noted that the rigidly-framed teaching and assessment methods used in China were an intrinsic part of the top-down thought control process orchestrated by the ruling political party that deprived students of the chance to develop critical skills. Even Ongesa (2020) noted that there is need to restructure the Kenyan curriculum in lower secondary schools to focus on critical thinking to facilitate teaching that is geared towards fostering free and reflective minds capable of resisting various forms of propaganda, fanaticism, exclusion, and intolerance.

Similarly, research has shown that a student's low English proficiency could inhibit them from developing critical thinking skills (Shaheen 2016; Durkin 2008). Many universities offer English language support to students whose first language is not English but most of the time, this type of service is focused on improving students' English language proficiency, and not also building critical thought through the English language (Zhong & Cheng, 2021). suggest that Universities could integrate critical thinking training into the English language support they provide, so that non-English-speaking students not only improve their English language skills but also enhance their understanding of how to employ critical thinking in their study.

Teachers' influence can also greatly defeat the development of critical thinking in learners. Schendel et al., (2020) argue that lecturers' underlying philosophies play a role in whether or not the methods used in class bring about critical thought. Indeed Bezanilla et al., (2021) posit that when establishing curricula and teaching-learning activities to develop critical thinking at university, it is very important to take into account the opinion of the teachers on the importance they give to critical thinking, the possibilities they see for teaching it in the classroom and the difficulties they perceive in this process. Only by equipping all teachers to mainstream and teach critical thinking across the curriculum through systematic, ongoing professional development can all learners develop the required critical thinking skills (Ongesa, 2020; Schendel et al., 2020).

What practices do teachers need to do to instill critical thinking in learners? One proposal is to introduce critical thinking as a working concept. Academic staff need to make students aware of what is expected from them, and also how they can fulfill these expectations. For example, academic staff could offer students an introduction to what critical thinking entails and how to demonstrate critical thinking in writing. Teachers could show examples of different written pieces,

compare them, and ask students to identify which one engage more successfully with critical analysis. This type of practical approach was noted to be beneficial to new Chinese students to help them understand the academic conventions of UK universities and teacher expectations (Zhong & Cheng, 2021).

Notable research gaps have been identified in teaching critical thinking in higher education. For example, viable approaches to critical thinking training that promote high performance on standardized tests have not yet been identified, given teachers' concerns that focusing on critical thinking would take away time from standardized test preparation. (Ongesa, 2020). Belluigi & Cundill (2017) also note a gap in the absence of enough discussion on critical disposition. The only way to teach critical thinking is by modelling critical thinking behavior. They note that more discussion is needed on ways to address this shortcoming.

CONCLUSION

It has been shown, in this study that historically, critical thinking was not part of the curriculum in Sub Saharan Africa but as employer demands for critical thinkers in the work place grew, the curriculum demands changed to seeking to have critical thinkers from institutions of higher education. Theoretically, it has been noted that Bloom's Taxonomy is the relevant theoretical framework for implementing critical thinking in higher institutions of education. Critical thinking is embedded in the higher facets of Bloom's Taxonomy and institutions of higher education that seek to instil critical thinking in their learners should effectively implement Bloom's Taxonomy in their curriculum. Conceptually, critical thinking is best conceptualised when perceived from a combination of all the three different approaches of critical thinking, that is, the psychological, philosophical and educational approach. But when institutions of higher education are seeking to implement critical thinking in their processes, the educational approach is the most appropriate in terms of deliberately pursuing the higher order facets of Bloom's Taxonomy. Today's educational and professional success require developing one's critical thinking skills and nurturing one's consistent internal motivation to use those skills. Where learners today are learning for an unknown future, there is a strong pedagogical challenge for teachers and universities to adopt ways in which they could effectively teach critical thinking skills. This study has identified some of the ways in which the same can be achieved and some of the factors that hinder the teaching of critical thinking in learners.

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