Lecturers' perspectives concerning the variables that hinder critical thinking development in the classroom

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ARTICLE INFO

Article history:
Received 14 October 2022
Received in rev. form 22 Nov. 2022
Accepted 17 December 2022

Keywords:
Critical Thinking; Critical Thinking Obstacles; Interpretative Phenomenological Analysis; Qualitative Research; Focus Groups

JEL Classification: I23

ABSTRACT

The need to train learners to think critically has been stressed and it has become a key concern among scholars in recent years. Although there is strong evidence demonstrating the benefits of critical thinking as well as proposals for its integration in schools, scholars are still looking for evidence demonstrating how teachers instill critical thinking in the classroom and the obstacles they face. Furthering this argument necessitated lecturers’ feedback on the obstacles to teaching critical thinking in the classroom. Data was collected from academics at a South African university of technology using interpretative phenomenological analysis approaches. The lecturers identified several obstacles that inhibited them from inculcating critical thinking in the classroom. The first one is time, according to the lecturers there is not enough time to inculcate critical thinking since the average lesson lasts for fifty minutes. The second is the large population of students. The third is the learners themselves who according to the lecturers are indifferent, unwilling to engage. Finally, the educational system according to the lecturers is based on rote learning and memorisation at all levels, which hinders creative, unique, and logical thinking. The findings of this study could have significant consequences for the auditing profession, as teachers are frequently pushed to come up with new approaches to help students improve their critical thinking abilities.

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Introduction

According to Elder and Paul (2020), the mind has three essential and interrelated processes, which are thinking, perceiving, and desiring. If one is prevalent, the other two are also present. The purpose of thinking is to give substance to our lives, to understand them, to categorise them, and to uncover patterns for us. Developing critical thinking (hereinafter CT) skills in learners has always been a priority for higher education (Clarke & Braun, 2018).

Learners must have sufficient critical thinking abilities to survive in a continuously changing, technology-driven society (Kivunja, 2015). It's no surprise, then, that critical thinking has been designated among the most important concepts of the twenty-first century (Van Laar et al., 2020). Notwithstanding its relevance, many academics are confused regarding what critical thinking entails or how to help students develop it (Petek, & Bedir, 2018). Consequently, there is a disconnect between learners' critical thinking abilities and the critical thinking skills required to be successful in the workplace (Cottrell, 2017).

Research shows that students can attain big successes in critical thinking abilities through training by applying them to their daily tasks (Duran, & Dökme, 2016). As a result, critical thinking is essential in both the public and private sectors. Obviously, critical thinking is beginning to influence an individual’s daily activities (Paul, 2018). Consequently, in many countries, one of tertiary education's stated aims is to stimulate students to enhance their CT skills so that they may effectively engage in community outreach.

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The sheer rapid expansion in science and technology, particularly in information systems, human knowledge is anticipated to double every three to five years in several fields over this century (Zuboff, 2019). If this evaluation is right, CT would become more important since it is vital in evaluating novel knowledge to determine its value and how it could be used or disseminated for individual or societal advantage. In the wake of revolutionising information and knowledge, CT enables individuals to appropriately tackle rising complex circumstances and manage challenges. CT, for instance, is essential for people to make judgements and analyse information concerning private, social, economic, and political issues (Kitchin, 2017).

According to some researchers, teachers play an important role in helping pupils improve their critical thinking skills (McPeck, 2016; Brookfield, 2017; Liu, 2015). Therefore, it is crucial that teachers have a strong understanding of critical thinking so that they can inculcate it on to their learners.

To compete effectively in the skilled economy, advanced economies, according to Malik (2018), must consistently generate individuals who are critical thinkers. In addition, Zivković (2016) said that critical thinking is a necessary quality for success in life. Critical thinking skills, as Jefferson and Anderson (2017) suggest, are tools for logical social function, and we will benefit personally and as a community if our lecturers and students participate effectively in it. According to Morgoun et al., (2021), critical thinking stretches well beyond the university setting, but Ennis (2015) believes that CT is a skill that people will require during their lives.

With regards to the advancement of critical thinking it may be stated that creating critical thinking awareness must be part of a bigger cultural revolution that starts in the lecture room with competent teachers. As a result, students are taught and urged to think critically as early as possible, a quality they will carry with them throughout their lives. Students, on the other contrary, require guidance from educators who have undergone such training.

It is, therefore, no surprise that CT has sparked a slew of international conferences, and research papers. Various universities have made critical thinking a long-term aim in order to prepare their learners to utilize logical thinking and creativity to gather, examine, and integrate information in order to solve challenges and make informed decisions in their employment and personal lives (Ebadi, & Rahimi, 2018).

Even though critical thinking is extremely regarded, research suggests that academic institutions have little impact on the development of critical thinking skills in learners due to existing impediments (Abrami et al, 2015). Recognising and overcoming the obstacles can assist educators and learners in enhancing their learning and teaching skills. Led by these facts, the current study set out to look into the obstacles of teaching critical thinking from the perspective of the lecturer. The participants for this research are educators at a South African university of technology who teach auditing.

### Literature Review

#### Theoretical and Conceptual Background

**Critical thinking development**

All educational institutions’ missions include the development of critical thinking. To guarantee that learners not only grasp key subject content, but also become successful citizens, capable of justifying ethically and behaving in the public interest, by establishing that they develop the ability to think critically and fairly (Mathiasen & Andersen, 2020). Individuals may develop critical thinking skills with the right training, according to popular belief (Cunliffe, 2016). According to Lai (2011), anyone can be trained to think critically in theory. The literature on the significance of relevant instructional methods in the development of critical thinking is extensive (Tiruneh et al., 2014; Loes, Salisbury & Pascarella, 2015; Gupta et al., 2015). The explicitness of critical thinking teaching differs between the generic, infusion, immersion, and blended instructional approaches (Bensley & Spero, 2014; Payan-Carreira et al. 2019). Critical thinking is developed independently from actual subject or domain composition in the general approach; critical thinking is explicitly interpreted across the framework of the subject area in which it is collectively presented in the infusion approach; although critical thinking education is not made explicit, the immersion approach consolidates critical thinking into discipline material instruction; and the mixed approach combines the general technique with either the infusion or immersion method (Tiruneh et al., 2014). According to Smith, Rama, and Helms (2018), offering critical thinking as part of a field of study is more beneficial than teaching critical thinking as a distinct course or subject. The effectiveness of a critical thinking instructional model may not be determined solely by the instructional technique.

Learners’ critical thinking skills are also aided by effective teaching tactics (Tiruneh et al., 2014). These techniques, often known as instructional techniques, have a substantial impact on critical thinking growth (Ghanizadeh, 2017).

Ciliker (2021) looked at variables that impact critical thinking capabilities and discovered that instruction tactics, as a sub-factor of educational factors, make up the highest impact. Problem-based learning, simulation, brainstorming, and case studies are all popular learning strategies for developing critical thinking (Breytenbach, ten Ham-Baloyi & Jordan 2017; Carter, Creedy & Sidebotham, 2016). Problem-based learning and brainstorming, according to Aein and Aliakbari (2017), demonstrated promising results in terms of critical thinking growth. In respect of simulations, however, there were mixed outcomes. In addition, Martin and Kompf (2020) discovered that using concept mapping as an instructive approach improved students’ critical thinking over time. Bean and Melzer
(2021) investigated productive teaching strategies for developing critical thinking. Certain aspects of teaching tactics, according to these researchers, are thought to enhance critical thinking in learners, particularly those of which encourage active learning, implement a problem-based curriculum, increase student engagement, and use real-world situations (Bean & Melzer, 2021).

Additionally, a constructivist learning environment is seen to be perfect for the development of critical thinking (Kwan & Wong, 2015). Constructivism has as one of its main goals the development of critical thinking through experience (Kwan & Wong, 2015). Active learning, student feedback, cooperative learning (Marzouki et al., 2017), interactivity, and learner-centeredness are all key constructivism characteristics (McHaney, 2011) and contextual learning through real-world situations (Willig, 2016). Discussion forums, wikis, blogs, simulations are examples of constructivist learning settings (Thota, 2015).

**Variables that could impact learners critical thinking**

**Teacher-related variables**

Teachers have an important role in assisting students in developing critical thinking skills (Brookfield, 2017). McCormick, Clark, and Raines (2015) found that teachers had the greatest influence on the development of learners' critical thinking skills. Teachers are also responsible for evaluating learners' critical thinking; therefore, they should be knowledgeable in the subject (Fuad et al., 2017). Regrettably, teachers cannot be asserted to be knowledgeable with critical thinking techniques or how to teach them (McPeck, 2016). Because they were predominantly taught via passive instructional methods, most of these teachers were not prepared to be critical thinkers (Song, 2016). Critical thinking is only properly nurtured in students if teachers have a good knowledge of the principles of critical thinking and institutions help teachers acquire this capability (Hong & Yu, 2017). With this in mind, a higher education institution must assist teachers to understand how to partake in educational activities that promote critical thinking and equally give them sufficient time to do so (Liu, 2015). University authorities should create a support system for academics that encourages them to develop critical thinking in their learners while also encouraging them to socialize (Selkriog, & Keamy, 2015).

As noted by Ennis (2018) to appropriately include critical thinking into their course and pedagogical approaches, teachers also require specialised training. To be able to accomplish this, Widana et al. (2018) concur that teachers should indeed be prepared via specialized courses and workshops. Along these lines, Aizikovich-Udi and Cheng (2015) concluded that intervention strategies on students' critical thinking were most effective when academics received specialized training on how to encourage critical thinking or when academics' critical thinking teaching practices were rigorously scrutinised. Furthermore, Gholami et al (2016) found whenever a qualified teacher implemented a critical thinking intervention strategy, significant critical thinking progress was observed, however the evidence is inconclusive.

Teachers with certain attributes and characteristics may be able to help learners study more effectively. Among other attributes, the instructor should be pleasant, knowledgeable, neutral, compassionate, and selfless. Critical thinking is regarded as a trait that distinguishes a competent teacher (Changwong et al., 2018). According to Noddings and Brooks (2017), the learning theory, character, and convictions of the teacher all have a role in the development of critical thinking. Personal characteristics, such as the ability to handle criticism, contribute to students' views of the teacher as a model for critical thinking. A teacher should be an individual who is, truthful, adaptive, observant, and respectful (Flanigan et al., 2022).

**Edagogic variables**

Instructional components including critical thinking instructional strategies have an impact on the efficiency of critical thinking education and pedagogical interventions (Mahanal et al., 2019).

There is much debate around whether critical thinking is a generic skill that can be employed across domains or if it is specific to the particular course in which it is learnt (Cottrell, 2017).

Wilson (2018) discovered that generic critical thinking programs aimed at improving general critical thinking ability is inefficient. On the other hand, some people believe that critical thinking skills are universal. Along these lines, Cargas et al. (2017) argue that critical thinking is a generic procedure with characteristics that can be learnt without any prior knowledge of a discipline or area. These skills could then be employed in a variety of circumstances. Bonney and Sternberg (2016) similarly agree that critical thinking skills are universal, and once acquired, they may be applied to a range of personal and professional situations, regardless of the discipline where they were developed. The universal perspective, in which critical thinking is viewed as the implementation of competencies that can be applied in a number of circumstances, is widely accepted by psychologists. The meta-cognitive competencies paradigm, which posits that skills may be transferable from one situation to another, is based on this assumption (Soto et al., 2020).

As reported by the APA Delphi study experts, critical thinking is not restricted to a particular field, topic, career, or discipline. Additionally, the study stated that exercising critical thinking within the context of a specific subject or field is the most effective method of doing so (Liu, 2015). They claimed that critical thinking skills could be transferable between fields or courses, however in some circumstances, discipline-specific knowledge is needed to effectively use these skills (Liu, 2015). Mastering the methodology, strategies, contexts, criteria, theories, and concepts of a specific discipline may be essential in order to make educated and reasonable decisions (Grant, 2018). According to Cargas et al. (2017), most researchers believe critical thinking is transferable across areas or subjects, but that underlying disciplinary or subject competence is still essential.
As reported by Wang and Zheng (2016), the statistical validity of whether critical thinking is produced autonomously from the field or subject material or is embedded into the content, is less essential.

**Instructional techniques**

According to Gelder (2015), instructional techniques have a significant impact on critical thinking abilities. Educators, however, are unsure if their instructional strategies are beneficial in increasing critical thinking in students (Almulla, 2018), and the ideal instructional strategies for developing critical thinking in students are unknown (Huber, & Kuncel, 2016). Huang, Lindell, Jaffe, and Sullivan (2016) backed up these claims by stating that assessments of intervention programs aimed at improving learners' critical thinking have been ambiguous in determining the exact impact of instructional techniques. Consequently, the puzzle of which teaching techniques are most effective in helping students improve critical thinking abilities remains unanswered (Shpeizer, 2018).

A study carried out by Thompson (2011), found that students must participate fully in the classroom to develop critical thinking. To promote critical thinking, higher institutions should promote active participation instead of rote memorisation, where students are simply receivers of information (Magrabi et al., 2018). Critical thinking is not a passive activity; instead is a result of active learning techniques which stimulate mental abilities (Kim et al., 2013).

**Research and Methodology**

**Research design**

Smith (1996) interpretive phenomenological analysis (IPA) research design was used in this study. The application of the IPA technique in internal auditing study is relatively new (Larkin, & Thompson, 2012). IPA is a methodical psychological qualitative research method that focuses on interpretation (Smith, 1996). Participants engage completely in data gathering, which aids them in understanding the meaning of their own views and experiences in a group context (Smith, 1996). Consequently, the use of IPA in this study was deemed suitable. In addition, the researcher got the appropriate ethical permission for the investigation.

**Data collection**

Focus groups can also be employed in an IPA study to collect data (VanScoy, & Evenstad, 2015). The goal of the focus group interview was to discover from the lecturers, the challenges to learning critical thinking in the classroom. The group discussion consisted of ten lecturers from a university of technology's internal auditing department.

According to Stewart and Shamdasani (2014), in a focus group, a number between 8 to 20 respondents is advisable, however group with less than 11 respondents do not pose a severe threat to the study's reliability. As reported by Guest et al., (2017), a focus group should contain between six to eleven respondents. Consequently, the group sizes selected for this research were deemed to be sufficient. In this study, ten lecturers took part in the focus group, and they were labelled (B1-B10).

The IPA focus group discussions were conducted in October of 2020. All of the group discussion were led by an external moderator. Respondents were asked to reflect on and then jot down their individual opinions on sticky notes concerning the study's question during the brainstorming sessions. Consequently, the sticky notes were taped to the surface of the classroom where the group discussions were held.

**Findings and Discussions**

**The obstacles to teaching critical thinking**

Most of the lecturers, according to the findings, were aware of the difficulties in embedding critical thinking into their lessons. The shortage of time is a major concern. For example, lecturer B4 indicated that teachers' lack of critical thinking abilities and insufficient teaching time are major issues. Consequently, lecturers' time limits are inextricably tied to the subject they must cover. Lecturer B4 stated that there is no time to teach critical thinking since "the university wants me to complete the course materials". Lecturer B8 agreed and mentioned some more limitations. He asserted that when trying to finish the course content and preparing exams, and that there is a climate at the university where freedom of criticism is completely absent. He noted that:

In South Africa, there are a number of obstacles that prevent me from incorporating CT into the classroom. The first is that the institution does not have an environment of criticism. Furthermore, there is a scarcity of critical thinking skills among lecturers, including myself. Finally, there is not enough time. In my topic, I have a lot of material to cover, and I need to arrange lectures, learners' assessments, and grade assignments for all my courses.

Lecturer B9 also stated that the subject was too substantive and that there was not time to address anything other than material. Lecturer B10 mentioned an equal concern, stating that:

I am limited by time no matter how hard I try to teach critically. I am going to tell you the truth. Instead of teaching critical thinking, which can be acquired through practice, I am obliged to finish the course material. To put it another way, there is just too much content to discuss.
Lecturer B2 similarly mentioned a lack of time as a constraint on his ability to inculcate critical thinking. He expressed the sentiments of most academics when he remarked:

I feel that all of the teachers present want to teach their learners to think and instruct them on how to do so, but we are all limited by time. Not just this department, but the entire institution is affected by this issue. Throughout the term, there are only twelve weeks. Take time to think about that. Is there really enough time to go over the course content critically? No, I don't believe that is the case.

To teach critically, he advises that the university semester be extended to at least sixteen weeks in order to examine the students’ progress and define their academic needs. Lecturer B7 also considered time constraint as a serious factor:

*The issue is a lack of time, which is a significant issue in critical thinking classrooms. Critical thinking necessitates more time than we now have. Learners currently receive one class each week, putting them at odds with their subjects. To be truthful, I do not have a lot of time to talk with my students about anything.*

The lecturer also mentioned the large population of students as a hurdle to critical thinking. This is an important component that none of the other academics acknowledged, but it would undoubtedly affect a teacher's ability to teach critical thinking effectively in the classroom. For instance, a standard lesson lasts fifty minutes and is given once a week to fifty to eighty students from diverse disciplines. Unlike most European countries, like the United Kingdom, Sweden, and other Western countries, we rarely offer tutorials. There are no outlets for students to join in discussions on the topic of the lectures, which is a major roadblock to critical thinking development.

My own experiences as an educator corroborate Lecturer B5's point of view. Due to the lack of tutorials and workshops, all discussions must occur in lecture theatres, which are not designed to develop critical thinking skills. Because the programs are designed so that all learning takes place solely during lectures, there is no extra time set up for discussion.

Time constraints, on the other hand, are an issue for his students, not for him, according to Lecturer B5. He argued stating “even if the course materials are lengthy, the lecturer has the time to cover it”. He emphasised that:

*To educate students on critical thinking, both the instructor and the student must put forth effort. However, the learner requires time. The core issue in the programme is that some students have occupations and others have other responsibilities. This is a major issue because they are not concentrating on their studies. If I were in a position of making decisions, I would urge them to enrol full-time to improve their learning outcomes. This way, they will be able to take classes that will help them enhance a variety of skills. However, they are short on time.*

Lecturer B5's perspectives are inappropriate, given the nature of the issues. Due to time constraints, limited tutorials, and insufficient critical thinking expertise among educators, school curriculums would not provide any opportunity for critical thinking, whether learners concentrated entirely on their studies and not pursue work.

In addition to time restrictions, several academics in this study acknowledged that one of the major impediments to effectively inculcating critical thinking is the students. For instance, Lecturer B3 said that even if we were to inculcate critical thinking, some students are either indifferent or unwilling to engage in it, and others are not motivated or eager to learn it. Lecturer B10 further agreed with this opinion, stating:

*Critical thinking is disliked by most learners, as is thinking generally. They like it if you base your course on common knowledge, such as five plus five equals ten, and so on. Consequently, they despise thinking that necessitates the use of higher-order cognitive processes. They would prefer to be graded solely based on rote memorisation.*

Lecturer B4 agreed with lecturer B3 and B10 that students lack the time or desire to think critically, noting, “I supervise postgraduate research students, and I have noticed that they often lack critical thinking skills”. These skills are often displayed in a dissertation literature review and how students analyse data, yet they are woefully lacking in students. Furthermore, Lecturer B6 stressed on the absence of critical thinking policy. The lecturer mentioned that there was no policy that made it compulsory for lecturers and institutions to implement critical thinking.

Lecturer B1 blamed the learners' inadequate critical thinking on their lack of enthusiasm:

*In my course, one of the obstacles to teaching critical thinking is the learners. My learners requested that I not make the course tough, stating that they are here to obtain certificates to obtain employment. As a result, learners are unmotivated to learn new skills, choosing instead to memorise facts and pass the exam, which has an influence on their CT.*

The lecturer’s identified several obstacles that stopped them from teaching critical thinking in the classroom such as lack of time, the large population of students and the students themselves who are indifferent or unwilling to engage in critical thinking activities.

**Discussion**

According to the academics, several factors are impeding critical thinking from being introduced into South African colleges. Time constraints, as earlier mentioned, is the greatest impediment to teaching or applying critical thinking. Multiple studies have stressed the necessity of giving students and teachers adequate time in the classroom to promote critical thinking abilities (Duro et al, 2013;
The shortage of time surfaced as a significant barrier affecting the lecturers' capacity to teach critical thinking skills. There are, unfortunately, other factors to consider when assessing the topic. Lecturers' limited knowledge of critical thinking and how to use it, according to Paul and Elder (2019), is an obstacle to teaching critical thinking.

The educational system in South Africa is based on rote learning and memorisation at all levels, which hinders creative, unique, and logical thinking, all of which are components of critical thinking. In the same vein, Byram and Wagner (2018) discovered that culture plays a significant role as to whether teachers integrate critical thinking in the classroom. This deals with the limitations on what can be questioned or disputed, as well as the discouragement of questioning, which creates an environment that is unsuitable for critical thinking.

The lecturers also commented on the lack of tutorials, which prevents students from participating in discussions about the subject material, which is crucial to their development as critical thinkers. Also, Learners' lack of willingness, indifferent, unwilling to engage is also a significant factor.

Another stumbling block, according to one educator, is the unavailability of a critical thinking policy. Several studies, such as Huber and Kuncel, (2016) and Vieira and Tenreiro-Vieira (2016), noted the effects of the lack of policies that stress the importance of the teaching of critical thinking whereby they emphasised that:

“Operating in a school system that stresses high-level thinking, motivates teaching for thinking in the lecture hall, and exposes teachers to thinking initiatives, techniques, and methods, fosters a notion in the appropriateness and efficacy of such a strategy, as well as the significance that the system” (Vieira and Tenreiro-Vieira, 2016: 298).

Another lecturer cited large number of students in a class as one of the impediments to inculcating critical thinking.

In summary, ten lecturers took part in the focus group discussion, and they identified different obstacles that stopped them from teaching critical thinking in the classroom.

Conclusions

The purpose of this study was to get lecturers perspectives on the obstacles to teaching critical thinking in the classroom. The lecturers some barriers that limited them from teaching critical thinking in the classroom. Some of the barriers include time, according to the lecturer’s time constraints is the greatest impediment to teaching critical thinking. The second is the large number of students in a class. Another barrier is the students themselves who according to the lecturers are unwilling, indifferent to the subject. One of the educators mentioned the educational system in South Africa as a barrier which according to him is based on rote learning and memorisation at all levels, which hinders creative, unique, and logical thinking.

This study may aid authorities, curriculum designers, and academics by offering insight into lecturers’ perceptions of the obstacles to critical thinking instruction in the classroom. The findings, while substantial, were not without flaws. It is possible that the limited sample size was an issue. Furthermore, future research should target larger number of academics for better insight regarding the barriers to teaching critical thinking in the classroom.

Acknowledgement

All authors have read and agreed to the published version of the manuscript.

Author Contributions: Conceptualization, EIF.; methodology, EIF.; formal analysis, CGI and JD.; investigation, CGI and JD.; writing—original draft preparation, EIF.; writing—review and editing, CGI and JD.

Informed Consent Statement: Informed consent was obtained from all subjects involved in the study.

Data Availability Statement: The data presented in this study are available on request from the corresponding author. The data are not publicly available due to restrictions.

Conflicts of Interest: The authors declare no conflict of interest.

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