Students’ views regarding the barriers to learning critical thinking

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ABSTRACT

This paper aims to evaluate students’ feedback on the impediments to developing critical thinking in the classroom. Interpretative phenomenological analysis techniques were used to obtain data from postgraduate and undergraduate students of an Internal Auditing department in a South African university. The students identified several barriers to developing critical thinking in the classroom some of which are (1) the lecturers who are most times not knowledgeable in the field of critical thinking, (2) the students themselves who are simply not interested, (3) finally the educational system, according to the students who all argued that critical thinking is not ingrained in the country's educational institutions. According to the students, their lack of knowledge of critical thinking including the lecturers’ seeming insufficient knowledge of critical thinking calls for urgent intervention in the form of re-curriculum and training of lecturers. The findings of this research could have important implications for the auditing profession, as lecturers are often challenged to identify innovative ways to assist students in improving their critical thinking skills.

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Introduction

Critical thinking (CT) is considered to be a distinguishing attribute of a university graduate (Huber & Kuncel, 2016) beside been among the main objectives of tertiary education (Ghanizadeh, 2017). To deal with a constantly shifting, technology-driven economy, students must have adequate critical thinking skills (Silber-Varod, Eshet-Alkalai, & Geri, 2019). It is not startling, therefore, that critical thinking was labelled one of the 21st century's most essential concepts (Harris, & de Bruin, 2018). Despite the obvious importance of critical thinking, many educators are unsure what it comprises or how to assist pupils to cultivate it (Brookfield, 2017). As a result, a gap exists between the critical thinking abilities of students and the critical thinking skills expected from them in the industry (Mutakinati, Anwari, & Kumano, 2018).

Evidence proves that through education students can obtain major successes in critical thinking skills by utilising the skills to achieve their daily goals (Tan, 2017). Hence, critical thinking is fundamental in both the government and the private sector. Indeed, critical thinking is starting to have a tangible impact on people's day-to-day actions (Paul, 2018). Also, CT has been dubbed “industrial thinking” since it emphasizes cognition processes that involve more than just individuals, such as collaborative thinking processes across a variety of fields (Gambrill, & Gibbs, 2017). As a result, in many nations, one of the declared goals of higher education is to encourage students to improve their CT capabilities to enable them to actively participate in public outreach programmes and initiatives in their corporate lives (Mena Araya, 2020). Due to the sheer quick growth in science and technology, widely in information technology, the twenty-first century will experience even more quick changes in human resources. In this century, it is expected that human knowledge will double every two to five years in different domains (Zuboff, 2019). If this assessment is correct, CT will become even more significant because it is critical to evaluate new knowledge to identify its utility and how it might be employed or shared for private or societal gain. CT allows individuals to adequately address rising complicated situations and to resolve issues in
the face of rapidly changing information and knowledge. For example, according to Marin and de la Pava (2017), CT is required for people to make judgments and analyse information about personal, societal, financial, and political problems.

According to Dahlman, Mealy, and Wermelinger (2016), advanced economies must constantly produce employees who can think critically to remain competitive in the global workforce. Also, Sellars et al (2018) claimed that being competent in critical thinking is a skill required to succeed in life. As Beyer (1995) argues, critical thinking abilities are instruments for coherent social function, and if our teachers and learners participate productively in critical thinking, we will profit individually and as a society. Critical thinking, according to Payne (2017), extends far beyond the university environment, whereas Shiraev and Levy (2020) believe that CT is a skill that individuals will continue to need throughout their lifetime.

Regarding the teaching and development of critical thinking, it can be argued that the education in and awareness of critical thinking must be part of a larger cultural revolution, which begins in the classroom with knowledgeable educators. Consequently, learners are educated and encouraged to think thoughtfully as early as possible, a skill they will retain all through their lives. Learners, on the other hand, need to be lectured by teachers who have received such training.

It is not surprising, therefore, that CT has become the subject of numerous international conferences, technical publications, and scholarly articles. Several academic institutions have focused on critical thinking as a long-term goal to enable them to groom their students to use common sense and innovative thinking to assemble, assess, and apply information to be able to solve problems and make better decisions in their careers, and lives (Ebadi, & Rahimi, 2018).

Though there are articles that focused on impediments to developing critical thinking (Aliakbari & Sadeghdaghighi, 2013; Schendel, 2016), further research is needed to provide a thorough understanding of the barriers to developing critical thinking among students. This paper is unique as it employed focus group interviews to get the perspectives of students and their lecturers.

This article is a subset of a broader research project. However, the purpose of this paper is to obtain students’ feedback on the impediments to developing critical thinking in the classroom. The respondents for this paper are undergraduate and post-graduate students in auditing who took part in a focus group.

**Literature review**

**Conceptual and Theoretical Background**

**The development of critical thinking**

The promotion of critical thinking is a goal shared by all higher education institutions. As per general perception, individuals can acquire critical thinking skills with the correct training (Cottrell, 2017). In theory, anybody may be taught to think creatively, according to Lai (2011). There is a lot of research on the importance of appropriate teaching techniques in the development of critical thinking (Carter, Creedy, & Sidebotham, 2016; Tiruneh et al., 2014; Padmanabha, 2018; Gupta et al. 2015). The comprehensibility of critical thinking training varies by teaching method (generic, infusion, immersion, and blended) (Bensley & Spero, 2014; Payan-Carreira et al. 2019). In the general approach, critical thinking is created independently from actual subject or domain constituents; in the infusion approach, critical thinking is consciously construed across the foundation of the field of study in which it is cohesively conveyed; the immersion approach unifies critical thinking into disciplinary resource instruction, and while critical thinking learning is not made explicit; and the mixed approach incorporates the general technique with the immersion or infusion technique (Tiruneh et al., 2014). Promoting critical thinking as an element of a particular discipline, rather than inculcating it as a separate subject, is more useful, according to McPeck (2016).

Effective teaching methods also help students develop the skills (Almulla, 2018). These methods, sometimes referred to as instructional methods, have a significant effect on critical thinking development (Ghanizadeh, 2017). A study by Erwiza, Kartiko, and Gimin (2019) investigated the elements that influence critical thinking capabilities and the result showed that instructional techniques, as a sub-element of educational variables, have the biggest impact. Along these lines, problem-based learning, simulation, brainstorming, and case studies are all effective educational tools for promoting critical thinking, according to Cowden and Santiago (2016). Also, Ulger (2018) claims that problem-based learning and brainstorming have shown positive benefits in terms of critical thinking development. In terms of simulations, however, the findings are inconsistent. Furthermore, Yue et al. (2017) concluded that adopting concept mapping as a learning approach boosted learners’ critical thinking over time. Furthermore, Bean and Melzer (2021) also investigated effective teaching practices for the promotion of critical thinking. From the result of the study, it was ascertained that, certain components of the teaching approach, notably those that foster active learning, adopt a problem-based approach, boost student involvement, and employ real-world circumstances, are thought to improve learners critical thinking skills.

Additionally, a constructivist learning environment is considered to be perfect for the promotion of critical thinking (Anagün, 2018). One of the primary objectives of constructivism is to encourage critical thinking via experiences (Topolovan, & Matijevi, 2017). Experiential learning involving real-world circumstances, active learning, student feedback, collaborative learning, and interaction are all major constructivism qualities (Willig, 2016; Marzouki, Idrissi, & Bennani, 2017). Some of the examples of constructivist learning environment include wikis, simulations, blogs, and discussion forums (Barak, 2017).
Factors that may influence students critical thinking

Lecturer-related factor

Lecturers are crucial in helping learners improve their critical thinking skills (Toshpulatova, & Kinjemuratova, 2020). In her study, Van Erp (2008) discovered that lecturers had the most impact in the development of students critical thinking abilities. Lecturers are also crucial in assessing students' critical thinking; hence they should be well-versed in critical thinking education (Stupple et al., 2017). It cannot, however, be assumed that lecturers are familiar with critical thinking principles or how to inculcate it (Bellaera et al., 2021). Most of these academics were not trained to be critical thinkers because they were largely educated through passive teaching practices (Bean, & Melzer, 2021).

Critical thinking can only be effectively cultivated in learners if lecturers have a thorough understanding of the fundamentals of critical thinking and if universities assist lecturers in obtaining this skill (Paul & Elder, 2019). As a result, an institution of higher learning owes it to the lecturer to assist them in learning how to engage in learning that promotes critical thinking development and to provide them the time to do so (Van Erp, 2008). Management should establish a support framework for lecturers that allows them to feel encouraged to foster critical thinking in students while also allowing them to connect with others (Gharib et al., 2016).

Lecturers also require specialised training to properly incorporate critical thinking in their programme and teaching methods (Cottrell, 2017). To achieve this, Gharib et al. (2016) agree that lecturers should be equipped through specific training and courses. Similarly, Abrami et al. (2008) discovered that intervention programs on learners' critical thinking were highest when lecturers had coaching on fostering critical thinking or when lecturers' critical thinking teaching techniques were closely evaluated. Additionally, Zarifsanaiey, N., Amini, and Saadat (2016) discovered that when a qualified lecturer executed a critical thinking intervention program, considerable critical thinking improvement could be detected, however the data is not definitive.

Certain qualities and traits of lecturers may also aid students in their learning. The lecturer should be polite, competent, unbiased, empathetic, and selfless, among other qualities. Critical thinking is considered as a quality that makes a good lecturer (De Villiers, 2015). Research by Suryawati and Osman (2017) discovered that the lecturer's educational philosophy, personality, and beliefs all play a key influence in the advancement of critical thinking. Students' perceptions of the lecturer as a mentor for critical thinking are influenced by personal attributes namely the ability to tolerate criticism. According to Liu (2017), a lecturer should also be honest, adaptable, attentive, and courteous.

Instructional factors

The effectiveness of critical thinking training and instructional interventions is influenced by instructional elements such as critical thinking teaching methods (Niu, Behar-Horenstein, & Garvan, 2013).

There is a lot of disagreement about whether critical thinking is a universal skill which could be applied across various disciplines, or whether it is unique to the course or subject in which it is acquired (Cottrell, 2017). The background for understanding critical thinking teaching approaches is provided by this argument.

Research by Dunne (2015) found that universal critical thinking or critical thinking training that purport to improve universal critical thinking abilities are ineffective. Some, on the contrary, consider critical thinking skills as universal. In this vein, Andrews (2015) claims that critical thinking is a generic process with competencies that can be learned with no prior understanding of a given discipline or field. These competences can then be applied in different situations. Birgili, (2015) also believes that critical thinking skills are generic, and that once a learner has mastered them, they will be able to utilise them in a variety of individual and career circumstances, independent of the field in which they were cultivated. Psychologists generally accept the generic approach, in which critical thinking is considered as the development of a set of competences that may be applied in a variety of situations. This is the central premise of the meta-cognitive skills paradigm, which assumes that skills may be transferred from one setting to another (Soto ef al., 2020).

Critical thinking, according to the APA Delphi project researchers, is not limited to a single field, subject, profession, or discipline. Furthermore, these researchers pointed out that practicing critical thinking in the framework of a certain subject or field is the most efficient strategy to do so (Wester & Borders, 2014). They suggest that critical thinking skills can be transferred across disciplines or courses, but in some cases, discipline-specific information is required to implement these skills successfully (Wester & Borders, 2014). Understanding of a subject's or discipline's methodologies, approaches, settings, criteria, ideas, and concepts may be required to make informed and sensible decisions (Grant. 2018). Carson (2015) further confirms that most scholars believe critical thinking is transferable across fields or subjects, but that fundamental discipline or subject expertise is still required.

According to Tiruneh, Verburgh, and Elen (2014), the empirical value of whether critical thinking is formed independently from the discipline or topic material or is incorporated inside the content is less important.

Teaching strategies

As noted by Kettler (2014), teaching methods have a massive influence on critical thinking skills. Teachers, on the other hand, are mainly uncertain whether their teaching methods are effective in improving critical thinking in learners (Brookfield, 2017), and the best teaching tactics for improving critical thinking in learners remain a mystery (Pu, et al. 2019). Supporting these views, Merisier,
Larue, and Boyer (2018) mentioned that analyses on intervention programs targeted at increasing students' critical thinking have been equivocal in assessing the precise influence of instructional practices. As a result, the question of which instructional strategies are most helpful in developing critical thinking skills remains completely unsolved (Schindler & Burkholder, 2014).

Learners need to actively contribute to the learning process to improve critical thinking, according to Florea and Hurjui (2015). To increase critical thinking, learning environments should encourage active participation rather than rote memorisation, in which students are merely consumers of knowledge (Tan, 2017). Critical thinking is a process that is created by active learning procedures that activate mental functions, rather than being a passive process (Bean & Melzer, 2021).

Research and Methodology

Research design

This research applied an interpretative phenomenological analysis (IPA) research design, as outlined by Smith (1996). In terms of auditing-related studies, the use of the IPA approach is rather new (Wagstaff, 2014). Because of its interpretive focus, IPA is a systematic psychological form of qualitative research (Smith, 1996). Respondents are fully involved in data collection and analysis, helping them to make sense of their own perceptions and experiences in a group setting (Smith, 1996). The application of IPA was hence considered appropriate in this research. Furthermore, the researcher received the necessary ethical approval that was needed for the study.

Data collection

Focus groups are also used in IPA to obtain data in qualitative studies (Love, Vetere, & Davis, 2020). The purpose of the focus group discussion was to uncover from the students the barriers to developing critical thinking in the classroom. The focus group comprised ten students in the internal auditing department who were registered in an undergraduate or postgraduate programme. These respondents were selected for this research based on their academic registration for the year of 2021.

Research by Phillips et al. (2016) recommended a focus group size of 8 to 20 participants but acknowledge that groups of less than 11 do not represent a serious threat to the reliability of the study. According to Nyumba, Wilson, Derrick and Mukherjee (2018), a focus group must have four to twelve participants. With this in mind, the group sizes that were chosen for this study were found to be adequate.

In September of 2021, the IPA focus groups were held. An independent facilitator conducted all the focus groups. The focus groups began with brainstorming processes in which participants were encouraged to think about and then write down their original perspectives on note cards about the study’s question. The note cards were therefore paste to the wall of the lecture hall where the focus groups took place.

Analysis and Findings

Before we delve into the main research question of this paper which is ‘students' views of the barriers to developing critical thinking in the classroom’, we need to understand (1) what the students know about critical thinking and (2) whether they believe critical thinking is important to them (students) or in their profession.

Understanding student’s perception of developing critical thinking

Listening to students’ viewpoints allows for a better understanding of their critical thinking position and is consistent with the qualitative method (Jackson, 2015). Evaluating learners’ perceptions of critical thinking in the context of this study gives for a fuller knowledge of critical thinking and its application in a South African university setting.

What do students know about critical thinking?

Students have different views on critical thinking which is based on their different experiences in a South African university. Critical thinking was considered to be a means of problem-solving by some of the students. The extract from the focus group interview is shown in Table 1.

Most students described critical thinking as a means of solving the challenges they faced in their lives, but this definition is quite opposite from the definition of Paul and Elder (2019) who noted that it is about improving your ability to thoroughly think in all aspects, particularly your profession, your duty as consumer, father, mother, and friend. Also, according to Demir (2015), evaluation is a key ability in critical thinking. Even though there is a process for evaluating, not even one of the students could explain how it was used as a critical thinking skill. Further Demir (2015) stated that daily every individual makes decisions, so how do we arrive at those decisions.
Table 1: Related focus group interview results on critical thinking

| Student  | Insight                                                                                       |
|----------|-----------------------------------------------------------------------------------------------|
| Student c6 | Critical thinking is looking closely into a problem to find creative ways to tackle it.      |
| Student c10 | Critical thinking, in my viewpoint, is whenever an individual analyses a difficult situation critically to find answers. |
| Student c9 | Some problems can be handled by using critical thinking to select the best solution. Critical thinking is what helps individuals to think outside the box. |
| Student c2 | The first time I heard about it was 2 years ago from a lecturer, even though he did not properly explain the meaning but, in my opinion, it is when a person meticulously evaluates a problem and seeks answers using ingenuity and other means. |
| Student c7 | Usually, we think about what we are seeing and experience in our daily lives. When we watch movies or a television series, for instance, we notice moments, and everything has a valuable sequence. |
| Student c6 | The capability to differentiate between positives and negatives. There has to be an objective or a challenge to think about. |
| Student c1 | Critical thinking, in my opinion, means questioning others. It's also about thinking about how to handle my daily problems. |
| Student c5 | I understand critical thinking as my capability to employ the last three levels of bloom’s taxonomy. |
| Student c4 | It's a form of constructive thinking that's based on scientific evidence and aims to assist individuals in solving difficulties in their life. |
| Student c3 | It's something I am not acquainted with. I know what criticism entails, certainly, it’s not the same as critical thinking. |

Do you believe critical thinking is important to you or in your profession?

Table 2: Related focus group interview results

| Student  | Insight                                                                                       |
|----------|-----------------------------------------------------------------------------------------------|
| Student c1 | In my opinion we should learn critical thinking because, as you and my classmates have stated in this convention, it can help people analyse a situation or problem before making a choice. Also, I have seen that it can also be beneficial in our industry. |
| Student c2 | Just yesterday, I did not believe critical thinking is valuable to me or in my professional life but today I have a different opinion since you are doing your doctorate in it and I have also learnt a lot today. |
| Student c3 | I have no idea how I would benefit from critical thinking. |
| Student c4 | I think critical thinking is important because from these discussions, I have seen how important it is and it should be applied by individuals instead of sentiments. I also believe it will assist me in the industry when I eventually get a job. |
| Student c5 | In my opinion critical thinking is vital because if individuals applied it, most fights happening in our communities would have been avoided. I also believe its important in our profession |
| Student c6 | I believe critical thinking is important because it safeguards me from the fake news that are posted on the media, and I also believe it’s a skill that one needs in order to succeed in our field. |
| Student c7 | Critical thinking keeps me on course and enables me to think about what I want to do extensively before committing to it. |
| Student c8 | Critical thinking is beneficial to everyone because it aids in making decisions. Also, making decisions is a skill that would be vital in our profession. |
| Student c9 | I believe it is important to me because it is a skill that would enable me when making decisions. Before an individual makes decisions, they will have to access the situation first. I also think it would be an invaluable skill in our profession. |
| Student c10 | Although critical thinking is believed to be helpful, I am not certain how it would benefit me or in my profession. |

Critical thinking is essential to the students here. Most of the learners have similar views on the significance of critical thinking in their lives and profession. Despite their inadequate critical thinking knowledge, the students believed that it is a skill that is vital for their day-to-day activities.
Students' Views of the Barriers to Developing Critical Thinking in the classroom

Lecturers

Students saw their lecturers as being the most significant obstacle to developing critical thinking. They were asked, “What are the impediments to obtaining or developing critical thinking in the classroom?” They merely differed in their remarks, with some learners reporting that the lecturers failed to teach critical thinking and instead relied on memorisation techniques. An extract from the student’s interview reveals how these learners agree that their lecturers’ teaching techniques are the source of their difficulties in acquiring critical thinking.

Table 3: Student Group Interview

| Student C8 | I never want to disparage this school’s lecturers, but critical thinking is rare in this curriculum. Only one or two lecturers employ questioning techniques in their classes. As a result, I can say that one of the major issues is teachers who prefer the traditional way of learning such as memorisation. |
| Student C2 | This program does not include critical thinking. The majority of lecturers use the same memorisation techniques that were utilised in secondary school. |
| Student C9 | I concur with my colleagues; I also think these lecturers bear the full blame because they are the ones who are meant to lead in the classrooms. They have a variety of teaching styles to select from, including the conventional method and critical thinking. In fact, teachers in this curriculum usually adopt the rote-learning method. |
| Student C3 | My classmates and I are completely in agreement. Even if we wanted to, we wouldn't be able to resist critical thinking because our lecturers don't promote or integrate critical thinking in their lessons, course materials, or evaluations. It is the lecturers that are the cause of the issue. |
| Student C7 | I hold both students and teachers responsible. Most teachers and students despise questioning and discussion as a way of teaching. |
| Student C6 | Academics in our school, I believe are one of the major causes we fail to learn critical thinking since students emulate what their lecturers do. As a result, our academics do not instil critical thinking in the students. |
| Student C5 | There is no critical thinking in our curriculum for two reasons: the first is that, with the exception of one teacher, no one encourages us or uses critical thinking in the classrooms. The community is the second reason. Critical thinking, in my opinion, is not exercised in our culture. Our society, in my opinion should practice critical thinking. Its challenging for universities to teach critical thinking to their students if community does not support it. |
| Student C1 | I totally concur with my classmates. |

Lecturers must be adept in critical thinking capabilities to enable them to teach them to their students. Although, "limited critical thinking competency is the norm rather than the exception" this is not just in South Africa but globally as cited Kuhn (2018: 4) who noted that:

Many lecturers did not acquire critical thinking and, as a result, do not grasp it. Critical thinking was not imparted to the vast majority of lecturers when they were students. They do not have a curriculum that promotes critical thinking, and most academics are unaware of how to impart critical thinking on their own. Consequently, any relationship that exists between critical thinking capabilities and classroom arrangements in the average classroom is often coincidental and irregular (p. 16).

Society

Critical thinking is valued in western cultures, but lecturers often lack the essential knowledge background to effectively execute it. The prevailing culture in South Africa is one of unquestioning deference to authority. For instance, Kids are prohibited from opposing their seniors and challenging their teachers. Challenging lecturers is not a common practise in my personal experience at a South African institution, and it is also not a frequent experience among learners, as this may lead to course failure or academic ostracism.

However, this scenario is not unique to South African colleges; rather, it reflects widespread beliefs in South African culture. Two of the students (Students C8 and C9) reasoned in this direction, with Student C9 noting that:

The issue arises in the early phases. I am referring to our upbringing environment. We live in a society that does not value critical thinking. South African culture must learn to appreciate the opinions of others. The issue is a society that discourages discussion, even amongst parents and their offspring at home. When I am troubled about my future, my parents respond by telling me to leave everything in God’s hands. I believe in God but I should also be allowed to think because God cannot do everything for you, he gave us brains for a reason.

Students at the University of technology have similar feelings about the barriers to critical thinking that they face. For instance, Student C5 admitted “one of the reasons for the lack of critical thinking is society. I don’t think CT is practiced in our society either. I think critical thinking should be used by everyone but if the society doesn’t encourage people to think critically, it is difficult for the university to teach it to its students”.

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There is a definite link connecting educational practice to critical thinking and the design of educational programmes, including university curriculum across and within disciplines. Allamnakhrah (2013) emphasised this point, when he said “many students have been trained both by parents and teachers to defer to authority figures. If students feel disinclined to question the ideas presented in a course, how could they dare question the declarations of societal leaders?” (p.5).

Students C9, C5, and C1 additionally noted “our society does not teach us to respect others’ views”. According to Paul (2011), Intellectual empathy is a key component of Philosophical thinking, alongside intellectual integrity. However, Paul discovered that philosophy undergraduates in European nations are taught to employ critical thinking in a “sophistic” sense, where the most significant goal will be to “win an argument or gain an advantage over others,” rather than in the Socratic sense (p. 13).

Antipathy to critical thinking stretched beyond instructional practices in South Africa and is integrally linked to the country’s culture, which has been the focus of some criticism (Kayira, 2015). In all sectors of life, such as social, educational, political, and personal, South African culture actively emphasizes subordination to authority. This is then embodied and promoted in the school system.

The role of Students
Students C8 and C7 pointed to themselves (students) as being the major obstacle to critical thinking, even though lecturers were viewed as the main barrier. Student C8, for instance, noted that “many students don’t like critical thinking as they are not familiar with these methods because that is not how they learned in high school. If they are not interested in CT they would not benefit even if the lecturers taught this way”. Student C7 was in agreement noting that:

“Keeping the responsibility of lecturers in mind, students also have a responsibility. We should investigate such things as CT. However, many students do not want their learning to be difficult and some of them just want to pass exams and get the degree to get jobs”.

As noted by Yang (2017) Students are also hesitant to engage in critical thinking, because it “takes hard work” as “many students would prefer that teachers just give them answers to complex questions” (p. 2). Indifference, as well as disengagement with critical thinking, was also mentioned by Ojewole and Thompson (2014: 5) among Nigerian students, who “spend most of their spare time listening to music via their headphones, even during lectures, instead of involving themselves in constructive activities”.

Blaming students, on the other hand, is a crude approach that ignores when or why the problem arises, whether because of academic institutions, unique cultural and socioeconomic situations, or other variables.

Systemic factor: The education System
Students C4 and C2 blamed the school system rather than the lecturers or society. Student C4 further said “our education system must be reformed toward critical thinking and only after that can we then blame teachers and students if they do not implement it”. Also, Student C2 also noted, saying “we are the bad outcomes of the bad education system”. These learners’ perspectives are consistent with those of South African researchers (Temel, 2014; Dunn, 2014), who all argued that critical thinking is not ingrained in the country’s educational institutions. These academics also suggest that school reforms in South Africa are required to include CT in all educational settings.

One of the most intriguing findings was that, even though students were chosen in reference to a range of scores from pass to excellence, there seemed to exist no substantial discrepancies in their critical thinking learning assessments.

Discussion and Recommendations
Critical thinking is what differentiates a university graduate from others (Clarke, 2018), and it is one of the main objectives of higher education (Halpern, 2014). Four factors were identified by the learners as barriers to critical thinking learning. The first is lecturers, who are regarded by students as the greatest impediment to critical thinking development. This is because most lecturers, as described by the students, lack a solid foundation in critical thinking and hence are unable to transfer their expertise to their students. Society was cited as the second element by the students. According to the students, the South African culture does not encourage deference to authority. This has an impact on the students as they are unable to challenge or ask necessary questions during classes. The third element as reported by the students is the students themselves. Many learners dislike critical thinking, according to some learners, because they are unfamiliar with the concepts. According to Yang (2017), most learners are uninterested in studying critical thinking because it requires a lot of effort to master. The educational system is the fourth element mentioned by the students. As previously indicated, several students criticised the educational system rather than the professors or society. Some students noted, “our education system must be reformed toward critical thinking, and only after that can we then blame teachers and students if they do not implement it”.

Furthermore, the perception that university education is based on memorisation is a big source of concern for students. Several students considered this approach as repetitive, uninspiring, lacking in intellectual prowess, and not particularly challenging. The lecturers were seen as information carriers instead of facilitators, and the instructional strategies were also regarded as conventional. Students questioned the programme, highlighting the reliance on quantity rather than quality. The students voiced their frustration
with the large variety of educational frameworks and insufficient training, arguing that there is little relationship between what they study and what occurs in the "real world”.

Instead of depending primarily on rote learning techniques, the researcher proposes that critical thinking be introduced into everyday tasks such as assignments and tests in the South African educational system. Curriculum reforms should be undertaken, and these changes should include critical thinking. Lecturers should participate in training to have the required abilities to educate critical thinking to their students. Such pedagogical and curriculum revisions will undoubtedly have an influence on South African culture in general, especially when it comes to the development of critical thinking in subsequent generations.

Conclusion

Critical thinking has been mentioned as a vital skill needed to survive in the 21st century. According to the findings, the students demonstrated an inadequate understanding of critical thinking. According to the students, this is mainly because of their lecturers who do not encourage critical thinking but rather focus on rote learning where memorisation is the key. If these students are to have an impact in their profession after their studies, they must be knowledgeable and must have critical thinking skills, otherwise, they might struggle in their field. When they struggle in their profession, it means that businesses will not get the best out of them which will in turn affect the output of the businesses. So, the higher institution must train their lecturers in critical thinking skills so they can help the students in acquiring such skills.

There could be other factors that impede students’ ability to acquire critical thinking skills, future research should focus on those other factors. There are some limits to the methodology that should be mentioned. IPA commonly use Focus groups; however, they do have some drawbacks. Because IPA generally employs a small sample size, this could be considered a drawback, even though IPA is focused on studying a phenomenon from the participant's viewpoint and experiences, and the findings are mostly not indicative of the entire population.

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