Thinking Critically about Lecturers' Perceptions and Development of Critical Thinking Skills in Teacher Education Students

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Abstract

The study was envisaged to examine how lecturers perceive critical thinking skills (CTSs) as well as how they teach to develop such skills in students. The study employed a sample of 42 participants using four data collection methods namely semi-structured interview, focus group discussion, participant observation and artefacts method of data collection. Despite the extant misperceptions of what constitute CTSs among lecturers, findings indicated that lecturers perceive CTSs as skills and abilities, dispositions and skills that enable a person to perform some functions. The study concludes that developing CTSs require changes in the minds of lecturers and students. The study argues that there is no way CTSs could be developed while students are less motivated and unwilling to learn.

Keywords: *lecturers, perceptions, students, teaching*

Introduction

Principally, one of the key issues that define higher education as 'higher' is its critical thought (Barnett, 2007, p. 151). It is for that reason that Critical Thinking Skills (CTSs) have been attached with a considerable focus in higher education curricula (Cargas, Williams & Rosenberg, 2017; Davies & Barnett, 2015; Stupple et al., 2017**;** Tiruneh, Verburgh & Elen, 2014). Thus, CTSs ought to be essential learning outcomes in higher education. Additionally, the literature has documented CTSs as one among the four

21st century learning skills namely critical thinking, creativity, collaboration and communication (Happ, 2013; Maneen, 2016; Widiawati, Joyoatmojo & Sudiyanto, 2018). The skills are termed as indispensable for ones' survival.

The continued emphasis of CTSs in students is due to the role which CTSs play to any individual. Education which focuses on developing CTSs is essential for students emerging from universities, for them to fit in the labour market upon their graduation **(**Davies & Barnett, 2015; Mwalongo, 2014; Ren & Tao, 2014). In addition, studies have indicated that critical education empowers students to construct their own knowledge (Pacho, 2013). Hence, making students free from considering the knowledge written in the textbooks as final knowledge (Kinyota & Kavenuke, 2018). When students construct their own knowledge, they tend to change from being passive learners to active learners.

Evidences have shown that CTSs courses are offered in many world well-known universities such as Duke University, the University of Melbourne, National University of Singapore and the University of Sydney. In particular, research has shown that many African universities are striving to introduce CTSs courses in order to make education fruitful for sustainable development (Ijaiya, Alabi & Fasasi, 2011). For instance, Tanzanian universities such as the University of Dar es Salaam (UDSM) and St. Augustine University of Tanzania (SAUT) are offering a course coded PL 111: critical thinking and argumentation (UDSM, 2015) and PH 122: critical thinking (SAUT, 2017) respectively. This suggests that CTSs can be taught and developed to students when appropriate teaching strategies are applied.

Assuming that CTSs can be developed and taught to students, a number of questions come into mind: How do lecturers know that students have acquired such skills?; In contrast, if we assume CTSs cannot be taught, how could students learn to have critical thoughts which form the core of higher education?; Furthermore, since universities play a crucial role towards cultivating graduates with CTSs (Davies & Barnet, 2015; Stupple et al., 2017), the question of the position of lecturers towards the development of CTSs in students becomes imperative.

Problem statement and research questions

In the process of teaching any course, lecturers can develop CTSs in students. Nevertheless, it is important to note that, teaching a given content requires that a lecturer is familiar with the content. Given that fact, lecturers who are teaching to develop CTSs have an obligation to understand what CTSs are, possess the necessary CTSs and be able to develop such skills in students. Despite this assertion, the literature has indicated that the concept itself is unclear among lecturers and students (Ijaiya, Alabi & Fasasi, 2011; Mwalongo, 2014; Trede & McEwen, 2015)**.** Also, there is less agreement on how CTSs can be developed to students (Cargas, Williams & Rosenberg, 2017; Stupple et al., 2017; Tiruneh, Verburgh & Elen, 2014). In that regard, this study aimed at responding to the following research questions:

i. How do lecturers perceive critical thinking skills?
ii. How do lecturers teach to develop critical thinking skills in students?

Research design

The study adopted a case study research design. Case study is useful in a context where the researcher addresses questions such as how something happens (Bryman, 2012). Additionally, Cresswel and Clark

(2018) asserted that case study allows the researcher to explore cases on a phenomenon under study over time through detailed data collection methods involving multiple sources of information.

Research site

The study was carried out in one of the teacher education universities in Tanzania. The university has three faculties, but the study was narrowed down to a single faculty—the Faculty of Education (FoED). Of all the three faculties, it is only the Faculty of Education that clearly stipulates in its website and brochures that it focuses on cultivating graduates with CTSs. This became one of the reasons for the selection of this study site in order to examine how teaching in the faculty takes place.

Participants

A sample of lecturers from the selected faculty was purposively sampled. The selection of lecturers was based on the criterion that they had relevant courses to teach at the time of data collection so that the researcher could interview them and observe their classroom teaching practices. In order to confirm the findings from lecturers, third year students from the FoED were purposively selected to participate in the study. Their selection was based on the criteria that they have had a longer time lived experience compared with first and second year students. Thus, they had experienced how lecturers teach and could tell whether or not the respective lecturers' teaching strategies tend to develop CTSs in them. Tables 1 and 2 summarize the sample composition for lecturers and students respectively.

The participants (both lecturers and students) were given pseudo names as noted in presentation of findings. However, the pseudo names do not have any meaning or direct relationship with the study participants. Given

the number of participants, only a general profile of participants was provided. Thus, I included participants' age, sex, department, academic rank and years of experience in teaching for lecturers. For students' profiles, age, sex and programme of study were provided. For the purpose of clarification, in the tables below M stands for Male; F for Female; AL for Assistant Lecturers; L for Lecturers; SL for Senior Lecturers; and P for professors. Furthermore, EPCS and EFMLL stand for the two departments where the participants came from. Also, BED Arts and BED Sc. stand for the bachelor degree programmes offered in the faculty. Tables 1 and 2 summarize the sample composition for lecturers and students respectively.

Table 1: *Sample Size Composition by Lecturer's Age, Sex, Department, Academic Rank and Years of Experience in Teaching*

Age				Sex		Department		Academic Rank				Years of Experience		
26-30	31-35	36-40	41+	M	F	EPCS	EFMLL	AL	L	SL	P	1-5	6-10	11+
2	4	2	10	10	8	10	8	9	8	-	1	3	8	7
Total														18

Source: Field data (2019)

Table 2: *Sample Size Composition by Student's Age, Sex, and Programme*

Age		Sex		Programme	
20-25	26+	M	F	BED Arts	BED Sc.
22	2	10	14	12	12
Total					24

Source: Field data (2019)

Data collection methods

Semi-structured interview for lecturers was used with the view of getting rich and detailed responses because the interest was much greater in interviewees' position on the topic under study (Bryman, 2012). Each interview session took 30 to 40 minutes and the data obtained were voice-recorded. In each interview session, before an interview, each participant was asked to fill a questionnaire of about one-minute long that demanded for interviewees' demographic information. Then, Focus Group Discussion (FGD) was used to elicit responses from students. This method offered an opportunity for participants in a group to probe in others' reasons for holding a certain stand. The purpose of having this group of participants was to triangulate the data reported by lecturers and other sources of data. Each FGD session had 4 to 5 participants and it lasted for 50 to 60 minutes. Again, data obtained from FGD were voice-recorded.

In addition, artefacts collection was used to extract information from documents such as course outlines, tests, examination papers and faculty brochures. Lastly, participant observation was used to supplement the data from semi-structured interview, FGD and artefacts collection. Participant observation was used to observe how lecturers teach in order to note if their teaching characterises teaching for developing CTSs. Just like in interview, only lecturers who had courses at the time of data collection were observed in their respective classrooms. To ensure that participants display similar behaviours over time, 3 to 4 observations were made for each lecturer.

Data analysis

The study used thematic data analysis, where categories and themes emerged from the data collected. Data obtained were voice-recorded, transcribed and coded. The researcher transcribed the interviews and the data from artefacts, and wrote down the observational data in a notebook. Furthermore, data reduction and categorisation was conducted resulting in generation of themes such as skills and abilities, critical thinking dispositions, and skills in functions responding to the first research question. Also, data reduction and categorisation resulted in themes such as asking well-thought questions, use of cases, group tasks and making classroom dialogue to mention a few for the second research questions. Since it is virtually impossible to present the voices of each participant, only a few quotations that were more relevant to the themes generated were used to support arguments.

Findings

The findings of this study are presented based on the research questions. Each subsection in this section represents a specific research question of the study described earlier. Basically, there is no teaching if there are no teachers and students. In that regard, students formed part of the study participants and provided data on how lecturers teach to develop CTSs in students. Thus, throughout this paper, there are cases where students' experiences are also presented and interpreted.

Lecturers' perceptions of CTSs

Findings indicated that lecturers' perceptions of CTSs are understood in trio. They perceived CTSs as skills and abilities; dispositions; and skills performing some functions.

Skills and abilities

Findings indicated that almost all lecturers understood CTSs as a concept involving some skills and abilities. It is hard to separate skills from abilities because skills are developed within a range of a person's abilities. Thus, it is from our abilities to perform a task where we can learn more skills. For instance, Lecturer Ahmed viewed CTSs as skills and abilities involving thorough analysis of issues, seeing things in different perspectives, synthesizing, inquiring others' worldview, listening to others, questioning and critiquing. Lecturer Davis believed that CTSs include examining people's arguments, being reflective, not taking things for granted and asking well- thought questions.

Likewise, Lecturer Sharifa perceived CTSs as skills and abilities of seeking for information, having problem - solving skills, doing things systematically and having alternatives to problems. Furthermore, Lecturer Clara viewed CTSs as skills which allow students to analyse and reflect on issues. Also, Lecturer Paul reported that CTSs are related to generating new ideas and being able to make value judgment. Lecturers described the skills and abilities related to CTSs using phrases which are slightly different but upon analysis, it was realized that they meant the same thing. For instance, while Lecturer Ahmed used the phrase 'thorough analysis of issues', Lecturer Clara used ability to 'analyse and reflect on issues' which is the same thing. Also, while Lecturer Ahmed used the phrase 'inquiring others' worldview', Lecturer Davis used the phrase 'not taking things for granted', which is also the same idea. This indicates consistency of the findings among lecturers.

Moreover, Lecturer Paul who seemed to have read and researched on CTSs, perceived CTSs as referring to the Bloom's taxonomy. He

emphasised that he is aware that recall and comprehension are important skills in critical thinking, despite some extant literature ignoring the two levels of thinking as components of CTSs. To quote his own words, the interviewee highlighted that:

> All the time, I have kept questioning the literature as to why skills such as recall and comprehension are not mentioned among the CTSs. I personally believe that before an individual reaches the level of recall and comprehension, there are a lot of complex processes of thinking that are involved in (Lecturer Paul, March, 2019).

Questionably, seven out of 18 lecturers related CTSs to criticizing others' views. To emphasise on this point, Lecturer Abdul expressed his own understanding of CTSs and highlighted that when teaching, he focuses on making sure that his students are able to criticise others. Another unpredicted finding is that of Lecturer Emilia who perceived CTSs as something to do with arguing based on facts. This tells us that any argument based on opinions is not a well-thought argument. In response to what was reported by Lecturer Emilia, Lecturer Angelica reported that CTSs are not about discussing factual information only, but rather the skills and abilities which enable a person to come up with new opinions out of the existing factual information.

Critical thinking dispositions

Findings reported that CTSs involve the dispositions and it is sometimes difficult to separate CTSs from dispositions. Due to such a close relationship, there are cases where Lecturers Davis and Sharifa reported self-confidence and open mindedness as CTSs. Moreover, findings unveiled that CTSs are related with critical thinking dispositions and the

associated knowledge which the dialoguers engage in. In expressing this, Lecturer Paul highlighted that:

> My understanding of CTSs goes beyond the skills and abilities. CTSs are related with the dispositions. Also, a person needs to have the subject matter where s/he can pose her/his CTSs. When I say dispositions, I refer to the motivations and the willingness to engage in thinking tasks. People may have CTSs but may not engage in critical thinking because they lack the motivation and willingness to do that. So, there is a direct relationship between CTSs and dispositions and in some cases it is difficult to separate the two (Lecturer Paul, March, 2019).

From the quote, we are informed that critical thinking dispositions are to do with motivation and the willingness to engage in critical thinking activities. It is well noted that, students may have the CTSs but may not engage in critical thinking activities. The implication is that critical thinking dispositions are prerequisites for developing CTSs. The idea of critical thinking dispositions being related to motivation and willingness to engage in critical learning is connected with what Lecturer Sharifa reported about students. The lecturer [Sharifa] underscored that students have less motivation and willingness to learn. In the researcher's own observation, this made many students end up dozing off or chatting with friends on cellular phones while lessons were on progress.

Moreover, the assertion by Lecturer Paul that people may have the CTSs but still not engage in critical thinking activities because they lack the motivation and willingness to do that, concurs with the observation made by Lecturer Dorine and Student Hamisi. For instance, Lecturer Dorine declared:

> Generally, learners' motivation is very low. I think there is a need to educate students who seem to lack the motivation to

> learn. Students are not ready to accept the new mode of teaching and learning. We are trying to engage them in learning but they do not see the value of it. For your information, many students are dozing off, chatting and busy doing their own issues during classroom hours (Lecturer Dorine, Feb, 2019).

Skills in functions

Moreover, findings suggested that lecturers described CTSs in terms of the functions which a person with such skills and abilities can perform. In other words, people with CTSs are likely to use their skills to perform a number of functions. Such functions are described hereunder:

Critiquing and solving problems: CTSs are closely linked with the idea of critiquing and solving problems. Lecturer Sharifa perceived CTSs as tools for critiquing and solving problems. CTSs are tools for critiquing because while critiquing, people ask critical questions. Although, CTSs were viewed as tools for critiquing and solving problems, Lecturer Jacob reported that ability to critique is a skill that everyone must have but the society has tended to give it a negative connotation. Such a negative nuance has made a culture of critiquing issues remain for a few who are largely labelled as 'radicals', with negative implication attached to it.

Labouring for knowledge construction: Findings revealed that CTSs relate to performing a function of knowledge construction. In particular, Lecturer Sharifa perceived CTSs as being related to knowledge production. This participant reported that the development of CTSs in students requires that each student uses the same CTSs to labour for such knowledge production and eventually leading to knowledge ownership. CTSs are used as tools to labouring for knowledge production. To fruitfully labour for

knowledge production, students have to contribute to the problem posed. In this way, CTSs become more of a means towards achieving a goal of constructing knowledge.

Similar to the preceding findings, Lecturer Pauline reported that she also understands that CTSs are related to performing the function of generation of knowledge. Lecturer Pauline explicitly disclosed that:

> In the classroom, I usually ask students to generate knowledge from what I want to teach before the lesson starts. In the process, I tend to use examples which make students reflect in minds because I believe it to be part of knowledge construction (Lecturer Pauline, January, 2019).

Although lecturers believed that CTSs are related to and important for knowledge construction, Student Flora reported that during classroom teaching some lecturers lack trust over students' ability to learn. Lecturers do not have a belief that students can contribute to knowledge construction. As such, students tend to rely too much on lecturers' knowledge. For instance, Student Flora added that many students rely on lecture notes delivered by lecturers or developed by other students in the previous years, popularly known as *madesa* or *videsa*. The culture has also extended to relying on textbooks' knowledge as an unquestionably authentic knowledge without critiquing that knowledge. In line with that, Student Judith commented that students normally consume the content delivered by lecturers as final and thus a lecturer is regarded as a final knowledge producer.

Although lecturers are aware that the development of CTSs requires both lecturers and students to use their skills to labour for knowledge production, findings indicate that they hardly do that in practice. In a FGD,

students reported that many lecturers want students to reproduce what they were taught. To highlight on this, students underscored that:

> Many examinations rely too much on the class notes or slides. In this way of teaching and assessment, I end up asking where the development of CTSs will come from. I generally have the feeling that the development of CTSs in students in this university is a process at risk, unless immediate measures are taken on board (Students' FGD, February, 2019).

The quote above is similar to the assertions by Lecturers Sharifa and Paul. These lecturers noted that many lecturers' ways of teaching and assessments are not geared towards helping students to become knowledge producers and owners but rather knowledge reproducers.

Listening to other people's ideas: Findings further unveil that CTSs are associated with ones' tolerance and open-mindedness that finally help a person to learn to listen to others' ideas. In support of this, Lecturer Sharifa was of the view that CTSs help a person to listen to others more maturely. Listening to others more maturely means stopping listening to oneself while giving room for the mind to think about the ideas of others. Lecturer Sharifa emphasised that CTSs help a person to go beyond listening to others. She argued that due to divergent thinking that naturally exists among individuals, disagreement may occur. Thus, telling others that 'this is not' without embarrassing them is an important function of CTSs. Additionally, Lecturer Henry reported that CTSs help a person to be able to withhold his/her thinking especially when it is challenged by others.

Systematic understanding of issues: Findings indicated that CTSs help us to systematically understand issues as opposed to mere memorization of facts. In this study, Lecturers Ahmed and Angelica, perceived CTSs as being related to performing the function of systematic understanding of

issues. They reported that CTSs are not about reproducing factual information but rather coming up with new opinions out of the existing factual information. However important sufficient domain knowledge may be, for students to improve their thinking, they are required to use their skills to reflect and analyse the content as they learn and understand it.

Teaching to develop CTSs

Findings disclosed that CTSs can principally be developed and taught to students. It was observed that the variation was on whether CTSs can be taught as an independent course or integrated in other courses. Thus, they varied in a manner into which the skills can be taught and developed. On how lecturers teach to develop CTSs in students, findings indicate that lecturers use a number of strategies as described in the foregoing sections.

Asking well-thought questions

In interview sessions, seven out of 18 lecturers reported to have been asking well-thought questions as a strategy of teaching to develop CTSs in students. During classroom teaching observation, Lecturer Jacob was noted asking well-thought questions. Nonetheless, Lecturer Ahmed, Abdul, Clara, Emilia and Student Glory underlined that, asking well-thought questions is common and most effective only in classes with relatively fewer number of students. Analytically, this is similar to arguing that students who attend classes with large number of students throughout the programme are likely to be jeopardised by the system. Lecturer Davis and Paul reported to believe on the power of questioning for critical learning and development of CTSs in students to occur. To them, asking well-thought questions has to be reciprocal with either the lecturer or the student being the initiator.

Making classroom dialogue

Findings unveiled that classroom dialogue has been used to teach students in order to develop their CTSs. Lecturers Davis, Paul, Clara and Jacob acknowledged that they use dialogue as a strategy to develop CTSs in students. One lecturer reinforced the point:

> In the course of making dialogue, students master critical thinking skills and in particular, critical thinking dispositions which are mastered through talking. It is through talking when we see peoples' arguments and understand those people and their arguments. The way people respond in a dialogue also indicates someone's tolerance and openness (Lecturer Paul, March, 2019).

To supplement the claim, Lecturer Jacob added that, thinking without talking, that is thinking without sharing one's thinking makes a person lack some other aspects of CTSs. Lecturer Jacob supplemented that in a class setting, he usually encourages students to think and talk with classmates. His assumption is that, it is better to think and talk than remaining silent because talking helps to get to know the individual.

Observing one of the classrooms taught by Lecturer Clara, students were noted to be engaged in active participation. There was a serious dialogue among students. The strategy made students critique among one another. The lecturer was more or less like a fellow learner; and she asked questions just like how students were asking among themselves. However, it was also observed that students were actively getting engaged in the session mainly because the lecturer created room for learners to feel free to discuss in either English or Swahili. This suggests that when students are free to dialogue in the language they are familiar with, they become more active.

On the other hand, Lecturer Davis declared that, dialogue is most effective in classes with a small number of students. Having that awareness, Lecturer Davis reported that even in small groups, he usually monitors the discussion, to avoid the possibility for extrovert students to dominate the discussion. The lecturer emphasized:

> In the group discussion, I normally pass through the groups to help, in case students need support. This helps to ensure those small groups do not turn into another lecture. Through class group discussion, I see students listening to others and critiquing others' views, which in my opinion are the critical thinking skills (Lecturer Davis, Feb, 2019).

Furthermore, Lecturer Jacob noted that, many students do not want to participate in the lesson by making dialogue. Lecturer Jacob reported issues that the researcher also observed during classroom observation. When the lecturer [Lecturer Gracious] was encouraging students in learning, one of the students from my back was heard telling his fellow students that "*this lecturer [Gracious] wants us to talk every now and again!"* This comment by the student is an illustration that students think teaching is a one-way as opposed to a two-way traffic.

Use of cases

Six out of 18 lecturers reported to have been using cases for students to read and analyse key issues as a strategy to develop CTSs in students. In particular, Lecturer Ahmed reported that he uses cases of different scientists in order for students to explore and discuss key issues that are related to such cases. This lecturer [Ahmed] believed that teaching by using cases, improves questioning and analytical skills. Similarly, Lecturer Paul taught and assessed his students using cases which required them to think reflectively before they attempted the questions. He reported that he usually tells students to analyse whether or not those situations in the

cases exist in the classroom, school compound and the society. As an example, below is one of the artefacts data (cases) which Lecturer Paul used to examine students.

Registration Number .....

22. Carefully study extract 3; then answer the following questions (15 marks)

Extract 3

Jane is a primary school head teacher. She has bought some books from a local supplier that cost her two million Tanzanian shillings. To that end, she goes to the Automatic Teller Machine (ATM) and withdraws the said amount of money to pay the supplier. As she is few steps away from the ATM, she is surrounded by a group of energetic young men, armed with matches and other traditional weapons. She receives several slaps and her body is severely wounded. Quickly, the young men disappeared with the 2,000,000 at a corner of the nearby street.

a. Why did the system allow Jane to withdraw the said amount of money from her account, and not from the account of any other person [3 marks]
b. Using examples, describe two different safer modes of payment Jane would have used to pay the local supplier without physically withdrawing the money from the ATM [6 marks]
c. From the subject of your specialization, identify a concept, or a topic that can be taught using this scenario and describe how it can be taught [6 marks]

Generally, the preceding scenario places students in the real life situation where they have to find solutions to problems they are likely to encounter in their day – to - day life. In fact, this act is in itself the focus of CTSs.

Group tasks

It was realized that some lecturers have been using group tasks as a teaching strategy to develop CTSs in students. For instance, Lecturer Davis reported to have been using this strategy and he believed that the strategy develops CTSs in students. Nonetheless, he cautioned that he used such a strategy in a small class because it is difficult to effectively monitor group tasks in large classes. Furthermore, Lecturer Davis believed

that group tasks are helpful if students know the importance of getting involved in such tasks. Regrettably, some lecturers' experiences (Such as Lecturer Sharifa and Clara) indicated that it is common to find only two or three students out of 10 students doing a group task. They reported that it has been a culture for the rest of students to write their names on the cover page as individuals who participated effectively in doing the task, while they actually did not participate.

During classroom observation, such cases were noted. This was evident during a seminar presentation session where only one student presented and responded to questions from the audience and the rest remained as observers. Reluctance of some students to participate effectively in group tasks might be due to lack of willingness and motivation to learn as explained earlier. In the researcher's own observation and experience, this situation may also be due to the mismatch of the members of the groups in which students belong. The assumption is that for students to effectively participate in a group task they need to be of similar characteristics and levels of commitment.

Real - life and reflective examples

Real - life and reflective examples were used to develop critical thinking in students. Lecturer Ahmed, Paul and Sharifa stressed much on the use of real- life and reflective examples as a strategy to develop CTSs in students. Lecturer Ahmed, in particular, reported that he usually teaches with real - life examples to allow students think in analogy. This means that, the lecturer gives examples which permit students to compare them with the real - life situations. Moreover, Lecturer Sharifa reported that she uses real - life and reflective examples as a means to develop CTSs in

large classrooms where it is difficult to engage students at its best. The lecturer underlined her point:

> I am aware that real - life and reflective examples take students outside the classroom. I, therefore use such examples on a regular basis. This compels students to be in the classroom physically but their minds going extra distance, thinking outside the classroom while linking what they learn with what is outside. I am sure such examples have improved students' critical and reflective thinking. (Lecturer Sharifa, January, 2019).

In line with what Lecturer Sharifa reported, some students (James, Jane, Jaythan and Allen) acknowledged that Lecturer Sharifa's teaching involved the use of real - life examples. The students reported that her way of teaching by using real-life examples enables them to think reflectively when finding solutions to various daily problems.

Discussion

This study examined lecturers' perceptions of CTSs in relation to how they teach to develop such skills in students. Overall, findings indicated that lecturers perceived CTSs in terms of sets of skills and abilities, dispositions, and the functions that people with CTSs can perform.

Lecturers' perceptions of critical thinking skills

The relationship between CTSs and critical thinking dispositions has been widely discussed in literature (Ennis, 2015; Facione, 2013; Mwalongo, 2014; Thomas & Lok, 2015). However, literature suggests that students may have critical thinking dispositions, yet they may not be able to think critically. This means that dispositional factors can influence CTSs and at the same time CTSs can influence the dispositional factors. Thus, dispositional factors such as self-confidence, open-mindedness and truth seeking (Shin, Park & Paul, 2015; Yuan, Liao, Wang & Chou, 2014) which

were earlier mentioned as skills may influence the development of CTSs in students.

Similarly, Mwalongo (2014) supported the relationship between CTSs and critical thinking dispositions by arguing that CTSs influence the ability to do a thinking task, and critical thinking dispositions determine the way in which actions are to be undertaken. For that matter, individual characters such as sense of humour, self-confidence and self-disclosure of one's feelings, motivation, experiences and interests influence the development of CTSs. In addition, findings unveiled that recall and comprehension are equally important abilities in CTSs processes although the literature has tended to ignore them. For instance, Brookhart (2010) noted that many experts in CTSs have tended to ignore recall and comprehension which are essentially the bases for individuals to reach other higher orders of thinking.

Nonetheless, there are findings which indicated that CTSs are related with the ability to criticise others. Some lecturers even reported that when they teach, they focus on ensuring that their students are able to criticise others' ideas. Such findings are similar to Kaplan (1991) who opined that there has been a misperception of CTSs being used to mean criticising others' views. To criticise others means disapprovingly indicating the fault in others' claims. A proper term to refer to people with CTSs is critiquing, rather than criticising. Critiquing means doing a thorough examination of one's claim, by identifying dimensions of meaning that are missing for the purpose of improving the claims. Critiquing enables an individual to make a value judgment of an idea based on viable reasons.

Other appalling findings are those which indicated that CTSs are about discussing facts as opposed to opinions. This understanding of CTSs is

similar to the findings from the study done by Moore and Parker (2009). In their study, they asserted that, there has been a misconception that sometimes people think opinions are not worth being discussed. People think we need to discuss factual issues only, which is actually not the case. Discussing only factual issues may make us assume that factual claims are always true claims. However, factual claims are not necessarily true claims. Factual claims become true claims only when established reasons for settling them are put forth. Thus, discussing both facts and opinions enable individuals to develop abilities to separate facts from opinions.

Furthermore, lecturers perceived CTSs in terms of their functions. As reported in the findings, lecturers indicated that CTSs are tools for critiquing and solving problems. Since CTSs are helpful in solving problems in the society, many scholars in this area have proposed to execute teaching that prepares students to become future problem solvers. For instance, one premise of critical pedagogy approach documented that lecturers have an obligation to use problem-posing approach to teaching (Freire, 2010). The purpose of using this approach is to help learners develop an attitude of being problem solvers.

Also, it was reported that when students learn to critique the situations around them in schools, they should expect to experience the same in the societies they live in. If they learn to critique others' views, then, the society should accept to be critiqued as well. The assumption is that students are products of the society. Thus, what they learn in schools should be reflected in the society. This view is similar to Julius Nyerere's view that what is learnt in schools should not divorce students from the society they leave in. Rather, it is expected to be preparing them to fit in

that particular society (Nyerere, 1967). In other words, the findings are reminding us that in nurturing a critical society, lecturers have to learn to accept challenging ideas from students.

Additionally, some lecturers indicated that people who critique issues are labelled as ‘radicals’, with a negative nuance attached to it. This is similar to other studies which have noted that there is a tendency to attach negative overtones to the word ‘critical’ when referring to CTSs (Adeyemi, 2012; Davies & Barnett, 2015; Kaplan, 1991). Such negative implication attached to the term has resulted in the misunderstanding among scholars in the field of CTSs. The negative overtones may also lead to misperception of people who think critically on issues before attempting to respond to such issues.

As reported earlier, findings unveiled that CTSs are useful tools for knowledge construction. Despite that fact, it was reported that lecturers lack trust over students’ ability to labour for knowledge construction. This has resulted in students relying on lecturers as final knowledge producers. It was reported that, the culture has gone beyond trusting knowledge from the textbooks without questioning its authenticity. Such findings are similar to those from the study done by Kinyota and Kavenuke (2018). In their study, they found that students’ belief on textbook knowledge is ingrained in them to the extent that questioning such knowledge in an effort to construct their own knowledge is equated to an offence.

Also, findings indicated that CTSs enable one to listen to others’ ideas and be able to withhold his or her thinking when it is challenged by others. This goes hand in hand with disagreeing with others without embarrassing them. The findings that CTSs are related with respecting others’ ideas are in line with the writings of Freire (2010) and Pacho (2013). Particularly,

Freire (2010) argued that it is almost impossible to develop CTSs if one side of the dialoguers is afraid of being displaced, tormented and devalued. To avoid that, Pacho (2013) argued that divergent opinions need to be respected, and in case one has to differ, s/he has to do so in a manner that does not hurt another person. Therefore, the development of CTSs in students is only possible if the dialoguers respect each other's ideas.

Teaching to develop CTS in students

Findings unveiled that one of the teaching strategies used was asking well-thought questions. Asking well-thought questions by both lecturers and students has been considered as a means to enhance CTSs in students (Gul et al., 2014; Pithers & Soden, 2000). Also, the findings indicated that classroom dialogue is a common strategy used by some lecturers to develop CTSs in students. This reflects one of the assumptions of critical pedagogy that teaching to develop CTSs requires that educators use dialogic approach to learning (Freire, 2010; 2013; Wang, 2010; Zare & Mukundan, 2015). Nonetheless, participants cautioned that the strategy is effective in classes with a small number of students. Such findings are similar to the observations made in other studies such as Brookfield (2012) and Dong (2015) which found that teaching to develop CTSs in students is mainly possible and enjoyable in classes with a small number of students. This reminds institutions to look for better ways of reducing the number of students in the classroom in order to allow effective interaction in the classroom.

Moreover, findings showed that group tasks were commonly used. The use of group tasks is in line with Fung (2017) who observed that in a

process, group tasks enable students to develop their CTSs. Participants were of the view that such a strategy develops CTSs in students, although it was as well reported to be effective in a small class size. However, findings indicated that there are situations where some students do not participate effectively in group tasks for reasons such as lack of willingness and motivation to learn critically. It was also inferred that the mismatch of the mix of group members to produce fruitful ideas may also be a reason for some students' ineffective participation in group tasks. Thus, lecturers need to have skills of forming groups which may eventually produce the most fruitful ideas.

Furthermore, findings unveiled that real - life and reflective examples make students reflect on the teaching and relate it with the real - life experiences. Scholars have found that real- life examples help students to connect content and problems in real- life situations (Kirstein & Kunz, 2015; Swartz & Mcguinness, 2014). Such real- life and reflective examples are useful in solving real problems in classrooms and/or outside the classroom contexts.

Conclusion and Implications

Based on the findings, this study concludes that some lecturers demonstrated a surface understanding of what constitute CTSs. Thus, lecturers need to learn through various means including attending trainings that can equip them with a clear understanding of CTSs and how to develop the same in students. Further, the study concludes that developing CTSs requires changes in the minds of lecturers and students. There is no way CTSs could be developed in students in a situation where students are less motivated and unwilling to learn. Finally, although, the

study did not intend to examine the challenges encountered when teaching to develop CTSs, many participants kept mentioning the challenges. This calls for future researchers to investigate the challenges encountered in teaching to develop CTSs in students as well as suggesting the solutions to such challenges.

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