Perception and knowledge of critical thinking: A qualitative research study with Professors of Higher Education in Oman

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ABSTRACT

Critical thinking is a key feature of the organizational cultures of higher education institutions, given its multiple impacts on graduates' academic, professional and personal levels. Thus, most of these higher education institutions in the Arab Gulf region state in their strategic plans, implicitly and explicitly, objectives related to enhancing students' critical thinking skills. Despite the apparent prevalence of such objectives, the concept of critical thinking (CT) is hardly taught in higher education institutions in the Arab Gulf region for different reasons. One of these reasons is that the perception of the concept is still in its infancy in the region, even among professors. This study aims to investigate how the perceptions and knowledge of critical thinking of English as a Second Language professors in the General Foundation Program at the College, a higher education institution in Muscat, foster critical thinking teaching. This is a qualitative and exploratory study with 10 professors and the data were collected through semi-structured interviews. The thematic analysis identified 4 themes: 1. First encounter with CT; 2. Connotations and denotations of CT; 3. Attainability of CT; 4. Scarce teaching of CT. The participants revealed their belief in the attainability of critical thinking. However, they expressed difficulties in implementing critical thinking teaching in their classrooms. The General Foundation Program's professors referred openly to the disparity between their espoused beliefs and enacted practices.

Introduction

Definition of critical thinking

Despite the domination of critical thinking (CT) in literature, there is no agreement on a precise definition of the concept in the field of education. For example, Moore (2013) refers to the fluidity of the concept, adding that this definitional impasse as the critical thinking movement seems to have found itself in is related to the tendency to detach the concept from its actual uses, and then to attach to it either notions that are thought to be somehow intrinsic to it or else notions that one desires it to have. A concept treated in this way will inevitably yield many different meanings. Given such disagreement on the definition of CT, Lai (2011) referred to many researchers such as Ennis (1962), Facione (1998) and Halpern (2003) who are from different schools of thought like philosophy and education to address this state of puzzlement.

Furthermore, Lai (2011, p.9) stated that despite the abovementioned scholars' areas of disagreement on a definition of CT, such scholars "agree on the specific abilities encompassed by the definition". Hence, CT is an umbrella term that is applied to different forms of learning styles and includes different approaches to thought processes. The abovementioned scholars agreed on the processes that occur when individuals apply CT such as identifying assumptions, predicting and seeing both sides of an issue. Moreover, Lai (2011) affirmed the role of higher-order of thinking skills such as analysing, evaluating, interpreting, synthesizing information and applying creative thoughts to form arguments, solve problems, or reach conclusions. Lai (2011) also referred to Bloom's taxonomy as means of information processing skills and stressed the role of this taxonomy when it comes to teaching and assessing higher-order thinking skills.

Importance of teaching critical thinking

Globally, critical thinking (CT) is an integral concept in the philosophies of most pedagogies and social fields. CT is a fundamental feature of higher education (HE) institutions. Since the beginning of the 20th century, CT has started to have a substantial presence in educational contexts, especially in HE. The concept is one of the most important 21st-century skills that need to be taught for its multiple impacts on students' academic, social and political realms. For example, different scholars such as Ghazivakili, Nia, Panahi, Karimi, Gholsorkhi and Ahmadi (2014) stated that the learning styles and CT teaching are closely associated with the student's academic performance. Likewise, Nasrabadi's and Mousavi's (2012) study affirmed that the role of CT approaches and cognitive learning styles in the students' academic achievement is inevitable. Also, the importance of CT teaching is its transformative effects on individuals' personal, political, and social perceptions. Due to that fact, CT has been a dominant concept in philosophy and science for its apparent impacts on individuals and, thus, society. Consequently, scholars such as Faour (2011), expressed their concerns about the absence of CT from the Arab region's schools' curricula with apprehension. Faour (2011) acknowledged explicitly the necessity of teaching CT to achieve better education and a profound understanding of the concept of the citizenry.

Because of the vitality of CT impacts on individuals, the structured teaching of such concept should be of priority to educators. The teaching of such a demanding concept could be achieved through the implementation of Bloom's taxonomy. Such taxonomy consists of six learning categories that reflect several skills which are essential to the process of CT teaching. The taxonomy's six learning categories are divided into lower-order and higher-order thinking skills. Such categories range from the simple recall or recognition of facts, at the lowest levels, to more complex and abstract mental ones, at the

highest levels (Forehand, 2010). Krathwohl (2002) referred to some categories such as knowledge, comprehension and application to reflect lower orders of thinking skills. However, categories such as analysis, synthesis and evaluation reflect higher order of thinking skills (Krathwohl, 2002). In this context, Athanassiou, McNett, and Harvey (2003) perceived Bloom's taxonomy to reinforce teaching aspects that reflect higher-order thinking skills. Moreover, the abovementioned scholars added that integrating such taxonomy in teaching helps classrooms to be more student-centred.

Consequently, the integration of Bloom's taxonomy can enhance CT teaching, as the categories of this taxonomy contribute to the achievement of such concept. To build CT skills it is important to have a vast domain of knowledge and to be exposed to different fields (Zwaagstra, 2016), as knowledge is one of the first categories in Bloom's taxonomy. Adams (2015) referred to this category as a foundational cognitive skill that involves the retention of information like facts and definitions. In the same context, Forehand (2010) described the hierarchical taxonomy as a stairway that encourages the students to approach higher levels of thought. By the same token, Lai (2011) placed Bloom's taxonomy with 'comprehension' at the bottom and 'evaluation' at the top and its three highest levels: analysis, synthesis, and evaluation as gradual processes to CT.

Teaching critical thinking in higher education in Oman

Oman has become part of the global economy, after signing the General Agreement on Trade in Services in 2002. Hence, Oman has taken serious steps to modernize HE, in terms of quality and quantity. HE is the avenue to develop human resources for the workforce. Being part of the global economy has been an incentive for Oman to give more attention to HE in order to cope with the economic changes in the global market (Donn & Issan, 2007). With the region's political instability and oil prices declining, the Omani government has launched reforms and strategic initiatives in HE (Al Abri, 2015). Thus, the policies of the HE system in Oman are adjusted to meet the national, regional and global demands. However, several studies criticised HE in Oman for failing to meet the needs of the private and public sectors. This is due to its inability to equip HE students with the knowledge and soft skills, such as CT skills and problem-solving strategies. In their study, Baporikar and Shah (2012) pointed to the outmoded pedagogical practice and the students' unprepared mindset for HE as factors behind the students' low performance and lack of CT skills.

Educators, in the region, blamed the education system for the drawbacks students and graduates face in their academic and professional performances. Al-Harthi (2002) criticized the education system for producing a power relationship in classrooms, where teachers have the sole authority. The scholar blamed such system of 'banking education' and the rigid hierarchy in classrooms for discouraging CT teaching. Under such circumstances, it is unlikely to create the right environment that fosters CT teaching. To enhance CT teaching, a democratic classroom environment is required.

The contextual background of the study

To understand the nature of this study, it is important to have a solid idea of this study's contextual background. The College, a pseudonym for the context of this study, is a HE institution in Muscat, Oman, it accommodates around 12,000 students studying in different programs. It has more than 975 staff and an annual intake of around 2000 students in its four levels' General Foundation Program (GFP). GFPs, designed for the new students' intakes, are integral programs in HE institutions in the Arab Gulf region. For example, colleges such as Bahrain Polytechnic (Bahrain Polytechnic, n.d.), Algonquin College in Kuwait (Algonquin College, n.d.) and the College in Muscat offer GFPs. In addition to teaching the English language, the GFPs teach information technology and mathematics to

ensure that HE students are well equipped with the language skills, computer skills and mathematical skills that they need in their Post Foundation Program (PFP) specializations.

Many scholars criticized the hefty budgets and hard infrastructure reforms in the affluent Arab Gulf region for not meeting such reforms' expectations, regionally and internationally alike. For example, Cheema (2014) referred to Qatar and highlighted the discrepancy between the high budget's education reforms and the students' low performance in international standardized, such as the Programme for International Student Assessment (PISA) and Trends in International Mathematics and Science Study (TIMSS) tests that require a higher order of thinking skills. Al-Mahrooqi (2012) criticized the Omani experience in education reforms and the disappointing results of students in HE institutions' entry tests.

Given this, the rationale for this study is to consider education reforms from a different perspective. In other words, this study accents the role of simple practical measures in fostering CT teaching. Instead of focusing on hard infrastructure as a means of reform, the study underlines the importance of enhancing soft skills such as CT. Thus, this study focuses on the impacts of CT teaching in fostering students' academic, personal and soft skills as means of reform. Subsequently, the rationale for this study stresses the impacts that CT teaching may have on the College's students' academic performance, in terms of enhancing their higher orders thinking skills. This study draws the attention of reformists and education policymakers in the Arab Gulf region to the importance, and the multiple impacts of CT teaching, focusing on its academic impact. Alazzi's (2008) study indicated that social studies teachers have little familiarity with the definition and, also with the teaching strategies related to CT. That being the case, different scholars highlighted the professors' role where they should have less authority and share knowledge with students to enhance teaching the concept. So, for CT to be practised, Choy and Cheah (2009) stated that it is important to consider the influence of professors' perceptions of themselves and their students about CT. Professors' perceptions influence their behaviours in classrooms. Hence, this study investigates the ten English as a Second Language (ESL) professors' perceptions and knowledge of CT. Also, it focuses on these professors' practical implementation of the concept in classrooms reflected in the way they perceive themselves as disseminators of information or mediators of learning.

Method

In this study, we decided to use a constructivist paradigm for three different reasons. First, O'Connor (2015) commended such a paradigm for understanding data differently and highlighting the participants' perceptions. Second, Guba and Lincoln (1994) acclaimed the constructivist paradigm for its practical impacts on the nature and accumulation of knowledge of a single concept within a context. Third, such a paradigm defines our role as passionate practitioners and advocates in the workplace (Guba and Lincoln, 1994). Accordingly, we implemented this paradigm to reach the aim of this study by establishing a comprehensive understanding of CT teaching in the GFP, relying on the individuals' constructions.

Research aims and research questions

The way professors perceive CT, and the possibility of teaching the concept, direct the learning-teaching process in their classrooms (Choy & Cheah, 2009). In this context, it is important to understand the GFP professors' perceptions and their knowledge base of CT. Larrivee (2000) affirmed that such perceptions and knowledge reflect the professors' beliefs in their teaching philosophies. Accordingly,

in this study, we aim to investigate CT teaching in the GFP for restructuring and renewing the practice of this vital concept. For this reason, we articulated a bounded research question that unfolds the research. How do the EFP professors' perceptions and knowledge of CT foster the learning-teaching process in the General Foundation Program?

In view of the above research question, we designed three sets of questions that we implemented in the semi-structured interviews with the EFP professors. In the first set of questions, we referred to CT explicitly where we elicited the professors' familiarity with the concept. We centred some of the questions on their definitions and perception of CT. We used the other sets of questions to examine the professors' knowledge regarding the impact of CT outside the classroom contexts and the importance of CT as an educational component. Such responses helped us to reconstruct the EFP professors' knowledge and perceptions of CT.

A qualitative case study: The methodology and the rationale

A qualitative methodology is implemented in this case study because the research question is the main point of reference. Its exploratory and explanatory character implies a qualitative approach. Such methodology allows us to examine phenomena, which are the EFP professors' perceptions of CT. Such phenomena are difficult to investigate when applying other research methods (Strauss & Corbin, 1998). Thus, a qualitative approach helped us "to understand the way people think about their world and how their definitions are formed" (Bogdan & Biklen, 1998, p.32).

Another significant advantage of a qualitative methodology is its characteristics that scaffold this intrinsic case study. Graebner, Martin and Roundy (2012) defined such characteristics as being flexible, exploratory and able to get the interpretations and experiences of the organizations' members. Also, using such methodology results in new emerging data, adding in-depth perspectives to the collected data and different angles of interpretation. Strauss and Corbin (1998) elaborated on the popularity of the methodology among researchers over the years. Likewise, we have adopted a qualitative methodology expecting that this work will have relevance to academic and non-academic audiences bringing vision to reality in the hope of change. Likewise, Simons (2009) praised the methodology for its capability of studying the singular and the unique phenomena. Hence, the case study intends to have a better understanding of a single case within its bounded context (Baxter & Jack, 2008).

We relied on an intrinsic case study to address the research question because Grandy (2010) acclaimed such a case study as the study of a case, where there is an interest in exploring and in knowing more about it. Baxter and Jack (2008) recommended an intrinsic case study, when there is an interest in the particularity and ordinariness of the case itself, with no further intention to understand a generic phenomenon or to build a theory. In relation to this case, having a profound understanding of CT and its application, within its institutional context, can enhance the teaching of the concept in the EFP learning-teaching process.

Participants

To address the research question, in this study, ten ESL professors from the General Foundation Program (GFP) with different demographic backgrounds were interviewed in English. Cohen, Manion and Morrison (2011, p.157) described purposive samplings as access to "knowledgeable people". This technique was used when selecting the GFP professors to give in-depth information, representativeness and divergence. The common criterion among the participants is having the ESL teaching experience for the GFP four levels. More to add, the ten professors were selected from the 131 professors who teach in the GFP. The cohort of the GFP teaching staff represents 13 nationalities.

These professors' teaching experience ranged from five years to thirty years. We based the professors' sampling on the variation of their demographic details. When selecting the professors, we made sure that there is diversity in the years of experience, and geographical and educational backgrounds. Furthermore, when we selected such professors, we made sure that they reflected different cultural backgrounds. Hence, some of them had eastern backgrounds, others had western backgrounds, and some had eastern backgrounds, but they have had western education as part of their postgraduate studies. This variation was reflected in the professors' responses as their cultural backgrounds influenced their familiarity with CT. Hereunder, Table 1 illustrates the GFP professors' countries of origin and their years of teaching experience.

Table 1 - The ten GFP professors' sample

Professors	Country of origin	Years of teaching experience
P1	Jordan	8 years
P2	United States of America	10 years
P3	India	15 years
P4	Egypt	20 years
P5	Egypt	30 years
P6	Oman	5 years
P7	Oman	20 years
P8	Iraq	20 years
P9	India	25 years
P10	United States of America	10 years

Semi-structured interviews with the GFP professors

Longhurst (2003, p.143) defined semi-structured interviews as "informal, conversational or soft interviews". DiCicco-Bloom and Crabtree (2006) described semi-structured interviews as a technique that can delve into social and personal matters. Such a technique helps to elicit data related to the respondents' perceptions of CT and its extended impacts.

In the interviews, the respondents addressed many of the issues, which is one of the advantages of the method as has been affirmed by Longhurst (2003). This gave us a closer feel of the respondents' insights, as they based their responses on their personal views and teaching experience in the GFP. Therefore, we developed a wider perspective in approaching the emerging data, which resulted in redesigning and rearranging some of the questions. Although there were other means of communication, we preferred conducting the interviews face to face with the respondents to take advantage of the social cues.

Data collection procedure

Detailed e-mails explaining the topic, study design and the purpose of the research were sent to the professors. In these e-mails, we referred to the administration's approval and the confidentiality of the study. Afterwards, the professors signed their written consent and individual appointments for the interviews on the College's premises were scheduled. Each interview lasted for approximately thirty minutes and all the interviews were recorded on a smartphone, after having the respondents' approval. Throughout the process of interviewing, there was note-taking to write key points and to investigate further themes in the transcribing stage. The transcriptions of each interview started immediately on the same day to avoid memory lapses.

Qualitative thematic analysis

The initial step in the stage of data analysis was to cut down on the bulks of data texts. We relied on the concept of condensation of data, rather than the concepts of reduction and distillation. Condensing the data texts means a process that shortens the texts without changing their core (Graneheim & Lundman, 2004). Before conducting the data analysis procedure, we decided to refrain from using computer software to perform the coding process. Alternatively, we worked manually, reading the data line by line and moving back and forth systematically, relying on the manual coding, because it facilitated the familiarization phase with the data as has been suggested by Braun and Clarke (2006).

Like the transcribing procedure, the coding process of the text data was extremely time-consuming. In this process, we selected the codes to define the exploratory scope of the research questions. This study has a constructivist framework, which leads us to focus on some of its aspects such as the socio-cultural context, structural conditions and implicit themes, as has been outlined by Braun and Clarke (2006). In addition to that, Resnik's (2015) and O'Leary's (2004) ethical implications were used as guidelines. All the ethical norms for promoting knowledge, truth and avoidance of error were fulfilled throughout this study.

Findings

In this study, we broke the chunk of data from the GFP professors' transcribed interviews analysis into small meaningful segments. In such segments, we looked for codes, about the respondents' perceptions of CT. Hence, we relied on the often-repeated codes in such interviews as these codes are the most important ones in the respondents' minds. Then, we gathered such codes under related themes to reflect on the research question.

We used a mind map to rearrange the long list's different codes under the related themes, applying this thematic map to visualize the connections between the codes and the related themes as Braun and Clarke (2006) recommended. The thematic map was reshaped a few times until we settled on naming themes that fell into a convincing narrative, through which we highlighted important issues about CT teaching. Consequently, naming each theme not only to reflect its content but also to use such a theme to be part of the narrative.

The GFP professors' sampling intentionally presented a variation in the professors' geographical and educational backgrounds, as well as in the years of their teaching experience. We expected that there would be a wide range of variations reflected in the professors' responses. On the contrary, such responses reflected similarities more than differences. However, such differences were evident in the GFP professors' responses regarding their first encounters and familiarity with CT. The following section reports on the findings related to the themes constructed to address the research question related to the GFP professors' knowledge and perceptions of CT.

Theme 1 - First encounter with CT

We advertently asked the GFP professors to flashback and recall the first time they came across the concept of CT. More than half of the respondents spent some time recalling their first encounters with CT. Such difficulties were expressed in hesitant responses. Hereunder are some examples,

P4: "ah ah (Pause)! Honestly, I cannot remember when the first time was. I was introduced to CT, maybe a few years ago".

Suddenly, after the second question, the interviewee recalled her first encounter with the CT.

P4: "now I remember I was attending a conference at the American University in Cairo, and there was a presentation about critical thinking and how important it is to English language learners".

Moreover, P4 elaborated on her further encounters with CT in presentations and informal conversations,

P4: "On several occasions, I read about critical thinking and listened to some colleagues' conversations and some other presentations at different conferences, the presentation was interesting, but I was not allowed in my classes to prepare materials to use critical thinking, I had to use materials prepared by the school where I was working".

Another example of the complete unfamiliarity with the CT is P5, who is a senior professor and has teaching experience of over 30 years, in Egypt, Saudi Arabia and Oman,

P5: "right now! I heard about it, to be honest, from you. So practically, I do not apply the concept in my teaching process here or even before coming to Oman. I do not come across it frequently. It is limited to my interpretations".

In the same context, P9, who is a senior professor and has teaching experience of 25 years, expressed her recent encounter with CT,

P9: "(Pause), for me the concept of critical thinking was like….. (mmmm) I mean not long because it depends upon the type of students you are gaining and with the change of curriculum and change of time, so we have started to work on this type of concept as the students need to have this idea of critical thinking because of the change of curriculum and the syllabus. So, to be precise from a year ago or two and mainly because of the new system and the new textbooks".

On the other hand, P10 and P2, who are from western backgrounds and had work experience in different places besides the Arab Gulf states, easily recalled their first encounters with CT,

P10: "I like…. remember still hearing about that in 1995 when I was studying for my master's degree in the US. However, I am saying about the notion (laughs) it does not mean I did not apply critical thinking in my own life or my teaching before. The only thing perhaps I was not thinking about that as defining it. Without knowing that I was using critical thinking. Of course, yes".

P2: "Oh, probably in my master's or even in my undergraduate. The words critical thinking probably. But, honestly the concept, at least in an American school, from when you're young, it's always fostered. Like, you've got to think on your own, think outside the box".

Although P6 is an EFP professor from an eastern background, still she showed a different stance when compared to the other Arab and Asian EFP professors,

P6: "It was after high school. My professor started to teach us how to think critically. At that time, it was a little bit difficult because I needed some practice and time. In the beginning yes, it was purely academic, and I was trying hard to think critically but later on, after a while, I tried to apply this method in my real life, honestly, I got benefits when I read or write critically so I decided to do it even in my real life".

There are variations among the professors' responses about their first encounters with CT. Such variations are because of the differences in the GFP professors' cultural and educational backgrounds. Despite the diversities in the GFP professors' encounters with CT, such professors managed to construct their interpretations of the concept.

Theme 2 - Connotations and denotations of CT

The denotations and connotations of CT are one of the themes where the EFP professors' responses were not influenced by their educational or cultural backgrounds. In terms of denotations or the literal meanings of CT, the ten GFP professors, even the ones who had earlier encounters with the concept, did not have any formal definitions of CT.

P5, whose first encounter with CT was only at the time of the interview, constructed his meaning of the concept.

P5: "ok (Pause) CT, it is brainstorming, could be some sort of activities that can go under CT. As far as I know. I guess it implies some sort of activating students' minds, so they come up with their thoughts and ideas, stuff like that".

Even though P10 and P6 resumed their post-graduate studies in western universities, still both professors constructed their definitions of CT,

P6: "to think out of the box".

P10: "digging deep".

Like P6 and P10, the other professors had similar informal definitions of CT, yet their definitions lacked generalizability, as such professors limited the definitions of the concept to the academic context only.

For example, P1 and P9 had their definitions of the concept,

P1: "going beyond the text".

P9: "Your thinking, like what you know about a topic or about something in life, (Pause) what is your opinion, your idea or your experience about something. That is my idea, I feel it is the ideas that you get".

Given the above discussion, the GFP professors managed to construct their denotations of CT based on the literal meaning of the concept. However, such professors could not respond to the questions related to the connotations of CT and what kind of ideas or feelings the concept invokes. Professors who had earlier encountered the concept in their workplaces or conferences restricted the denotation of the concept to academia, and slightly touched on it as a life skill. P4 revealed her response, about the denotation of CT and its impacts in the coming responses.

P4: "It is about acquiring new skills in your job, learning new skills for your life, so if you think critically, you can attain any skill you need for your future".

However, the majority of the GFP professors are unlike P10, who had encountered CT in his HE. Even so, P10 could not clearly articulate what CT invokes in him. P10's response is reflected in the following verbatim.

P10: "I do think so, well as I said umm again as I said a while ago I accepted that notion in my life, again it does not always make it easy, but ….. I do not know (laughs) I have fun with that, (laughs) questioning, being sceptical about things sometimes I go overboard with that in my own career life".

The majority of the GFP professors linked CT more to the academic realms. Hereunder, are some responses that reveal how the majority of the GFP professors limit CT to thinking inside the classrooms.

P3: "it is out of the box thinking".

P9: "I think of student's issues, like how to generate ideas from them".

P4: "Critical thinking is beyond a simple understanding of words, you need to think of connotations or words and evaluate information to have a kind of judgment, something like that".

Despite the GFP professors' differences in their geographical backgrounds, the majority of these professors related CT to thinking inside the classrooms. Moreover, such professors believe in their responsibilities as educators to enhance CT teaching in the EFP learning-teaching process.

Theme 3 - Attainability of CT

CT attainability has been an ongoing argument in literature (Lee, Lee, Makara, Fishman and Hong, 2015). For example, Atkinson (1997) disagreed with the possibility of attaining the concept in other cultures apart from Western ones. In fact, in their responses, the GFP professors affirmed the role of cultures in attaining CT. The GFP professors believe that one culture can provide the right learning environment for CT teaching compared to the other ones. I quoted different professors from eastern and western backgrounds to assert their points of view. Despite the GFP professors' different years of teaching experience, and educational and geographical backgrounds, they agreed on the attainability of CT regardless of the learners' cultural backgrounds.

P4: "I can say some cultures provide the right environment for critical thinking better than other cultures. It is not about genes or people, it is about the environment or educational system, so it is attainable".

P2: "I think everybody is born with what can I say, a clean slate, tabula rasa, I don't mean to get philosophical but you know, people (um) are not complete, but partially products of their environment, so critical thinking, like I said, get cultivated in school or from your parents (um), from older people I would say or from another source and forces someone to grow those ideas, skills and analysis, ability to produce or to give their opinions, ability to (um), I don't know. I'm trying to think of another word except for produce… ability to express".

Despite the evident dichotomy in the literature regarding CT attainability, the GFP professors affirmed that CT could be acquired through the right learning environment,

P6: "The methods that the teachers use will definitely help the students to think critically or not".

P4: "Yes, it is possible if the materials we teach adopt the same approach or the teachers were interested in this or believe in the importance of critical thinking to students and if we have students who have simple thinking skills so then we can build on that". On recapping on her responses, the interviewee added "and the right amount of teaching time".

The GFP professors affirmed that the teacher's role is essential in any learning-teaching environment to enhance CT teaching. In their responses, the GFP professors stressed the importance of the teacher's role, individuality and methodology in the classrooms in helping students to attain CT,

P10: "maybe obliged is a strong word, but I do think it is our responsibility to do this as part of being a good teacher".

P2: "So some teachers just want to hear back what they got and other teachers want the students' ideas or words from their projects or whatever. So, it totally depends on the teacher. I think we talked about it at the very beginning of the interview. That's where critical thinking comes into play. Some conditions have to be set up, and I think that some teachers are great at setting up those conditions and some just aren't. Some don't care".

P7: "I do not believe that this should be the responsibility of teachers only, so the writing materials, writing exams, teaching and the books we choose to use, everything should provide students with the right environment".

The coming section explores CT teaching in the GFP classrooms and the GFP professors' role in enhancing the teaching of such an important concept.

Theme 4 - Scarce teaching of CT

In the previous section, the GFP professors referred to CT attainability and their responsibilities, as facilitators, to help students attain such a challenging concept. However, such professors honestly expressed the difficulties of implementing CT teaching in their classrooms. This misalignment between the GFP professors' espoused practices and enacted practices, in terms of CT teaching, is not unfamiliar. Polly and Hannafin (2011) stated that studies confirmed such discrepancies when learner-centred approaches are implemented. For example, P1 and P8 voiced their justifications for not teaching CT in their classes.

P1: "The level of the students is a major constraint as they feel they cannot express themselves. I try to enforce it in the class, but students' cooperation is too weak. Their reasoning skills, learning skills and thinking out of the box are not yet mature enough to say that they are thinking critically. It depends on the student, if he fails to cover the simplest thing how can we go deeper? I like teaching the concept still the students' abilities determine that".

P8: "To a certain extent, not much. Now changing the curriculum, I think there is a lot of CT that must be done by the students to which I don't think they are prepared and also the language which they need to know is not up to the standard. There are a handful of students who can do that not most of them and it will take some time".

Only P10 had a different standpoint when compared to the other EFP professors,

P10: "I think I do it all the time, I think I do it pretty much all the time because I never let them get away with just the answer, so I always kind of try to make them think so why, why do you do that? They might hate me for that".

The other GFP professors, except P10, had the same justifications such as P1 and P8 for not teaching CT in their classes. Such professors referred to students' resistance as one of the most hindering barriers for them to teaching CT. P6 and P3 referred to the GFP students' low language proficiency, and not having CT as part of the assessments, as their main justifications for not teaching the concept,

P6: "For me, the language itself is a vital constraint as students did not acquire the right expressions to think critically, especially at level 1. I try hard to apply this concept, but few students could answer. Another thing is the assessment system in our college. It does not encourage us to think out of the box".

P3: "Critical thinking is not a big part of the class. It is usually a part of the lessons' end, where the students looked at the lesson from a different angle. I focus more on Lessons A in the textbooks to cover the factual level of the unit. Because critical thinking is not part of the assessment, I assign Lessons B as homework".

The majority of the GFP professors shared similar CT perceptions in terms of the concept's definitions, applications in the classrooms and attainability. However, such professors honestly expressed their reluctance to teach CT in their classes for different reasons that will be elaborated on in the discussion section. Table 2 shows the thematic analysis result of the GFP professors' perceptions of CT.

Table 2 – Themes and sub-themes of the EFP professors' perceptions of critical thinking

Themes	Sub-themes
1. First encounter with CT	1a. Eastern background: workplace; conferences; no encounters.
	1b. Western background: schools; higher education; postgraduate studies.
2. Connotations and denotations of CT	2a. Connotations: nonentity; academic performance.
	2b. Denotations: Brainstorming; Thinking out of the box; Going beyond the text.
3. Attainability of CT	3a. Educational environment.
	3b. Professors' role.
	3c. Cultural values.
4. Scarce teaching of CT	4a. Out of assessment criteria.
	4b. Teaching time constraints.
	4c. Students' resistance (weak language proficiency; immature reasoning skills).

Discussion

In the following section, we discuss the GFP professors' perceptions of CT relying on aspects related to their educational backgrounds, their CT conceptualizations and their beliefs in the attainability of the concept. In this view, Choy and Cheah (2009) stated that the way the professors perceive themselves affects their teaching practices. Hereunder, we discuss the GFP professors' responses to construct their perceptions of CT. Such responses reflect the GFP professors' first encounters with CT, their definitions of the concept, their beliefs in the attainability of CT and their roles in facilitating the teaching of the concept.

Regarding the GFP professors' first encounter with CT, professors' responses reflected that their cultural backgrounds influenced their familiarity with CT. Only P2 and P10, who are from western backgrounds, encountered the concept earlier in their education. The seven professors from eastern backgrounds, except for P6, encountered CT either at their workplaces or by chance in conferences. The seven professors did not encounter CT in their education or educational training programs. Aliakbari and Allahmoradi (2012) confirmed the impact of the absence of CT from teachers' training

courses on their teaching. Both scholars affirmed that, for professors to be able to teach CT, they need to have a breadth of knowledge of the concept.

Scholars such as Ryan and Louie (2007) refuted this dichotomy of CT between eastern and western cultures. They affirmed that there are other aspects related to CT that are "often under-theorised or lack agreed meanings" (Ryan & Louie, 2007, p.404). Both scholars urged educationalists to initially realize the differences and complexities within cultures before making any judgements. Mason (2008) referred to this dichotomy, whether CT is a universal, or a culture-laden concept, as crucial to CT teaching.

Concerning the GFP Professors' definitions of CT, there is no agreement in education literature on a single definition. In the literature on CT in HE, the concept is not commonly understood (Lloyd & Bahr, 2010). Likewise, each of the GFP professors has a different definition of CT. Such professors constructed their definitions of CT, where they depended on the wordings and their understanding of the concept. They are not the only faculty to construct their definitions of CT. Paul, Elder and Bartell (1997) found in their study that only 19% of the faculty could define CT.

Burbach, Matkin and Fritz (2004) previously confirmed that educators' agreement on the value of CT is enough for the concept to be featured in courses. Turner (2006. p.3) described the definitions of CT as "unclear and emerge from cultural knowledge and traditions rather than universal measures of higher learning". This is clear in the GFP professors' responses, except for P2 and P10, whose responses were concise. P2's and P10's responses reflect informality and generality in terms of defining CT. The GFP professors, who are from eastern backgrounds, had different approaches to defining CT. They limited the definitions of the concept to the students' academic performance. Such professors perceive CT through their cultural knowledge as Turner (2006) had stated. The GFP professors do not perceive CT out of the educational context. They confined the concept by connecting it only to the academic disciplines (Brookfield, 1997).

The GFP professors' responses to the definitions of CT relate the concept to students' performance in classrooms. They referred to the impact of CT outside classrooms as helping students to be problem-solvers or lifetime learners. They overlooked other pragmatic characteristics of CT. For example, Faour (2011) referred to the importance of teaching CT to ensure the impact of the concept on better education, citizenry and peace. Such concept of the citizenry is inevitable in the Arab region now.

Alazzi's (2008) study, in a Jordanian high school, proved that Arab teachers have little familiarity with CT. One of the reasons for that is the lack of research in the Arab world, in general, as Abu-Orabi (2013) reported. Besides, the focus on educational research in the region is marginalized (Abdelqader, 2016). Furthermore, the dominance of 'banking education' (Freire, 1970), the exam-driven systems in HE institutions in the region and institutional regulations, discourage teachers from exploring CT.

Regarding the GFP professors' role in CT teaching in the GFP learning-teaching process, the GFP professors agreed on the attainability of CT and hold themselves responsible for teaching it. Yet, nine out of the ten professors stated openly that they do not teach CT in their classrooms. Ironically, only P10 implements CT in his classroom. However, such misalignment between the GFP professors' espoused practices and enacted practices is not uncommon in teaching practices. Polly and Hannafin (2011) referred to prior professional development studies to reflect on the discrepancies between what teachers report and what they demonstrate in their teaching. Furthermore, Ertmer, Ottenbreit-Leftwich, Sadik, Sendurur and Sendurur (2012) stated that such misalignment is because of some barriers such as lack of administration support, and inadequate teachers' training and the focus on assessments.

In the same context, the GFP professors referred to the barriers they face as justifications for the mismatch between their espoused beliefs and espoused enactment, in terms of CT teaching. For example, the GFP professors stated that their students' low English language proficiency is the main barrier to not teaching CT. Choy and Cheah (2009) found that several professors, in HE institutions, did not teach CT, because students lacked the language mastery and the confidence to demonstrate the concept.

Like Polly and Hannafin (2011), the GFP professors referred to the decline in students' motivation as another factor for this misalignment between their espoused practices and enacted practices in teaching CT. For instance, P1 referred to the students' lack of motivation and weak cooperation as the main barriers to not teaching CT. The authors stated that one of the reasons for impeding CT teaching is the students' focus on good grades, rather than on the process of thinking. Likewise, Brookfield (2013) confirmed that attaining CT could not be viewed as a by-product of the learning process. The scholar asserted the important role of explicit instructions in teaching CT. In the same context, Choy's and Cheah's (2009) study highlighted some factors that foster CT teaching, such as the professors' in-depth knowledge and their willingness to incorporate the concept in their teaching.

Given the above discussion, the GFP professors' perceptions influence their enactment in classrooms. The GFP professors believe that CT is an attainable concept, and they define themselves as facilitators who are responsible to teach CT. Despite that, none of the GFP professors, except for P10, teaches CT in their GFP classes. Hence, the GFP professors adhere theoretically to one of the College's objectives by defining themselves as facilitators. Llyod and Bahr (2010) and Aliakbari and Sadeghdaghighi (2013) referred in their studies to the students' and professors' pragmatic focus on exams and grades as constraints for CT teaching. Another reason for not teaching CT is that the concept is too challenging to teach. In his study at a higher education institution, Ali (2012) found that professors focus on core disciplines, as disciplines that are less demanding to teach. This concurs with some of the GFP professors' approaches regarding CT teaching. P2 commented on the GFP professors' attitudes, as far as CT teaching is concerned, stating that such attitudes vary from one professor to another. P2 explained that some professors focus on enhancing the students' CT skills, whereas some are indifferent to teaching the concept.

Ngoc Du (2015) reported other factors that hinder CT teaching, such as the limited school democracy, low professors' autonomy and traditional pedagogy. Some of the GFP professors experience such factors at the College. For instance, P7 referred to the importance of professors' autonomy, reflected in the choice of the teaching materials, to enhance CT teaching. Likewise, P4 pointed out the institutions' democracy as another factor in enhancing CT. P4 noted the importance of the professors' beliefs and interest in the concept. Furthermore, P4 referred to the impacts of institutional regulations on CT teaching such as the type of materials and the time given to the professors.

Given this, Choy and Cheah (2009) affirmed the importance of professors' high expectations of their students to enhance their abilities and ensure CT teaching. The GFP professors had no expectations of their students to perform any kind of CT skills. Such professors assumed that the GFP students' low language proficiency would hinder CT teaching. Therefore, GFP professors' main focus is to teach English language skills to improve the students' language proficiency. As a result, teaching CT skills is not a priority for such professors in this setting.

Conclusion

The findings related to this research question have practical contributions to CT teaching in the EFP learning-teaching process. It was important to investigate the EFP professors' perceptions of CT, as such professors' core beliefs influence their teaching in classes (Choy & Cheah, 2009). Such findings can contribute to CT teaching in other HE institutions, as there is a lack of research in exploring professors' perceptions of CT, despite its significance (Saginak, Scofield, Saginak, & Foege, n.d.). In other words, the pedagogical implications of this study can bridge the gap between research and practice in the College's GFP and other HE institutions' GFPs. Thus, such implications would help in developing new ideas and improving CT teaching in higher education institutions. Given this, the study's implications for this institution are to highlight the importance, and the multiple impacts, of CT teaching. Accordingly, the professional development programs can utilize the study's literature reviewed and findings, about the definition and the impacts of CT teaching and hold presentations and workshops for the GFP professors to develop their knowledge of the concept and its practical applications to the GFP classes. Consequently, these kinds of professional development programs would improve the GFP professors' conceptualizations of CT and, hence, their teaching and applications of the concept. Furthermore, one of this research's findings is the necessity of introducing CT explicit instructions to enhance teaching the concept, as has been affirmed by different scholars such as Brookfield (2013) and Van Gelder (2001). It is crucial to enhance CT teaching as an implication for practice in the GFP classes. Pica (2000) affirmed that for students to be proficient in a foreign language, they should learn to think creatively and critically when using the target language.

References

Adams, N. E. (2015). Bloom's taxonomy of cognitive learning objectives. *Journal of the Medical Library Association: JMLA, 103*(3), 152.

Al Abri, K. M. K. (2015). *Higher education policy architecture and policy-making in the Sultanate of Oman: Towards a critical understanding*. (PhD thesis, The University of Queensland, Australia). https://doi.org/10.14264/uql.2016.38

Alazzi, K. F. (2008). Teachers' perceptions of critical thinking: A study of Jordanian secondary school social studies teachers. *The Social Studies*, *99*(6), 243-248. https://doi.org/10.3200/TSSS.99.6.243-248

Ali, H. H. (2012). Assuring quality in promoting generic skills in the Higher College of Technology (HCT), Muscat: Challenges & realities. *English Language Teaching, 5*(11), 45-50. https://doi.org/10.5539/elt.v5n11p45

Aliakbari, M., & Allahmoradi, N. (2012). On Iranian school teachers' perceptions of the principles of critical pedagogy. *International Journal of Critical Pedagogy, 4*(1), 154-171.

Aliakbari, M., & Sadeghdaghighi, A. (2013). Teachers' perception of the barriers to critical thinking. *Procedia-Social and Behavioural Sciences*, *70(2013)*, 1-5. https://doi.org/10.1016/j.sbspro.2013.01.031

Athanassiou, N., McNett, J. M., & Harvey, C. (2003). Critical Thinking in the Management Classroom: Bloom's Taxonomy as a Learning Tool. *JOURNAL OF MANAGEMENT EDUCATION, (5)*, 533. https://liverpool.idm.oclc.org/login?url=https://search.ebscohost.com/login.aspx?direct=true&db=edsbl&AN=RN139375954&site=eds-live&scope=site

Al-Mahrooqi, R. (2012). A student perspective on low English proficiency in Oman. *International Education Studies, 5*(6), 263-271. https://doi.org/10.5539/ies.v5n6p263

Baporikar, N., & Shah, I. A. (2012). Quality of higher education in 21st century–A case of Oman. *Journal of Educational and Instructional Studies in the World, 2*(2), 9-18. http://www.wjeis.org/FileUpload/ds217232/File/02.baporikar.pdf

Baxter, P., & Jack, S. (2008). Qualitative case study methodology: Study design and implementation for novice researchers. *The qualitative report*, *13*(4), 544-559. https://nsuworks.nova.edu/tqr/vol13/iss4/2/

Bogdan, R. C., & Biklen, S. K. (1998). *Qualitative research for education: An introduction to theory and methods* (3rd ed.). Boston: Allyn & Bacon.

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, *3*(2), 77-101. https://doi.org/10.1191/1478088706qp063oa

Brookfield, S. D. (2013). *Powerful techniques for teaching adults*. San Fransisco: Jossey-Bass.

Brookfield, S.D. (1997). Assessing critical thinking. *New Directions for Adult and Continuing Education, 75*, 17-29.

Burbach, M., Matkin, G., & Fritz, S. (2004). Teaching critical thinking in an introductory leadership course utilizing active learning strategies: A confirmatory study. *College Student Journal, 38*(3), 482-493.

Cheema, J. R. (2014). The migrant effect: An evaluation of native academic performance in Qatar. *Research in Education, 91*(1), 65-77. https://doi.org/10.7227/RIE.91.1.6

Choy, S. C., & Cheah, P. K. (2009). Teacher perceptions of critical thinking among students and its influence on higher education. *International Journal of Teaching and Learning in Higher Education*, *20*(2), 198-206. https://files.eric.ed.gov/fulltext/EJ864337.pdf

Cohen, L. M., Manion, L. L. & Morrison, K. (2011). *Research methods in education*. UK: Routledge.

DiCicco-Bloom, B., & Crabtree, B. F. (2006). The qualitative research interview. *Medical Education, 40*(4), 314-321. https://doi.org/10.1111/j.1365-2929.2006.02418.x

Donn, G. A. R. I., & Issan, S. (2007). Higher education in transition: Gender and change in the Sultanate of Oman. *Scottish Educational Review, 39*(2), 173-185.

Ennis, R. H. (1962). A concept of critical thinking. *Harvard Educational Review*, 32(1), 81-111.

Ertmer, P. A., Ottenbreit-Leftwich, A. T., Sadik, O., Sendurur, E., & Sendurur, P. (2012). Teacher beliefs and technology integration practices: A critical relationship. *Computers & Education*, *59*(2), 423-435.

Facione, P. A. (1998*). Critical thinking: What it is and why it counts*. https://www.nyack.edu/files/CT_What_Why_2013.pdf

Faour, M. (2011). *The importance of education in the Arab world*. http://carnegie-mec.org/2011/12/01/importance-of-education-in-arab-world-pub-46067

Forehand, M. (2010). *Bloom's Taxonomy: Original and Revised*. In M. Orey (Ed.), Emerging Perspectives on Learning, Teaching, and Technology (E-Book) (pp. 41-48) https://textbookequity.org/Textbooks/Orey_Emergin_Perspectives_Learning.pdf

Ghazivakili , Z., Nia, R. N., Panahi, F., Karimi, M., Gholsorkhi, H., & Ahmadi, Z. (2014). The role of critical thinking skills and learning styles of university students in their academic performance. *Journal of advances in medical education & professionalism*, *2*(3), 95-102.

Graebner, M. E., Martin, J. A., & Roundy, P. T. (2012). Qualitative data: Cooking without a recipe. *Strategic Organization*, *10*(3), 276-284. https://doi.org/10.1177/1476127012452821

Grandy, G. (2010). Intrinsic case study. In Mills, A. J., Durepos, G., & Wiebe, E. (Eds.). *Encyclopedia of case study research*: L - Z; Index, Volume 1 (pp. 473–475). Sage Publications, Inc. http://dx.doi.org/10.4135/9781412957397.n183

Graneheim, U. H., & Lundman, B. (2004). Qualitative content analysis in nursing research: Concepts, procedures and measures to achieve trustworthiness. *Nurse Education Today*, *24*(2), 105-112. https://doi.org/10.1016/j.nedt.2003.10.001

Guba, E. G., & Lincoln, Y. S. (1994). Competing paradigms in qualitative research. In N. K. Denzin & Y. S. Lincoln (Eds.), *Handbook of qualitative research* (pp. 105-117). Thousand Oaks: Sage Publications.

Halpern, D. F. (2003). *Thought and knowledge: An introduction to critical thinking* (4th ed.). London: Lawrence Erlbaum.

Krathwohl, D. R. (2002). A revision of Bloom's taxonomy: An overview. *Theory into practice, 41*(4), 212-218. https://doi.org/10.1207/s15430421tip4104_2

Lai, E. R. (2011). Critical thinking: A literature review. *Pearson's Research Reports* (*6*), 40-41. https://images.pearsonassessments.com/images/tmrs/CriticalThinkingReviewFINAL.pdf

Larrivee, B. (2000). Transforming teaching practice: Becoming the critically reflective teacher. *Reflective Practice*, *1*(3), 293-307. https://doi.org/10.1080/713693162

Lloyd, M., & Bahr, N. (2010). Thinking critically about critical thinking in higher education. *International Journal for the Scholarship of Teaching and Learning*, *4*(2). https://doi.org/10.20429/ijsotl.2010.040209

Longhurst, R. (2003). Semi-structured interviews and focus groups. In N. Clifford, M. Cope, T. Gillespie, & S. French (Eds.), *Key methods in geography* (3rd ed.) (pp. 143-156). London: Sage Publications.

Moore, T. (2013). Critical thinking: Seven definitions in search of a concept. *Studies in Higher Education, 38*(4), 506-522. https://doi.org/10.1080/03075079.2011.58699

Nasrabadi, H. A., & Mousavi, S. (2012). The contribution of critical thinking attitude and cognitive learning styles in predicting academic achievement of medical university's students. *Iranian Journal of Medical Education*, *12*(4), 285-296. http://ijme.mui.ac.ir/browse.php?a_id=1817&sid=1&slc_lang=en

Ngoc Du, N. (2015). *Factors influencing teaching for critical thinking in Vietnamese lower secondary schools: A mixed method study focussed on history* (EdD thesis, Newcastle University, UK). https://theses.ncl.ac.uk/dspace/handle/10443/2866

Paul, R. W., Elder, L., & Bartell, T. (1997). California teacher preparation for instruction in critical thinking: research findings and policy recommendations from a study of 38 public universities and 28 private universities to determine faculty emphasis on critical thinking in instruction. Sacramento, CA: California. *Commission for Teacher Credentialing* (ERIC Document Nº ED437379).

O'Connor, M. K. (2015). *Social work constructivist research*. Routledge.

O'leary, Z. (2004). *The essential guide to doing research*. London: Sage Publications.

Pica, T. (2000). Tradition and transition in English language teaching methodology. *System*, *28*(1), 1-18.

Polly, D., & Hannafin, M. J. (2011). Examining How Learner-Centered Professional Development Influences Teachers' Espoused and Enacted Practices. *Journal Of Educational Research*, *104*(2), 120-130. https://doi.org/10.1080/00220671003636737

Resnik, D. B. (2015). *What is ethics in research & why is it important*. https://www.niehs.nih.gov/research/resources/bioethics/whatis/index.cfm

Ryan, J., & Louie, K. (2007). False dichotomy? 'Western' and 'Confucian' concepts of scholarship and learning. *Educational Philosophy and Theory*, *39*(4), 404-417. https://doi.org/10.1111/j.14695812.2007.00347.x

Saginak, K., Scofield, T., Saginak, A., Reljic, R., & Foege, A. (n.d.). Perceptions of Critical Thinking: Seeking Instructional Strategies in the Development of Critical Thinking Skills. https://www.shsu.edu/~piic/documents/PerceptionsofCriticalThinking

Simons, H. (2009). Who are they? studying others. In Simons, H. *Case study research in practice* (pp. 68-80). London: SAGE Publications Ltd. https://doi.org/10.4135/9781446268322.n4

Strauss, A., & Corbin, J. (1998). *Basics of qualitative research: Techniques and procedures for developing grounded theory* (2nd ed.). Thousand Oaks, CA, US: Sage Publications, Inc.

Turner, Y. (2006). Chinese students and critical thinking in postgraduate business and management degrees: Teasing out tensions of culture, style and substance. *International Journal of Management Education, 5*(1) 3-12. https://doi.org/10.3794/ijme.51.131

Van Gelder, T. (2001). How to improve critical thinking using educational technology. In G. Kennedy (Ed.), *Meeting at the crossroads: Proceedings of the 18th annual conference of the Australasian society for computers in learning in tertiary education (ASCILITE)* (pp. 539-548). Melbourne: Biomedical Multimedia Unit, The University of Melbourne.

Zwaagsrta, M. (2016). There is no critical thinking without a base of knowledge. https://www.theafronews.com/theres-no-critical-thinking-without-a-base-of-knowledge/

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