Learning Critical Thinking in Saudi Arabia: Student Perceptions of Secondary Pre-Service Teacher Education Programs

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Abstract

Saudi scholars have been agitating for education reforms to incorporate critical thinking in education programs. This paper is a qualitative case study undertaken at King Abdul Aziz University and Arab Open University and examines students' perception of learning critical thinking in secondary pre-service teacher education programs in Saudi Arabia. Definitions of critical thinking are based on the Delphi Report (Facione, 1990). The findings underscore the need for education reforms based on critical thinking to elevate the quality of education in Saudi Arabia.

Keywords: critical thinking, students' perspectives, Saudi Arabia, secondary pre-service teacher education programs

1. Introduction

The importance of critical thinking in education has been recognised by leading theorists and scholars (Paul, 1992, 1995, 2008, 2011; Elder, 2002, 2005; Faccione, 1992; McPeck, 1990; Siegel, 1988; Fisher, 2001; Ennis, 1989, 1990, 1993, 1997; Halpern, 1998; Swartz, 1994) and has been the focus of education reforms in many parts of the West such as the US, England and Australia. Fisher (1998, p. 5) for instance, states that "the aim of this movement is to create a 'thinking curriculum,' placing the development of thinking skills at the heart of the educational process."

Because fast-paced technological change has brought about vast changes in the way people work, communicate and learn, skills such as analysis and evaluation have become important and necessary. For this reason Paul (1995) maintains that critical thinking is "the heart of well-conceived educational reforms and restructuring because it is the heart of the changes of the 21st century" (pp. 97-98).

Critical thinking is considered important not only for achieving educational achievement outcomes based on the narrow criteria of standardised testing but as Swartz (1994), Facione (1998) and Paul (2008) maintain, the benefits of critical thinking transcend school life, enhancing greatly the quality of life and professionalism in the workplace. Critical thinking benefits not only the individual but society in general as Beyer (1995) points out, arguing that critical thinking skills are tools for cohesive social function.

Furthermore, as Beyer (1995) states, critical thinking enables individuals to make decisions and evaluate "information related to personal, social, economic and political issues" (p. 28) while Brookfield argues that "critical thinking is a survival skill that you need to make your way through life" (Johanson, 2010, p. 27).

In relation to pre-service teacher education, Dewey (1997) "contended that the primary purpose of teacher education programs should be to help pre-service teachers reflect on problems of practice" (Mewborn, 1999, p. 316). Consequently, according to Elder (2005) "critical thinking is foundational to the effective teaching of any subject, and it must be at the heart of any professional development program" (p. 39) such as pre-service teacher education programs. Akyüz, (2009) claims that

> Many educators believe that specific knowledge will not be as important to tomorrow's workers and citizens as the ability to learn and make sense of new information. On the other hand, most scholars can agree that one aspect of critical thinking is the ability to analyse, understand, and evaluate an argument" (p. 541)

For secondary pre-service teacher education students, critical thinking assumes greater relevance because these students will be responsible for instilling critical thinking in their own future students. If critical thinking is not taught effectively at secondary pre-service teacher education programs, student teachers will be unable to teach critical thinking effectively to their own future students. Or as Tsui (2001) agues "if these students do not receive training in higher-order thinking while at college, when can they expect to receive it?" (p. 19).

2. Context of the Problem

According to Walsh and Paul (1986) critical thinking skills "should be thoroughly integrated into all aspects of the teacher education programs and prepare future teachers to be models of effective thinking strategies" (p. 49).

However, several studies conducted in secondary schools in Saudi Arabia demonstrate that there is a lack of knowledge of critical thinking among students and in the teaching strategies of secondary school in-service teachers (See Al-Qahtani, 1995; Al-Qmadi, 2008; Amen, 2008; and Al-Gabrey, 2007). Saudi scholars (Al-Essa, 2009; Al-Miziny, 2010; Kafe, 2009; Elyas, 2008 and Al-Souk, 2009) argue that there is a lack of critical thinking among Saudi students and demand that any reforms must also incorporate critical thinking into the Saudi education system.

As an educator, the lack of critical thinking among in-service teachers and students is of personal and professional concern, therefore these findings prompted me to investigate the reasons why critical thinking is lacking among secondary Saudi students and particularly among in-service secondary teachers by "entering inside the box" from which those teachers graduated. Identifying the lack of critical thinking in Saudi secondary pre-service teacher education programs, therefore, needs to be examined and one way of examining this was to give voice to the students' own perceptions about how and whether they are taught critical thinking skills in their secondary pre-service teacher education programs in Saudi Arabia.

Studying students' perceptions will "contribute to our understanding of learning processes that commonly take place in many of the thinking curricula..." (Zohar & Schwartzer, 2005, p. 1596). Furthermore, giving students a voice facilitates greater understanding of their perceptions of critical thinking and corresponds with the methodology of qualitative case studies (Merriam, 1998, 2009; Stake, 1995, 2005). Analysing students' perceptions is also necessary in order to design suitable professional education programs based on critical thinking. Moreover, student teachers' views are essential as teachers are "agents of change in the reform effort currently under way in education and thus are expected to play a key role in changing schools and classrooms" (Prawat, 1992, p. 354).

However, despite the evidence of the importance of critical thinking in education, researchers such as Zohar (1996; as cited in Feuerstein, n.d.) maintain that "comprehensive integration of thinking education in teacher education is still limited" and Elder (2002) also contends that "critical thinking is not typically a significant part of teacher preparation programs" (p. 1). If, as claimed by Elder (2002), Paul et al (1997) and Zohar and Schwartzer (2005) (who examined critical thinking in the US and Israel respectively) the teaching of critical thinking was found to be inadequate, then the teaching of critical thinking in Saudi Arabia, where didactic rote-learning is the prevalent teaching method, must also be inadequate.

The need for analysing whether critical thinking is taught in secondary pre-service teacher education programs in Saudi Arabia, therefore assumes greater urgency. This paper investigates secondary pre-service teacher education students' perceptions of whether they are taught critical thinking, and if so, how, at two Saudi universities.

3. Research Questions and Purpose of This Study

The main research question is: *what are students' perceptions of whether and how critical thinking is taught at secondary pre-service teacher education programs at King Abdul Aziz University and Arab Open University?* This question is but an initial foray into critical thinking in secondary pre-service teacher education programs in Saudi Arabia as such an analysis has not been undertaken before in Saudi Arabia. Analysing this issue also addresses a gap in the literature in critical thinking specifically in the Saudi context.

4. Literature Review

Although the literature on critical thinking is extensive, dating back to ancient Greece and the writings of Plato and Aristotle, contemporary literature focusing on pre-service teacher education or on pre-service teacher education students' perceptions of learning critical thinking is still incipient, especially in the context of the Gulf States and Saudi Arabia specifically. Therefore, this literature review focuses primarily on the categories of student perceptions and pre-service teacher education programs.

4.1 Critical Thinking Definition

Theorists in the field advance various definitions of critical thinking. In order to attempt to resolve the lack of consensus between psychologists and philosophers, experts attempted to define critical thinking as a concept for use across disciplines and for everyday life. A project with these objectives was initiated in California in 1990, comprised of forty six experts. Just over half of these were philosophers, twenty percent were educators, and twenty percent were from the social sciences and psychology and six percent from the physical sciences. The outcome of this project was recorded in a report entitled *The Delphi Report* (Facione, 1990). Facione recognises critical thinking in this report a*s* "one among a family of closely related forms of higher-order thinking, along with, for example, problem solving, decision making, and creative thinking" (p. 13). The report's outcome demonstrates that a consensus on the definition of critical thinking has been arrived at:

> *We understand critical thinking to be purposeful, self-regulatory judgment which results in interpretation, analysis, evaluation, and inference, as well as explanation of the evidential, conceptual, methodological, criteriological, or contextual considerations upon which that judgment is based. Critical thinking is essential as a tool of inquiry. (p. 2)*

4.2 Critical Thinking in Pre-Service Teacher Education

Owu-Ewie (2007) cites the importance of thinking skills in pre-service teacher education in Ghana and explores in a case study the factors that inhibit the enhancement of thinking skills. The conclusions from the case study demonstrate the need for higher order thinking skills in students and that it is therefore "crucial for teacher institutions to produce teachers who have the skill and capacity to enhance the critical thinking skills of their learners" (p. 46).

Owu-Ewie's (2008) subsequent case study discovered that there exists a gap between the curriculum objectives and the materials provided to enhance thinking skills among students. Owu-Ewie argues for staff development for teaching strategies as well as textbooks and tests that are based on higher order thinking skills. Following up with another case study Owu-Ewie (2010) found that little research on thinking skills has been conducted in Ghana. It is necessary, Owu-Ewie argues, that as schools move from transmission of information to "information processing" that teaching institutions in Ghana "break the cycle by producing teachers who have the skills and capabilities to enhance the thinking skills of their learners" (p. 9). For instance, the study found that in the lessons observed, most student contributions were ignored by teachers and that teachers dictated notes in order to enable students to pass exams (Owu-Ewie, 2010).

However, it is not only in developing countries such as Ghana that critical thinking is not the basis of curricula in pre-service teacher education programs; it is also lacking in most US teacher preparation programs. In 1997 Paul and several colleagues investigated the extent to which California's teacher preparation programs were adequate to train or equip teachers to teach critical thinking and problem solving in elementary and secondary schools. The research focused on thirty eight public schools and twenty eight colleges and universities and had three chief objectives. The first was to evaluate current teaching practices and knowledge of critical thinking amongst faculty teaching in the teacher preparation programs. The second was to identify exemplary teaching practices that enhance critical thinking, and the third was to develop policy recommendations based on the results of the research. This study found that most of the educators had a "vague understanding of what is critical thinking and what is involved in bringing it successfully into instruction" (p. 1). The study revealed that eighty nine percent of those interviewed argued that "critical thinking was the primary objective of their instruction" but that only nineteen percent could define critical thinking, and just nine percent used it on a daily basis in their teaching. In addition, a large number of faculties were not able to plausibly explain how to reconcile covering content with fostering critical thinking and do not consider reasoning as a significant focus of critical thinking.

In Australia, expectations of teachers have changed over the last ten years according to Amanda Mergler (2009), who notes that the move away from rote learning and information transmission has required teachers to produce students able to think critically, who are self-aware and can reflect thoughtfully. Mergler examines the twelve week philosophy programme at the Queensland University of Technology for teacher educators. She argues that because philosophy encourages and enables self-awareness and critical thinking, it is imperative that pre-service teacher education programs incorporate philosophy as part of its curriculum to enable teachers to develop these skills in their students. A "strong theoretical and practical foundation in pre-service teacher education will become more apparent" (p. 12).

Similarly, Williams (2005), who analysed teacher preparation programs in the United States, argues for critical thinking in teacher education as a means of enabling society to effectively address social problems at a local and global level. Williams maintains that emphasis on critical thinking in teacher education will result in an emphasis

on critical thinking in K-12 education, which will create a critical thinking society at all levels, thereby allowing for more effective problem solving in society. The development of critical thinking along these lines is unlikely, argues Williams (2005) unless pre-service teacher education students and their educators are themselves the products of critical thinking instruction and practice in the teacher education programs.

Queensland University of Technology's Margaret Lloyd and Nan Bahr's small scale study (2010) examines the perceptions of critical thinking among academics and their students. The findings demonstrate no substantial differences in perceptions between them. The slight differentiation was the students' concerns with the outcome of critical thinking, suggesting an emphasis by students on "product" while the teachers' emphasis was on "process", suggesting academics' concern with the process of "lifelong learning" (p. 14). The authors argue for curriculum design and teaching approaches in the tertiary context, in particular in coursework, and maintain that critical thinking in coursework should not "undermine the integrity of critical thinking as a developing disposition or process" (p. 14). Furthermore, explicit teaching and discussion of critical thinking facilitates "higher level connections with epistemologies of disciplines" according to Lloyd and Bahr (2010, p. 14).

Harding and Parsons (2011) address current practices in pre-service teacher education programs in the United States. Their perspective, based on their research over the last twelve years, is to enable young teachers to develop "to do" lists. For example, they argue that education students require critical thinking processes that include research, trying out ideas and discussing solutions, keeping track of data and discussing alternatives. Collaborative work is also important as is empowering teachers to consider the kinds of classrooms and school cultures they want to build.

Multicultural education, according to Zippay (2010), poses particular problems for teachers. Zippay's thesis examines achievement gaps in culturally diverse students and two white female teachers' reflective and critical thinking in relation to multiculturalism and how this informs or impacts on their literacy practices. The findings demonstrate the need for incorporating explicit culturally relevant pedagogy in the teacher preparation program with an emphasis on critical thinking attributes such as "self reflection" and "relational reflection". One study that compares two different cultural groups produced interesting results. McBride, Xiang, Wittenburg, and Shen (2002) examined 234 Chinese pre-service physical education teachers and found that while there was some resistance to critical thinking by the Chinese teachers, the US teachers expressed positive views and endorsed it. The findings demonstrate that the US teachers scored significantly higher results in the examinations suggesting that this may be associated with the cultural differences and the attitude to critical thinking in these specific contexts: the historically and constitutionally enshrined liberalism and individualism of an open democratic society such as the US produces participants who view critical thinking in positive terms, while the proscriptive one-party state in China, in which political and ideological dissent is largely outlawed, critical thinking is viewed with some scepticism or suspicion. However, the authors note that the disposition for critical thinking between the two groups transcended cultural boundaries, pointing to the need for further research in this area.

Anastasiadou and Dimitriadou (2011) examine the perceptions of critical thinking among student teachers in the School of Education at the University of Western Macedonia. They argue for a productive approach to pedagogy that involves the development of critical thinking parallel with epistemological development for achieving depth in critical thinking in pre-service teacher education. Teaching for critical thinking in pre-service teacher education, they maintain, also aids "progress in their epistemological development toward promoting inclusive education and using teaching practices which respond to the needs of cognitively or culturally differentiated classrooms" (p. 81). Similarly Lee (2005) reviews the criteria for assessing reflective thinking, and investigates how the process of reflective thinking develops in pre-service teachers. Lee argues that experimentation with the ideas that prospective teachers are developing as part of their coursework and analysing their own practice in the course of teaching enhances their ability to impart these self-reflective skills to their students.

Qing, Jing and Yan (2010) applied the California Critical Thinking Skills Test to investigate the effects of inquiry chemical experiment in chemistry teaching. The findings demonstrated a difference in the results of the pre-score and post-score tests, showing that critical thinking skills were enhanced with the implementation of the inquiry chemical experiment. Similarly, Kong (2006) examines the effects of the Cognitive-Infusion Intervention on critical thinking skills and dispositions of the pre-service teachers in Singapore. Using two factors, experimental and control as well as Education Programme Grouping, both groups scored significantly higher in both critical thinking skills and disposition after participating in the study.

The importance of teachers having critical thinking skills is asserted by Unks (1985) whose research focused on teachers of social studies. Unks found that approximately half of the teachers could not achieve the essential critical thinking skill of "distinguishing between statements of fact and statements of opinion" (p. 240). Teachers,

therefore, are not able to teach critical thinking "if they themselves lack the skill" (Unks, 1985 p. 240). Unks asserts the necessity of providing teachers with critical thinking skills through training programs to enhance their development and their own critical thinking skills in order to be able to disseminate it to their students. Nicoll (1996) puts forward similar arguments in his study on the development of critical thinking among children in Kindergarten to year three (K-3). Nicoll demonstrates that critical thinking can be enhanced among children by training teachers in the field and in doing so, provides a refutation of Piaget's theory that critical thinking does not develop among children aged 0-2 years. While Nicoll (1996) focused on the development of critical thinking skills in children he emphasises that "in order to promote critical thinking in young children ... teachers need to understand these skills" (p. 1).

However, while pre-service teacher education programs have been the focus of many studies in several parts of the world, there has been no research undertaken in secondary pre-service teacher education programs in Saudi Arabia, and specifically none on critical thinking or on student perceptions of critical thinking in these programs in Saudi Arabia which is the aim of this study.

5. Methodology

The study employed a qualitative case study approach (Yin, 2009 and Merriam, 2009) to assess students' perceptions. Two focus group sessions took place in which twelve students from the secondary pre-service teacher education program at King Abdul Aziz University and from the secondary pre-service teacher education program at Arab Open university participated. The purposeful sample method was used (Patton, 1990) with students selected by lecturers according to the GPA selection criteria.

Zohar & Schwartzer (2005) argue that many teachers believe that "teaching thinking is appropriate for students with high academic achievements, but it is inappropriate for students with low academic achievements" (p. 1602) and that "low-achieving students are, by and large, unable to deal with tasks that require higher order thinking skills" (Zohar& Dori, 2003, p. 145). However, such conceptions are not supported by the literature on critical thinking theory. Therefore, for this study it was deemed appropriate to select students from a range of abilities. Lecturers at each university were asked to select six students: two each with low, medium and high GPAs in order for broader representation among students. These criteria also possibly facilitate the assessment of critical thinking ability and the development of programs in the near future to meet the varied academic needs of students with different abilities.

6. Data Analysis

The focus groups participated in open-ended interviews in which all were present. The interviews were transcribed from Arabic to English and then to ensure precision, the English translation was translated back to Arabic by an expert translator in English and Arabic language. These were compared to my translation to ensure greater accuracy and to correct discrepancies or errors. A preliminary exploratory analysis was conducted in which the transcribed data was read several times. This was followed by coding, the construction and reducing of themes and writing up the findings in a report (Creswell, 2009 and Merriam, 2009).

7. Findings and Discussion

7.1 Critical Thinking is Important

The main theme to emerge from the interviews was that critical thinking was considered important by all students interviewed. This emerged in response to the first question the students were asked: *"Do you think critical thinking is important, and if so, why?"*

Student A summed up the general perception of the importance of critical thinking stating that "I think critical thinking is important to enable me to solve problems that I face throughout my life". He also argues for the benefits of critical thinking beyond education achievement, claiming that critical thinking may aid in limiting the influence of harmful ideologies on Saudi youth:

> *We should employ reason, not emotion. I'll give an example. There are many youth in our society who have been influenced by Osama Bin Laden and Al-Qaeda ideology over the last ten years. If these youths thought critically and analysed the ideology and its goals and why it calls on people to kill, they would not be easily influenced by such ideology at all.*

Critical thinking, therefore, is not only an academic exercise but as Paul and Elder (2002) state:

> *Critical Thinking is about becoming a better thinker in every aspect of your life: in your career, and as a consumer, citizen, friend, parent, and lover. Discover the core skills of effective thinking; then analyse your own thought processes, identify weaknesses, and overcome them. Learn how to translate more effective*

thinking into better decisions, less frustration, more wealth, and above all, greater confidence to pursue and achieve your most important goals in life (p.xix).

Interview excerpt: King Abdul Aziz University (KAU) student group interview

> **Student B:** critical thinking is good but I do not know to what extent it is important for me.
>
> **Student C:** critical thinking helps me to think carefully before forming any judgment or decision. I think it is important as a means to analyse issues before forming a judgment.
>
> **Student D:** critical thinking is good for everyone because it is helps the decision-making process.
>
> **Student E:** I agree with my classmates about the importance of critical thinking.
>
> **Student F:** critical thinking is important for me to keep on the right track and also enables me to think carefully before I undertake any task.

Like those at King Abdul Aziz University (KAU), students at Arab Open University (AOU) also believe that critical thinking is very important. An excerpt of the group interview with AOU's students shows that all secondary pre-service teacher education students in this study shared similar perceptions of the importance of critical thinking in their learning.

Interview excerpt: AOU student group interview

> **Students H:** Critical thinking is important for both the individual and society because if critical thinking is used I think most societies can solve their problems and families will be able to discuss issues with their children in order to better equip them to make the right decisions in their lives.
>
> **Student G:** Critical thinking is important for protecting us from harmful ideologies, whether from Al Qaeda or the west and disseminated through the media.
>
> **Student I:** I agree with my classmates about the importance of using critical thinking instead of our emotions.
>
> **Student J:** I have no idea about the importance of critical thinking for me.
>
> **Student K:** Before this session I did not know whether CT was important for my own learning or in life but, it must be important because you are doing your PhD in it and I therefore have learnt something about it through these discussions.... we are lacking knowledge in this field.
>
> **Student L:** we should learn critical thinking because, as I have heard from you and my classmates in this session, critical thinking can help people to analyse a situation or problem before forming judgments.

Several Saudi scholars such as Al-Miziny (2010) and Al-Essa (2009), who call for education reforms in Saudi Arabia based on critical thinking, also express similar views about the need for CT to limit the influence of harmful ideology based on reason and analysis, rather than emotion. Student A's views about the importance of critical thinking in limiting the influence of destructive ideologies is congruent with studies which have been conducted by Kafe (2009) and Al-Sagoube (2009). They argue that Saudi youth lack appropriate knowledge and training and recommend a greater emphasis in education on critical thinking to assist youth to overcome destructive influences by enabling them to distinguish between reason and rhetoric.

While both students C and L agree that critical thinking enables one to think carefully about issues before deciding on a course of action or forming judgements student C qualifies this by stating that critical thinking "is unusual thinking and does not happen automatically or by chance". Student C was the only student to express this view about critical thinking, which reflects Paul's (1992) argument that "critical thinking is not just thinking" but is a means of raising thinking to the level of "perfection" (p. 7). Student C's claim that critical thinking "needs ability such as knowledge in a particular area in order to be a critical thinker" also reflects the views of McPeck (1990) who argues for background subject knowledge to think critically. However, Paul (1992) Ennis (1993) and Elder (2003) argue that "critical thinking provides the foundation for deep learning and integration" (para. 1). Elder explains that critical thinking:

> *Introduces students to the idea that to learn any subject well is to learn its most fundamental logic, to be able*

to think within the subject. In other words, it emphasizes the importance of students learning to think historically, to think sociologically, to think scientifically, to think in a literary way, etc. It also introduces students to the intellectual standards for thought, as well as the intellectual virtues, or defining traits of the disciplined mind (para.1).

When asked what he meant by his claim that critical thinking enables him to "think carefully before I do anything" Student F replied that it "means not to make hasty decisions and to think before acting". When asked about the thinking processes necessary to arrive at the most appropriate decision, he did not elaborate, stating only that "I just think". Thinking critically, however, involves specific processes and intellectual standards. For example Paul and Heaslip (1995) state that in order to think critically, one must question one's own thinking processes, for instance: "Is my thinking clear, accurate, precise, relevant, complete and consistent?" (p. 47). Such a process requires that critical thinking be applied explicitly; in other words, students have to learn critical thinking "by having to exercise it while thinking their way through all the disciplines they study" (Paul, 2011, p. 10).

7.2 Critical Thinking is not Taught in the Secondary Pre-Service Teacher Education Programs

Another theme to emerge in the interviews was that while students perceived critical thinking skills as necessary, all students except two maintained that they did not learn critical thinking, either explicitly or implicitly, in their pre-service teacher education program at either KAU or AOU. Students were asked "*do you think you are being taught critical thinking by your lecturers in the pre-service teacher education program. If so, explain how?*"

KAU Students' responses

Student A: if there is critical thinking, it doesn't occur very often.

Student B: I did not see any evidence of critical thinking in this program.

Student C: I will be fair here; there are just two out of ten lecturers who teach critically in this program.

Student D: there is nothing new to tell you; traditional teaching methods, traditional curricula, traditional lecturer and traditional system. All this makes me unhappy. It is boring.

Student E: I do not know.

Student F: I agree about there being no critical thinking skills taught or used in this program in general, but there are perhaps two lecturers who probably use it.

Students F and C, who claimed only a few lecturers taught critically, were asked to explain the methods these lecturers used to teach critically. Student C claimed that "they prefer questioning styles and discussion whereas most lecturers in this program do not like that method". Student F claims that those lecturers who teach critically asked questions rather than merely transmit information. When asked whether these questions were probing questions according to the Socratic method, he claimed that these were questions were not of that calibre, with the lecturer asking only, for example, if the previous week's lecture had been useful. Other questions required little or no critical or analytical thinking as they were based solely on recalling information from text-books.

An excerpt of the group interview with AOU students below demonstrates that all six secondary pre-service teacher education students believe that they were not taught critical thinking in the pre-service teacher education program.

AOU students' responses

> **Student G:** In fact, we were taught in this program many things such as how to teach, write and research but we didn't learn how to think critically.
>
> **Student H:** We don't have critical thinking in our program. I don't think it is practiced in our society either. I think critical thinking should be used by everyone in society. If the society doesn't encourage people to think critically, it is difficult for academics to teach it to students. Anyway, the fact is that we don't learn critically.
>
> **Student I:** I don't think so. I don't blame the lecturers because they want to cover the course content and most students like to learn traditionally. Therefore lecturers are not motivated to learn critical thinking and pass it on to their students. I appreciated them. I think they did their best.
>
> **Student J:** We do not think we are being taught critical thinking by our lecturers, because they do not have time to teach us critically. Furthermore, they may have no idea about critical thinking to pass on to their students.
>
> **Student K:** No, we do not have critical thinking in this pre-service teacher program.
>
> **Student L:** I hope we have critical thinking, but I do not think we do.

Students attributed the lack of critical thinking in their pre-service education programs to their lecturers' own lack of critical thinking knowledge and practice. This perception corresponds with findings in the field (Paul, 2011; Elder, 2003; Tsui, 2001; and Ab Kadir, 2009; Ijaiya, Alabi and Fasasi, 2011; Paul et al, 1997; Williams, 2005). Taking into account the students' perceptions to arrive at a more accurate and comprehensive understanding of the current neglect of learning and teaching critical thinking is important and lends further credence to findings in other studies on critical thinking in non-western contexts such as conducted by Ab Kadir' (2009) and Owu-Ewie (2008).

7.3 Students' Perceptions of the Impediments to Learning Critical Thinking

7.3.1 Lecturers

Lecturers were regarded by students as the main impediment to learning critical thinking. Students were asked "*what are the impediments to obtaining or learning critical thinking in the classroom?*" Responses varied only slightly, with students from both universities claiming that the lecturers neglected teaching critical thinking, and that they based their teaching on rote-learning methods. An excerpt of the group interview with KAU students below demonstrates the consensus among these students in attributing the impediments to learning critical thinking to their lecturers' teaching methods.

KAU student group interview

> **Student A:** To be honest, I don't want to denigrate lecturers in this Diploma of Education program but if there is critical thinking, it doesn't occur very much. I will be honest: there are just one or two lecturers who use questioning methods in their classrooms. I can therefore state that one of the main problems is lecturers who like the rote-learning style.
>
> **Student C:** I agree with my classmates and I also believe that the bulk of the responsibility is with the lecturers because they are supposed to lead in the classroom. They have options in teaching methods and can choose to teach in the traditional method or based on critical thinking. Actually in this teacher education program the rote-learning method is used frequently by lecturers.
>
> **Student D:** I did not see critical thinking in this education program. Most lecturers use traditional rote-learning methods that were used in elementary and high school.
>
> **Student E:** I strongly agree with all my classmates. We do not get the chance to reject critical thinking even if we wanted to because lecturers do not encourage us or incorporate critical thinking in the classroom, in their course content or in the homework assignments. The problem is the lecturers.
>
> **Student F:** I blame both lecturers and students. Many lecturers and students dislike discussion and questioning as a teaching method.

Students at AOU express similar opinions, claiming that lecturers are the main impediments to their lack of learning critical thinking.

AOU Student group interview

> **Student G:** I think teachers in our schools and professors in our university are the main reasons we do not learn critical thinking because students will imitate what teachers or lecturers do. Therefore, our lecturers and teachers do not teach for critical thinking and consequently we teach in the same way.
>
> **Student H:** We don't have critical thinking in our program and I attribute that to two reasons: the first is the absence of lecturers' encouragement and use of critical thinking in the classroom, except for one lecturer in this educational program. The second reason is society. I don't think critical thinking is practiced in our society either. I think critical thinking should be used by everyone in society. If the society doesn't encourage people to think critically, it is difficult for university to teach it to its students. Anyway, we don't learn critically.
>
> **Student L:** I agree with my classmates about that.

Competence in critical thinking and higher order thinking skills is essential for educators if they are to disseminate it to their own students, either explicitly or implicitly. However, minimal competence in critical thinking is the rule rather than the exception, not only in Saudi Arabia but everywhere, according to Elder (2003) who states that

> *Most teachers have not been taught critical thinking and consequently do not themselves understand it. The overwhelming majority of teachers were not taught critical thinking as students. They were not taught critical thinking in teacher preparation programs. The curriculum they use is not designed to foster critical thinking. And most teachers do not identify vehicles for learning critical thinking on their own. Therefore, in the typical classroom, any relationship between critical thinking development and classroom structures tends to be incidental and inconsistent (para.16).*

Paul et al (1997) found that while most educators in public and private colleges in California considered critical thinking the main goal of their instruction, "only 19% gave a clear explanation of what critical thinking is, and only 9% were clearly teaching for critical thinking on a typical class day" This suggests that critical thinking is not being taught adequately in teacher education courses.

An "inadequate knowledge base" and resistance to add to an already "overloaded curriculum" (p. 33) are further challenges, according to Ljaiya, Alabi and Fasasi (2011) to teaching critical thinking in teacher education. Covering extensive course content as part of an overloaded curriculum is also a concern in the Saudi education system. This concern emerged as part of my own study which involved interviewing lecturers about their knowledge and practice of critical thinking in King Abdul Aziz and Arab Open University. All the lecturers maintained that they have little time to undertake professional development programs because they have much course content to cover in a limited period of time.

7.3.2 Society

In open western societies critical thinking is encouraged but teachers lack the necessary knowledge base to implement it effectively. In Saudi Arabia, the culture is predominantly one of uncritical submission to authority. For example, children are discouraged from questioning their elders and from challenging their educators. In my experience as a student and lecturer in Saudi universities, and what is the common experience of students, challenging lecturers or teachers is not standard practice as it may result in failing a course or social and academic ostracism.

However, this situation is not confined to Saudi universities; this merely reflects prevalent attitudes in Saudi culture. Two of six students (Students A and C) argue precisely along these lines with Student C stating that:

The problem comes from the early stages. I mean from the environment in which we grow up. We are living in an uncritical society. Saudi society needs to learn that others' views must be respected. The problem is a society that doesn't encourage discussion, even in the home between parents and their children. If I have to think about my future, most of my family say, don't worry, God will guide you. We fully agree with that expression and I fully trust in my God's guidance but we should also be given the opportunity to think.

Arab Open University's students express similar opinions about the impediments to their lack of learning critical thinking. Student H for example claims that "one of the reasons for the lack of critical thinking is society. I don't think CT is practiced in our society either. I think critical thinking should be used by everyone but if the society doesn't encourage people to think critically, it is difficult for university to teach it to its students".

There is clearly a dialectical relationship between cultural practice in relation to critical thinking and how teacher

education programs, and indeed, university syllabi across and within disciplines, are structured. Williams (2005) alludes to this, noting that "many students, have been trained both by parents and teachers to defer to authority figures. If students feel disinclined to question the ideas presented in a course, how could they dare question the declarations of societal leaders?" (p. 182).

Students C, H and L also claim that "our society does not teach us to respect other views". Intellectual empathy along with intellectual integrity are central tenets of Socratic thought, according to Paul (2011). Yet Paul found that philosophy students in western institutions are taught to use critical thinking not in the Socratic sense but in a "sophistic sense", whereby the primary objective is to "win an argument or gain advantage over others" (p. 13).

In Saudi Arabia, aversion to critical thinking extends beyond educational practice and is inextricably bound up with Saudi culture, which has been the subject of some critique (see Al-Essa, 2009, Al-Miziny, 2010) Saudi culture actively encourages submission to authority in all spheres: social, educational, political and domestic. This is then reflected and perpetuated in the education system.

7.3.3 Students Themselves

Although lecturers were regarded as the main impediments to critical thinking, students A and F consider the students themselves obstacles. Student A, for example, claims that "many students don't like critical thinking as they are not familiar with these methods because that is not how they learned in high school. If they are not interested in CT they would not benefit even if the lecturers taught this way". Student F agrees claiming that

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

Williams (2005) also points out the reluctance on the part of students to practice critical thinking as it "requires hard work" and "many students would prefer that teachers just give them answers to complex questions" (p. 182). Ijaiya, Alabi and Fasasi (2011) also cite disinterest and disengagement with critical thinking among students in Nigeria, many of whom now "spend more of their spare time listening to music from their headsets, even during lectures, instead of engaging themselves in productive activities. If student teachers lack CT skills, what would they teach their future students?" (p. 30).

However, to blame students themselves is a rather simplistic argument as it fails to take into account how or why this situation arose, whether as a product of educational systems in specific cultural and social contexts or for other reasons.

7.3.4 Education System

Students I and K do not blame lecturers or society but the education system. Student I argues that "our education system must be reformed toward critical thinking and only after that can we then blame teachers and students if they do not implement it". Student K states that "we are the bad outcomes of the bad education system". The students' perceptions reinforce the views of Saudi scholars Al-Miziny (2010); Al-Essa (2009); Barnawi's (2011); Kafe (2009); Al-Sagoube (2009); Al-Qahtani (1995) and Elyas (2008) all of whom found that critical thinking was lacking in the Saudi education system. These scholars argue that there is a necessity for education reforms to incorporate CT in all educational sectors in Saudi Arabia.

One of the significant findings was that although student selection was based on a cross-section of grades from pass to high distinction, there appear to be no significant differences regarding perceptions of learning critical thinking between students.

8. Conclusion

Students' perceptions of how or if they are taught critical thinking reveal that critical thinking is not the basis of pre-service teacher education programs at both universities in Saudi Arabia. Rote-learning and memorisation remain the prevalent methods of instruction with which students are dissatisfied.

Students found this method boring, uninspiring, lacking in intellectual rigour, and not very challenging. The teaching methods were also considered traditional, with lecturers perceived as transmitters of knowledge, rather than facilitators. The curriculum was viewed skeptically by students, who criticized the focus on content quantity rather than quality. The data reveal an urgent need for reforms of Saudi education system, with critical thinking as the basis of pre-service teacher education courses to limit the perpetuation of the rote-learning method of teaching and learning. Such reforms to the education system and curricula will undoubtedly impact on the culture in general in Saudi Arabia, facilitating the fostering critical thinking in future generations.

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