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Critical thinking in business education: using creative and innovative assessment approaches

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Abstract: Critical thinking is not only an important skill in everyday life but also in the development of academic skills. In the 21st business education, critical thinking is an important part of teaching, learning and assessment. Critical thinking has been described primarily as a type of high-order thinking that involves controlled reflective thought that utilises active argumentation, logical reasoning, inferencing and appraisal of information in making value judgements. Critical thinking is broadly recognised as an important attribute that business schools' students should gain to be successful in an increasingly globalised economy. However, there has been little discussion about a widely-accepted method of teaching, learning or assessing it in business education. This presenttaion will focus on a systematic understanding of how different teaching strategies contribute to increasing critical thinking skills in different courses and levels. It uses more than 700 articles that study critical thinking in business education, a first of its kind that investigates the whole literature on critical thinking in business education. The implications of this for the business school community and beyond can be significant.

Paper: Introduction

Critical thinking is not only an important skill in everyday life but also in the development of academic skills. In the 21st business education, critical thinking is an important part of teaching, learning and assessment. A quick scan of courses across many business schools in the UK, US and Australia indicates that critical thinking is embedded in both the acquisition of discipline knowledge and generic skills, as evidenced by a number of learning outcomes associated with the development of critical thinking.

Critical thinking has been described primarily as a type of high-order thinking that involves controlled thoughts that can be distinguished from forms of low-order cognitive mechanisms such as attention and perceptions (Smith, 2003). In early literature, critical thinking is described as a logical process that involves accurate assessment of statements (Ennis, 1964). Robert Ennis, defines critical thinking as "reasonable reflective thinking focused on deciding what to believe or do" (Ennis, 1996). A review of ideas and research attempting to define critical thinking reveals that they point towards an

understanding of critical thinking as controlled reflective thought that utilises active argumentation, logical reasoning, inferencing and appraisal of information in making value judgements (Behar-Horenstein & Niu, 2011; Shakirova, 2007; Smith, 2003; Snyder & Snyder, 2008). Presenting a more recent view while capturing some of the key concepts discussed above (Halpern, 2007) defines critical thinking as,

“the use of those cognitive skills or strategies that increase the probability of a desirable outcome. It is used to describe thinking that is purposeful, reasoned, and goal directed – the kind of thinking involved in solving problems, formulating inferences, calculating likelihoods, and making decisions, when the thinker is using skills that are thoughtful and effective for the particular context and type of thinking task” (Halpern, 2007, p. 6).

In addition to the skills discussed in the definitions above, there is general agreement among researchers that critical thinking also entails dispositions (Facione, 1990). Open-mindedness, inquisitiveness, respect and openness to consider others ideas are some of the key critical thinking dispositions referred to in the literature (Bailin, 2002; Ennis, 1989; Facione, 1990; Halpern, 1999).

Critical thinking in business education

Critical thinking is broadly recognised as an important attribute that business schools’ students should gain to be successful in an increasingly globalised economy. Professional associations add support to this view by drawing attention to the skills and methods that students should develop to go beyond perspectives based solely on content memorisation (Wilkin, 2017). The Association to Advance Collegiate Schools of Business - AACSB standards for accounting accreditation, for example, highlight critical thinking and analytical skills as a crucial area of curriculum content (AACSB, 2018).

What measures need to be taken to enhance students critical thinking skills within the teaching learning process is a well-researched aspect within higher education. It has been established that traditional lecturing and rote learning, that rely on delivering facts to students and then students memorising them, do not help advance students critical thinking skills (Celuch & Salma, 1999; Diaz-lefebvre, 2004). What has been emphasised instead is instructional strategies that can utilise students inquisitive mind that will then trigger the utilisation of high order thinking skills (Snyder & Snyder, 2008; Wong, 2007).

Teaching critical thinking in business education

Incorporation of critical thinking into the teaching learning practices varies depending on the level of education, the context and the discipline of the course, and teaching strategies used by instructors (McEwen, 1994). One of the widely debated issues related to teaching critical thinking is whether critical thinking is discipline specific. Three main ideas prevail. Some researches argue that critical thinking skills can be best enhanced if it is taught amalgamated into the discipline specific knowledge (Bailin, 2002; McPeck, 1990; Willingham, 2007). Another group contends that it needs to be taught separately as a subset of skills (Gelder, 2005; Halpern, 2001). There are also others who argue that critical thinking includes both general and domain specific knowledge (Ennis, 1989; Facione, 1990, 2000).

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In business education in particular, research indicates that there is a positive correlation between critical thinking and academic performance (Snyder & Snyder, 2008; Tempelaar, 2006). Given its significance, different approaches of teaching such as problem-based learning and course-content-embedded learning have been identified as important strategies to incorporate critical thinking into the curriculum (Braun, 2004). Braun (2004) categorises different instructional strategies such as case studies, and applied projects under problem-based learning and discussions, debates, guided questioning and scaffolding under course-content-embedded learning.

Methods for critical thinking assessment

Although research has examined several instruments to measure critical thinking skills, there has been little discussion about a widely-accepted method in business education. The models by Halpern (Halpern, 1998) and the California Critical Thinking Skills Test (Facione, 1990b) have been pointed out as empirically validated instruments to measure the ability to think critically (Butler et al., 2012). Based on both approaches, Reid and Anderson (2012) found that a final capstone course in a business class that used restructured case-based activities to incorporate behavioural and cognitive components demonstrated a positive impact on critical thinking skills. Other researchers have focused on Bloom's Taxonomy as a framework through which students can engage in higher-order thinking associated with critical thinking (Dwyer et al., 2014; Nentl & Zietlow, 2008; Reeves, 1990). Nkhoma et al. (2017) employed the revised Bloom's Taxonomy to demonstrate the incremental effect of business cases on higher-order thinking processes. A search of the literature also reveals the use of the Watson-Glaser Critical Thinking Appraisal - WGCTA (Watson & Glaser, 1994) as a measure of critical thinking skills (Cloete, 2018; Seldomridge & Walsh, 2006). Using the five dimensions of the WGCTA, Cloete (2018) found that teaching techniques based on real business scenarios had a significant influence on the critical thinking skills of those participating in the experimental group.

The limited number of articles on critical thinking in business education already signals an under-researched area. There are more articles on critical thinking as applied in the medical, nursing and allied health studies than in business. This would indicate the importance placed on critical thinking in medical education due perhaps to cases of health care diagnostic and management problems which could be avoided by improving medical practitioners' diagnostic and critical thinking skills (Zayapragassarazan, Menon, Kar & Batmanabane, 2016). In this paper, the research questions are:

How important is critical thinking in business education? What is the purpose of critical thinking in

teaching and learning in business? What are the conceptions of critical thinking in business education? When researchers study critical thinking, in which contexts do they situate it in? Which topics areas in critical thinking are less featured in research?

More than 700 articles will be analysed.