


A Historical Text-Based Game Designed to Develop Critical Thinking Skills

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ABSTRACT

Designing an intervention that can effectively develop critical thinking skills is challenging because of the problems of transfer and domain specificity. The authors describe the design and development of a text-based game that could teach players important critical thinking skills in the domain of history. This was achieved by combining Schon's reflective practitioner model with game-based learning principles. The work contributes to the existing literature because the combination of the models employed allowed the game design to address the problem of transfer, as well as developing critical thinking skills. The instrument used to evaluate the effectiveness of the game was a questionnaire based on the reflective practitioner model. The gathered qualitative data were analysed through affinity diagramming. The results show that the game that was developed has the potential to encourage advanced levels of historical thought, as well as critical thinking skills.

KEYWORDS

Critical Thinking, Higher Education, History, Reflective Practitioner, Schon, Historical Thought

INTRODUCTION

The aim of the work described here was to develop a game harnessing game-based learning (GBL) principles to strengthen critical thinking (CT) skills and dispositions in the context of the discipline of history.

The experience shared in this report makes two contributions to the existing literature on GBL. The first crucial differentiator is the employment of the Reflective Practitioner model of behaviour (Schon, 1984) in the context of a GBL-based CT intervention. The insight Schon brings is that because practitioners learn by drawing on previous experience, then a game explicitly designed to boost CT skills and dispositions in a practitioner could form part of that experience.

Second is the key theoretical link between the idea of internal motivation as expressed by Malone (1980) as a factor which encourages people to play games and the idea of motivation as a set of consistent internal behaviours described by Facione (2000) in the context of developing CT skills. Most academic work which discusses GBL and CT together highlights the advantages games offer to skills development but somewhat neglect the equally important side of CT dispositions (see McCall, 2013 and 2016, for a review of such literature in the field of history).

DOI: 10.4018/IJGBL.323138

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BACKGROUND

The Challenges of Teaching Critical Thinking

There is an abundant literature on the importance of critical thinking (CT). Hunt (1995) argued that the global economy had entered a new phase which required a new kind of worker, the “knowledge worker”, who would be capable of manipulating “abstract and complex symbols and ideas” and could “remain flexible enough to recognise the need for continuing change” (Hunt, 1995). As a result of surging demand for the knowledge worker, any country which wished to remain competitive in the global marketplace would need to reform its education system to emphasise CT: that combination of skills and attitude that would form the knowledge worker (Hunt, 1995). Two decades later, Western educators continue to emphasize the importance of CT for the success of the next generation and lament current institutional barriers to teaching it (Davies, 2016 and Staton, 2021). Halpern (1998) noted that an absence of the CT also has negative repercussions for people in their personal lives, not just their career. A substantial part of the American population, Halpern pointed out, spent more money than they could afford to do on psychics and pseudo-scientific remedies (Halpern, 1998). This has not appeared to improve substantially in the past two decades: McLaughlin and McGill (2017) note that belief in pseudo-historical narratives around ancient civilisations, such as the Maya, can negatively impact the well-being of their contemporary descendants. Conspiracy theories have been part and parcel of American political discourse for several years now with potentially dire implications for the health of its democracy (Venkataramakrishnan, 2020). Thus, the difficulty of teaching CT appears to be a pervasive problem with global reach and sufficient complexity to continue to challenge educators.

In a comprehensive literature review of the major academic contributions to the subject of CT, Lai (2011) describes three areas of agreement among scholars of the different contributing fields. First, that CT has a skill component. These are abilities such as analysis, inference, evaluation and problem solving (Lai, 2011). Second, CT has a dispositional or attitudinal component. CT dispositions are “consistent internal motivations to act toward or respond to persons, events, or circumstances in habitual, yet potentially malleable ways” (Facione, 2000) and include traits like open and fair-mindedness, inquisitiveness, and the desire to be well-informed (Lai, 2011). Finally, there is agreement on the fact that background knowledge is a prerequisite for effectively employing CT. This is because the evidence, reasonings and explanations that are considered to be examples of CT are domain-specific (Lai, 2011).

The interplay between these three components is what makes teaching CT so challenging. Facione (2000) notes that having CT skills does not correlate with a disposition towards applying CT, although there is a correlation between disposition and proficiency with CT skills. Attention must be paid to both for there to be an improvement in students. Furthermore, Willingham (2008) highlights that once students have been trained to think critically in one domain, they do not automatically do so in others. Even within the same broad domain such as mathematics or history, if students are taught to apply critical thinking to one specific type of problem, and then encounter a problem of a different type, there is no guarantee that those CT skills will transfer over to the new problem (Willingham, 2008). The importance of domain knowledge is such that the most effective CT interventions are those where it is taught in the context of a specific discipline, an observation also supported by Lai (2011).

Critical Thinking in the Domain of History

Because of the fundamental challenge of transferring CT skills from one domain to another (Lai, 2011, and Willingham, 2008), the authors restrict the scope of the work described here to one domain, the discipline of history. There is a literature which shows that history can engage both the dispositions and skills necessary to think critically, making it a useful domain to focus on.

Yogev (2013) argues that CT should be considered a fundamental part of the discipline because of the role it plays in forming citizens who actively engage with their democracy. Societal trends like the consumption of information through scattered media sources and the fragmentation of society

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