

# Chapter 5

## A Case on Teaching Critical Thinking and Argument Mapping in a Teacher Education Context

**Yasemin Oral**  
*Istanbul University, Turkey*

### **EXECUTIVE SUMMARY**

*This chapter is based on the classroom work of a course on critical thinking designed as part of a pre-service teacher education program in English language teaching at a large-size Turkish state university. With its dual focus on both modernist and postmodern approaches to critical thinking, the course offers scope for classwork that concentrates on the skills to identify the parts and structure of arguments. To this end, argument mapping has been utilized to enhance understanding of the components of arguments and to facilitate the analysis of arguments. This chapter seeks to illustrate the materials and activities used when argument maps have been constructed during the class sessions. Furthermore, drawing from the data gathered from students' journal entries, I argue for a high interplay of the perceived efficacy of argument mapping with the content, length, and complexity of arguments as well as the anxiety evoked by these factors.*

## **INTRODUCTION**

Few would disagree about the centrality of critical work in educational settings. Although “critical thinking has been central to higher education as a desirable attribute of graduates since at least the beginning of the twentieth century” (Davies, 2011, p. 255), it has taken on a special role in the twenty first century not only in general education but also in teacher education due to the sociopolitical circumstances of the age (Williams, 2005). The need to integrate critical thinking into all facets of education has now come to be widely recognized. One key question for educators is thus how they can best promote students’ critical thinking. One of the major emergent themes in this regard is the use of visual representation strategies such as concept mapping and argument mapping. Although the idea of displaying complex information visually is quite old, the beginning of the twenty first century marked a new turn in the teaching of critical thinking with the advent of computer-aided tools to help visualize elements of thinking (Davies, 2010; Davies, 2011).

In this perspective, there is an emerging body of empirical evidence from the cognitive sciences which shows that visual displays and concept/argument mapping enhance learning (Davies, 2010). In a quantitative study, which investigated the influence of concept mapping as a post-reading strategy on EFL learners’ critical thinking by utilizing a pre-test post-test control and experimental group design, for instance, Khodaday and Ghanizadeh (2011) concludes that “concept mapping positively and significantly influenced critical thinking” (p. 53). In another experimental study, Harrell (2008) reports that while on average all of the students improved their critical thinking abilities the most dramatic improvements were made by the students who were able to construct argument maps. Twardy (2004) also found that critical thinking classes taught with argument-mapping-based approaches displayed substantial improvement in critical thinking while critical thinking classes taught with other methods did not. However, one major shortcoming of these quantitative experimental studies is that they are often inadequate to capture the complexity and richness of the issues under study despite their recognized contributions. Given that the continuing ascendancy of the quantitative studies bears significant limitations that hinder an in-depth understanding of these issues, more qualitative research is needed into the lived learning experiences of the students taking critical thinking courses.

Driven by the overall question if and how students can improve their critical thinking when given practice in argument mapping and diagramming, this chapter thus sets out to provide a qualitative perspective on the classroom uses of argument mapping in a teacher education context in an attempt to address such gap. Nevertheless, a thorough understanding of the case first necessitates a brief introduction to field which is marked by different lines of thought as each of them has distinctive

19 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage: [www.igi-global.com/chapter/a-case-on-teaching-critical-thinking-and-argument-mapping-in-a-teacher-education-context/107134](http://www.igi-global.com/chapter/a-case-on-teaching-critical-thinking-and-argument-mapping-in-a-teacher-education-context/107134)

## Related Content

---

### Context-Sensitive Attribute Evaluation

Marko Robnik-Šikonja (2009). *Encyclopedia of Data Warehousing and Mining, Second Edition* (pp. 328-332).

[www.irma-international.org/chapter/context-sensitive-attribute-evaluation/10840](http://www.irma-international.org/chapter/context-sensitive-attribute-evaluation/10840)

### Online Signature Recognition

Indrani Chakravarty (2009). *Encyclopedia of Data Warehousing and Mining, Second Edition* (pp. 1456-1462).

[www.irma-international.org/chapter/online-signature-recognition/11012](http://www.irma-international.org/chapter/online-signature-recognition/11012)

### Path Mining and Process Mining for Workflow Management Systems

Jorge Cardoso and W.M.P. van der Aalst (2009). *Encyclopedia of Data Warehousing and Mining, Second Edition* (pp. 1489-1496).

[www.irma-international.org/chapter/path-mining-process-mining-workflow/11017](http://www.irma-international.org/chapter/path-mining-process-mining-workflow/11017)

### Exploiting Simulation Games to Teach Business Program

Minh Tung Tran, Thu Trinh Thian and Lan Duong Hoai (2024). *Embracing Cutting-Edge Technology in Modern Educational Settings* (pp. 140-162).

[www.irma-international.org/chapter/exploiting-simulation-games-to-teach-business-program/336194](http://www.irma-international.org/chapter/exploiting-simulation-games-to-teach-business-program/336194)

### Dynamical Feature Extraction from Brain Activity Time Series

Chang-Chia Liu, W. Art Chaovaitwongse, Panos M. Pardalos and Basim M. Uthman (2009). *Encyclopedia of Data Warehousing and Mining, Second Edition* (pp. 729-735).

[www.irma-international.org/chapter/dynamical-feature-extraction-brain-activity/10901](http://www.irma-international.org/chapter/dynamical-feature-extraction-brain-activity/10901)