



MULTIPLE CONTENT ANALYSIS MODELS FOR ANALYZING HIGHER ORDER THINKING DEVELOPMENT IN ONLINE FORUMS

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ABSTRACT

Literature on blending multiple coding methods to obtain a more nuanced understanding of the complexities of thinking remains limited. This article explores asynchronous transcripts from an action research study to determine whether or how multiple content analysis instruments can effectively assess the development of higher order thinking. The intervention design was based on ecological constructivism. The mediation provided drew upon sociocultural theory. The study included 16 Japanese high school students engaged in English-based online synchronous and asynchronous activities, supported by in-person, face-to-face sessions conducted in Japanese. Qualitative data were collected from asynchronous forums, a post-survey, and my observation notes. Participants' forum interactions were transformed into quantitative data using three content analysis instruments: the Interaction Analysis Model (IAM), the Cognitive Dimension of Revised Bloom's Taxonomy, and Krathwohl's Affective Domain. These were selected based on the definition of higher order thinking adopted in this study. It was concluded that it takes time to analyze data with multiple models. Researchers need to be trained to use each model properly. Nevertheless, this study indicated that the use of multiple content analysis models can facilitate the development of higher order thinking in online discussion forums by complementing each other and highlighting different aspects of thinking.

Keywords: Content analysis models, Interaction Analysis Model, Cognitive Dimension of Revised Bloom's Taxonomy, Krathwohl's Affective Domain, higher order thinking, online forums, action research