

Title: A multimodal investigation on metaphor productions of early adolescents: how 11-year-old Japanese children understand the concept of tax through postcard drawings

Xiaoben Yuan, Akita University

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This study aimed to investigate how Japanese children aged 11~12 years old (6th grade) comprehend complex concepts such as tax and taxation through postcard drawings using multimodal metaphor analysis. The postcards were gathered through a prefecture-wide competition organized by the Public Interest Incorporated Association (PIIA) in Akita, Japan. A total of 712 postcards were collected, containing text and drawings based on the children's understanding of tax and taxation.

According to different literature, individuals at the age of ten can be classified as either the end of middle childhood or the beginning of early adolescence. Therefore, this study focuses on the multimodal metaphors produced by Japanese children in their early adolescence. The participants of the competition were considered to have a relatively adequate ability to produce multimodal media and to understand and interpret complex concepts such as tax and taxation.

I checked interrater reliability for metaphor identification and conducted both quantitative and qualitative analyses of the data. I compared the identified metaphor units coded with variables related to their VEHICLE, TOPIC, and MODE. The relationships between these variables are explored using Chi-square Tests. I also examined the pictorial-verbal consistency for understanding what constitutes coherent metaphor productions. The preliminary results suggest that the metaphor "TAX IS FOUNDATION" is most prominent in the text and drawings. Additionally, various semantic variations on the VEHICLE of "FOUNDATION" have been identified.

The implication of this study complements existing multimodal metaphor studies (Forceville, 2020; Yuan, 2023), by providing examples of real-life multimodal creations from Japanese children. It also demonstrates a great variety of metaphors in text and pictorials for the understanding of a complex topic such as tax. The result is in alignment with the recent child psychology research, which has shown a qualitatively marked increase in metaphor processing in eleven-year-old children compared to seven and nine-year-old (Willinger et al., 2019). Furthermore, when compared to adults' creation of online posters (Tay, 2017), the results offer valuable insights into the cognitive development of early adolescents in terms of metaphors and multimodality.

References

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