The Role of Question Asking in Creative Thinking

Introduction

Question asking has been a critical tool for teaching and learning since the time of Socrates and is important in the creative problem-solving process. Yet, its role in creativity has insofar not been thoroughly explored. The current study assessed the role of question asking in the creative process.

Alternative Questions Task (AQT)

What are all the creative questions you can ask about these objects?

Bloom Taxonomy

- **Create**: Produce new or original work. Design, assemble, construct, improve, develop, formulate, author, investigate
- **Evaluate**: Appraise, argue, defend, judge, select, support, value, criticize, evaluate
- **Analyze**: Differentiate, organize, relate, compare, contrast, distinguish, examine, experiment, question, test
- **Apply**: Execute, implement, value, use, demonstrate, interpret, operate
- **Understand**: Define, describe, discuss, define, identify, locate, recognize, report, state
- **Remember**: Recall facts and basic concepts. Define, describe, list, mention, repeat, state

Higher Pyramid levels represent more complex, higher order thinking skills.

Creativity Assessment

Objective Creativity: Maximum Associative Distance Scores
Subjective Creativity: Scored using five online raters from Prolific
Bloom Taxonomy: Scored for respective Bloom level
Fluency: Number of AQT responses

Methods

Divergent thinking: Alternative uses task (AUT) conducted alongside other tasks measuring openness, curiosity, and intelligence

Participants

Participants: participants were recruited from Prolific Academic. (N = 221; Mage = 26.1, SD = 6.4; 47.9% male, 50.4% female, 1.7% prefer not to say)

Results

Bloom Level and Creativity

- Objective Creativity
- Subjective Creativity

Serial Order Effect

Lower Order Thinking Skills

Predicting Creativity

Discussion

Complex questions were found to be positively correlated with objective and subjective creativity scores.

Individual level analysis showed that lower levels correlate with lower creativity while higher levels correlate with higher creativity.

The current work suggests that the Alternative Questions Task coupled with Bloom’s taxonomy allows elucidating the role of question asking in creativity.

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