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**Learning the indefinite integral in a dynamic and interactive technological environment.**

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Summary: The present study was designed to identify the objectification processes involved in making sense of the concept of an indefinite integral when studied graphically in a dynamic technological environment. The study focuses on 11 pairs of 17-year-old students familiar with the concept of differentiation but not of integration. The students were asked to explain the possible connection between two linked dynamic graphs: the function and the primitive function graphs. The present study was guided by objectification theory, which considers artifacts to be fundamental to cognition and which views learning as the process of becoming aware of the knowledge that exists within a cultural context. In the course of two rounds of data analysis we identified six elements in the processes of objectification: objectifying the relationships between segments based on the location, inclination, and concavity of the function graph; and on the relationships between the zero, the extreme, and the inflection points in the function graph and the corresponding points in the primitive function graph.

*Classification:* I54 U74 I24

*Keywords:* indefinite integral; objectification; mediation; dynamic artifact; graphs

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