A Video-Based Task as a Window into Quadratic Function Graphing

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This study explores the effects of a video-based task as a formative assessment of a student's performance in graphing quadratic functions. The experimental and control groups are compared to assess the impact of the video-based task. Content analysis is applied to analyze students' conceptual and procedural understanding of graphing quadratic functions. The results indicated that the video-based task positively influenced students' understanding of graphing quadratic functions. In particular, the video-based task group demonstrates a stronger ability to find the vertex by completing the square procedurally and conceptually compared to the control group. Survey questionnaires are used to gather students' perceptions of the video-based task. In sum, this study provides further evidence of the positive impact of video-based assessments on student learning, while highlighting the importance of addressing technical challenges to ensure effective implementation.

Keywords: video-based task, formative assessment, quadratic functions, technology

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