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Takeaways from Teacher Desmos: implementing an interactive tool to encourage visual thinking in complex analysis

In higher-level mathematics education, there is a need for exploration into pedagogical methods beyond the passive lecture and textbook approaches. I built an interactive activity for students learning complex analysis to encourage using visual representations of complex numbers and their manipulation. The aim of the activity was to help students build a strong visual understanding of the mathematics they were learning and to foster student exploration. In this session, I will share takeaways from the development of the activity (built using Teacher Desmos) as well as the evaluation of its success: via students' feeling of learning, a user experience questionnaire, and test scores. I will also talk about how this activity and its evaluation scale to other skills and topics of mathematics.