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3D Pen-Supported Geometry Teaching

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The study of three-dimensional objects in school mathematics is frequently mediated through planar projections. For many students, however, these two-dimensional representations do not sufficiently support the development of accurate spatial imagery, making it difficult to mentally reconstruct the intended 3D structure. Recent advances in low-cost 3D printing technologies provide new opportunities for teaching three-dimensional geometry. In particular, handheld 3D printing pens enable students to construct spatial models directly and to interact with them in ways that integrate visual and tactile experience. This poster presents research findings indicating that the use of 3D pens in solid geometry instruction can significantly enhance students'spatial understanding and engagement. We also introduce a set of instructional materials designed to support the integration of 3D pen activities into secondary school geometry lessons.

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Session Classification: Poster session + káva: prezentácie vedeckých výsledkov FMFI UK Zamestnanci Matematika

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