

Pre-schoolers' number sense strategies and patterns of strategy use during interactions with multi-touch technology

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Early number sense, including subitizing and composing, is fundamental for mathematics (Clements & Sarama, 2007; Samara & Clements, 2009). Multi-touch digital technologies can afford foregrounding fingers and gesture in experiencing and developing number sense (Baccaglioni-Frank et al., 2020). Researchers used iterative stages of analytic memoing, coding, and theming to qualitatively analyse weekly videos of 18 4-5-year-old pre-schoolers playing the multi-touch number sense digital game Fingu for five weeks. Initial findings include: (a) use of subitising, composing, and less commonly, counting strategies, with corresponding finger patterns; and (b) strategy use patterns, often evident when encountering challenges. Potential implications include relevance of gesture, quantification strategies and flexible strategy use in developing early number sense.

References

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