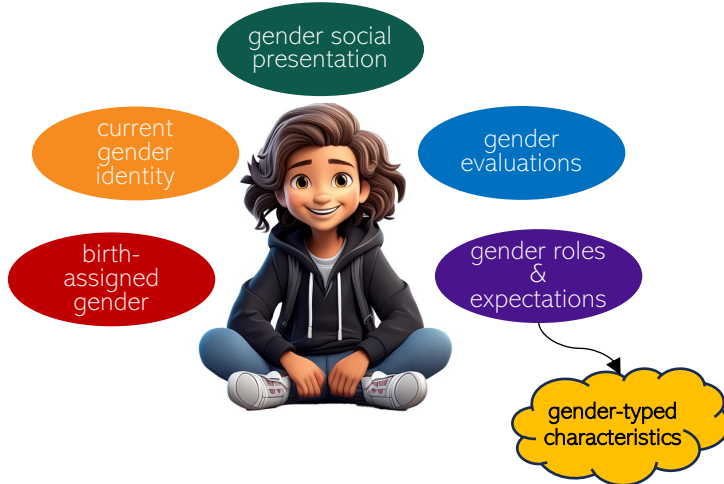


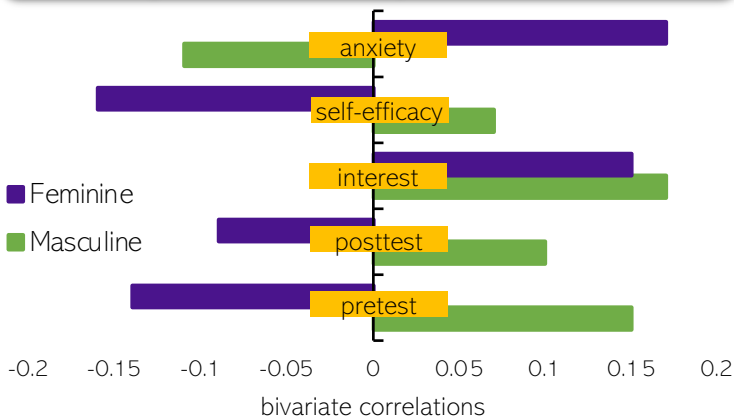
Can a multidimensional approach to gender improve targeted interventions in math education?

#2201797: Investigating Gender Differences in Digital Learning Games with Educational Data Mining

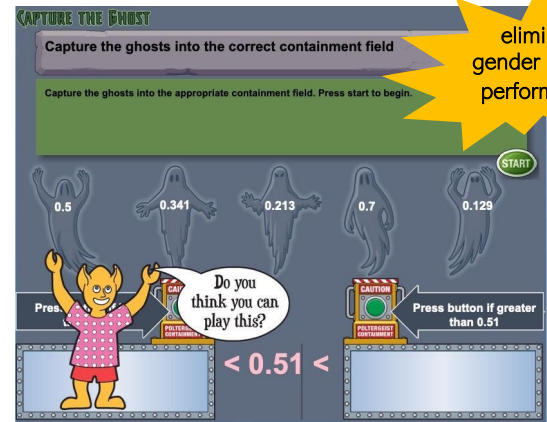
Gender is multidimensional!



Gender-typed characteristics explain some binary differences & predict outcomes



Digital learning games can be engaging & support math learning



Preferences for digital game genres & narratives are gendered

- Gender-typed characteristics trump identity
 - Masculine-typed → action, sports & racing genres; adventure narrative
 - Feminine-typed → music & party genres; helping narrative
- Can leveraging gendered preferences improve learning gains? 🤔
 - Conducting classroom studies to explore this

Methods

classroom study

math learning games

- N ~ 720 5th-6th graders
- Pre-test → survey → game/tutor → survey → post-test
- Gender identity (open-ended!)
- Masculine & feminine interests, activities, & traits
- Aspects of motivation & affect

Challenge Area

research methods & ethics

- How can we assess gender safely, inclusively, & reliably in our current political climate?
- How do we equitably adapt games to students' interests without promoting stereotypes?

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