

Feature-Rich Software Exploration: Older Adults' Collaborative Learning Dynamics

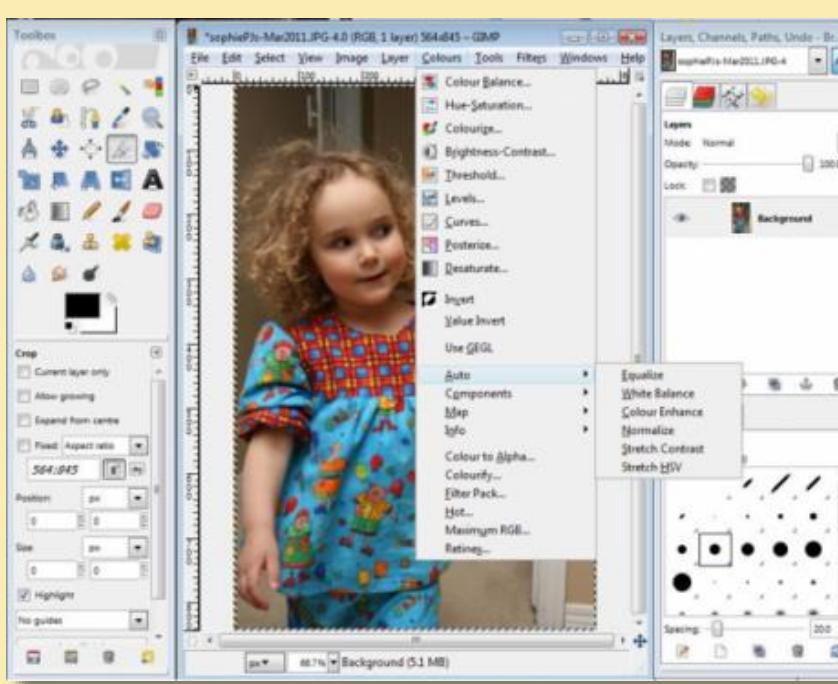


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Motivation and Research Questions

- Older adults (OAs) are using feature-rich software more frequently [1].
- Exploratory learning is popular but challenging [2].
- Social support has been promising in IT [3].
- How do OAs experience collaborative learning while exploring feature-rich software?
- What type of interaction patterns emerge between learning partners?
- Are there any differences between mixed-age and same-age pairs' interaction patterns?



Methodology and Data Collection

- 16 OAs and 6 younger participants worked remotely in 5 same-age and 6 mixed-age dyads to explore Gather.Town [4] mapmaker.
- First session (1 hr): Introduced participants to the virtual environment and software concepts.
- Second session (2 hrs): Worked on 3 sets of design tasks. e.g., replicating virtual room below.



- Pre-study questionnaire: background such as level of education and technology use.
- Screen recording: interaction with each other and with the application.
- Post-study questionnaire and interview: perception about partner and experience.

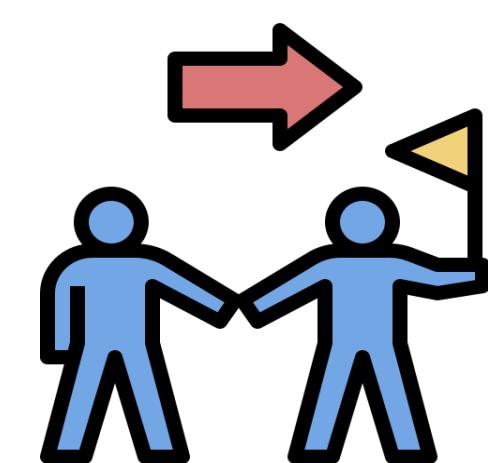
Findings

Collaboration Dynamics and Task Performance

Equal Collaboration



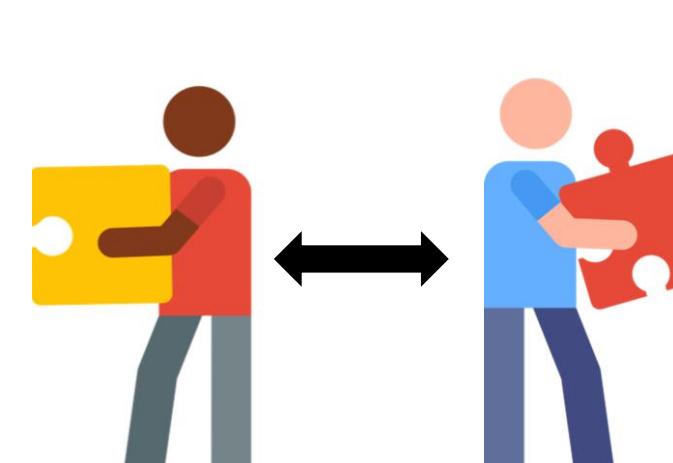
Dominant-Follower



On Demand Assistant

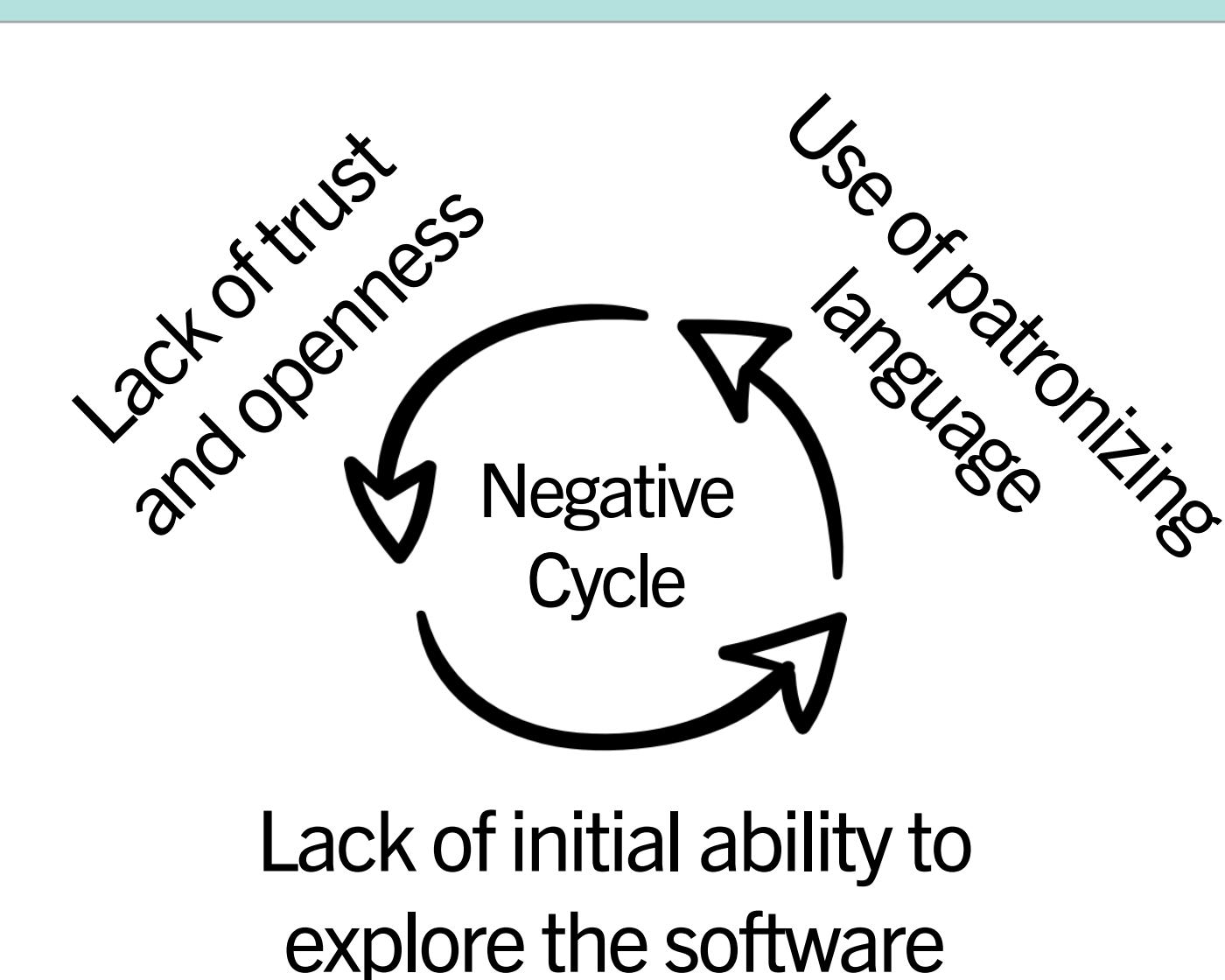


Individual Exploration



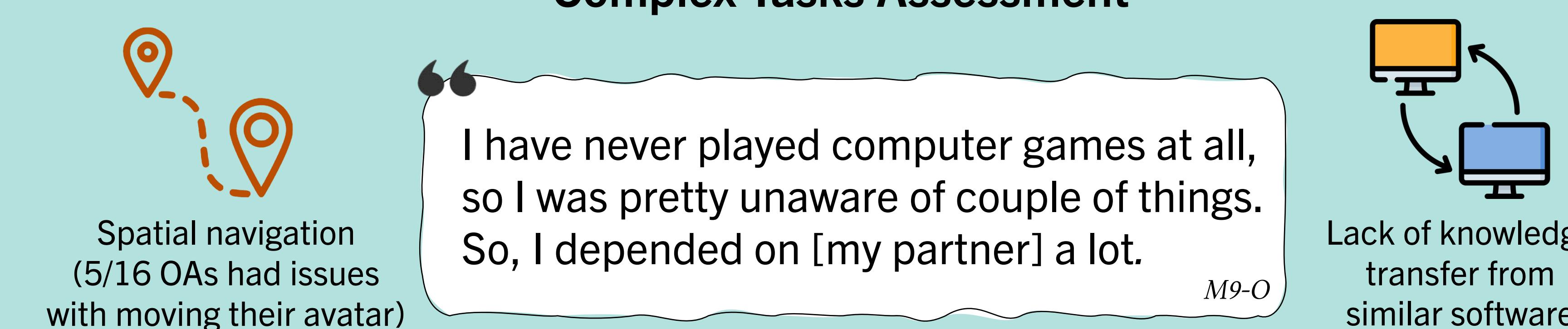
Task success

Impact of Interaction on OA and Participants' Perception



Partner	Advantage	Disadvantage
	OA appreciated having similar limitation	OA got frustrated when the partner was struggling
	A more knowledgeable partner for OA	Fear of being a burden or not keeping up

Complex Tasks Assessment



I have never played computer games at all, so I was pretty unaware of couple of things. So, I depended on [my partner] a lot.
M9-O

Design Suggestions



Matching system can consider application expertise & partners' perception of each other's competencies



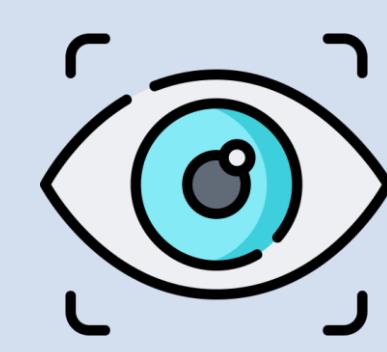
Partners from OA's outer circles might be better than family members



Displaying task progress might encourage communication



Developers can suggest pre-requisite skills to learn an application



Easy-to-access preview modes might facilitate tasks assessment

Future Research

- Measuring the effectiveness of collaboration beyond individual task success.
- Allowing participants to practice simpler tasks over time before attempting to do harder design tasks.
- Different types of software and learning scenarios.

References

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- www.gather.town

This poster has been designed using images from Flaticon.com.

