

B. DE SCHUTTER, D.E. BLACK. Learning games for older adults: The case of Minecraft. Gerontechnology 2016;15(suppl):122s; doi:10.4017/gt.2016.15.s.762.00 **Purpose** The widely popular cubist sandbox world of Minecraft has been successfully used for educational purposes². For example, the game has demonstrated value for teaching content such as geography³, engineering⁴, science⁵, as well as nourishing creativity, collaboration and problem solving⁴. While the game is widely popular among teenagers and young adults, the game seems to be unexplored domain for older adults. Considering how previous research has demonstrated the importance of self-cultivation and intergenerational connectedness for game adoption among older adults¹, Minecraft seems to have great potential for older adults looking for a shared activity with their grandchildren, a different entry point into interesting content, or an engaging way to practice cognitive skills. **Method** Considering that novice older players typically need extensive training⁶, and that Minecraft has a considerable learning curve (e.g., new players typically do not survive the first night, its crafting system is highly essential yet unexplained, the game requires proficiency in controlling a character in a 3D world, etc.), we recruited for a maximum of 4 participants. We were successful at this, but one of the males dropped out at the last minute due to a scheduling conflict. The study was therefore held with 1 male (67 years old) and 2 female participants (64, 78). All participants were retired, and in good health, and had no previous Minecraft experience. All three participants went through a 7.5 hour training program together, spread out over 5 weeks. The sessions were recorded using an audio recorder and transcribed for analysis. At the end of every session, the participants filled in a quick online survey that asked them about their perceptions of the game. Finally, a focus group session was held at the end of the final session. **Results & Discussion** The study provides an intricate description of how older adults learn to play Minecraft, as well as suggestions to optimize this process. It demonstrates how the educational value of Minecraft for younger audiences is also relevant to older audiences. Our participants exhibited their individual problem solving skills, practiced their memories when crafting, and collaborated to overcome obstacles that would have been difficult to overcome individually. Our oldest participant^{4,5} (*Figure 1*) showed a noticeable increase in spatial navigation, as she improved from “standing against a wall and not realizing what was going on” to “being able to move through the world and jump over obstacles”. The participants shared how Minecraft had become a larger part of their lives, how they had a positive opinion about it, and how they had started to play with their grandchildren outside of class

References

1. De Schutter B, Vanden Abeele, V. Meaningful Play in Elderly Life. Montreal: Annual Meeting of the International Communication Association; 2008
2. Dikkers S. Teachercraft: How Teachers Learn to Use Minecraft in their Classrooms. Pittsburgh: ETC Press; 2015
3. List J, Bryant B. Using Minecraft to Encourage Critical Engagement of Geography Concepts. Society for Information Technology & Teacher Education International Conference; 2014; pp 2384-2388
4. Schuster K, Groß K, Vossen R, Richert A, Jeschke S. Preparing for Industry 4.0—Collaborative Virtual Learning Environments in Engineering Education. International Conference on E-Learning in the Workplace (ICELW). New York; 2015; pp 1-6
5. Short D. Teaching scientific concepts using a virtual world—Minecraft. Teaching Science: the Journal of the Australian Science Teachers Association 2012;58(3):55
6. McLaughlin AC, Bryant MR, Sprufera JF, Allaire JC, Gandy M. Usability an important goal for the design of therapeutic games for older adults. Engineering Psychology and Cognitive Ergonomics. Applications and Services 2013;8020:358-364; doi:10.1007/978-3-642-39354-9_39

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Figure 1. GloomOwl (m, 68), Archsea (64, f) and Donnyboar (78, f) in Minecraft