Literature indicates that the United States has fallen behind other countries in the world in terms of creativity. At the same, children's self-motivated gaming and involvement in gaming communities have grown as a major pass time. The literature is inconsistent on the relationship between games and creativity with some indicating benefit while others indicate harm. Might the observed level of creative thinking among children be associated with the level of a priori self-motivated engagement with creative games and associated social media? Given the wide spectrum of the kinds of games, this research considers the “builder” (e.g. Minecraft) genre and related social media. The research question examined is, given a STEM-oriented middle and high school student population, what is the strength of the correlation between the observed level of creative thinking and the level to which a student plays and/or succeeds in a builder game and engages in its social media culture? Level of play is measured in terms of time and level of achievements within Minecraft. Level of engagement is measured in terms of posting and sharing behavior on Minecraft forums, YouTube and other social media platforms. The level of creative thinking is measured by Urban's Test for Creative Thinking - Drawing Production test. Correlations with TCT-DP and time spent, achievements in the games, and social media engagement levels were found to be statistically insignificant across all factors. However, a closer inspection of the individual distributions found evidence that supports an alternative perspective on the role of Minecraft in the play engagement of children.

Major: Modeling and Simulation

Educational Career:
Bachelor's of Computer Science, BS, 1997, University of Central Florida
Master's of Modeling and Simulation, MS, 2010, University of Central Florida

Committee in Charge:
Michael Proctor, Chair, Industrial Engineering and Management Systems
Robert Hoekstra, Industrial Engineering and Management Systems
Ahmad Elshennawy, Industrial Engineering and Management Systems
Francisca Yonekura, Center for Distributed Learning

Approved for distribution by Michael Proctor, Committee Chair, on March 1, 2020.

The public is welcome to attend.