"A META-ANALYSIS OF THE COGNITIVE AND MOTIVATIONAL EFFECTS OF SERIOUS GAMES"

Citation

Keywords: (cognition, game-based learning, meta-analysis, motivation, serious games, learning, instruction methods)

I. Argument & Perspective
The main goal of this study was to summarize the research on the effects of serious games on learning and motivation through statistical analysis. Meta-analytic techniques were used to test if serious games were more successful at fostering learning and motivation than the conventional instructional methods. The research found that serious games were more effective with learning and retention, but were less effective than conventional methods in terms of motivation. It was done with a broad focus in terms of location including laboratory settings and classroom settings. And, a broad range of serious games was examined from adventure games to puzzle games. Because of this broad scope in game domain, it was suggested not to generalize the results. The next steps suggested for future research was to have more value-added research on specific game features that test their effectiveness.

II. Ideas
Computer games were described in terms of being interactive based on a set of agreed rules and constraints and directed toward a clear goal that is often set by a challenge with constant feedback. In this research, the term ‘serious games’ is described as “an objective to use the entertaining quality of the game for training, education, health, public policy, and strategic communication objectives.” The interactive nature of computer games aligns with an emphasis in educational psychology that active cognitive processing of educational material is a prerequisite for effective and sustainable learning.

III. Commentary
This work is inspiring. It is the kind of research that is needed to continue our understanding of how technologies, namely digital games, interface and integrate with human cognitive function, memory, and learning practices. In our class we’ve been exploring play and games and how they relate to culture in efforts to frame questions about the various roles they take on a theoretical or ethical level. All of which is helpful in fostering discussion. The level of statistical analysis found in this research pairs nicely in the discussion about how we can utilize games as a form of activism. I see this work and future studies of its kind to be crucial pieces of the puzzle in the work of Jane McGonigal where she is trying to tap into the psychology of the player and have that connection carry over into real world applications.