Serious games as a level playing field for early literacy

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Propositions

accompanying the dissertation

Serious games as a level playing field for early literacy:

A behavioural and neurophysiological evaluation

by Toivo Glatz

1) Every digital game-based learning tool requires careful consideration of its intended training goal, implementation, target group and content characteristics. Because all these factors interact, experimental evidence from a single study is often not generalizable (Chapters 2, 3 & 7).
2) Cross-linguistic differences in the importance of early literacy skills for long-term reading outcome may only partially explain the success or failure of digital game-based literacy studies. Intervention properties like target population, game contents and training intensity are at least equally important (Chapter 3).
3) Playing the Dutch version of GraphoGame beyond a child's mastery of letter sound knowledge has no effect if phonological awareness skills are too low (Chapter 3).
4) Visual and auditory event-related potentials reflect both long-term cognitive maturation as well as short-term training effects, and can in principle be used as a measure for training effectiveness (Chapters 4 & 5).
5) Modelling of nonlinear interactions of single trial event-related potentials and behavioural measures deepens our understanding of reading development in the brain (Chapters 4 & 5).
6) Game training duration should exceed five hours on task for short-term improvement of reading fluency, whereas long-term benefits require many more hours (Chapter 6).
7) Reading training through digital game-based learning can be more enjoyable than reading a book (Chapter 7).
8) Digital game-based learning does not yet provide a level playing field for early literacy (Chapter 7).
9) Unannounced fire drills and forgetting to press the record button do not go well with electroencephalography research (personal experience).
10) The combination of some data and an aching desire for an answer does not ensure that a reasonable answer can be extracted from a given body of data (John Tukey).