**Klopfer, E., Osterweil, S. & Salen, K. (2009). Moving Learning Games Forward. Obstacles, Opportunities and Openness. The Education Arcade, Massachusetts Institute of Technology**

A major goal of this article is to promote a debate on the opportunities and challenges inherent in integrating games into an educational environment. The paper suggests that if game based learning were to be successfully incorporated into the classroom it would have a transformative effect on learning. The authors cite (Menn, D. 1993) amongst others in support of this position. They also explore the barriers and conflicts that need to be overcome to achieve this goal.

The publication approaches the subject by examining two diametrically opposed views as regards games in education. The first viewpoint discussed sees the skills students develop playing games as essential to a 21st century education and correspondingly see little progress happening in schools still shackled to a traditional model of education, essentially this viewpoint “embraces games and abandons schools” the opposing view “embraces school to the detriment of anything that looks like real gaming” (Klopfer, E. Osterweil, S and Salen, K. 2009). The authors construct a position between these two opposing views, justifying their stance by referring to various studies, such as a study from the University of Michigan, of children’s computer use in public libraries, which implied that disadvantaged children tended to skim from site to site and application to application, this hinted that little deep or real learning was occurring ((Neuman, S. & Celano, D. 2006).

What is the value of educational games and how do we develop a game based learning approach? Those who believe in using games in education usually start from a common set of assumptions. They observe that game player’s regularly exhibit persistence, risk-taking, attention to detail, and problem solving skills, all behaviours that ideally would be regularly demonstrated in school” (Klopfer, E. Osterweil, S and Salen, K. 2009). It is the promise of these positive and motivational behaviours becoming integrated into the school based curriculum wherein the potential of the game lies based learning approach.

Don Menn “claims that students can only remember 10 per cent of what they read; 20 per cent of what they hear; 30 per cent, if they see visuals related to what they are hearing; 50 per cent, if they watch someone model something while explaining it; but almost 90 per cent, if they engage in the job themselves, even if only as a simulation”. (Menn, D. 1993)

Assessment driven, exams, such as the Leaving Cert miss a good deal of what is valued in and out of the classroom. This includes higher order thinking skills, new media illiteracies, interdisciplinary learning, and most of the great attributes that can be provided by game based learning for e.g., freedom to fail (without serious consequences), freedom of interpretation, freedom to experiment, and to fashion identities. Innovative designs should not be entirely beholden to existing standards. They should push the boundaries of learning, and drive the need for redefining standards to include valuable new skills and knowledge.  
The authors upheld the position that support and structure from teachers and parents are essential for children to maintain discipline and perseverance to work through applications in a meaningful way so as to fully understand the attributes of any particular application (for example excel). The conclusions drawn from this study plays a role in the author’s positions that “schools can and should play a critical role in fostering learning in association with game play.

Well-designed games enable players to advance on different paths at different rates in response to each player’s interests and abilities, while also fostering collaboration and just-in-time learning. (Gee, J, P 2003).  
Why use Video Games? Because games integrate a 21st century skill critical to the design and play of games that is systems thinking. “Systems-thinking has been identified as a skill necessary in the 21st century” (Federation of American Scientists, 2006) video games have been described as “able to teach higher-order thinking skills such as strategic thinking, interpretative analysis, problem solving, plan formulation and execution, and adaptation to rapid change” (Federation of American Scientists, 2006, p. 3)  
“Interactive games are the medium of attention for youth, who spend on average 50 minutes playing them each day” (Roberts et al., 2005). The authors conduct a comprehensive exploration of the role of play, and link why play and games can be so effective for learning, some of which I will cover in my reflection. Games such as Battleships have a role to play in teaching Co-Ordinate Geometry, they introduce the student to a practical application of the subject, are fun to play, allow the student to learn about the co-ordinated plane, the x and y co-ordinates, distance between two points, the slope of a line and mapping objects, in my experience students engaged more, retained more and had some fun using this form of game based learning than traditional classroom teaching.

The Horizon Report on Game Based Learning indicates a time to adoption of between two to three years, there are still many barriers to overcome before game based learning can become a widespread learning method in schools. One of the major barriers to the effective deployment of game based learning is to effectively marry the fun element of gaming and the serious requirements of an assessment driven curriculum, there has been many attempts at inserting learning materials into games or alternatively trying to develop learning content into an engaging game, but many of these endeavours have failed in their aims to be fun and to provide real learning. Parental attitudes can be hostile to the idea of gaming in the classroom, especially when many parents are exposed to long hours of gaming by their children at home, and the constant battle to get them to their homework or help around the house. Overcoming dubious teacher attitudes and justifying the costs in terms of software and computer facilities, to school boards and administrators in recessionary times is another hurdle.

As a result of reading this and other papers on game based learning, my attitudes have definitely changed; I can now see the benefits obtainable, such as far greater motivation, engagement, and retention by the students. I have thought of methods I could use to capitalise on this, and I hope to make use of game based learning in the next academic year, I have requested an Interactive whiteboard for my classroom, and I believe this can be especially useful for teaching Geometry and C-ordinate Geometry.

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