

Towards a New Learning: Play and Game-Based Approaches to Education

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ABSTRACT

This position paper introduces the idea of a 'new learning' which brings together elements of play and game-based learning approaches into education. The paper argues for a better understanding of the division between structured and unstructured play time in how one designs and delivers learning at all levels from primary to tertiary. Play and game-based approaches are not just for having a rest but according to new research have a critical component in how people learn, as they give the player a chance to reflect upon and reorganize their learning experiences. The position paper puts forward an idea of future learning and provides an example from the Quest to Learn Schools in New York and Chicago as possible models for how future learning may look. The paper concludes that new learning expects a more rigorous and pervasive focus upon the learner, rehearsal, reflection and feedback, highlighting the role of play and game-based approaches as being central.

Keywords: Education, Game-Based Learning, New Learning, Serious Games, Structured Play Time, Unstructured Play Time

At the heart of all learning lies the ability for reflection. Without reflection upon our learning points and experiences, we will not remember the learning for long, we will not fully understand the learning points and we will not be able to situate and organize that learning within the context in which we learn. But while reflection is clearly critical to giving emphasis to learning, it is the role of rehearsal, feedback and play that empowers the learner to adapt points of learning into different contexts and situations. This is what effective learning transfer relies upon: reflection through free play and free time and rehearsal, feedback and play through structured activities, missions and quests. But there is

one other element to consider in learning, the social interactions we engage with every day are all parts of learning and teaching, sharing information and trading and negotiating our understandings allowing us to reconcile our views of events and experiences with those experienced by others.

So it is this triumvirate that circumscribes our learning journeys and adventures: structured play, free play and social interactions. New learning - that is the new approaches we use that mediate technology enhanced learning with face-to-face learning - brings these elements together and in a sense therefore re-contextualizes how we learn by shifting the

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emphasis of how we understand learning: not as an unchanging instructional pedagogy designed to organize us in terms of functions in space and time as in the Victorian conception, but in a Deweyian sense where the individual's experience becomes a central and guiding component of learning, allowing different modalities of learning to be organized around the learner and their experiences.

The use of computer generated environments such as virtual worlds and game environments are peculiarly aligned with being able to incorporate structured, free and social play and interplay as they offer a relatively unbounded field within which learning experiences can be choreographed and shared. While the adoption of CGEs in education has not been seamless or easy, the potential has always been recognized and some early foundational work has given us valuable insights into how we can construct and manage effective learning design to create immersive experiences whilst supporting improved performance and connecting experiential learning with measurable learning outcomes and transfer. Particular highlights in the research base include: importance of reflection upon learning outcomes (Boud et al., 1985; Bakkenes et al., 2010), effectiveness of game-based approaches over traditional learning (Knight et al., 2010), the minimal exposure time needed for games to be effective (Kato et al., 2008), importance of social interaction in learning (Lave & Wenger, 1991) and the effectiveness of immediate feedback for reinforcing learning points (Dunwell et al., 2011; Opitz et al., 2011).

Here, the line between play and learning becomes curiously blurred, and play becomes yet another modality of learning, indeed at times, especially with younger learners, it is hard to see where one ends and the other begins. Indeed, in the Victorian conception, play times were significantly separate from school time and while it made up almost a quarter of all time spent in school, a societal link of play with not working has led progressively to reducing playtime for children at school, leading to a severe reduction and even an absence of free play in some cases (Chudacoff, 2007). In my

most recent book (de Freitas, 2013), I traced the journey of our understanding of play, and found new evidence and studies that have found a link between reduced free play and higher levels of anxiety and narcissism in children and young people (Chudacoff, 2007). But what is the role of free play in learning? Is it strictly reflectional or does it relate to rehearsal as well. Perhaps, as seems to be indicated in the literature, in sleep as in free play we have the opportunity to re-run what we have learned, or to rehearse it conceptually, allowing us to transfer what has been learnt into practical and different contexts, but also the potential for learners to negotiate meaning, implement outcomes at least imaginatively and to share reflections could be strengths of this free and unbounded time. It certainly allows scope for testing and re-testing hypotheses in a different context.

In any event, we certainly need to undertake research to find out more about how this works, and it could have a deep impact upon how we design learning experiences in the future. Cycling between different modes or modalities of learning, such as structured, free and social could improve learning in a number of measurable ways: accelerating learning, extending the duration of learning and allowing for faster and better transfer of learning points.

I have been intrigued for some time by the notion of free play and what makes it inherently powerful, but at the same time I have been intrigued by the power of structured play and how in studies I have undertaken by colleagues and myself how much more effective games seem to be than the use of more open ended virtual worlds, at least formerly (de Freitas et al., 2010), perhaps now we have had more time to design better instructional and constructional strategies in virtual worlds they will become more effective learning tools, and interestingly one new study found that greater interactivity was apparent in a virtual world over classroom setting where an instructional strategy was observed (Chen et al., 2013).

On the face of it, the findings about efficacy of one form of learning modality over another are problematic, as these studies are

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