

Designing for Motivation in TEL:

Relevance, Meaning and Value in Context

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Abstract. Given the increasingly pervasive and important role of the net in our everyday lives, along with the many practices it mediates and supports, it is becoming crucial that we consider the role of motivation in TEL. This will help us to ensure that our TEL innovations are adopted, and their related learning activities are favoured, supported and realised in the digital landscape - and not avoided because our focus lies elsewhere or there are simply too many other things to do. And yet, motivation is poorly understood and usually not considered in the design of TEL. In addressing this issue (of motivation) this paper will reflect on perspectives from Psychology, Serious Games and Social Software, before proposing some initial ideas for designing for motivation. The arising design ideas that have initially been applied to the development of Digital Dialogue Games are now being articulated within a larger scale EU Integrated Project called MATURE, that is particularly challenged to design informal learning and knowledge maturing in the Web 2.0 workplace.

Keywords: motivation, Technology Enhanced Learning (TEL), learning design, context.

1. Perspectives on Motivation

This Section will briefly present three perspectives on motivation, from Psychology, Serious Games, and Social Software and Digital Literacy. This will scope out some of the issues and problems related to motivation and TEL, and lead into the methodological direction and approaches that we introduce in the later parts of this paper.

1.1 Psychology and Behaviorism

The earliest and arguably still most widely accepted perspective on motivation and learning in Psychology is the work of the behaviourist school and

notably that of BF Skinner (1954). This is based on conceptions of reward and punishment that were derived from a canon of work based on animal studies, from which he developed notions of operant conditioning through reinforcement schedules. He then applied this to develop the pedagogical approach of programmed instruction. And although behaviorism and Skinner's work is often perceived as somewhat mechanistic and 'inhumane', the notion that reward of some sort can shape our behaviour is widespread throughout education and society in general. Most, if not all, school systems reward individual behaviour by giving stars to young children or prizes for high achievement at later levels. And at work, we all expect to get financially rewarded in a way that is commensurate with our performance.

But a major problem with this approach within the TEL community is that it is overly outcome based rather than process based, and in Skinner's approach the learners had no opportunity for experimentation, dialogue, reflection and 'higher level' conceptual thinking and reasoning. These are precisely the sort of learning processes that are emphasized in contemporary theories for learning in the digital age (e.g. Siemens, 2005; Ravenscroft, 2010). Learners are not *tabula rasa* and they are all different. So the knowledge and processes they bring to an educational interaction has a significant bearing on what and how they learn from these interchanges. And similarly, most learners and workers will want to know or reason 'why' a TEL process should be adopted, rather than simply be rewarded for doing it.

1.2 Serious Games

More recently, TEL research into Serious Games has adopted a more process oriented, situated and experiential approach to supporting engaging learning 'in action'. A large body of work (e.g. Gee, 2003; Prensky, 2001) claims that these approaches can raise the levels of motivation, and social and affective engagement in learning through more 'immersive' experiences. They also emphasise the role of pleasure, play and 'learning by doing' through collaboration and competition. But, there is often a problem with the degree to which these video game inspired approaches fit with our existing or near-future learning landscape. Gee (2003) is quite explicit about this, arguing that digital games, and the learning principles that underlie them, represent a somewhat revolutionary approach to learning and literacy development that cannot be easily accommodated or realised through traditional institutions such as schools. Indeed, he argues that video game approaches actually change the fundamental nature of learning and literacy. Although, even accepting this, the levels of arousal that motivate interaction in games is difficult to reproduce in most learning contexts. Related to this is another significant problem with video game inspired approaches. This is that they are often weak in relating the immersive game-playing activity to broader social or conceptual processes and skills that constitute, or are related to, learning and knowledge development. We might master a Serious Game, but in doing so have we acquired any generic social or conceptual competencies? Or have we just 'won' the game? So whilst digital gaming proponents offer attractive arguments for 'active engagement' and 'future' learning, this paper and talk will argue that we should also adopt a more problem-focused, learning design and contextually embedded approach to motivation and learning, that will be

introduced in the context of the Digital Dialogue Game and MATURE projects. Both of these projects are also located within the most prevalent, and arguably most motivating space for communication and social interaction, namely that of Social Media and Web 2.0, where we need to fully consider the development and operation of new and personalized digital literacies.

1.3 Social Software and exploiting Digital Literacies

In a number of ways, recent initiatives that have attempted to harness Social Media and Web 2.0 for learning have been inspired by similar motivations to those for educational games. Researchers and practitioners have simply wanted to harness the participation, engagement and general explosion in Social Media activity for learning. The idea being that, if so many people are motivated to use their digital literacies and social technologies for interest-driven interaction, on a massive scale, then if we use the same literacies and technologies for learning, then these users should inevitably also be motivated to learn. Unfortunately, as recent reviews have shown (Ravenscroft, 2009; Hatzipanagos & Warburton, 2009), things have not worked out in this way. These publications covered a wide-range of perspectives and projects that collectively conveyed the energy and enthusiasm for embracing more open and participative approaches to learning, but also uncovered some deep misalignments and paradoxes in the context of education.

In brief, whereas Social Media clearly motivate high levels of participation, communication and collaboration, their adoption for 'real' learning in the school and the workplace, in ways that address profound problems or opportunities remains mostly unproven. Why is this the case? And what are the implications for designing TEL that learners in education or the workplace are motivated to use and adopt?

Another intriguing recent finding is that students who have a positive affect, and are 'happier', do not learn better (Cecilia & Rodriguez, 2010). So, taken together, these findings suggest that we need to look at the relationship between motivation, TEL design and learning in a new way.

2. Designing Motivating TEL: Relevance, Meaning and Value in Context

The accounts given above are important because they scope out the problem with motivation and TEL. Theoretical accounts from psychology of learning are often simply unsuitable because they do not address complexity of motivation in our highly personalised and socially networked society. Similarly, attempted technical solutions based on serious games and existing social media have had limited success because they have not emphasized transfer of deep learning processes and the role of context. Then if we factor in contemporary connectivist thinking (Siemens, 2004; Ravenscroft, 2010) about TEL in a socially networked world the problem becomes increasingly complex. As we are no longer dealing with 'traditional' learning problem vs. technical solution situations, but instead we are developing tools supporting personalized

digitally mediated learning practices that evolve and mutate as learners and workers follow their own learning trajectories, that often cannot be predicted or pre-specified. So we need to think differently about motivation and TEL. And one way to do this in our socially networked landscape, is not to see it as a theoretical or technical issue, but instead, to see it as a design methodology issue, associated with methods to properly problematise and model, or scope out, the motivational landscape of a learning community and context before proposing a TEL 'solution'.

This new way of looking at motivation and TEL has not yet matured into clear design techniques, but recent work into Digital Dialogues Games (Ravenscroft et al., 2010, see www.interloc.org.uk) and designing Social Media for informal learning and knowledge maturing at work (see <http://mature-ip.eu/>) has supported this perspective. This work has also suggested that we should look at motivation from a more community oriented design frame, that incorporates methodologies to assess the relevance, meaning and value of TEL innovations within their contexts of use, and incorporates these 'soft factors' into the design and deployment process. Practically, this means involving potential users in all stages of the design process, from initial brainstorming and early mock-ups and prototyping to piloting and then eventual release. To understand motivation in a complex and socially networked world, we need to understand what motivates our learners, and also accept that they are motivated by different things. This means incorporating socio-technical studies within our design processes in ways that will allow us to emerge and shape the motivational landscape. Similarly, this means interweaving evaluation with design, development and deployment so that the TEL practices are an ongoing and relevant activity. Our experiences across these two projects shows that users are motivated to use and adopt technologies when they, or their representatives, have been significantly involved in the design process and can see how it addresses a clear, or critical, problem or opportunity in their context. In brief, when the design team and the user community collaborate in ways that allow them to understand, or co-construct their understanding, of the relevance, meaning and value of a TEL innovation – then it is more likely to get adopted and used successfully. This also requires a clear *relationship* between designers, developers and users, that acts as the foundation for successful design based research methods. This does not mean that socio-technical developments aren't scaleable or transferable, it just argues for intense user involvement during the earlier stages of the design process. Concrete examples of how this approach works in relation to the Digital Dialogue Game and MATURE projects will be given at the workshop.

This approach does not negate the value of affective arousal and positive affect in performing TEL mediated activities, but does foreground the necessity to share common meanings and purposes within the design-user community. In other words, users are motivated to use TEL when they feel that themselves, or their representatives, are part of the design and development community and what results has, or is likely to have, a clear purpose and value in their context.

3. Discussion and Conclusions

This paper has argued that, for TEL design, concepts of motivation need to move beyond *in vivo* affective engagement towards more contextual and community conceptions of relevance, meaning and value. These latter characteristics need to be clearly articulated throughout the TEL design process, as we cannot simply ‘add them on’ at the end. In other words both individuals and communities need to understand why a TEL experience is worthwhile and experience reflective satisfaction about it, which may occur whether or not their experience was overly ‘pleasurable’.

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