How Fun Can a Serious Game Be?

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Abstract. This paper will explore how fun can be and might be designed into serious games for children. Three projects are described and then the tensions around designing for fun and education are unpicked with consideration of the roles of children in the design of these serious games.

Keywords: Serious games · Children · Fun · Learning

1   Introduction

The serious games industry has grown up around a premise that when learning is embodied within a game environment the learning experience is improved in some way when compared with more traditional instructional methods like the lecture (for example). When Clark Abt wrote his book on serious games in 1970, he talked about the elements that games brought; procedures, rules, participants, information, moves, winning and losing and he captured the key motivations for playing as being amusement, play, gain, competition, and opposition. [1] When referring to serious games he uses this to refer to the matter of the game – for example it being around a thing of great importance - as opposed to the attitude of the player. He writes 'games can be serious without being solemn, interesting without being hilarious, purposeful without being humourless'.

Research has shown that with the right balance, serious games can be used to instruct in very serious things. Many studies have suggested that the main addition to learning, brought by a serious game, is intrinsic motivation. Increased motivation has been shown, time and again, to have a positive impact on learning [2, 3]. That said, even after several decades of research, the jury is still out on the specific learning effects of serious games.

This tension, between a game that has to bring motivation and information while also allowing some humour and some amusement is particularly interesting when the intended players of the 'serious game' are children. Research has suggested that what is needed for improved learning and enhanced motivation is congruence and appeal. Congruence is the fit of the game narrative to the educational goals, and appeal is associated with the game mechanics and the right balance of challenge, fantasy, and curiosity [4].

2   Three Projects

The UThink project was funded by the Esmee Fairburn foundation and aimed to develop a serious game to instruct teenagers in ways to regulate their emotional intelligence. There was a very serious aspect to this project as low emotional intelligence is correlated with teenagers getting into conflict situations with authority figures. This project took a set of already assembled worksheets, that had previously been used with teenagers in one on one sessions with caseworkers, and sought to embed the learning from those worksheets into a game. The novelty in the research project was the decision to work with a set of teenagers who were themselves already low in emotional intelligence and to have them co-design the game elements that would later be built into the game. The fun, therefore, in this serious game situation began at the point of design where teenagers used plasticine and biscuits as design props [5].

The UMSIC project was a cross European project that sought to create a music game to promote inclusion and cooperation between children. One of the target groups for this project was newly immigrant children who did not have the language of the country in which they were situated. This is clearly a very serious problem for European migrants and those migrating into Europe from several parts of Africa. These children, often with very little understanding of why, find themselves in schools that are unequipped to meet all their needs. Children contributing ideas for the design of 'inclusive games' were encouraged to design for Mr Hippo, who was a hippo who had happened to come into school that day. In creating a fun entry to the serious elements of the game - that Mr Hippo spoke no English, and that Mr Hippo had no fingers, children were able to empathise with the situation of the target players of the game and thus design into a space that they had hitherto not understood. In the context of this project, the design of the game elements was actually part of the solution as it became a process of education in itself for the children who volunteered ideas [6, 7].

Children designing for others has been a recent theme of our work in serious games design. The ChiCI in Africa project aimed to build a serious game to teach children the importance of careful hand washing in order to avoid water borne illnesses. There is little that is more serious, in terms of serious games, than a game that can, by clear instruction, save the lives of children. This game was to be shipped to rural Africa as part of a package of technology that included solar charging devices, tablet PCs and lighting. Designing this game involved a group of children in the UK having the problem explained to them before they then worked in small teams to sketch out the game story [8].

3   Where Is the Fun?

When considering fun in the context of serious games, there can be fun in the playing of the games, fun in the design of the games and fun in the understanding of the contexts. Where children are the recipients of the games then fun has to be a designed in component. The challenge is that if the game is too fun then maybe that fun might affect the learning – as it is the learning that is so important.

When children design serious games for other children, the discussion with the children has to stress the elements of learning. In the ChiCI for Africa project, the children doing the designs were focussed on the instructional, rather than the fun, elements of the game and consequently the designs were not so fun [9]. In the UThink project, the teenagers designing the games focussed very much on the fun aspects rather than on the learning and so the learning had to be layered into the fun aspects of the design and this did cause some design disparity [10]. When children designed for Mr Hippo they became engrossed in the needs of the players of the game to the extent that neither learning nor fun were all that evident in the game [6].

These three studies evidence a triangle of needs that require to be met in the design process where serious games are involved. The laying out of the design activity in order that these needs can be all conveyed is unpicked in the presentation.

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