

Meaningful Play 2010

Extended Abstract

Playful Learning Experiences
Meaningful learning patterns in players' biographies

Konstantin Mitgutsch
Massachusetts Institute of Technology, Education Arcade

0. Introduction

Mediated experiences transform our understanding of ourselves, others and the world. We watch a movie that opens up a new perspective on a topic, read a book, that twists our prior beliefs, look at a painting that changes the way we perceive things, see a play that touches us deeply or listen to a song that opens un-lived emotions – we all go through meaningful experiences like that. Thus, certain media-based experiences meet our minds at particular phases of our lives, in relation to space and time and in context to specific subjective experiences. Therefore, some books, movies, plays or songs appear to have more potential to transform us, than others. Nevertheless, this process of transformation remains interdependent to cultural, historically and biographical settings and can hardly be generalized. As our media landscape changes, a shift between preferences occurs. Therefore each type of media provides its own specific potential to foster transformation. Experiences made while reading a book, are different from those evoked through a film or by listening to a piece of music. Furthermore, we learn differently through diverse forms of media, as they foster specific forms of attention, activity, interaction, reflection and transformations. Nowadays computer games are a central part of our culture and they accompany our lives. We use games as intermediate playgrounds for our interests, passions, values and beliefs. Computer games entertain us, please our needs, challenge our abilities, make us engage with other players and provide us with novel experiences. But, as I will outline in the following investigation, the question as to whether we transform our understanding of ourselves and others in a meaningful way through playing games, is a question yet unanswered.

Today we know that players play passionately (Yee 2006), that they learn to recognize and participate in different semiotic domains (Gee 2003) and in specific cultural spheres (Jenkins 2006). But how players reflect deep and fruitful experiences in games and how they learn through playing games for their lives is the pivotal question in this paper. Do mediated experiences achieved in digital games, transform the way we understand ourselves and the others? The following extended abstract, will outline basic theoretical assumption on playful learning experiences. It will provide a brief overview of the central insights found in a novel narrative study on learning biographies in games. In this abstract will give a brief overview of theoretical and methodological approach, the structure and the central aspects of my findings. Thus, I will not include the data of the study in detail, as these findings will be included in the final paper and presentation.

1. Playful Learning - what is it all about?

The first part of this paper will focus on the theoretical basis that helps us understand learning in games in general, and meaningful and deep learning in particular. The research questions to

be followed in my approach are: Do learning experiences in computer games transform the player's body of experience? And how do players recognize and reflect meaningful learning that they experienced in their games?

To answer these questions, I will outline research that focuses on deep, meaningful and circular learning in games. To touch upon it briefly: The trend to observe learning in games, digital game-based learning or learning games has become obvious in the last few years, but had in fact already started to emerge in the late 20th century (e.g. Malone 1981). Today we know that computer games are ideal learning environments (cf. Gee 2003; Mitchell/Savill-Smith 2004, Van Eck 2006), but does their promise to foster new ways of learning (Kirriemuir 2002) imply a deep and meaningful dimension? To we transfer the patterns learned in the game, to our lives? Playing digital games implies cultural, cognitive, social and self-directed forms of learning (Kutner & Olson 2008; Gee 2003) and it proceeds in an informal and self regulated learning environment. Players cultivate higher-order thinking skills (Beck/Wade, 2004) and develop problem solving skills (Squire 2006) in social settings (Steinkuehler 2007). Even gender related learning potentials were recently highlighted (Gee/Hayes 2010). But are these forms of learning just related to the game or do the players transfer their learning experiences to their understanding of the world? To answer this question we first need to understand what "meaningful learning" in games means.

2. Meaningful Learning

Defining "learning" is a difficult task. Every paradigmatic shift since Socrates produced a different understanding of "learning". From recognition (Socrates) to induction (Aristotle/Lock), from behavior modification (Behaviorism) to cognitive stimulation (cognitive sciences), from construction of knowledge (Constructivism) to brain circuitry (Neuro Science) etc. different models were developed – but until today, the phenomena of learning remains a puzzle (cf. Mitgutsch 2009a). In the following approach I will relate to a pragmatic-phenomenological basic understanding of learning as a process of experiencing something in relation to someone's body of prior experiences (e.g. Husserl 1993, Bateson 2000). Every experience relates to our prior experiences, to our way of anticipating, to the cultural, historical, and biographical setting. Learning thereby can be understood as a process of recognizing, comparing and remembering patterns (Koster 2005) in relation to transformation of prior experiences. Thus, as Jean Lave and Etienne Wenger (1991) argue "learning, transformation, and change are always implicated in one another" (p. 57). But the fact that they learning is situated and transfer and change are implicated, does not mean that we automatically transfer one learning experience to another. Learning is an integral aspect of our being and games are tools to learn with. Thus, even if the learning transfer can be fostered, the transformation – the change of the player's body of

experience and believes – can not be instrumentalized. Furthermore, not every learning process appears "meaningful" to us. While most definitions of learning reflect this differentiation in an insufficient way, Gregory Bateson distinguishes between four different levels and forms of learning. His differentiation helps us understand the difference between linear learning (achieving of information), circular learning (framing of information to context) and recursive learning (restructuring experiences and frames in different contexts) (cf. Mitgutsch 2009b):

- On the first level learning starts with perception. After giving our attention to an impulse, we react to this external stimulus or as Bateson suggests, "the simple receipt of information from an external event, in such a way that a similar event at a later (and appropriate) time will convey the same information" (Bateson 1972, p. 284). The process of this *Learning 0* - as Bateson labels it - is linear. It can be understood as a specific behaviour in relation to information. But the data does not yet make "sense" to us, we just react to it like a machine.
- On the next level (*Learning I*) we change our specific response (*Learning 0*) through trial and error, but with a set of given alternatives. In this sense we react in specific directions and choose between options. Computers are excellent learning machines in this sense, but they can not reflect upon the alternatives given. Computers do not change their frame, as long as they are asked to do so.
- On the third level (*Learning II*) the learners respond to repeatable contexts. Bateson (1975, p. 186) defines this context as a frame or "a class or set of messages (or meaningful actions)". These different frames organize the perception of the viewer and convey the message, "Attend to what is within and do not attend to what is outside" (ibid., p. 187). By *framing* their perception (*Learning 0*) and the collected data (*Learning I*), individuals enrich the neutral data with meaningful interpretations in a circular way. If we learn on this level we experience something in a particular setting and relate it to a meaningful frame. Thus, this stage of learning remains in the context of the particular setting (e.g. the game) - a transfer between the context (game) and the other (world) is not yet done.
- On the last level (*Learning III*) we change the process of *Learning II*. We learn on a meta level about our learning in a particular setting and change the setting in relation to new experiences. Once the framed data (stage framing) of the game is related to other frames in real life, a transfer is set in motion. The players reframe the learning experienced in the game to meaningful settings in their lives. At this transfer stage a learning process occurs in which a general experience is derived from a specific one. In an act of recontextualisation, different frames are confronted and values and anticipations are redefined and explored. I call this form of transformation *recursive learning* (Mitgutsch 2009b) The player learns to use different strategies, concepts and playing patterns as needed. Now the players are enabled to transfer from one experience in a particular frame (*Learning II*) to other frames on a meta level.

If we think about a transformative learning experience, all four levels are combined. We achieve information, react on that impulse (0) recognize alternative possibilities (I), frame that experience (II) and transfer the framed experience to other situated meaningful contexts (III). As James Paul Gee argues from a semiotic perspective, this form of learning can be called "value-laden deep learning" (Gee 2008, p. 32); this is where real life-based skills are transferred from the game space to real life. As research into transfer processes fostered by computer games shows (cf. Schwartz et al. 2007), there are different forms of transfers from games to real life and vice versa. For the process of learning through games it remains essential that these transfers induce a change in the player's concept of "real life". This form of learning appears

highly relevant, but is barely researched on an empirical level. To open up new insights into how people transform learning through play to their lives, we need to understand how people learn in games. The following case study reflects this issue in form of a narrative investigation of players' biographies.

3. Narrative investigations on play histories

The investigation of meaningful learning experiences achieved through playing digital games has two significant limits: Firstly, humans do not consciously remember their process of learning, only its results (Buck 1989, Mitgutsch 2009a). For example, we know *that* we learned how to ride a bike, but we do not remember *how* we learned it. We rarely recognize our own learning processes. Even if we know that we are just in the process of "learning" a language, we do not remember when exactly or how we learned it, until we succeed or fail. But the process of learning is more than its result - therefore the empirical research on learning is challenging. The second limitation affects the phenomena of play. Playing is a voluntary and private activity that relates to the needs and values of the players. It is contextualized in its own space, time and affinity group. Playing is the voluntary attempt to confront ourselves with unnecessary challenges in a satisfying way (cf. Suits 2005). If we interview players about their private playing experiences, we intrude a secure space and often players cannot articulate their reasons as to why they play what type of games for which reasons. In my ongoing research I tried to develop a methodological framework that helps with investigating meaningful play experiences:

Method

In the period from November 2009 to June 2010 I carried out qualitative research on meaningful playing experiences at the Massachusetts Institute of Technology as part of my research project on recursive learning in games sponsored by the Max Kade Foundation New York. In doing this I interviewed 8 students between 20-35 with the help of method-mix and analyzed their play biographies and their reflection of meaningful play experiences. The methods in use were semi-structured life history interviews grounded in sociolinguistic methods and narrative analysis (Mishler 2004; Gee 1991). In addition to that, biographic drafts of time lines and game preferences were used as a door opener for the players experiences. The interviews took between 60-90 minutes and involved 5 steps:

Steps 1: After a short introduction, the players were asked to draw a timeline of their lives including video games that - looking back - were most meaningful to them. The definition of "meaningfulness" was not outlined in advance and the interview partners had to come up with

their own definition. The more meaningful a game was in a particular point of their lives, the bigger the bubble surrounding the game was scaled.

Step 2: After drawing the timeline and the "meaningful game-bubbles" the players were asked to structure and label their timeline in categories of their choice. For example some players structured their timeline in relation to places they lived in, others in educational phases and others in types of consoles they were using in that time (Figure 1).

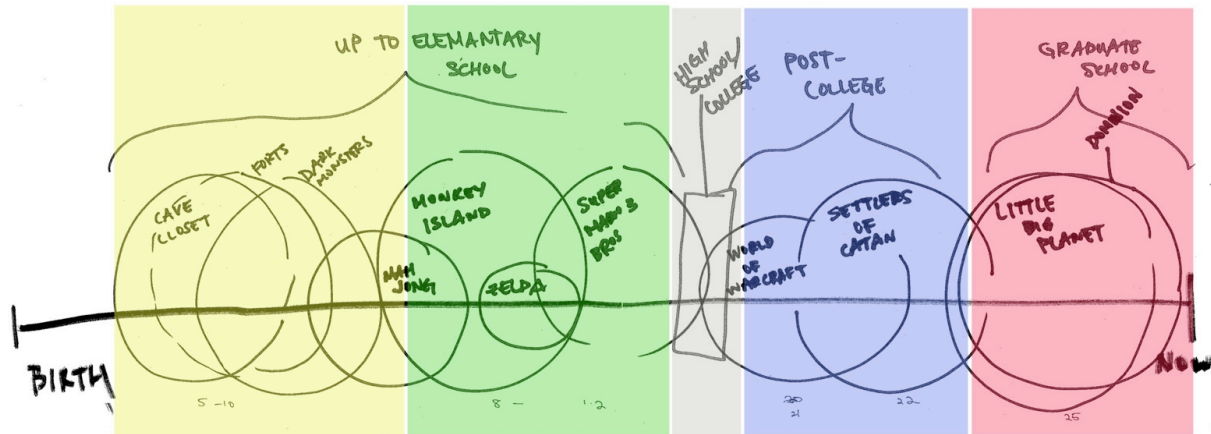


Figure 1: Time line of playful experiences (Sarah, w, 30)

Step 3: After structuring the timeline, the players explained their experiences in detail to the interviewer and articulated reasons as to why they felt specific games were more "meaningful" to them as others. They outlined their definition of "meaningfulness" and described the context in which they played a game. Thus they contextualized the games in relation to the time, place, life phase, their "state of mind", their relation to others and their emotions.

Step 4: After outlining their playful biographies more clearly the students were asked to include specific "breaking points" to their playful timelines and choose one transition point, that appeared especially meaningful, fruitful and important to them. In addition to that, they were asked to explain the two colliding phases in more detail and talk about the "shifts" between them. The question arising was, how the player related to that shift and what role the games played at that time.

Step 5: In the last step, the players were asked to choose one experience that appears most fruitful to their life. They were asked how they related this experience to other "non-game" experiences. Furthermore the players could give additional information or highlight specific aspects of their biographies.

The outcome of this research provided evidence on how different players experienced meaningful learning experiences in their lives. The 8 interviews show how situated and

subjective play biographies are and they make linear, circular and recursive learning processes through games visible.

In the intended paper I want to exemplify one playful biography and the transformative learning processes in detail. Next to this particular experience, which I will not outline in this extended abstract, I am going to highlight the central findings that became evident throughout the investigation. In context of this abstract, I will briefly summarize the central findings of the investigation.

4. Central Findings

The following findings briefly sum up the central results that became evident through the narrative analysis of the interview transcripts:

i. Players experience deep and meaningful playful learning experiences in their lives

One central result of the narrative interviews is that all players could easily highlight different yet meaningful experiences that they relate computer games to. Most players had never reflected upon these experiences before and were surprised by the outcome of their drawings. It showed how early childhood play experience between the ages of 4-6 are marking the path for fruitful playful biographies. Particular playful experiences are deeply related to the interview partners' lives and they play a central role in their cognitive and emotional development throughout their lives. Interestingly, those games were often not the games that the players spent most time on, but - as the interviews show - those that opened up a novel learning challenge, reminded them off relations to other players. Especially those play experiences that fostered learning in a contextual and meaningful setting were remembered as fruitful and important to the players (see point 3).

ii. Every playful biography differs and is highly dependent on a specific context

As Batson's differentiation already showed (1975), those learning experiences that appear "meaningful" to the players are those, which are decontextualized and reflected upon a meta level (Learning III). The players do not only learn "in" the game, but through the game and in relation to a meaningful context. The meaningful play experience differs from person to person and from time to time. Even if some of the interview partners played similar games such as *Monkey Island*, *Pokémon*, *Sims*, *World of Warcraft* or *Ico* etc. they contextualize these games very differently and in relation to their biographies. No play experience is like another and the learning patterns achieved in the games are different. Furthermore players have different learning experiences even with similar games and they develop a unique preference for future games. While some players search for additional experiences (e.g. games their target group likes), others try to reuse a well-learned pattern in different games.

iii. Players develop different meaningful learning patterns in relation to their context

Players developed passion for games with specific learning patterns. The experience of recognizing, understanding, remembering and mastering a pattern is remembered as especially fruitful. While some of the interviewees developed skills in problem solving, strategic thinking, social interaction, orientation, combination of patterns and meta-recognition - all of them contextualize these learning experiences as particularly meaningful. While some articulate that these experiences gave them a sense of mastery, others were

challenged on new levels or just connected to new playing communities. Thus, the players transferred their learning patterns to new games. None of them understood this learning experience as directly transferable to their every day lives. The patterns learned in the game remain related to the context of the game (Learning II) and are not related to other contexts.¹

iv. Meaningful learning experiences as social moments

The games the players labeled as most fruitful always had a relation to a particular phase in their life. Whether the students had just moved to a new place, or they were changing schools, or, as in some cases, there were problems in their everyday life. In addition to that, meaningful games are related to a particular group of people that directly (friends, siblings, classmates) or indirectly (parents, teachers, celebrities) framed the playful learning experience. The players did not just play any game with anyone, but a particular game with someone special. Social settings appeared to be highly related to meaningful learning experiences - whether the games were played in single or multiplayer modus, or online. Some games were transferred to different settings by talking about them or by exchanging experiences with others.

v. The transfer is not transformation

Although it became evident that players transfer their play experiences to their real life settings, this transfer is not understood as a linear one. Even if players realized how meaningful a pattern learned in a game is, they do not directly reflect on this pattern as being useful in their every day life. Things learned in the game stayed in the context of play, not of reality. Thus, the experience has an impact on the players' lives, but not in the sense of a productive transfer. For example, Tim (m, 21) learned through playing *Call of Duty* that he and his friend are very skillful at understanding maps and other players' strategies. Although Tim is surprised by his developed skills, he could - at that time -realize, how to use these skills in his normal life. He explains how fruitful his experience was to him and how meaningful it was for his future game experiences, but as his surroundings neglected games as meaningful settings, his experiences remained private. Learning "in" the game, and learning "through" playing the game, do not automatically lead to reframing outside the game. Thus, Tim states that he so learned, that he is able to develop complex strategic concepts and might be able to learn other things as easy.

5. Conclusion

Today's generation experiences deep and meaningful learning in their playful biographies. These experiences are mostly related to certain patterns that are learned in the game and are related to a specific biographical setting. Nevertheless, all interviews made it evident, that there has to be a "meeting of minds" between the prior experiences of the players and the learning challenge of the biographical setting of the game. If this meeting of minds happens, transformative experiences that change the player's understanding of themselves and others are possible. Thus, it also made obvious that games are not tools for transformative learning, but

¹ If learners transfer the experience to games but not to other settings, the transformation is limited to certain settings. This aspect appears crucial for further investigation and will be outlined in more detail in the final paper.

possibility spaces for meaningful experiences. Games are playgrounds and can lead to the development of new learning patterns and competences. If players act in a satisfying and passionate way and under voluntary conditions, they can decontextualize their learning experiences in meaningful ways.

These findings will be documented through quotations from the interviews and related to the theoretical framework outlined in the intended paper. Finally, remarks for future investigations, for questions concerning learning in games and education challenges will be outlined and discussed.

6. Literature

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