

Participative Game Design in the Zet Project – Engaging the Youth to Enhance Wellbeing

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Abstract. Engagement in meaningful activities is important in supporting the youth in their wellbeing for today as well as for the future. Serious games and game design provide an interesting field for exploring the opportunities and possible benefits for activating the youth at the same time benefiting from their experiences. In this article, a game design process conducted following the principles of participatory design is presented. The article provides examples of the positive as well as the challenging aspects of engaging the youth.

Keywords: Participative game design · Youth · Engagement · Wellbeing · Serious games

1 Introduction

The Finnish comprehensive school ends generally at the age of 15 or 16. After that, the youth need to decide their secondary education, either aiming at a vocational school or upper secondary school. Both paths also enable tertiary education from 18–19 years onwards. According to EuroStat [1], 10.2 % of the Finnish 15 to 24 year olds were neither in employment nor in education and training in 2014. In 2016, the amount of unemployed 15 to 24 year old youth varies between 46 100 and 70 000 persons of the whole population (7.2 % and 10.9 % respectively) depending on the definition and method of data collection [2, 3].

Since 2013, the youth guarantee has aimed at enhancing access to education and employment for the youth in Finland. Every youth is guaranteed a place to study after leaving comprehensive school and every youth under 25 or under 30 in case of recently graduating is guaranteed a place for work, a work try-out, a study place, a place at a workshop, or rehabilitation placement within three months of unemployment. The youth workshops aim at supporting the youth in life management and working skills while at the same time providing guidance for finding the right path for education or employment [4].

The youth are going through several transitional phases where important choices for the future are made. At 25, the youth may already have entered the labor market,

may have graduated but be without employment, may be in the middle of studies, or may still be in search of the right education for the future. Several possible paths exist. In addition to conscious and goal oriented choices, chance and contingent events shape the path and mingle the everyday life of the youth. For many, youth is a period in life full of exciting opportunities. However, the uncertainty of the future, the multitude of decisions to be made combined with all the new requirements of adulthood may also make youth a demanding period in life causing challenges to the youth's present and future wellbeing.

One of the key questions in society is how to support the youth to find the right path and to feel well today as well as tomorrow. Two central elements of wellbeing are to have meaningful ways to occupy one's time and to be engaged in the community [5]. In order to support the youth, then, it is critical to offer the youth opportunities to engage in activities that make sense to them and have an influence on the surrounding society.

Several studies link self-efficacy beliefs to better motivation in health practices [6, 7]. Self-efficacy is a term of the social cognitive theory that claims that beliefs about the ability to exercise control over one's actions are crucial in attaining goals [8]. Improving people's self-efficacy beliefs and their feeling of control can therefore be seen as enabling movement towards better wellbeing. In the context of youth, positive youth development is one of the schools of thought aiming at developing settings for the youth to support initiative by engaging the youth for goal-directed efforts fostering intrinsic motivation [9].

To engage the youth, serious games offer many opportunities. An extensive literary review by Connolly et al. [10] suggests that serious games and videogames have potentially positive impacts on many different areas, particularly focusing on health, business and social issues. Most common benefits were seen on the fields of knowledge acquisition/content understanding, affectivity and motivation. The study further suggests that players find learning by playing both motivating and enjoyable.

In addition to playing, also game design has potential for engaging the youth in a positive manner. Participatory design (PD) is at the same time a design approach, and a design research method, where the users partake in the design of a product. The underlying motivation is to democratize the design process. The reasoning behind this lies on the idea that the people who use the end-product know best how it should work, and thus should have a say in the design process. It is also seen as empowering for the users to take their knowledge as a part of the design process [11].

To some extent, participatory design has also been used in game design - especially while designing serious games [12, 13]. While the game designers are usually adults, the value of this method lies in the collaborative nature that allows the youth to take part in the design process. Lochrie et al. [13] for example used PD in a game design project aimed to connect digitally excluded 11–19 years old people. They argue that it is vital for the success of this kind of project to build a relationship of trust with the participants, and to keep more direct communication between developers and the community. According to Khaled and Vasalou [12] the problem with PD in serious game design is that the users must be fluent with both the game design and the subject matter. As such they suggest confining the workshop content into a subject that relates the expertise of the participants.

When working with people with varying backgrounds and sources of interests, it can be challenging to engage them in active participation [14]. This is especially the case with young people. While observing 13–15 year old teenagers in a PD workshops, Iversen et al. [15] found that teens' motivation was drawn from different kinds of rewards, and while offering refreshments kept them engaged only a brief moment, endorsements sustained their motivation for a longer time. Further, the effect of tools used to engage teenagers in the PD process was seen as highly dependent on how well they are appropriated and valued in relations between the teenagers.

This article is a practice oriented description of a participative game design process in the Zet project developing a game with the youth, for the youth. The goal of the project was to implement participatory design for developing a game that the youth could relate to for managing their everyday life and the future in a fun way. We wanted to explore what the most pressing issues for the youth would be and how they could be transformed into a game concept providing both serious content as well as entertainment. Engaging to youth as experts in their own life in game design is expected to produce a game with high potential for addressing the youth. The game can then be used as a platform for interaction with the youth in youth services, at school or where ever serious subject matters are discussed with the youth about the youth's life. As an end product, the project will also produce a guide book for participative game design to be used in other settings.

The focus in this article is on the process, how the youth have been engaged and what kind of benefits are expected as byproducts of the actual game development goals of the project. The project also provides an example of how the youth may be engaged working as experts in the development of a serious game for their peers.

2 Zet as an Ongoing Case Example

Zet project is a collaborative project funded by the European Social Fund with a game company Meanfish Ltd responsible for the game design and the higher education institution Laurea UAS responsible for reaching the youth and collaborating with local partners in the region. In the Zet project, young people develop in collaboration with game design professionals a game for the youth for visioning their future and planning and managing their life. The goal is especially to reach the youth pondering on their future educational choices or career choices between 15 to 24 years of age. However, the project follows an inclusive project design, where all young people are welcome to participate.

The goal of the game design process is to benefit from the experiences and know-how of the youth in order to design a game which suits the concrete needs the youth have in their everyday life and which speaks to the youth in their own language. At the same time, the process gives the youth success experiences and opportunities to be engaged and have an influence in society. The design process is carried out with two teams meeting in Hanko and Lohja in the Uusimaa region in southern Finland. Lohja is the larger of the towns with 47 300 inhabitants while in Hanko the population is 8900 [16]. The distance between the towns is about 80 km. The youth services in both towns

are key partners in the project to reach the youth. In Lohja, the meetings are organized in the premises of Laurea UAS and in Hanko in a local workshops for the youth.

The Zet project also gathers local actors together in network workshops. Service concepts are developed and piloted to support the use of the game. Based on the experiences in the Zet project, a guide book of the participative design process will also be formulated.

As a result of the project, an open source game is designed to be used by the youth either independently or as part of other services, as designed in the project. Concrete benefits are expected also for the participating youth. Engagement, the opportunity to make use of one's know how and experiences and to be active and gain experience in an interesting topic is expected to have positive effects on the self-efficacy beliefs and feeling of control of the youth already during the project. To assess the effects of the design process, a survey is conducted at the beginning and the end of the process. Also interviews will be conducted to gather qualitative data of the design process and its effects.

2.1 Background Information Prior the Game Design Process

Prior to starting the actual game design process, 67 interviews among young people mostly in the Lohja region were conducted in September–October 2015 by nursing and business students at Laurea UAS. The questionnaire was designed by Laurea personnel representing futures research, business and nursing. The goal was to gather background information of the youths' future visions within 5–10 years and present day health and wellbeing in the region. The sub-themes of the desired futures were related to housing, studying, work, voluntary work, friends, family and hobbies. Also background information from the participants were collected. The age of the interviewed people varied from 15 to 24, average being around 20 years.

The future dreams of the youth were quite ordinary. Most wanted to live in their own apartment and only a few wanted to move abroad. The most wanted to study in the future. Some of the youth had certain dream professions in mind while others had several options or had no idea at all. Generally, meaningfulness was seen the most essential feature of work. Only few were involved in voluntarily work. The friends of the respondents were mostly from the immediate surroundings even though some had friends from virtual environments, too. The family dreams were quite traditional: the most wanted to have a family with children or at least find a partner. The most of the respondents had some kind of hobbies, often related to sports. The time scale with which the respondents considered the future was maximum one year onwards.

Basically, the respondents found themselves healthy and happy. Over 95 % found their health situation to be very good, good or quite good. Only three persons perceived their health to be rather bad. Almost 90 % were happy or very happy with their lives in general. Seven respondents found themselves quite unhappy or unhappy. The most common health and wellbeing problems were neck and shoulder pains, tiredness, stress, difficulties to wake up in mornings and headache.

After the interviews, a future workshop was organized in October to the youth on the themes of studying, employment, leisure time, family and friends, health and

wellbeing and housing to define future visions. In addition, discussions on issues supporting and hindering wellbeing in the present day were also organized. All the information collected were used as background data in the game design process.

2.2 The Game Ideation

The game design process started with a two day game jam resembling ideation session in November 2015. Game jams take a variety of different forms, but a recent definition by Kultima [17] states that: “A game jam is an accelerated opportunistic game creation event where a game is created in a relatively short timeframe exploring given design constraint(s) and end results are shared publically.” In the recent years, the popularity of game jams has been on a constant growth, and every year a vast number of jams are organized around the world, varying in size from The Global Game Jam, which in 2015 attracted 28 837 participants around the globe, to small events with only a handful of attendees [17].

Unlike in regular game jams, the goal in this project was to ideate together and not develop full games during the event. The event was advertised vastly in the region the message being that the event is open for everyone without any competence requirements. After coverage on a local newspaper, participants from Lohja started enrolling to the event already in September. Although transportation from Hanko was arranged to the event, youth from Hanko on the other hand was extremely difficult to reach and get interested in participating. Especially the time of the event during the weekend seemed to work against the goal to reach the youth. Eventually, there were 13 youth enrolled to the event with 10 participating. Also one youth worker and one collaborating partner as well as students from Laurea UAS participated in the event.

The game jam event exploited the results of the October discussion events and started generating ideas for the identified challenging situations in the youth’s life. The youth listed opportunities and challenges in four themes: What is it like to move into a new city; how to get the dream job; how to be in contact with family and friends and how to keep up one’s own wellbeing? After that, by using different ideation and story generation methods, the themes started to convey into ideas for games.

Between Saturday and Sunday, the ideas were themed by the project staff. On Sunday, three of the most interesting ideas were chosen and developed further in teams. One team focused on a game where the player managed an enterprise imperium and sabotaged opponents. In one game, the player fought for his living environment against the bad potato. The third game envisioned the difficulties of interacting with others in case you were a youth struggling with anxiety.

The teams presented their game ideas to the group and the good points of each idea were then discussed together. Turning the roles upside down, humor, an intense atmosphere and well thought game settings were characteristics in the games that were well received. The event was wrapped up by making a combination of the three presentations for further development.

2.3 The Game Theme and Mechanics

In the game, which goes by the working title “Reptilian Overlords”, players take the role of a recruiter for a reptilian controlling an international corporation. The aim of the game is to grow your own business, while sabotaging your competitors - AI controlled corporations. The game can be divided into two “modes”: controlling your own company, and conducting espionage missions on your competitors’ companies.

The approach taken is an upside down view on the challenges of life management and planning for the future (i.e. looking for a job or a place to study). The game concept draws from the benefits of the dark humor created by the upside down situation, as well as distancing the actual game play from the serious content it represents. The aim is to reach an experience where the player does not realize she is learning while playing.

The game mechanics can be divided roughly into three categories by the main aspects of the game: espionage quests, company management and recruiting employees. The espionage quests are conducted with a point-and-click mechanism. These three categories arose from the themes.

On espionage missions, the player controls one of the employees - sent as an agent to a competing company - as the agent tries to steal the blue prints of some device or sabotage the production line. The quest takes the form of a puzzle, where you need to find the right chain of actions that will lead to the desired outcome.

The game characters used in the espionage quests have their distinct characteristics with which the player needs to learn how to cope with and benefit from. All have both positive as well as challenging characteristics. For instance, playing an espionage quest with an employee fearing crowds requires different tactics than playing the quest with a talkative employee. On the other hand, the first may be more attentive to detail while the latter more easily distracted. The right amount of challenge enhances the game characters abilities to overcome difficulties and utilize strengths. The goal is to offer the players insight into how personal differences affect and can be taken advantage of in the working life. Besides the players’ own abilities and hindrances, the player may also be able to look at others from a new perspective.

As the game starts, the player as recruiter is unaware of the boss being a reptilian. During the game, the player comes to realize the unethical working methods of the boss and the grievances in the company. With a twist in the game plot, the player then starts to collect evidence against the boss. In the end, the boss is revealed and the player may restore the order in the company. The end twist balances the story arc and the game may be finished with a positive spirit offering many topics for discussion after the game.

2.4 Game Design and Local Team Meetings

The base for the game design team in Lohja was grounded on the participants of the game jam event. A core team of 8 youth in Lohja have participated throughout the project consisting of three youth outside employment or education, one with employment and four students. Youth that have come to the project later or visited the team meetings occasionally, have mainly been students. Altogether 16 people have participated in the game design team in Lohja.

The situation in Hanko was rather different, as we did not manage to engage any youth from Hanko in the game jam event in Lohja. Instead, the first team meeting was the start of the game design process in Hanko. In a larger town, youth interested in participating in game design was easy to find while in a smaller town the aid of the youth workers in engaging the youth was crucial for project success. Through collaborating with a local media workshops and a youth workshop, we were able to reach the core target group of the project i.e. the unemployed youth. However, we did not manage to attract a core team for the game development. We started the team meetings at the media workshop with youth from the youth workshop also visiting the team meetings occasionally. However, the media workshop started cancelling the team meetings due to scheduling issues and the project needed to reorganize its activities. Instead, one game demo presentation and one workshop was organized with the youth at the youth workshop. Therefore, the composition of the team in Hanko has varied considerably throughout the project. Altogether 15 people participated in the game design team meetings in the media workshop and approximately ten attended the events in the youth workshop.

The teams had game design meetings throughout the winter and spring with an interval of 2 to 4 weeks. These meetings were structured into workshops, where the game development experts first introduced the topic of the workshop and then gave a brief presentation on the game development fundamentals. After this, the participants were engaged into rapid game developing exercises. The team meetings also included information snapshots to support game design. For instance, trends and weak signals for the future working life and future professions were presented.

The first workshops focused on iterating the game ideas into a workable game concept. Since the iterative nature of the game design process, the content of the following workshops was kept open during this initial stage. As the game concept started to take a form with solid game mechanics in place, the topics of the remaining workshops was finalized. This gave structure for the entirety of the development process, and assisted communicating the process to the participating youth.

The contents of the workshops during the mid-stage of the development process varied from testing the initial game mechanics with paper prototypes, to designing the character gallery and testing out the digital game development environment to be used in the development. Between the workshops, the new content created and results achieved were implemented on the game. The overall design was thus a collaboration between the experts and the youth participants. The final team meetings will take place in August to assess the game demo before piloting during the Autumn.

2.5 Evaluation of the Process

To gain insight into the expectations of the participants and evaluate the possible benefits of participation, an online starting survey was conducted which will be followed by an ending survey at process end. Follow up interview will also be conducted by a nursing student of Laurea UAS during the autumn. The survey was sent to 15 respondents in Lohja and 12 in Hanko with 15 responses altogether. The response rate in Lohja is 73 % but in Hanko only 25 %. This follows the general pattern in the project of more commitment to the process in Lohja.

The survey focused on the expectations and preferences of the respondents in relation to the game design process. In addition, a ten item general self efficacy scale was included [18] (with a Finnish translation by Härkäpää as described by Aalto [19]). The project timeline did not allow the construction of a specific self-efficacy scale although specificity is acknowledged as an important factor in measuring self-efficacy.

One of the goals of the game design is to make visible to the youth their own capabilities. The target is that at the end of the process the youth have both learned new things as well as learned to capitalize prior capabilities. The 15 respondents so far have expected slightly more to learn new things than capitalize prior capabilities. Items such as familiarity with games, coding, game design, graphics and writing skills are mentioned as prior capabilities. For new capabilities, most are quite general, wishing to learn about all aspects of game development. Also team working skills are often mentioned. The youth list between zero to three capabilities in both questions. In the ending survey, the goal is that the youth will be able to name more capabilities, prior and new, than they anticipated in the beginning.

The self-efficacy scale includes 10 items rated from 1 to 4. The mean of all answers in the starting survey is 3.15. The responses show that the respondents are quite confident on their abilities to solve problems when they try hard enough. Facing opposition or unexpected events, on the other hand, seem to cause more disagreement with the items.

Feedback has also been collected during every team meeting. The questionnaire consists of two sets of closed questions with the first focusing on the content of the event and the second on the conditions of the event. The open questions give the participants the opportunity to make suggestions for game design and future team meetings, list issues that they wish to learn more about and comment all issues freely.

The role of the team meeting feedback questionnaire has mainly been to guide the game design and steer the development process to those themes that especially interest the participants. For instance, the original goal was to get the first digital draft of the game out in January for the youth to evaluate and develop further. As the digital turn was delayed, there was a clear fatigue of ideation and design on paper present in the teams. As the digital platform for game development was presented in March, it provided the game design with a new edge that immediately improved the feedback especially in Lohja.

3 Conclusion

The Zet project is an ongoing case example of participative game design. Therefore, results of its possible benefits to the participants are not yet available. The goal of this article has been to present the framework and design of the project and provide the readers with practical examples of the positive as well as challenging experiences during implementation. Lessons learned may be of use to others interested in supporting the youth in their wellbeing, life management and gaining a future orientation to life through engagement in meaningful activities.

The two game design lines have proven that the sense of meaningfulness is crucial from the point of view of successful engagement. The game design team in Lohja

participated in the first ideation sessions in the game jam and the game development followed the game jam smoothly. In Hanko, on the other hand, the commitment to the game concept was weaker. This might originate from the fact of not participating in the game jam, and thus not feeling ownership of the game concept. In addition, organizing the team meetings in a youth workshop made the activity something that the youth were obliged to participate in. Instead, in Lohja the participation was based on voluntariness and interest. Hence, the youth in Lohja were more interested in games per se, and were therefore an easy target group to work with. In Hanko, the interests of the participants varied more. All these three factors made the game design more challenging in Hanko. The planned schedule and work plan needed to be tailored during the process in order to respond to the identified problems.

Although the process in Lohja proceeded more smoothly, from the point of view of developing the participative process, the lessons learned in Hanko were valuable. Had the project been carried out solely in either one of the locations, understanding of the issues affecting the success of the process would have been much weaker. The Hanko case pinpointed the need for meaningfulness and motivation. As the original goal of the project was to offer the opportunity to engage in game design to all the youth irrespective of their personal interest on games, the Hanko experience forced the project group to think through the elements in game design from different perspectives. By tailoring the process, the emphasis may be placed on issues that are of most interest to the participants. On the other hand, dividing the team meetings into sub teams also enables more varied tasks for different interests. As the participants have different kinds of prior knowledge and interest when they come to the project, their roles in the project may also be varied. However, the feeling of equity within the team is also important; all the team member roles need to be equally valuable to the process.

All the tailoring that is required when working with a diverse team makes the management of the design process challenging. The more concrete the tasks of a team meeting are, the easier it is for the youth to participate even without prior knowledge. The process managements' task is then to fix all the pieces together and make sure to keep the big picture of the game design. The team members need to understand where all the tasks are leading, too. Then, interest to learn more on theory, game mechanics and all the serious aspects of the game concept may be awoken as well. It should also be pointed out that although the process in itself is of importance, the end product, i.e. the game and the ways in which the game may be utilized to fulfill its serious functions, is at least as important. The youth do not participate in the game design only to be engaged themselves but instead, they work as experts whose input is crucial for the development of a game with potential to reach and address the youth pondering on their future.

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