Enhanced Learning Outcome Using Participative Role Play Simulation

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Abstract— The aim of this paper is to explain how a new type of participative role play simulation can be used to improve a learning situation. A learning goal is presented to make a concrete example of how to use the tool. The paper will address the particular learning goal, and how a total learning situation can be created to support the wanted outcome. We will discuss game design principles and the pedagogical benefits of using participative role play simulation and argue why this improves the learning situation. The testing is still undergoing as part of a PhD project and one of the reasons for this paper is to receive feedback from a different target group. We will use examples from the testing of the model and also where only the first part of the model is tested. The last project was regarding netiquette amongst parents and children in elementary school, as bullying on the internet and improper exposure to children has become increasingly harder to combat.

Keywords—participative role play simulation, participative design

I. INTRODUCTION

Role play and role play simulations are not a new way of learning; in fact it has proven very useful to comprehend many subjects to a large and diverse group of learners. However, the suggested participative role play simulation differs from the traditional ways in the way that it lets the learners be part of creating the actual role play, and how it is implemented in a traditional lecturing model. The reason for this is to extend the learning process and at the same time it lets the lectures assess the so far acquired knowledge. The learners need to have gained a certain amount of knowledge from the lectures given, in order to be able to create a role play scenario.

Participation in the development process is well known in different methodologies in Systems Engineering [1, 2]. From Participatory Design Processes [3] we also have a consensus on including the participants. Participation enhances ownership to the product and towards the process. In many cases it reduces the time spent on training for using the new system. It has also been used when new work processes have been developed, in so called business process reengineering. In systems engineering the participants in the development process can be argued to be a learning process on several levels; they might learn about their work processes and how to improve them and they might learn about the system as it evolves from paper prototype to working prototype.

Game designers will argue that being a part of the creation process will take away a critical game design element, hence knowing the plot. The closest game designers will go towards including the users are the investigations regarding the target group for their games and test groups (like beta testers) [4].

Also regarding organizational theatre used in change processes in organizations also have the consultants in to do the role play script[5].

The model can be operationalized as shown in the model below:

Figure 1 The Participative Role Play Simulation Model

The idea with this role play simulation is that not only the role players play an assigned role but they also actively design the roles themselves that they are going to play. For that reason our role is to provide the role players with the environment where they can create these roles and play them. The environments we can provide them with can be computer-based platforms where the role players communicate.

A role play simulation will encompass different situations that characterize the role play simulation task. In participative role play simulations, it is the role players’ responsibility to brainstorm about and find out what those different situations are. The strength of the participative role play simulations vs.
role play simulations come from this brain storming sessions in addition to the actual role playing. Both processes help the role players to find out, understand better and share the characteristics of a role play task both while designing the role plays and actually carrying them out.

Our hypothesis is that having gone through a role play simulation as such with having experienced both processes, the role play simulation participator will easier handle a task when s/he comes across an actual situation that resembles the theory being taught, and the role play task that has earlier been experienced in a role play simulation. Also the solution will be more efficient since the role play participator would have considered the characteristics of the task in depth earlier.

II. EASE OF USE WHAT HAVE WE BEEN MEASURING AND HOW

The data has been gathered using audio recordings, questionnaires and field notes. We want to enhance learning. Testing how we can enhance learning proves more difficult. We might have been able to test how their skills had improved or if they had been better at handling different problems. However, it would still have been difficult to single out the effect of this model alone. In this study we have chosen to measure to what extent they themselves experience a learning outcome.

III. THE PROJECTS

In this section we will present three different projects and a short analysis of the outcomes. Most focus has been on the last project – Netiquette. Here the participation in the script development process was most interesting as two of the authors Nina Ree-Lindstad and Tone Vold were themselves the instructors and had the possibility to discuss and evaluate at first hand if the participants had any learning outcome traceable in the development process.

A. NAMA (Norwegian Army Military Academy)

The project here was done after a play session using Steel Beasts Professional [6]. The participants were cadets at a senior level. During the workshop they came up with a suggestion of playing a plan of action that was previously made up. They came up with roles in order to play the different roles. Then they played the role play simulation using Microsoft NetMeeting as a communication platform. In the plenary phase posterior to the role play simulation they reported to have been confused about what to do and felt that they had learned only little from the experience. However, the lecturer could point out in the dialogue where progress was visible and noticeable.

B. Tretorget

Tretorget is a “regional innovation actor, that has as a goal to be a common good producer for the wood based industry in the Glåmdalen region” [7]. They are providing and facilitating courses and training in a diversity of areas in this region. The model was tested out on a course in Health, Security and Environment (HSE). The participants came up with script ideas and suggestions for roles. The theme they chose was alcohol and drug problems at work. They were quick to brainstorm ideas that the instructor found both interesting and very relevant. One feature that they found particularly relevant was that the workers often are related and befriended and that it thus can be difficult to report suspicions of alcohol or drug use at work.

The platform for communication was Fronter [8]. Fronter is a Norwegian developed web based learning management system. However, it turned out that the computers in use did not have all the components required in order to use the chat system. We therefore had to use the forum which turned out to be very confusing. This and a very unstable internet connection made the role play session more difficult to play than anticipated. However, during the plenary phase they reported having learned from the design workshop as they had the possibility to discuss with the others regarding different situations connected to the topic. They did not come as far as they wanted on the actual role play simulation, but saw the potential. The discussions in the plenary phase were generally positive and they reported that they would like to try this model again.

C. Netiquette at Åmot Elementary School

In our latest project our target group was parents for children in the 2nd year of elementary school. They are people from approximately age of twenty-eight to past forty. A quick round of questions to them revealed that most of them had been on the internet and almost half of them had a profile on Facebook.com. However, only two had read the conditions of the use of Facebook or were aware of what they had agreed to. All the children of the parents present used internet or had access to it.

Several organizations and web pages provide recommendations on how to avoid this exposure and also provide good and sound advice on how to use internet as a good source of information.

We started by giving a lecture on netiquette. This topic very much involves bullying and being bullied with on the internet. As children are sometimes very young when they are exposed to the internet it is important that the school and the parents are focused on the benefits and the dangers of the internet. Since the dangers of the internet is rapidly expanding and and increasingly better disguised, it is important that the parents network and come to agreements on how to teach their children about the do’s and don’ts of the internet.

Due to the time constraint (we were only given limited time) we decided on testing the most important issue;
participatory design workshop. We encouraged the parents to come up with situations either experienced or something they were worried about getting exposed to. Quite a few suggestions were put forward. Here are a few:

1) Unwanted advertising
   “My daughter read the local newspaper online. Then she clicked on an ad on the web page and was directed to a web page that is offering sex toys. Links from there led her to even worse stuff.”
   Possible expansion: child enters unsuitable web page and is exposed to adult material. Parents find out and contacts web page administrator. What happens? How do they ensure that children get access to their website?
   Suggested roles: parents, child, web page administrator of the web site unsuitable for children

2) Teenage bloggers as idols
   “I am worried that teenage bloggers might be an idol for my daughter. There is a 14 year old blogger that has made it as a business idea to blog and has approximately 80 000 viewers. What will my daughter do to attract people to her blog?”
   Possible expansion: child breaks laws to attract viewers by posting improper pictures of classmates
   Suggested roles: parents, child, child’s classmates, classmates parents

3) Gamers
   “My son plays games on the internet. Most of the games are good, but sometimes he plays games that cost money for expansion packs. I have also heard of games that charge your cell phone bill – this leaves us parents with little control”
   Possible expansion: child gets hooked on games that has features that costs money, features that are charged to the cell phone bill. How can this be stopped and how to avoid this?
   Suggested roles: child, child’s parents, “game site” or administrator of game site

All these suggestions have in our opinion good grounds for a role play simulation. As previously mentioned, we were unable to do this role play simulation due to the time constraints on the meeting. However, based on the previous experience regarding the HSE course at Tretorget, this can be a vital part of their reflection phase as they will here reflect for action.

The feedback in the plenary session was that they were very happy with both the lecture, but also with the possibility to “air” some of their own thoughts and get feedback from us and other parents. The feedback from other parents ranged from similar experiences to how to avoid the negative situations. They responded positively regarding having learned from the experience of discussing situations with other parents and us. Some of them expressed this as a good start to get a network started between the parents regarding securing a safe use of the internet for their children.

IV. ANALYSIS OF THE DATA FOUND

At the NAMA the confusion clearly overshadowed the learning. We found that confusion that were not attended and corrected indeed inhibited the learning process [9, 10]. In the eager to make the participants figure out for themselves what they could come up with scripts ideas for role play simulation, there was paid to little attention to their confusion. This indeed made the participants negative towards the project and thus prevented them from reflecting in order to learn.

At Tretorget the participants were given the same input, but had a different approach to the task. They immediately caught on to the idea and suggested different input and roles for the role play simulation.

The difference in the two outcomes, the same approach despite, may be due to the different situations that they are in. At NAMA the participants were in a situation of being students. They are also in an institution where they are trained to give orders and be given orders. They are trained for clarity in giving and receiving orders, and the “orders” given in their workshop lacked this clarity. Also at Tretorget they were in a different situation. Although they were attending a course, they are all in a work situation in their “normal” life. It is also very likely that they have a different approach to dealing with “orders”. In their working life, they might be used to a less “structured” way of being “given orders”.

In the third project we decided on being clearer in our questions. It was no point in being testing out being unclear again to see if yet another group would understand what we wanted to obtain. According to action research principles [11, 12] we acknowledged what we had learned as researchers and decided to improve the models content in the workshop. We thus changed our strategy and were clearer in our questions towards the audience. By clearer we mean more specific with regards to our topic to tie it to relevant topics with them.

The results from this project were as we hoped easier to obtain and the relevance was high with regards to also reflecting the learning objective of the lecture given. They also reported back having learned a lot from both the lecture and the part of the model that we had time to expose them to.

V. CONCLUSIONS

What we can draw from this is that the model – with some adjustments according to audience – seems to work with regards that the respondents either have shown a development (according to lecturer/instructor) and/or that they are reporting back on experienced learning. The model still needs some working on:

- We need to investigate our target audience in order to provide the right level of clarity with regards to what is to happen in the workshop
- We need to prepare for the role play simulation so that we are independent of internet connection and can run the role play simulation on pc’s in network and for instance MS NetMeeting
• We should still hand out the questionnaires as this gives the participants time to reflect one on one and not only in plenary sessions (such as the workshop and the plenary posterior to the role play simulation).

We still believe in the model and will seek to implement this on a wider scale.

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REFERENCES