

Black Blizzard – Designing Role-play Simulations for Education

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Abstract

This paper outlines and analyzes some key design issues we encountered in the process of creating an online role-play simulation (RPS) for a course targeting emergency services personnel. Titled “Black Blizzard” the RPS aims to enable an exploration of typical issues and problems that arise in cross and multi-cultural international collaboration. Focusing on the basic structure of games and on aspects that make good games engaging the paper compares the issues that arose in designing the structure of this RPS with other RPS designs. It then outlines some practical suggestions and theoretical conclusions to help teachers design online role-play simulations that are in harmony with educational objectives while simultaneously deploying good game-play design principles that make it engaging for students.

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Game Design and Education

Games and simulations are increasingly becoming popular for both entertainment and educational purposes – as products of the online games industry become more popular with students, teachers increasingly use them to motivate students to learn. Underlying this are the assumptions that using the new game technologies enhances the learning process because they are fun and that experience is the best teacher. On the basis of these assumptions and a constructivist philosophy that recommends collaborative practices, many teachers have embraced this experiential learning strategy.

However, teachers who are not usually trained in game design, rarely create games that are engaging enough to fulfill student expectations raised by the gaming industry. Consequently, off-the-shelf games, which are rarely modifiable, are being bought and used, albeit imaginatively in educational contexts. The problem is that rather than games being designed to meet educational objectives, educational objectives are sacrificed and altered to fit the pre-existing structure of commercial entertainment games.

The aim of this paper is to outline and analyze some of the key design issues that we encountered in the process of creating an online role-play simulation (RPS) for a course titled ‘International Crisis Management, Communication and Collaboration’. The course aims to provide students with “tools” to better understand cross-cultural issues that may give rise to miscommunication and/or misunderstanding. The role-play, titled “Black Blizzard” (provisional title) is designed to engage students in exploring typical issues where such problems arise.

The paper compares the issues that arose in the design of this RPS with other RPS designs. It focuses on the basic structure of games and on those aspects that make good games engaging. Based on previous research and on the experience of designing “Black Blizzard” the paper elicits some practical suggestions and theoretical conclusions that may help educators design more engaging role-play simulations in particular and online games in general.

Our argument is that if the strategy of using games and simulations to help motivate students to learn is going to be successful it is critical that educational objectives are not sacrificed on the altar of entertainment. But simultaneously, if the ‘fun factor’ embedded in entertaining games is important in motivating students, they cannot be ignored in designing educational games. The middle path that we outline may therefore help teachers to think through how they may create online games that are in harmony with educational objectives and at the same time deploy good game-play design principles that make it engaging enough so that students are motivated to learn the subject matter.

Defining Games and Role-play Simulations

There are numerous definitions of what constitutes a game in the literature on games and game design. Having taken stock of some of the more prominent ones, Salen and Zimmerman provide the following definition “A game is a system in which players engage in an artificial conflict, defined by rules, that results in a quantifiable outcome.” (2003; 80) Role-play games they argue are a limiting case to their definition because they do not necessarily have quantifiable outcomes. They do nonetheless acknowledge that whether or not a role-play game qualifies to be called a game depends on the framework from which it is viewed, as some role-play games do indeed have such outcomes.

Even if we accept this view, there are a number of issues that need to be clarified if we are going to be able to use game design principles in designing engaging role-plays for education. Firstly there is the notion of artificiality and the associated separation between the space of the game and the real world. Salen and Zimmerman insist that there is 'in fact' a distinct boundary between the artificial world of the game and the "real life" contexts that it intersects. (2003; 94)

The problem for role-playing games is that while such a boundary does exist, it is less distinct and more permeable than what their definition of games allows. In order to play a role, a player must ask himself/herself two questions. Firstly 'how should this role act?' i.e. what are the characteristics of the role that would lead the role to act in one-way rather than another? And secondly the player must ask 'how should I play this role?' i.e. what do 'I' know about these characteristics and how would 'I' act if 'I' had these characteristics?

In the cognitive and emotive resonance between these two questions of identity and action, between the imagination and experience, the boundaries of play and reality become less distinct. Yet it is precisely the reflective process set up between the two that makes role-plays such an effective tool for pedagogy. (Linser, 2004)

The second issue that needs to be clarified is their notion of rules - constraints to activity that constitutes 'playing' the game'. In role-play the notion of rules has two senses: the first corresponds to the above, however the second refers to social rules. Every role-play has both social rules that may or may not be made explicit in the design and social rules that are imported by players into the field of play from their cultural position in 'real life'. The social relations between roles constitute a secondary space to those of the players who are like shadows following the roles in the field of play. Perceptions of real social relations are unimportant to players in a game as defined by Sales and Zimmerman. Indeed one can think of them as suspended given that the only thing that counts is following the rules of the game. But in role-plays, social relations, hierarchies and structures are of utmost importance. Indeed a role-play is precisely playing with the possibilities inherent in social relations.

The third issue is the notion of quantifiable outcomes, which from the players' perspective are associated with the objective or aim of the game. In a game players aim to win, or reach a high score. While role-playing, may or may not have quantifiable outcomes, for educational purposes the pedagogical objective and the aim of using the role-play are separable, though not unrelated, to the objective of the game sought by players in the role-play (whether quantifiable or not) and again may be separable from the objectives of the roles.

All three issues above have at least one salient characteristic that clearly differentiates them from games. In games players confront each other (or a digital opponent) directly on the playing field, where as in role-playing games they confront one another indirectly – through their roles. The players themselves remain off the playing field directing the roles' interaction. To the extent that throughout the interaction remaining in character is important to a role-play, players remain shadows of roles on the field.

These issues are important for games designed with pedagogical objectives. If knowledge and understanding of the 'real world' and skills applicable in the 'real world' lie at the root of pedagogical objectives, the permeability of the boundaries, the double sense of rules and the multiple objectives in role-plays are a pedagogical asset that is critical in designing engaging role-playing games for educational purposes.

Perhaps role-plays for educational purposes would be better understood as simulations rather than games. A simulation in our definition is "*an artificially dynamic and closed systemic*

environment in which a particular set of conditions is created according to a priori rules in order to study or experience something that exists or could exist in reality.”

Pedagogically this seems to fit better with the root of pedagogical objectives – the creation, transference and/or acquisition of knowledge, understanding and skills relevant to the real world. Teachers using the experiential learning approach use games, role-plays and simulations to have their students ‘study or experience something that exists or could exist in reality’.

A role-play simulation can thus be defined as ‘*a dynamic artificial environment in which human ‘agents’ interact by playing roles with semi-defined characteristics, objectives and relations (social rules) to one another and within a specified scenario (set of conditions)*’.

In designing role-play simulations (RPS) for pedagogical purposes one must therefore take into account (a) the interplay between these structural conditions in which players are shadows of roles on a playing field that indirectly relates to ‘the real world’ and (b) that pedagogical outcomes and objectives are separable from game outcomes and objectives but must relate to them. In designing educational games and role-play simulations the ‘real world’ must enter if not directly then indirectly.

However, teachers use games and RPS, not because pedagogical objectives can be designed into such experiential activities, but also in order to leverage the motivating, focus and ‘fun’ dimension of games in reaching these objectives. Thus even if we take account of the above, the question remains how to translate these into fun and engaging activities for students? The following sections will outline and compare the ‘Black Blizzard’ RPS with other RPS on the basis of the above understanding of games and role-play simulations.

The creation process of ‘Black Blizzard’

Hedmark University College in Norway offers a course in international crises management, communication and collaboration in which simulations, using the Norwegian army’s simulation center, form part of the exam. The College has decided to extend their foray into simulations and experiment with RPS in collaboration with Fablusi P/L, which provides an authoring role-play simulation platform. This collaboration resulted in “Black Blizzard”. Traditionally, students enrolled in “International Crisis Management, Communication and Collaboration” had to submit two written assignments prior to the exam. The RPS is planned to replace these assignments in the belief that it will give a better understanding of issues in the curriculum.

Given the ‘international’ context of this crisis management course, the pedagogical objective of the role-play simulation is to provide students with an experiential environment to creatively explore ‘tools’ provided in the course and understand cross-cultural issues that may give rise to miscommunication and/or misunderstanding. It also aims to provide participants with awareness and experience of problems and communication breakdowns using English rather than their mother tongue, i.e. to experience the problems they might encounter given the lack of vocabulary and precision in expressing their thoughts in English. Such communication problems are more likely to arise under pressure when they are required to coordinate efforts with international agencies in a crisis situation – for example using the wrong words.

Furthermore, they will each need to research the cultural issues represented by the different roles, and hence, providing other participants with various cultural facts such as gender issues, religious prohibitions (e.g. burial rites, prayer times etc.) clothing issues etc.

The question is how to translate these pedagogical objectives into game objectives that would engage participants and motivate them to use the tools that are part of their curriculum?

We began by brainstorming ideas about an international crisis that might involve Norwegian emergency services. But could not settle whether it would be a terrorist attack, a natural calamity or some other crisis. Simultaneously with attempting to define the scenario we began defining our target group of participants, mostly emergency service personnel from police and fire departments and health service professionals, but also from corporate and government personnel, and invented generally corresponding roles for our scenarios. We reasoned that the role-play would be facilitated if basic knowledge, understanding and skills in our target group could be leveraged to make the interaction more authentic.

The roles we created were first simply fictional but functional, i.e. police chief, English emergency services coordinator and so forth. But as we started creating roles for our terrorist attack scenario we realized that while this may perhaps be a 'sexy' subject, rather than focusing on our learning objectives, a terrorist attack would shift attention unto political issues. Though we may have been able to create a multi-national context that would bring some multi-cultural issues to the fore, we felt that the political dimension of 'terrorism' would tend to dominate the cultural.

Given the secondary objective, though not less important, of highlighting the potential hazards to collaboration in using English by Norwegian speakers under stress, we also began to think of the tasks roles would need to perform. Reading and writing reports in English would perhaps achieve this objective. But that did not seem to be an activity that in-itself would motivate

Thinking of contexts in which Norwegian emergency service personnel have been involved and which at the same time presented them with multi and cross-cultural issues we remembered the Turkish earthquakes of 1999 and 2003. It seemed to us that a scenario based on such an event and in this particular geographic region presents all the ingredients of our pedagogical objective. Not only would Norwegian emergency services be called upon to act in an international context and need to communicate and collaborate with corresponding international organizations in a cross and multinational and cultural context – providing appropriate learning opportunities – they would most likely have to do this in English. A Turkish earthquake scenario to which a Norwegian contingent of emergency services personnel is sent seemed both a realistic possibility and appropriate to our pedagogical objectives.

Returning to the task of delineating the roles, we now added Turkish emergency services personnel, Iranian emergency personnel and Turkish victims and/or foreign tourists. Reasoning that by playing such roles, our Norwegian players will be required to do some research and familiarize themselves with some of the cultural and social aspects of their roles. Moreover, in attempting to play these roles, they could potentially present cultural issues of significance that occur to them during the role-play by creating problems for their colleagues playing Norwegian roles. To create problems for others seemed like something that would motivate students – it sets out the conflict or contest element critical in making games engaging generally.

The above highlights the issues raised in the last section. Firstly the boundary between the 'real world' and the 'role-playing world' of Black Blizzard is clearly crossed. We do expect, and indeed will encourage, students to infuse the game with their professional experience. Our design for the roles, the scenario and location permeate the whole role-play environment with issues, problems and possibilities that exist in the real world and we expect our roles to try out

various solutions to these based on their research, experience and what they learned in the course.

Secondly, in our role-play it is precisely the social rules that are the central problem confronting players. The focus is on the problems that arise in cross-cultural collaborative contexts. It is the culturally accepted rules of interaction that will be challenged. We thus expect our students to become explicit about their tacit understandings and thus to both pose problems to this understanding as well as to find solutions for dealing with these. Game rules on the other hand are going to be few. We may for example include a minimum number of posting per role per day. Or we may impose a rule such as all communication within the role-play must be 'in character'. Or devise a rule that all communication must be in English. There are really two criteria that we think need to be consulted – does it serve the pedagogical objectives and will it provide the role-play with a 'frame' for playing that will constrain players to focus on our pedagogical objectives but still allow play to be engaging.

Finally, perhaps the thorniest issue, our role-play does not specify quantifiable outcomes per se. It is not clear what would constitute a 'win' or a 'score' – would resolving a cultural misunderstanding or identifying it be a 'win' or can we give it a score? And would it apply to single roles or would a collaborative effort count? Would completing a role-profile, or a report be considered a quantifiable outcome? Can we evaluate the degree to which solutions to cultural problems of communication are better or worst? And how many of these are needed to rank players contributions? Clearly a role-play need not have quantifiable outcomes, but would it be useful if we could? Does the fact that our players will be evaluated on effort and postings count as 'quantifiable outcome'?

'Black Blizzard' in comparative perspective

Given the above, the question still remains whether 'Black Blizzard' will engage the students as we hope. Would it be 'fun' to play? And what would contribute or hamper such 'fun'? A definitive answer can only be given after we actually run this role-play. However a comparison with other such role-play simulations might provide us with some clues whether our design is likely to succeed.

Firstly, the role-play simulations we examined were engaging and fun to play when the roles and scenarios were based on real people, organizations and events rather than being fictional. This is demonstrated in comparing a number RPS where events from the real world constituted the bulk of the scenario and roles were particular actors like President George W. Bush, President Hugo Chavez etc. (Linser and Ip 2001; 2002; Hintjens, 2005.) Opposed to this are RPS with a completely fictional scenario and functional roles like Governor of Kandhar with a fictional name (Shaw and Mendeloff, 2007) or manager of a fictional company (Coll and Linser, 2006). In the first case participants were required to research and play what they thought these real people would do under circumstances provided by the scenario that related to the real world. In the second they were required to research the duties of a functional position and play accordingly. The fact that they were playing people and events whom they encounter in the news seems to have made it more engaging because it allowed participants to play with the idea of how things could be different if these people would have acted otherwise. The lack of real world reference does not enable such comparison to actions that such people have taken in the real world.

Secondly, RPS that have few rules of engagement, i.e. allowing participants the freedom to decide when and how to act as they see fitting their role; and fewer prescribed tasks (e.g. write a report and submit it) seem to be more dynamic and enjoyable experience for participants (Linser and Ip 2001; 2002; Hintjens, 2005; Linser, Waniganayake and Wilkes, 2004.) This is opposed to RPS that demanded the completion of a range of tasks, in collaboration with specified roles and at specific times (Shaw and Mendeloff, 2007; Coll and Linser, 2006.)

Participants were more engaged in the first set because it put the decision making power of what to do, with whom to collaborate and when to do it in their hands rather than being told what they must do. Freedom to decide on the sort of actions to take is probably related to the enjoyment one gets from seeing the results of one's own decisions and actions rather than those actions prescribed by others.

Finally, and related to the above, RPS in which quantifiable outcomes were required (Shaw and Mendeloff, 2007; Coll and Linser, 2006) seem to have been less enjoyable than open-ended outcomes that depended on the goals set by participants themselves (Linser and Ip 2001; 2002; Hintjens, 2005; Linser, Waniganayake and Wilkes, 2004.) Quantifiable outcomes that are predetermined such as "reaching a consensus report" diminish the satisfaction that comes with reaching one's own goals.

The above comparisons seem to indicate that, from a structural perspective, engagement and 'fun' is associated with fewer rules, fewer prescribed task to fulfill (allowing roles to create and seek their own objectives), absence or fewer pre-defined game objectives, and clear links to 'real world' contexts and actors. Conversely, the more structured the tasks, rules and game outcomes the less engaging is the RPS. Translated to player's perspective we can summarize these as following: the more control a player has over what they can and cannot do, objectives to be reached and creative transformations of the real world into the game, the more fun and engaging is the RPS.

The present design of "Black Blizzard" has no quantifiable outcomes, and few predetermined tasks and rules. From a structural point of view, it allows participants freedom of choice to determine when and what to do similar to the RPS above that were engaging. On the other hand, our roles are fictional and functional rather than being based on actors in the real world. However, our scenario is based on real world events, though it too is fictional. To what degree these last two elements would lower engagement levels and hamper 'fun' is yet to be seen.

While the above structural characteristics of a role-play can potentially lead to further engagement or lessen it, we realized that 'fun' and engaging games have some other characteristics that we may leverage to make our RPS more engaging. Briefly, we came up with the following list: conflict (competition), feedback that provides immediate results to activity and skill improvement ('easy to learn difficult to master'), humor, and discovery of new elements and possibilities that enable to develop or enhance the role being played. Salen and Zimmerman also suggest 'elegant representation', 'social' 'cool' (Salen and Zimmerman, 2003, Preface)

"Black Blizzard", unlike the more engaging RPS noted above, does not have in-build conflict between roles, though potential conflict is pre-structured in the role characteristics we provide e.g. one role may be given a personal grievance against another role, or Norwegian roles are likely to conflict with roles defined as 'culturally different'. However, the roles do not have conflicting agendas as the roles in the political science RPS do. Feedback in our RPS is structured by the nature of role-play in that other roles will necessarily respond to the actions a role takes. Similarly, skill improvement may not be necessarily immediately apparent, it is likely that participants will notice it. On the other hand the element of discovery is designed into "Black Blizzard" as the roles themselves are expected to 'find' and engage one another with problems and issues of cross-cultural mis-communication. This will probably also involve humour to some degree. Whether our scenario will be an 'elegant representation' of the real world is hard to evaluate at this stage. The social aspect of the game, on the other hand, is clearly present as the nature of all RPS is that they are social by definition – participants play with one another.

Concluding Remarks

While experience and research suggests that using games and simulations is clearly good pedagogy the next step is to infuse this pedagogy with engaging sparkle by implementing good game design principles in the creation of educational games.

In this paper we have focused on structural characteristics of RPS and identified a particular structure that makes it fun and engaging for students. We do not however know whether there are other factors involved in making RPS more engaging and 'fun'. We have not addressed issues such as the age and gender composition of the target group, technical online skills, and prior experience and knowledge of the content. Would a younger target group be more likely to enjoy an RPS than an older one? Does gender make a difference? Does the content? How much conflict between roles needs to be embedded in the scenario?

Still, for our purposes of designing Black Blizzard, we have some guidelines that will help make this RPS an engaging prospect for our students. Is it going to be 'cool'? We hope so.

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