EFFECTS IN SELF-PERCEPTION AND RELATIONSHIPS AFTER A BRIEF EXPERIENCE OF ROLE-PLAYING GAME WITH 7TH GRADE STUDENTS

A. Sousinha, A. Ferreira de Almeida

University of Coimbra (PORTUGAL)

Abstract

The school should be the place of excellence to learn. However, learning means much more than acquiring specific content in academic subjects. Assuming that the training in the school should be based on the autonomy and flexibility of the curriculum, and that meaningful learning requires several literacies [1], multiple theoretical and practical skills, promotion of scientific knowledge, intellectual curiosity, critical thinking, creativity and collaborative work and the 21st century skills are feasible through game-based learning [2] or playful literacy [3]. So, this article reports on a role-play game experience aimed at these competencies and specially to interpersonal relationships and self-concept.

The experience was presented, following a request for a psychoeducational intervention in a school group with complaints of behavior, challenge to authority, breach of norms and lack of cordial conduct, attitudes of conflict, with great heterogeneity of ages, socio-cultural provenance and suspicious situations of (pre) bullying among students.

The experience consisted on the interpretation of characters in a role-play table-top game (RPG) inspired by Dungeons and Dragons (D&D or DnD) [4].

The characters move themselves in a fantasy adventure while actively constructing a story, in an open world of possibilities where each participant decides within the limits of the reasonability allowed by the others and the contexts presented by the narrator, or D-Master (DM). The narrator organizes the game, creates the details describing to the players what they see and hear, presents the challenges, maintaining a realistic continuity of events while controlling the development of the adventure, except in the actions of the characters. Everyone play and take own decisions to solve the problems faced and described by the DM. The decisions are discussed and a consensus must arise or is determined by the narrator's orientations in accordance with the fate and consequences of rolling the dice. Playing the game suppose immersion in the scenarios presented, acceptance of the challenge and a state of flow or focus shifted from the real world to the game world, social interaction and affect generated.

So, by participating in the game, the 24 students of the 7th grade participating were encouraged to put into practice values and competencies identified to be essential to develop themselves as individuals and members of a group.

After a period of 5 sessions, the individual experiences were assessed in terms of flow, self-competence, affection towards the others using de Game User Questionnaire [5]. All the participants expressed pleasure in participating and availability to continue the experience, noting their improved ability to regulate the mood and social behaviour. They also revealed interest in deepening different themes, that means, availability to learn. The students, teachers as well as the observers concluded that the approach was pertinent and should go on within the school context to promote competencies.

Keywords: Game-based learning, RPG DnD, Flow, Self-competence, Interpersonal relationships.

1 INTRODUCTION

Game-based learning, serious games and gamification are trends to modernise and make school learning more meaningful for youngsters. Lots of work has been done to inform this purpose, but in fact, game playing at school is still opposite, most of times, to the learning goals, whether in terms of declarative content, procedural learning or the opportunity to activate and observe competencies [6, 7, 8]. However, more than define what a game is and how gaming foster learning we focus on the elements identified as being meaningful in experiencing play a game [5, 9, 10].

The framework considered is grounded on previous game studies and on relevant psychological theories (e.g. theory of flow [11]).
1.1 The game *Dungeons and Dragons*: a resource for intervention in Educational Psychology

*Dungeons and Dragons* (D&D or DnD) is one of the world’s greatest and known role-playing games. Created in 1974 DnD transformed gaming culture by blending traditional fantasy with miniatures and wargaming, played in a table-top mode as well as in digital environment. The emphasis is put on the story telling, roleplaying, and worldbuilding [12].

The *Player’s Handbook* is the core guide and rulebook, now at its 5th edition (2014) [13]. It contains rules for character creation and advancement along the campaign, backgrounds and skills, exploration and combat, equipment, spells, etc. Besides DnD core rulebooks, there is a Monster Manual and the Dungeon Master’s Guide. The Player’s Handbook is the foundational text for beginners and for veteran players, too.

Each character is created upon an alignment chosen between good and evil with nuances from lawful, through neutral to chaotic. The alignment characterize the “hero” or “heroine” that play its role in a story, rolling dice and navigating maps as the tale is unfolded as limitless as imagination.

There is a moral psychology implicit in the DnD alignment system [14]. Each character is defined attending to six categoric abilities: strength, dexterity, constitution, intelligence, wisdom, and charisma. A player must also choose the race of the character within Dwarves, Elves, Half-Elves, Halflings, Gnomes, Half-Orcs, and Humans. The “races” are species, each with special abilities and handicaps that modify their ability scores and skills during the game. The player also chooses the class of the character, depending on the kind of training the character possesses (fighter, rogue, cleric, druid, wizard, rangers, monk, sorcerer, paladin, barbarian, bard).

After the class is chosen the player must choose skills, feats, equipment, weapons and spells.

Lastly, players choose an alignment for their character that is meant to determine the motives and value set of the character. Examples of alignments are lawful good, chaotic good, neutral, lawful evil, chaotic evil, ... Alignment provides a template to guide the behavior and interactions within the campaign; campaign is a term denoting the current set of objectives and story line being participated in during the current game sessions. Characters develop over time in these games.

Characters advance in level by gaining experience points. Experience points are rewarded for victories over challenges and adversaries. There is regulation in function of a morality evaluation; players get involved in the game, being emotionally engaged even knowing their investment is in something fictional. The “paradox of fiction” asserts that the player knows that his /her reactions aren’t really, but are pretending; he/she knows that his/her character is fictional as well as the events in character’s live; and players feels some impact of the fictional events. Individuals do not change or suspend their beliefs, but willingly get involved in games of make-believe. Players might have real emotional responses to things that aren’t really happening, but are “true” in the fictional world. “D&D offers you the ability to be your own protagonist, to interact to other protagonists, and to have a bit of control over what kind of narrative develops (the DM has ultimate control, but we like to think even in D&D we have some say in our own destinies) (…) And just as in the real life, the more a fictional world is talked about, navigated, and conquered, the more real it become to each of the players. (…) D&D allows players to cross the threshold from third person to first person, from persona play to role-play, and from observer of a fiction to participant in that fiction. …; this transition (…) allows for a kind of immersion in and engagement with the fictional world that neither other kinds of games nor other kinds of stories can offer” (p. 205) [15].

The game ends when the participants are no longer able or willing to continue. There is no winning or losing the game, but an imaginative co-construction which allows each player the freedom to excel in the creative ability to solve problems through collaboration.

Jon Cogburn presents each “profile” (e.g., lawful good), in the light of a philosophical analysis of morality. He calls Mary Sirridge argument in “Truth from fiction” (1975) saying that “one of the primary ways we learn from fiction involves the use of archetypal characters to help us understand certain personality types. This is why story-telling is a central part of moral education in all known human cultures. We learn different ways to be virtuous, in part, by learning about archetypes who instantiate these virtues” (p. 33) [14]. Later in the text, the author reminds that in real life, just as much as in fantasy, the world needs heroes.

Knowing the benefits of role play games as successful social instances to acquire social competencies [16, 17, 18], DnD was the way we’ve chosen to immerge students in a collaborative experience to
increase their feelings of belonging and decrease their social anxiety, allowing them to interact with their own emotional contents by role experimentation through their characters and monitoring social skills [19], although the experience took care of reporting the context of the fantasy of the play session.

1.2 Playability of DnD, self-competence and supportive relationships

The gameplay is the set of elements responsible for providing the player with a fun, significant experience of immersion, essential for the player’s involvement. Basically, these are the rules that allow the player to act. The interactions result in affects (positive or not). A game motivates the player’s interest if (s)he perceives it as achievable by his/her abilities but, at the same time, represents a challenge, but not so difficult that the user anticipates that (s)he will not be able to dominate or control it, which can cause the player to abandon by the frustration or anxiety felt. This balance is defined as flow [11]. The flow keeps the player in the interaction situation, in order to overcome the challenge by activating this/her skills, making the game competitive and interesting, thus causing a greater immersion [20]. Playability concept is not only flow because, according to Csikszentmihalyi, all flow inducing activities become spontaneous and automatic. That is not the case in DnD; but the will to controlling the game should be spontaneous and automatic.

Immersion resembles flow experience, but while immersion can be defined as a sensation of being surrounded by a completely other reality taking over all of our attention and imagination, in flow a player directs all attention to a certain goal in the activity. Immersion means becoming physically or virtually a part of the experience itself, most powerful when the player can achieve the flow state, a balance between challenges and abilities. Imaginative immersion enables the player to become absorbed with the stories and the game world, identifying him/herself with game characters and enjoying the fantasy of the game [21].

Fantasy play contributes to the development of a sense of oneself in relation to others and builds an understanding of the rules and roles of their community and culture [22, 23]. Role-playing games offer players opportunities to work on their self-concept and to further develop their personal identities [24]. Play a role is a tool for behavioral and symbolic learning [18].

There is no other way to promote emotional and social skill either than in social environments. Physical proximity, social proximity, and familiarity determine the formation of social support through gaming [25].

Dungeons and Dragons is a challenge to imagination, active engaging in social play through attention to ongoing game play by more than one person at once, having some game elements but also characterised as a story-telling situation [14]. Massively Multiplayer Online Role-Playing Games MMORPG is a genre of role-play games where many users can interact with each other, and that has its roots in the table-top DnD role-play game.

2 METHODOLOGY

Resuming a series of definitions of game from Huizinga to recent contributions, Jesper Juul characterizes a game in function of six aspects: “A game is a rule-based formal system with a variable and quantifiable outcome, where different outcomes are assigned different values, the player exerts effort in order to influence the outcome, the player feels attached to the outcome, and the consequences of the activity are optional and negotiable” (p.255) [26].

About a RPG like DnD, we must specify that the rules are covered by a story. The user of the game has an active role in the interaction process, and our focus is on the psychological implications that the user may have after engaging with the game. Studies based on gaming or analyzing playing games inform the design of games aiming learning and competence training or the design of serious games [27].

This is a game-based study of competence in a situated context [28]. It is an exploratory action research regarding the impact of the DnD role-play game on the interpersonal relationships and self-perceived competencies of a 7th grade class.

The experience took place in a school, within the activities plan of the Student and Family Support Office, to respond to difficulties in complying with classroom rules, self-control of behavior and heterogeneity reflected in conflictual peer relationships. When playing role-play games, the players are simultaneously moving in a virtual, in their real-world, and evoke their projective identity [29].
The experience was supported by a narrative adapted to the context, following the manuals in the application of the rules of the game of interpretation of characters of the DnD. Participants started by creating their character, after they were presented with the setting.

They were all informed of the proposal which purpose would be to participate in a fantasy adventure that was intended to be fun, where everyone would participate, and whose main challenge would be to imagine solutions to the different situations with which they would be confronted. From the outset, the narrative suggested that each group of players would engage in a campaign and that each player, with his/her attributes and equipment, powers and decisions would contribute to the shared success of the group. The rules were clarified and the entire game process observed and monitored.

The class was divided into 4 groups and each had the experience of playing during 5 biweekly sessions (2 groups each week) over three months (3rd term of 2017-18).

Although brief intervention in only 5-sessions, at the end, the experience was assessed by responses to the game experience questionnaire [5], about sensory immersion and imagery, self-competence perception, flow state, recognition of acceptance, involvement and empathy, positive affect, feelings of tension, annoyance or discomfort.

2.1 Participants

There were 24 students of a 7th grade class, in a school located on the outskirts of the Portuguese city of Coimbra. Participated 12 girls and 12 boys with ages between 12 and 15 years old (mean age: 13y).

2.2 Instruments and procedures

After signalling the class as having relationship and behavior difficulties hindering the process of teaching and learning, the school management agreed to promote a citizenship training by active participation in the proposed game (more likely to happen in non-formal contexts). With this experience, we wanted to reconcile the school “request” with the learning potential and activation of higher order cognitive processes (e.g. creative problem solving, decision making, anticipation of consequences, etc.) and non-cognitive listening attentively, acceptance of diverse opinions, involvement, empathy, ...) from a game approach and taking a framework of game experience [10] as shown in figure1.

\[\text{Figure 1. Model to analyse game experience (adapt. from Savi et al., 2010) [10].}\]

This model was translated into a questionnaire applied to game user experience.

The questionnaire resulted from other previous studies, namely that by partners in the project FUGA: The fun of gaming: Measuring the human experience of media enjoyment [5]. That instrument has a
modular structure consisting of a core questionnaire, a social presence module and a post-game module. The scoring took into account the components of Competence, Sensory and Imaginative Immersion, Flow, Tension/Annoyance, Negative affect and Positive affect.

The adapted questionnaire used in this study was applied post-game consisting in the core questions and also in the items referred to the social presence. From this compilation resulted a 50 items questionnaire about recalling game experience plus 20 items reflecting about feelings post-game. The answers were asked into a 5 point Likert scale, for intensity of thinking and feeling from 1= nothing to 5=extremely.

The scoring was made in the components of the theoretical model considered by FUGA project.

3 RESULTS

This action research is exploratory regarding the impact of the DnD role-play game on the interpersonal relationships and self-perceived competencies, in terms of being able to engage, persist in a task, comply with guidelines, response to the challenge, acknowledge own abilities, self-control, empathy, cooperation and competition.

So, data included observations of game-play and post-play questionnaires about the game experience.

Next, there are the descriptive results of the adapted game experience questionnaire.

3.1 Game experience questionnaire results

At this point, our goal is to analyse the results obtained through the questionnaire. It was applied anonymously. Although we have collected characterization data such as the perception of the level of school performance, playing habits, ..., in this place we only discuss the results in terms of self-perception of the own competence, immersion, state of flow, tension, response to challenge, negative and positive affect and of perception about the relationship with the peers. This is due to the fact that the intervention was requested, with a view to improving those aspects.

As we can see in table 1., the mean values about how the students perceived immersion and positive affect during de game play oscillate between the points of the scale relative to the general appreciation of quite and extremely. They saw themselves as quite competent and in flow, perceiving their low or moderate response to challenge. But they point out not to have bored or identified negative effects.

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<tr>
<th>Table 1. Descriptive statistics about the components of game user experience.</th>
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<tr>
<td><strong>Self-Perception</strong></td>
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<td>Competence</td>
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<td>Sensory and Imaginative Immersion</td>
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<td>Flow</td>
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<td>Tension/Annoyance</td>
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<td><strong>Social Interaction / Relationship</strong></td>
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<td>Psychological Involvement – Empathy</td>
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<td>Psychological Involvement – Negative Feelings</td>
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<td>Behavioural Involvement</td>
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<td><strong>Post-game Perception</strong></td>
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<td>Positive Experience</td>
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<td>Negative experience</td>
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<td>Tiredness</td>
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<td>Returning to Reality</td>
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In terms of relationships, they recognised that they felt quite empathy towards their peers and that they felt moderately involved.

Generally, the experience with the game was positive and they showed up in order to continue the campaign.

4 CONCLUSIONS

Taking DnD into school context as an educational game to promote emotional and social skills counted on student’s engagement and assumes the potential of the activity to engage students into a flow experience [21]. Also, the Dnd inspiring story telling was an artefact to arouse meaningful immersive experiences. “gaming group, motivated my mutual enjoyment of time together and a shared passion for collaborative story-telling, is an offline version of the affinity space. Sharing authorship in a joint enterprise of story building, we learned from one another as we co-constructed new identities” (p. 10) [28].

DnD revealed to be an useful tool in studying game-based learning experiences, namely, in self-perception of own competences and interpersonal relationships with good results. As an immersive fantasy role-playing game allows players to fulfil real-world social needs through interaction [23].

The gaming experience was felt to be positive for the favourable perception of oneself and approach to the others, showing that such an approach was relevant in the school context.

The students expressed their pleasure and desire to continue the experience, in a path of self-knowledge and peer discovery.

We read the results of moderate response to challenge and involvement as some lack of autonomy and due to the few opportunities that they have in the daily school life, to participate actively in the planning and implementation of proposals and decision making.

Both in the responses to the corresponding items and in the open response, several participants reported that the game allowed them to see that they are more capable than they could think they were, and that this knowledge made them feel good about themselves, trustful and self-confident.

For the short duration of the experiment it was not possible to test impact indicators at the effective level of: autonomy, responsibility and other skills such as communication or problem solving. But direct observation resulted in the ability to comply with rules, exercise of imagination, decision making, openness to others, being noticed by the teachers better interpersonal relationship and cohesion in the group.

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REFERENCES


