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Review Article

Role, play, and games: Comparison between role-playing games and role-play in education

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ABSTRACT

This article compares educational role-play and role-playing games in education by examining their definition, similarities in their elements, differences current use, implication of the elements of educational role-play and role-playing games, along with phenomenon unique to role-playing activities shared by both. This article will also outline how elements of educational role-play and role-playing games can aid in implementation of transformative learning, along with precautions and special attention that must be taken to conduct a role-playing activity in education.

1. Introduction

Both educational role-play and role-playing games (RPG) are similar in names and some of their core concepts. However, discernment should be applied. Role-playing, as known in pedagogy, should not be used interchangeably with RPG. Currently, some research do not give clear boundaries between educational role-play and RPG, using the term while failing to consider game elements of RPG. An example of this is shown in research by Ivanova, Dimitrov, Ivanov, and Prokopovych (2021) about a method to educate prospective teachers where an educational role-playing method was used as an example of RPG implementation. While great in showing the power of simulated environment and role-taking, the study takes an educational role-play and puts it inside a game, propping it as an example of role-playing game with simulations included. This could potentially blur the line between educational role-play and RPG, confounding further method development and studies.

While it is a relatively new topic in education compared to educational role-play, there have been many studies explaining the benefits of RPG in formal education. Those benefits include assisting students to learn different subjects (Zalka, 2012), increasing literacy drive (Kaylor, 2017), and aiding in social skills (Spinelli, 2018). The beneficial qualities of RPG in education are to be expected. After all, the concept of role-playing in education, while not necessarily done in a gaming context, is a well-documented method used as early as 1946 in the work of Lillian Wald Kay: Role-Playing as Teaching Aid (Kay, 1946). Moreover, while RPG exclusively only exists in the gaming context, it has similarities to role-playing in education.

RPGs have inserted themselves into current culture, gaining increasing popularity following the opportunity of digital distribution and digital integration of a previously analog media (W. J. White et al., 2019). Example of such distribution can be seen in services such as D&D Beyond that provides quick access to Dungeon and Dragons sourcebooks. Despite the widespread use of educational role-play and the current popularity of RPG, there is an extensive literature gap in bridging and comparing educational role-play and RPG. The lack of comparison between how both are used in education might lead to misconception and failure to understand the specific element of RPG that can help the learning process.

This article attempts to bridge the gaps between educational role-play and RPG by analyzing their concepts with theoretical approach in various terms. First, by outlining their definitions and comparing them to understand the fundamentals and function of educational role-play and RPG. Afterward, we will look at how the same concepts are used in a similar yet different way in educational role-play and RPG and the implication of these similarities to those that wish to use RPG in their classroom. We will examine how educational role-play and RPG develop and what forms they took in their respective function.

2. Literature study

Before going further, it is important to understand how the current literature and sources define Educational Role-Play and Role-Playing games. A group of people gathering to play Dungeons and Dragons

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will look very different from a classroom of students role-playing to be a therapist for their future career, a different understanding of the experience is also gained from viewing students playing an educational game to learn a foreign language. All the examples above are doing the act of playing a role, despite their apparent differences. In this observation, questions can be raised. How does role-playing games and educational role-play differs from each other, what similarities do they have, and how can they both be used in education?

2.1. Defining educational role-play and role-playing game as a continuity in education

Both educational role-play and role-playing games can be seen as a method in education. Westborg (2022a, 2022b) in her lecture, outlines how educational role-play and role-playing games are both part of greater theme on how role-playing games can be used in education. In this, Westborg characterized role-playing activities based on their dimensions of physicality, and to what extent characters within the activity is used as a mask by their participant. Using these dimensions, an educational simulation can be rated high on 'physicality' scale, and low on 'character as mask' scale for example. Furthermore, Westborg also categorized the use of role-playing games in education into two axes. The first axis is gameplay design, encapsulates rules, design, mechanic, relationships, and general plots. The second one being framing design, aspects of activities that can happen before, during, and after play experience to frame the whole components. Both axes are a continuum with 'Leisure' and 'Educational in both of their end. Westborg's model show that educational role-play and role-playing games are both a different form on how role-playing games are used in education. However, to understand the concept of educational role-play and role-playing games further, it is important to also see in what other ways educational role-play and role-playing games is defined.

2.1.1. Definition of educational role-play: Is it a simulation?

Role-play, in educational term is defined as an instructional method where learners take on the responsibility of representing different character roles, within predefined, often realistic, scenarios (Bawa, 2022). Furthermore, Bawa (2022) also explained that educational role-play requires scenario that facilitates the learning objective, role for the participants to play and the relationship between multiple roles, and facilitators to ensure that there are directions within the activity so that it stayed relevant to the subject matter. Commonly, role-playing is used to prepare participants in a real-life situation and allow cognitive and social development via exploration (Cherif & Somervill, 1995). Role-play is also noted to be an activity that touches multiple educational activity domains: cognitive, affective, and psychomotor, as described in Bloom's taxonomy (Rao & Stupans, 2012).

A different definition is provided by Lean (2006), where role-play in education term is defined as a type of non-computer-based simulation game. Which is further divided into interactive and non-interactive activity. Lean (2006) described simulation in this context as approach to imitate a system, entity, phenomenon, or process in order to represent issues or problem that are currently being studied. This definition of educational role-play involves the terms game and simulation. Both being concepts of their own in ludology. It is interesting to note, that both Lean's and Bawa's definition on educational role-play involved a representation, a simulation, of something that does not appear in its original form in the role-playing activity. For example, students role-playing in a history class to be Roman senators are not senator standing in the senate, they are students playing the role of Roman senators, with the classroom transformed into the senate hall.

Harviainen (2022) described simulation as representation of a facets of reality, which can be a part of the real word around us or a fictional one. Furthermore, simulation can range from one that give its participants no agency, and one where inputs from participants shape how the activities happen. Judging from this, role-play in educational can be seen as an instructional method that involves some form of simulation, where reality is represented with a reproduction of another activity within a frame of play. Note that this 'reality' can also refer to representation of a reality in a fictional world with coherent rules.

2.1.2. Definition of role-playing games

Although also using the same term of role-playing in its name, RPG differs significantly in how its elements are defined. RPG can be defined as what is created in the interaction between players or between the player(s) and gamemaster(s) within a specific diegetic framework (Stenros & Hakkarainen, 2003). Therefore, the definition provided by Stenros indicates the existence of several components within an RPG: players, gamemasters, interaction, and a specific diegetic framework that determine what is right within a game.

In an attempt to elaborate further what an RPG is, a set of features was discerned about components within an RPG that classifies it as such which are: (1) a game world, which is an imaginary world where players are free to explore within it; (2) participants, which are divided between players and referees; (3) characters, which constitutes a defined individual within the game that is classified with both quantitative and qualitative terms and can develop through their interaction with the game world; (4) game master, defined as the person having control over the game world beyond a single character and tasked with adjudicating rules of the game; (5) interaction, which is how the player interacts with the game world through their character via a wide range of options; (6) a narrative, portrayals of sequences of events within the game world that give the game its narrative elements (Hitchens & Drachen, 2008).

To summarize, RPGs work through a system ruled by its diegetic frameworks, a system of unique portrayal on reality and things work in an RPG. For example, in Dungeons & Dragons, a character must roll a 20-sided dice and get a result high enough to successfully climb a cliff. Using that framework, players create their character and play a role adjudicated by the game master. The role of the game master is to present narrative scenarios such as 'rescuing a noble' within an imagined world. The fictional world is set as a stage and space to interact with both the world itself and other players through the medium of a character (White et al., 2018).

2.1.3. Diegetic framework in RPG and educational role-play

Diegetic is a narrative concept from theatrical and film art, defined as a sum of a film's denotation, not only the narration but also fictional space and time dimensions implied in, and by the narrative, and consequently the characters, landscapes, events, and other narrative elements (Metz & Guzzetti, 1976). While the concept was used by Stenros and Hakkarainen (2003) to explain role-playing games, the diegetic framework also exists in an educational role-play, albeit in a different way. Diegetic framework inside RPG will focus more on world-building and how players can influence the components if this world with game mechanics. Whereas the diegetic framework of educational role-play might focus more on how the narrative elements can support the educational purposes of the activity.

2.1.3.1Definition: In conclusion.

In examining Westborg's view that educational role-play and role-playing games are both part of greater theme on how role-playing games can be used in education, along with multiple definition by theorists on what constitute educational role-play and RPG, we can see that there's apparently not that many differences. Terms that are used to describe RPG can also be applied to educational role-play.

An educational role-play can be contained within a diegetic narrative world. It can only be played with participants, the participants play characters, and they interact with each other through series of narration. All the qualities of RPG are present. Vice versa, RPG contains elements of representation of reality, be it a true reality or a fictional one, reproduced within the frame of the game, which shows the characteristic of role-playing activities defined in educational role-play.

Then, the only differences being that RPG uses the term 'game' within it, which will be explained further later, and that educational role-play positions its players as learner, with a goal in education rather than as a leisure activity. This goal in education requires facilitators so that the activities in term of available action and choices is kept within acceptable range for the educational goal to be reached. For example, students role-playing a historical re-enactment cannot disregard their script and change how the story goes, that will break the goal of teaching history through educational role-play. To further understand the differences between the two, perhaps paradoxically, we must delve into the similarities in the elements of educational role-play and RPG.

2.2. Role and play, the similarities between educational role-play and RPG

Both educational role-play and role-playing games contain the element of 'Role' and 'Play' within it. Grasping these similarities will be beneficial to further understand their differences and how they can be used in education.

2.2.1. Role in educational role-play and role-playing game

A role can be described as several sets of behaviors grouped together (Turner, 2001). Role can exist in terms of how a person is marked through a society's cultural value, whether in a favorable light or not, and how they position themselves related to other individuals (Lynch, 2007). Hence, someone may be a 'Father' in one circumstance and a 'Client' or a 'Clerk' in another situation. Each role comes with its distinctive list of societal expectations regarding that individual (Montgomery, 1998), and it is possible that roles can conflict with each other.

In educational role-play, a role is assigned following the educational needs. For example, a medical worker in training will be a fully-fledged medical professional currently attending to their patients (Rønning & Bjørkly, 2019) and conduct themselves in the exercise adhering to a set of expectations expected from the role they are currently playing. The role is imagined because they are not performing in the field, yet it is still treated as a real one in the concept of 'play' and carries the same expectation and interactional value.

The same can be observed in RPGs. A character that is created within the game world does not exist in a vacuum. They come with an imagined role that is connected to the game world. This role can be connected to a game mechanic or a societal relationship that mimics a real-life experience. For example, should a player create a character that is a clergy member of a specific religion in a fantasy world, other players, through the medium of their character, may expect them to act in a certain way or have a particular way of seeing things under this fantasy religion.

Overall, it can be said that the concept of role exists similarly in educational role-play and RPG. Both roles in RPG and educational role-play still function as social role. Clergy member of a fantasy religion is a social role, same as medical students currently roleplaying as medical professional. Each come with their own expectation. The 'unreal' aspect of both educational role-play and RPG allows for reduction in serious consequences of the role (Deterding & Zagal, 2018). Roles in RPG and educational role-play can be entered and left at will, and it should it be broken, the social consequences will not be as severe as roles depicted in educational role-play.

2.2.2. The implication of role concept for education

The existence of roles in both educational role-play and RPG means that both can be used in education, especially to teach about the expectations and behaviors that come with bearing a role in society. Among younger individuals, the act of imitating the role of others comes naturally. It can be used as an aid in education and therapy (Biddle, 1986), and as such educational role-play and RPG provide a good building block for students in the form of a structured session that touches on all four fundamental concepts of role theory summarized by Biddle (1986): consensus, conformity, role conflict, and role-taking.

Role-play sessions can teach students about the agreement of expectation that must be discussed and enacted by various people involved in the activity as a model for society, teaching the concept of consensus. For example, in educational role-play that teaches real-life skills, there must be an agreement on who acts in what capacity and is expected to do what in a specific simulation. In RPGs, a consensus must be reached among players. Expectations must be set on what each player will do when faced with challenging situations given by the game master. Failure to do so will lead to confusion and the inability to overcome the task. For example, a player playing a character with proficiency in lock-picking will be expected to open locked doors, just as a player playing a healer role will be expected to support the wellbeing of other characters.

Role-playing activities can also facilitate the second key concept of conformity. Through role-playing, students can experience the cause-and-effect relationship happening complying to a pattern of behavior. In educational role-play, a student is expected to act in a way that fits the norm that they are currently playing and can expect to receive sanction from being non-compliant in the form of feedback and criticism. Students role-playing as therapists for real-life skill learning will have to conform in their role by obeying the norms they learned during the role-play session. In RPGs, a similar act happens. Players not conforming to their expected role could receive consequences in the form of criticism and earn the ire and dissatisfaction of their group. Similarly, both experiences will allow participants to reflect and gain insight into the importance of group norms attached to the roles they take.

The third key concept, role conflict, can be presented well in educational role-play and RPGs. Role conflict is what happens as a result of incompatible expectations between individuals. Those subjected to role conflict will feel pressure and stress and be required to resolve the conflict by taking coping behavior or adapting to the demand. In educational role-play, this could be triggered by presenting a social scenario where conflict will happen due to taking a role and interacting with another person with a clashing role. This can happen when a player wishes to play a character that takes multiple roles in RPGs. Such as when circumstances expect a character designed to be good-natured to do a cruel act to further the objective presented.

The last essential concept of role theory is role-taking. Role-taking can be described as an effort to attribute others' expectations accurately. This act requires the sophistication of social thought. To take a role, someone has to presume that others also expect that they map the thoughts and actions of another person. This concept is linked with empathy that can help in judging others' expectations accurately. In educational role-play, students must understand how other players in different roles will view their roles and act based on those expectations. For example, students taking the role of a first responder in medical role-playing can be expected to capture what they are expected to do in their current role based on their judgment on the expectation of another student taking the role of an injured patient.

Role-taking can facilitate perspective-taking in its practitioner. Perspective-taking is an appreciation for other's view and understanding of other individuals' unique psychological point of view. This is gained through imagining the experiences of other, the activity that is the core of both educational role-play and role-playing games. Perspective taking have been linked with altruism, empathy and understanding of other, further outlining the beneficial quality of role-taking in both educational roleplay and role-playing games (Hammer et al., 2018).

In RPG, during the game sessions where a series of events are introduced in conflict sequences, players will be expected to complement each other and understand each other's role to fulfill the challenge given by the game master. This can come in the form of knowing what will be done by all other characters present in the scenario based on the player's cognitive ability to accurately predict what will be done using their understanding of character roles.

2.3. 'Play' in educational role-play and role-playing games

Up to this point, the concept of how both educational role-play and RPG utilize the idea of a consequence-free, safe artificial space has been examined. This shared concept, unsurprisingly, is found in the definition of play. 'Play' is a common element in both role-play and RPG despite their differences. Play is a significant, instinctual, and fundamental activity of a human being. Through this voluntary activity, a person can step from real life into a temporary state where rules apply differently with a disposition on its own. This temporary state is aptly named 'Magic circle,' a clear defining limit of the spatial, physical, and psychological border between the state of play and non-play (Stenros, 2012).

Since time immemorial, the act of playing has influenced culture, art, and the process of learning (Huizinga, 2014). The fact remains true with regards to role-play and RPG. It had been stated that the pervasiveness and broadness of the act make attempts to figure out the formal definition of play difficult (R. E. White, 2013). However, Larsen (2015) proposed a formal definition of play, viewing play as a spatial doubling phenomenon that assigns augmented content to an activity. This definition means that play is a play if it creates and imposes a manifestation of mental augmentation into an otherwise mundane activity. In educational role-play, an instructor assigns a mental augmentation in the form of a situation or case presented for learning. Whereas in RPGs, the entirety of the game imposes a meaning of play into the act of make-believe. Through the lens of play, the act of pretending to be a character in a game world is transformed into something else. In conclusion, both educational role-play and RPG carry the element of 'play' with its benefits and functions, albeit expressed differently. The elements of play that in principle can aid in learning and understanding oneself and the world (Huizinga, 2014).

2.4. Defining 'game' in RPG

Both educational role-play and role-playing games include the concept of 'role' and 'play'. Yet only one of them include 'game'. What is game, and how does game different from play? Walter (2003) differentiates play and games as different yet connected concept. Play is defined as open-ended territory that hinges on world-building and make-believe as its crucial factor. Whereas games are confined areas that challenge the interpretation and optimizing rules and tactics. Walter (2003) divides non-play, play, and game as a different state in a continuity, marked by transgression of one state in order to transition to another.

For example, someone could pretend that the floor is made of lava, and the living room furniture are rocks suspended in the fiery river. This marks the transgression from a state of non-play into play. Furthermore, one could also impose a rule, a pattern that can facilitate tactics and different interpretation. In the case above, after pretending that the floor is made of lava, a rule is created that touching the lava for longer than 1 s will kill you, and if you cannot reach the end of living room in 2 min, you will die from the heat. Thus, one must think of the optimal route to cross the room in time. This marks another transgression, marking the movement from play to game. It can be summarized, that play is a prestep that is a necessity for game to happen. All games are play, yet not all plays are games, this in an important distinction to note.

Game element involves robust rules that aim to simulate reality, a diegetic framework of worldview, and systems that invoke stable continuity both in character currently played and in the state of the game world. Within this rule, each action and outcome are calculated and decided based on it, enabling the concept of winning or losing (Zagal & Deterding, 2018). Take for example, a play session of Dungeons and Dragons. A group of players playing as adventurer within a game session can fight a dragon, they will keep track of their character's health in form of hit points, rolling a certain number on a 20-sided die will enable a character to strike the dragon when their bonus number in character sheet added to surpass the dragon's armor class. Should the player character's strike the dragon enough time, and add sufficient damage, the players fulfill the winning condition of the combat by defeating the dragon.

In LARP, this concept of winning and losing in a game can be defined as whether a goal is desirable or not to pursue according to player as opposed to winning or losing. Players can define their own personal conception of winning and losing, they can plan or strategize using game mechanics to pursue this goal regardless of the existence, or none thereof of an actual win or lose condition. Montola (2009) explained that existence of a goal that accepted within diegetic frame is a key on whether a game can be defined as a game or not, but this goal is endogenous in nature, stemming from the diegetic nature of the experience. For example, goal of 'collecting all the relic and claim the throne', is an endogenous and diegetic goal.

Stenros and Montola (2010), explained that goal in Nordic LARP is often a complete illusion, and losing oneself in a character is often seen desirable. In some games, sometimes there's not even a condition of winning or losing. Yet, Nordic LARPs are undoubtedly a form of a game. The actors described their activities as games, there are mechanics in place, rules imposed to its participants, and elements of strategizing within set rules also exist in many forms within it. Thus, it can be summarized that game element within role-playing games enable its participants to seek a goal, facilitated by rules and diegetic elements of the game. In other word, player's exogenous goal transformed into endogenous and diegetic goal.

Then, in what state does an educational role-play cross to become a role-playing game? Based on Walter's theory of transgression between states of play into games, the moment that a player sees there's an objective to be accomplished, possibility of using rules both as tools and as constraints in this endeavor. At that point in time, the act of playing for that individual, become a game. Consider, for instance, a class about leadership held a role-play session. In this session, a student act as a leader in a discussion regarding a fictional town, in which they are a councilmember, and must lead the group through several topic. However, knowing the grading standard for this activity, what actions can lead to extra credits, and what words can make him be seen favorably by the lecturer, he intentionally engineers the discussion to includes those criteria to maximize his gain. The activity of role-playing, for that student become a game, to strategize and maximize.

Why is it important to mark these differences, to put line between play and game in the first place, if it is so easily transgressed and fickle in its boundaries? Walther (2003) argues that in a game, it is important to keep players in a state where they both are playing and gaming, while gaming. Otherwise, the illusion that create a game will be shattered, and players are thrown back one step into state of play.

Walther's concepts were applied in context of computer gaming. However, the same principle can also be applied in using RPGs and educational role-play, it is important to make sure that participants are in a state where the facilitators want them to be. If we want participants to focus on playing, on investigating semantics and interpret their experiences then transgression into next step of game must not happen. Consider the previous example on role-play session as a town councilmember. A student that haven't transgressed yet into gaming territory will stay in play state interpreting his experiences playing role of a councilmember, and gain the intended lessons from it. However, a student that transgressed into game state will turn the experience into strategizing and maximizing grades gained from it.

Likewise, should RPG be used as an educational tool on purpose, it is important to keep players in a state of 'gaming', where they understood the system, try to strategize within it, and taking the game seriously. Transgression such as inconsistencies or breaking of immersion will pull the players back to 'play' state, where they are not interacting with the objective of the game that might be crucial in the designed learning goal.

Thus far, we have examined the definition, elements of 'role', 'play' and 'game' in educational role-play and RPG. The table below will serve as summary of these elements (see Table 1).

Table 1
Similarities and comparison.

Elements	Educational role-play	RPG
Definition	Instructional method that involves some form of simulation where reality is represented with a reproduction of its elements within frame of play.	What is created in the interaction between player or players and game master within a specific diegetic framework.
Diegetic Framework	Focusing on how narrative elements can support learning objective.	Focusing on world building and interaction with game mechanic
Role	Role concept in both educational role-play and RPG involves social and functional role that came with their own expectations. Differences can be seen in contextual form, connected to diegetic framework of the activity. Otherwise, both allows for reduction of consequences while still maintaining the experience of being in a role.	
Play	Play is a mental augmentation, imposed on a fictional situation or case as a form of learning.	Play is the imposing of meaning into the act of make-belief. Furthermore, play is a pre-step towards state of game.
Game	Transgression to game state may indicates a breach in design of educational role-play.	Game state is the intended design of RPG

2.5. Immersion and bleed in role-playing

The greater involvement a player has with role-playing elements can serve as an incentive and added value in learning. For example, a person will be more motivated to try his best when his continued existence or a personal value is currently at stake, even though the stake and risk exist only within the game's framework. This involvement is widely known within RPG studies as immersion. It is a condition where a person experience heightened attention while playing a role within the scope of a game's fictional reality. Someone can immerse themselves in the role-playing activity, into the game's goal and rule, into the virtual imagined space's environment, into the game's narrative elements, into their character, and the community (Bowman, 2019a,b).

As an example in character immersion, a game system that allows for character creation, continuous involvement of playing a character allows its player to formulate a character that expresses their 'self' in many ways. The created entity can range from being a copy of the player's personality to a complete opposite. The act of playing a self-formulated character may enable a player to integrate themselves with the personality of their character and channel their beneficial personality traits to use in real-life situations (Bowman, 2010). This condition where the 'self' is reflected in a character will make it easier to have an emotional connection to the character and immerse oneself within the character.

The strong identification brought by immersion may facilitate a state of psychological or emotional resonance between player and character. This state of strong immersion has been described as 'taking the game too far' and being immersed too deeply in a character, resulting in a phenomenon called bleed (Bowman, 2019a,b). Bleed is an emotional experience that happened when characters are influenced by their player in terms of thought, ideals, relationships, and other traits or vice versa. Bleed can happen in two ways. A player can be influenced by a character they play, just as they can be influenced by their player (Montola, 2010). Bleed is a well-known occurrence that had been studied extensively within RPG communities. However, the concept itself is not exclusive to RPG activities. In theater terms, phenomenon similar to bleed is described as 'emotional hangover' or possession syndrome', something that happen when residual emotion seeps and influence the life of an actor Baker (2008). In theory, activities that involve individuals playing character as a role can incur bleed. As such, while there are no study indicating bleed happening in educational role-play, it can be argued that bleed can also happen there.

Despite the explained link to immersion, bleed may happen even without a state of strong immersion. Players that play characters with large number of similarities to their psychological characteristics (often described as playing close to home), player on sleep deprivation, long amount of playtime and other intense physical condition may have a lowered state of inhibition and ability to maintain the psychological distance between character and player (Bowman & Lieberoth, 2018). Such emotional and physical state may result in bleed regardless of the absence of heightened attention that mark the existence of immersion.

Many forms of recreational role-play utilize the concept of bleed heavily to induce an emotional shock that can enhance a playing experience (Stenros, 2012). Bleed can be viewed as a powerful tool; it is viewed as a desirable experience that gives the player an intense experience or risk to be mitigated. However, the viewpoints are often different related to this phenomenon. Some role-playing communities fear the occurrence of bleed, viewing it as what happened when role-playing goes too far, and a person loses themselves in their character (Bowman, 2019a,b). Other role-playing communities seek to induce bleed, making it harder for a player to detach from the immersion (Montola, 2010).

Bleed is a unique and robust power of RPG in the educational field. It takes the benefits of RPG outlined before to its extreme. It also allows uncomfortable and sometimes taboo themes to be brought forth into lights and explored as a learning experience (Montola, 2010). However, it should not be done without preparations. While bleed seeks to blur the line between the real-world and the game system's diegetic virtual world to enhance the player experience, the line should still be maintained.

2.5.1. The implication of immersion

Having a player attached to their character in an RPG used for education has its uses. The attachment may allow players to deeply explore concepts that may be hard to do otherwise and gain unique insight. This is demonstrated in a game that puts bleed experience as its central aspect in exploring sexual violence, abuse, body image, and aggression (Montola, 2010). However, should a teacher wish to do this, then preparation must be taken to handle bleed that might occur. A set of ground rules must be created to ensure that players can differentiate between their role and their real self and handle conflict. Procedures must be designed to handle debriefing or other post-game activities and make sure that all players can safely exit the mental space of the game. Prior mental conditions or vulnerabilities must also be assessed before the play session starts in RPG. Having a mental health practitioner on standby to handle emotional outbursts as a result of bleed is also recommended. While a powerful tool to increase engagement, bleed should also be managed and treated.

The occurrence of immersion and bleed make specific preparation by experienced handlers a requirement before the activity. A program that seeks to utilize RPGs that heavily rely on exploration of emotional and character involvement as an educational point will be wise to prepare for its effects beforehand. Handling bleed can be done through the process such as debriefing. In an RPG, debriefing is an after-play activity to help players recontextualize themselves after a strongly induced emotional experience. This process relies on social support and the instillment of a feeling of safety and trust (Atwater, 2016).

Post-play activities are methods that should be considered should one wish to use RPG in education in order to minimize the potential negative effect of bleed or other conflicts. Brown (2018) explained that post-play activities can be done with retelling of epic tale and war stories of what had happened within game, de-rolling or exiting the headspace and fictional world, and debriefing where feelings and experiences of players are accepted, understood, and affirmed. Another method that can be used to wrap up a role-playing activity is wrap party to give

opportunity for bonding outside of LARP that has been closed.

Physical treatment and attention can also be provided with aftercare that gives comfortable physical contact or giving space for one to recover from an intense experience. In a way, giving someone distance and allowing them time to recuperate on their own until they are ready to address issues rising from role-play experience is also a method that can be considered should a facilitator wish to conduct an activity that can inflict bleed or other intense emotional and social effects. Other form of post-playing activity can also be seen in integration practice, where the experiences gained from playing within game frame are processed and integrated into a new awareness of their self-concept in the player's daily life (Bowman, 2019a,b).

2.5.2. Overinvolvement as a risk

Related to Immersion, attachment to character, or narration can create a problem in a player's daily life. Players may be fixated in an if-game thinking (Koljonen, 2013), which involves fantasizing about actions that their character can do during play, the mechanics of their characters, relationships in game, and other game-related information. If-game thinking is heavily associated with immersion and is a normal process, however, should social relationship and other responsibilities become neglected as the result of in-game thinking, the player can be considered as overinvolved (Bowman & Lieberoth, 2018).

As of currently there had been no studies that specifically focus on overinvolvement behavior in educational role-play or educational RPG. The problem of overinvolvement indicates an excessive amount of playing and involvement. Therefore, moderation in playing time can become key on how to regulate so that this does not happen in education setting.

2.6. Typology comparison

A point where educational role-play differs from RPG is in its typology. Understanding where the line is drawn may benefit practitioners to choose which method to use in their classroom based on the goal, number of participants, available resources, and feasibility to use in education of each type.

2.6.1. Typology of educational role-play

Due to the number of fields and disciplines that seek that same goal and with the flexibility of educational role-play, role-playing has taken many forms. Understanding these typologies and how each of them can contribute to learning will be important in seeing how educational role-play can be compared to RPG. In their study, Rao and Stupans (2012) identify three typologies that stem from role-playing. Each type aligns closely to the role of a specific principal learning domain. The first one is role switch, described as a role-play method to learn from the inside out of people and things. This model primarily aligns closely with the cognitive function of the principal learning domain. By taking another person or object's role in a situation, a participant can understand the learning materials from the inside out and from many different perspectives. The second typology is the acting model of role-play. The acting model aligns the most with the 'doing' part of the learning domain and involves developing participant practical skills through group scenarios that require and align with the affective and psychomotor domains. The last typology is almost real-life. Participants are supported in carrying high-level professional tasks such as counseling or responding to an emergency, with the clients being other students rather than the general public. As the most complex typology, this method touches on cognitive, affective, and psychomotor learning domains.

While it varies in method and discipline where it was used, the common consensus about role-play in an education setting is that it encourages controlled conditions. Participants are introduced to new ideas within this controlled environment. Within this environment participants are observing and acting in a simulation, creating a condition that mimics real life and that enables feedback and debriefings (Rao & Stupans, 2012). The real-life condition depicted relates directly to the teachings or specific concepts or skills needed in a professional occupation (Lean et al., 2006).

Typology in educational role-play is divided based on the educational domain it touches. For example, the division between role-switch, acting, and almost real-life show an increasing degree in complexity and skills used. With role switch touching the cognitive aspect, acting touches the affective and cognitive aspects, and almost real-life that touches the cognitive, affective, and psychomotor aspects. However, we seldom see a learning activity that touches only a single domain. Sönmez (2017) indicates that learning domain and its outcome are not isolated, an activity touching one domain could also support learning in another. For example, participant that is doing a role-switch understand the character that they are taking, but at the same time they are also delving into the emotional state of the character, therefore this act involves affective domain as well.

2.6.2. Typology of role-playing game

Unlike educational role-play that is classified by what learning domain it touches, RPG is classified by its playing medium, spatial accommodation, temporal condition, role differentiation, ethos, the role of a character, game world, and rules. Zagal and Deterding (2018) divides RPG into four different forms, which are Tabletop Role-Playing Game (TRPG), Live Action Role Playing Game (LARP), Computer Role-Playing game (CRPG), and Multiplayer Online Role-Playing Game (MORPG).

TRPG involves a small group where the game master acts as a referee to control the game world and determine how players interact with it with narrations. Players can choose how to approach the world and scenarios offered by the referee and interact with each other in nearly unlimited ways (Crawford et al., 2014). In a tabletop RPG, participants aim to experience a shared autotelic (performed for its own sake) experience via collaboration (Zagal & Deterding, 2018).

Different from TRPG, LARP involves players meeting in a physical location. It is a form of RPG where actions are acted out instead of described (Pohjala, 2003). Similar to TRPG, LARP players also seek an experience performed to play for its own sake using collaboration with each other (Zagal & Deterding, 2018).

Both CRPG and MORPG are played using a computing device, in both CRPG and MORPG a software takes over a referee's role in simulating the game world. The difference between CRPG and MORPG lies in the number of players and the goal of each player. In a CRPG, the player seeks their individual unshared experience in being in a game world and playing a role. Whereas in MORPGs, the digital experience is sought together and shared with many other players (Zagal & Deterding, 2018).

2.6.3. Implication of differences in typology

Typology of educational role-play should be considered according to the learning needs of students and available resources. For example, more preparations will be required for role-play that requires more participants and use real-life skills that necessitate tools related to those skills. This is doubly true if a teacher develops their own game system rather than using what already exists.

In term of required resources, RPGs in education require different materials and tools to be used in a classroom. For example, a CRPG requires a computing device for each participant, an MORPG requires a working network and a computing device, and a TRPG requires at least a rulebook and a method of recording the continuity and game elements of the RPG.

2.7. Current uses comparison

2.7.1. Role-playing in education: Current uses

The broadness and benefits of touching many educational domains allow educational role-play to be used in many different fields for longer and more documented than RPG. Observing its current usage will give an insight into what makes educational role-play work and why it is still

used today.

Role-playing in education is a well-documented education method with various contexts and content areas such as early childhood education, computing, physiotherapy, occupational therapy, law, and outdoor education (Rao & Stupans, 2012). By assigning students specific situations and roles in a scenario, a student can connect to the materials taught at the cognitive, emotional, and behavioral levels. Many learning benefits have been studied about using role-play in the classroom in tandem with or as an alternative to other methods, from increased student engagement and interest (Stevens, 2015), language learning (Krebt, 2017), to knowledge retention (DeNeve & Heppner, 1997) and creativity (Hidayati & Pardjono, 2018). Other benefits have also been explored concerning social skills and empathy (Havens, 2019) and facilitating self-reflection and awareness of social circumstances (Kilgour et al., 2015).

Role-play benefits have been linked to the dynamics of interacting factors within its confines. Educational role-play gives a protective environment that provides participants room for improvement while acting in a specific role (Moreno-Guerrero et al., 2020). This simulated frame allows students to explore the causality of their actions in an almost real-life situation without real-life consequences.

2.7.2. *Role-playing games in education: Current uses*

As with educational role-play, RPGs in their many forms also find use in education. Identifying these uses will allow a clearer perspective to see how educational role-play and RPG differ in their function in education. The implementation of RPG ranges from developing a game system to spread traditional folktales (Zalka, 2012), using it as a tool to develop literacy skills and learning interest (Kaylor, 2017), as a method of teaching language (Phillips, 1994), and developing students' soft skills (Bowman & Standiford, 2015). The draw of using RPG in education mainly comes from its benefit to simulate a group dynamic and presenting a scenario that otherwise would not be encountered in daily life to provoke creativity and critical thinking.

RPG has also been observed to provide a learning experience in confronting mistakes and adversaries, increasing self-confidence, and accepting imperfection and error. Those learned abilities are also transferable into real-life interaction outside of the game world, which benefits teaching social connectedness (Abbott et al., 2021). In a more specialized setting, although not directly related to education, RPG has shown its transformative potential for personal character developments in its players, transferring the skills gained in the game to a real-life parallel while also building a better relationship between players (Daniau, 2016).

In a form of RPG that is specifically designed for education such as edu-LARP, it has been found that edu-LARP supports student through secondary language acquisition, music, health education, debate skill, and empathy (Bowman, 2014).

2.8. *Transformative learning potential of educational role-play and role-playing games*

Transformative learning is defined as the process of effecting change in a person's frame of reference due to the process of learning. This frame of reference encompasses cognitive, conative, and emotional, and is composed of dimensions of habit of mind and point of view (Mezirow, 1997). Transformative learning is a powerful concept in education, especially in challenging current perspective and to help students grow a more open-minded and inclusive worldview.

The concept of transformative learning is one that contain many compatibilities with educational role-play and RPG, owing to their unique characteristics of allowing their participants to take the role of other and experiencing multiple cognitive frames, allowing participants to act out a different perspective, and to experience emotions as another person. All of those acts can be performed with lessened real-life consequences, when the act is framed as a play experience.

Transformative learning is capable of changing a person's frame of reference, a part of their identity in a significant manner. However, in this principle as well, that we should consider the potential pitfall of transformative learning in role-play activities. During course of life development, each individual's unique life experience shapes their identity, within each step of development, an individual's identity become more formed (Erikson, 1993). As such, on an adult, identity is mostly stable. An individual could see no reason to change too drastically and disrupt this already built identity they are comfortable with. Furthermore, on someone that already carry preconceived notion based on experience, learning may not go as intended due to the difficulties of incorporating the newly acquired information on top of previously existing one (Westborg, 2022a, 2022b). In transformative learning, this reluctance of transformation is called identity defence (Illeris, 2014). This principle is also supported by characteristics of adult learning, being that adults have to be internally motivated and see a reason to learn (Knowles, 1968). If transformative learning with role-play is planned for adult learners, then the learner's interest in transformation has to be addressed (Illeris, 2014).

There had been prior research about the use of educational role-play as one of the methodologies for transformative learning. One such is observed in research that use simulation in environmental education, in the goal of changing the frame of references that is made of internal habit of mind and point of view about the environment. This is achieved through using the principle of transformative education to focus on change, and challenging students' worldview and current assumption of the world through the interactive roleplay that can serve as a reflective experience that engage with personal emotions (Chen & Martin, 2015).

The same theme was found in role-playing games. Daniau (2016) uses term of Transformative Role-Playing Game to refer to a sub-genre of Educational Role-playing games that focus on the authenticity of play experience, and exploring, through rich experience, the changes that the TRPG by itself bring to a group of players. This require several conditions to be met such as: the play session is in a small group to foster interaction and imagination; the session is longer to consolidate the group's imagination; atmospheres, props, and costumes or other setting are used to enrich imagination; and avoiding disturbances to support player's involvement and ensure consistency of group imagination.

From the two examples above in educational role-play and RPG we can see that both method fits well with the concept of transformative learning, following the similarities that had been outlined in this article. Both educational role-play and RPG allow for the participants to experience a disorienting dilemma in form of scenario brought by facilitator or game master of the session.

Both educational role-play and RPG allow the participants to experience emotions both negative and positive, more so in case of role-playing games that utilize bleeding as one of its core concepts, where the players experience the same emotion that their character are currently feeling inside the game world. This emotional aspect of taking a role can allow the participants to examine their assumptions critically and transform their own transformation to the group. Furthermore, the myriad of imagined scenario in both role-playing games and educational role-play may allow participants to take on new roles, being in a new imagined relationship, and explore new potentials of actions that are usually outside of possibility.

The concept of planning new course of action due to transformed viewpoints appear both in educational role-play and role-playing games. The dynamic shared world in role-playing games, for example necessitate the players to create plan to handle current issues presented. Same thing can be observed as well in educational role-play where new elements can be introduced to stimulate its participants. The phase of transformative learning where students are trying out new role, and gaining competences is apparent in both educational role-play and role-playing games, with the differences lies in what kind of role and what kind of competences are being learned, as already outlined in the previous sections.

Thus, we can see how both educational role-play and RPG facilitate transformative learning, using their strength in evoking their participant's imagination, new scenarios, and emotional immersion. Both methods allow for constant critical evaluation, recognition of transformation process, and competence gaining, that are instrumental to transformative learning.

3. Conclusion

In conclusion, this paper has explained educational role-play and RPG. In term of definition, that we discover as containing similarities, in terms of its components, and differences in terms of its purposes. We have also clarified how the concept of 'role' and 'play' happen in educational role-play and RPG. The 'game' concept has been explored, showing how play can move to game and vice versa, along with the importance of having a strong design in keeping an activity in state of play or game.

The potential of transformative learning of educational role-play and RPG have also been outlined. Explaining their mutual potential to be a facilitator of transformative learning that can change a person's frame of reference. Understanding what elements inside educational role-play and RPG that evoke the transformational aspect is important to make use of its many unique characteristics in a way that facilitate growth and change.

3.1. Discussion: implication for future research

This article also underlines that both educational role-play and RPG contain the potential as a method for transformative learning. Understanding this better by conducting more research about how educational role-play and RPG can foster critical self-reflection and changing a person's worldview may yield interesting and useful boons to the field of education.

Another concept that has not been explored as much in educational role-play and RPG is how they can help teach about the importance of a person's role and the social implications that come with it. Again, the concept of role-playing aligns with the critical concepts of role theory, and this can present an opportunity for a deeper understanding of how role development happens in education.

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