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GM Screen: The Didactic Potential of RPGs

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As with any educational modality, no guarantees can be made about efficacy and consistency across student populations. Therefore, when we discuss didactics and RPGs, we refer to their potential. Because RPGs are a form of experiential learning, within which players interact with each other in shared co-creativity, our experience and research indicates that their didactic potential is heightened, particularly along specific cognitive, affective, and behavioral dimensions (Bowman 2014). Additionally, because RPGs are multimodal, meaning they have multiple methods of engagement operating at the same time, students have the possibility to train several skills and practice working with multiple bases of knowledge at once.

Notably, this strength of RPGs can also be considered a weakness depending on the context. RPGs are often far more chaotic than typical classroom activities, as each student is granted more *agency* to make meaningful choices than is usually permitted in educational settings. Sometimes, teachers may feel out of control or ill-equipped to handle this comparatively chaotic energy (Larsson 2004, p. 247; Harder 2007, p. 234; Hyltoft 2010, p. 51). Additionally, RPGs' multimodal nature often means that students are engaging in multiple activities at the same time, with their associated thought processes and emotional reactions. Thus, a challenge for educational RPG designers and facilitators is in finding ways to make sure the activity centers upon the specific learning objective and/or curricular goals. Additionally, educators should be aware of some of the central concepts in both role-playing theory and in didactics in order to make informed choices in the classroom. This chapter will explain some of the key concepts in these areas, applying them to learning situations involving RPGs.

RPGs in Formal, Informal, and Non-Formal Learning

Although we often assume traditional classrooms are the most effective places for education to occur, learning can transpire in many environments and situations. Indeed, even using the word "play" to refer to role-playing may cause some individuals to think that learning is a contradiction in terms, as learning often requires "work," similar to classwork or homework. In truth, regardless of the type of role-playing game, players often willingly engage in various types of labor (Jones et al. 2016) , even in their leisure time. A typical traditional tabletop game like *Dungeons & Dragons* often requires a

steep learning curve just to create a character, learn the jargon, and become familiar with the rules, much less game master a campaign for several players. Thus, this distinction between work and play becomes quite fuzzy when considering role-playing, as learning can take place in playful contexts, and depending on the degree of labor required, not all game experiences may feel playful to participants.

Thus, as Josephine Baird (2022) has detailed, RPG educators might find it helpful to consider the three basic settings of learning in terms of their settings and goals (see La Belle 1982; Selman et al. 1997):

1) **Formal learning,** which refers to traditional environments accredited by society as legitimate institutions of education, i.e. schools, universities, etc.
2) **Non-formal learning,** which refers to activities taking place outside such institutions. In non-formal learning, students often do not use a set curriculum or medium and they may even co-create their pedagogical goals, methods, and outcomes, i.e. workshops, study groups, etc.
3) **Informal learning,** which refers to activities that are not organized for educational purposes and often lack a trained "educator" guiding the process. Learning in this case is often a byproduct of engagement in life activities.

The environment and context within which play takes place can have a tremendous impact on learning, as can the facilitator's degree of power relative to the students. For example, if a student attends an RPG session in a classroom run by their teacher during regularly scheduled class times, they are likely to expect to learn something from the experience or for the game to have an educational goal. In contrast, the same student playing the same game run by a peer in their spare time is likely to have very different expectations. Learning may still happen -- or not happen -- in either environment, but the expectations and goals are distinct.

Framing Role-playing Experiences

As is likely apparent at this stage in the book, in order for RPGs to maximize their didactic potential, they must be framed sufficiently with explicit learning objectives and/or curricular goals in mind. Many RPG designers focus explicitly -- and sometimes exclusively -- on what occurs surrounding and within the magic circle of play (Huizinga 1958; Salen and Zimmerman 2003), i.e. the elements of the game that bound it from daily life with new social rules, roles, and precepts. Elements surrounding the magic circle include the *social contract* of play, where implicit and explicit rules of engagement are established. Elements within the magic circle include all the facets of the fiction as well as the means of representing and resolving in-game conflicts, including lore, characters, plots, stories, and mechanics. Designers often spend a good deal of time considering how their players might interact

with these elements, iterating upon their game in order to produce an experience that is appealing to players and/or achieves their aesthetic goals.

While all of these elements are certainly important, they can sometimes contradict or overshadow educational goals. A satisfying game experience for some players may involve immersing into an extensive fictional world and having few limits on creative expression within it, whereas such engagement might detract from specific learning objectives. For example, a traditional RPG in a fantasy setting played in a history class might run counter to the curriculum of that class, as players may have difficulty distinguishing between the fantasy content and the accurate historical elements. If the game is competitive in its playstyle and features violence as a core component of its design, these elements might run counter to learning objectives focused upon prosocial interaction such as nonviolent communication, collaboration, and impulse control.

This is not to say that such games are impossible to use in specific educational contexts, but rather that teachers should take care to consider their goals when choosing materials to run for their students or designing their own games. Additionally, facilitators should take care to frame the experience properly in order to emphasize the content they wish to emphasize, e.g. explaining "This faction within this fantasy environment is similar to this real world historical faction in the following ways…" Furthermore, the social contract of the game is not equivalent -- and may sometimes contradict -- the social contract of the learning environment. For example, perhaps the instructor chooses to play a servant to the noble characters, who the students are portraying in a scenario. Such a shift in role can be liberating for students, especially young people who have few avenues for agency and power in their daily lives. However, after the game, the instructor is not just a facilitator or a peer; they must then shift back into the high-power role of the teacher, with the social norms that accompany it.

Therefore, we recommend the use of explicit framing structures to maximize the didactic potential of RPGs in educational environments above and beyond those usually present in role-playing groups. These structures should include pre-game, mid-game, and post-game strategies, as didactic potential exists in all of these phases of play. For example, when playing an historical RPG in the classroom with an emphasis on content mastery, the activity can be framed in the following ways:

Pre-game: The teacher can give lectures on the historical time period -- e.g. on the papacy in Catholic medieval Europe -- as well as assign homework to students to research for their particular role and general setting information. During this phase, the instructor can make clear the specific topics they would like the students to emphasize in their work.

Mid-game: Through metareflection during play, the students can make connections between the curricular content and the storyline unfolding through play. For example, let's say the play involves

various clerics deciding who should become the next Pope, e.g. *Conclave* (Palecek 2019). Students can take meaningful actions in play that affect the outcome, which may be guided by what they have learned previously and/or may help them better understand concepts that were abstract otherwise. Importantly, mid-game reflection is quite difficult without breaks to process what players have learned, but is still possible.

Post-game: After the game, the class can reconvene for an after-game discussion to discuss the game events. The teacher can give a brief lecture *contextualizing* the specifics of play with reference to a larger body of knowledge. For example, perhaps a specific family line included in the game dominated the papacy for many years. The class can also engage in a formal debrief moderated by the teacher, in which each student has the opportunity to explain their experience during play. During this debrief, the instructor can ask questions specifically geared toward the learning objective and curricular goals of the class, in this case to understand how the power behind the papacy was focused upon a few key families and factions.

Notably, without the post-game discussion, a high chance exists that participants will leave the experience having learned different things than intended or not much at all. In our example, perhaps the students left the game thinking the specific family member they voted to become Pope historically was the actual Pope during that time. They are missing the fact that this exercise was not intended to *simulate* or *reenact* faithfully real events, but rather to allow participants to experience the types of pressures and political dynamics during this time period, hopefully gaining greater interest in history through first-person perspective taking.

Types of Processing

After a RPG of any kind, we believe it important to have some kind of processing after the game. In educational role-playing, as we have mentioned, such processing is essential. Processing can take many forms, e.g. creative expression, intellectual analysis, emotional sharing, interpersonal discussions (Bowman & Hugaas 2019). Some of these types of processing can take place independently, i.e. a student writing in their journal, whereas others must take place in a group, i.e. the class discussing important topics related to play. For our purposes, we will discuss three key forms of processing:

1. **Emotional processing:** Activities focused on the emotional content of play and the relevant associations that emerged from it. Examples include cathartic sharing, connecting game events to aspects of one's personal life, identifying fears that both the character and player share, etc.

2. **Intellectual processing:** Activities focused on the intellectualization of the game and its relevance to other domains of knowledge and/or experience. Examples include creating new theory or applying existing theories to the play experience, documenting the events of play, reframing the play to connect it to real world events, etc.
3. **Educational processing:** Activities focused on the intellectualization of the game specifically connected to learning objectives and/or curricular goals. Within educational processing, we are specifically interested in three types of cognitive activities:
    a. **Connection:** Reflecting on the experience in relation to specific learning objectives, e.g. learning about Catholicism in the Middle Ages.
    b. **Abstraction:** Relating takeaways from the RPG experience to concepts or experiences in the wider outside world, i.e. discussing how negotiations and power function within important decision making in political situations.
    c. **Contextualization:** Learning additional information about the context surrounding the topic or granular facts related to it as a means to enhance the learning, i.e. learning how a specific family became dominant throughout medieval history within papal politics. Contextualization in this case may also mean assigning additional reading or viewing materials, i.e. researching the history of the papacy or watching a documentary about it. Note that contextualization, in this case, is different than learning in various contexts which we will also describe later.

One way to ensure these processes happen is to integrate them into post-game lectures and debriefs. However, realistically speaking, time may be limited. Therefore, instructors should consider thoroughly many options for these types of processing to take place over a longer period of time in a less facilitated process, i.e. students keeping a reflection journal all semester, receiving extra credit for watching historically-based dramas, etc.

The Educational Role-playing Design Matrix

As a means to visualize some of these concepts and the ways in which they interrelate, Westborg (2022) has developed an Educational Role-playing Game Design Matrix. While extensive examination of the matrix is beyond the scope of this chapter, we will include the basic concepts here. The matrix is intended to provide insights about the design process, the degree of control educators have over the learning process, and how the game facilitates learning in specific ways. It features two axes -- Gameplay and Framing -- within which role-playing games are situated based on whether they have specific learning objectives or not, as in leisure games.

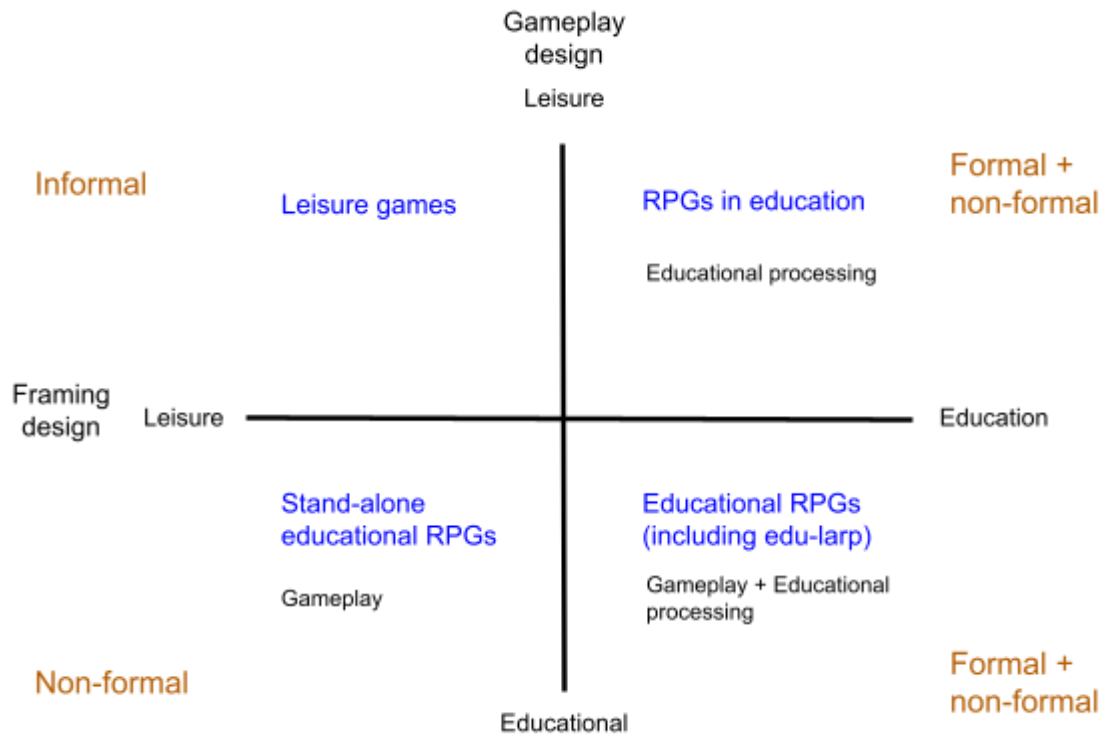

Figure 1: Educational Role-playing Game Design Matrix (Westborg 2022)

In the matrix, the key components that distinguish RPGs in informal, non-formal, and formal learning are the degrees to which: 1) the gameplay has been designed with learning objectives in mind, and 2) educational processing is incorporated into the framing. While learning can take place in any of the quadrants, the goals of the design and the group are distinct. Leisure games fall under informal learning. Stand-alone education RPGs fall under non-formal learning, as educational goals may be imbued in the gameplay, but the lack of educational processing does not frame the game sufficiently for it to be considered a formal learning activity. Playing existing leisure RPGs in educational environments without modifying their content can occur in both formal and non-formal settings and generally include educational processing. Educational RPGs are designed with explicit learning objectives in mind and feature educational processing. These RPGs can be run in formal and non-formal settings, but they are explicitly educational due to this combination of the game design and framing.

The Transfer Problem and Context-Dependent Learning

The setting and goals are not the only factors to consider when evaluating the didactic potential of role-playing games. Regardless of the learning activity, one of the most classic problems in

educational psychology is the transfer problem (Illeris 2015). Transfer is when individuals apply what they have learned in one context within another context. Humans tend to find transfer difficult, as often knowledge becomes bounded within specific learning environments and social situations; for example, perhaps a student remembers information from their textbook about the papacy when in class taking a test, but completely forgets the same information in a conversation with their colleagues at a workplace Happy Hour. To be able to transfer knowledge, learners need to have *encoded* the information within their mental schemas, then access it through memory retrieval, then also manage to apply it in specific situations. To get better at encoding, regular exposure to the material and reinforcement of its key features at the time when the learner is about to forget the information helps with building a stronger memory. Thus, educational role-players consider debriefing and other forms of intellectual processing as key to reinforcing specific learning objectives.

The transfer problem is especially relevant in terms of knowledge retrieval. How well an individual knows a topic does not matter if they are unable to access that knowledge. In other words, if the person does not experience *cues* that help them retrieve the memory of the knowledge, then they will be unable to use it in daily life (Didau & Rose 2018). In other words, people struggle with retrieving information when in different contexts from which they originally learned the information. The classic example arises from the study, "Mathematics in the Street and School" (Nunes et al. 1985), in which the researchers observed that children could perform complicated mathematical calculations out on the street in their everyday lives, but when put in school in a classroom, they failed to solve the same kind of calculations.

As all learning occurs within a specific context, individuals often find retrieving knowledge far easier when in a situation that is reminiscent of the original learning context (Eich 1980). As such, when people learn, they connect the knowledge to the situation within which they learned it. Their minds unconsciously create cues that connect to the information. When these cues exist in an environment, they can then help trigger a memory, like small hooks onto which learners latch when trying to retrieve a memory, or perhaps a memory arises unbidden as a result of a cue. This process is called *cue-dependent learning* (Powell 2021b), which can help students with memory retrieval.

Thus, learning information in multiple different situations increases the amount of cues the individual has to recall it, as more sensory data is attached to the various contexts. As role-playing focuses on stepping into another world and context, it can give us many more potential cues and reference points than traditional teaching, which may be one of the strengths of working with RPGs in education. During a math test, perhaps the sound of rolling dice makes a person recall memories of solving the same type of equations while calculating the dice rolls in a tabletop game. Now, they are bridging the two contexts within which they have practiced their math skills: traditional classroom environments and leisure gaming, possibly in their home or a game store.

Fortunately, awareness about the ways in which people retrieve knowledge can help us design learning environments accordingly. If a student wants to learn concepts related to a specific context,

they should study those concepts in an environment as close to the specific context as possible. For example, if students struggle with learning math, playing a tabletop game that requires math calculations on the same tables on which they take tests at school might cue positive memory associations related to success in math in a low-stress atmosphere with social support, as well as the knowledge related to the math equations themselves. Furthermore, RPGs can become a way of applying existing knowledge in a different context, e.g. a player using knowledge from Geometry class to calculate if they are able to sneak into a castle with a certain length of rope.

To address the transfer problem, ideally students will retrieve and use knowledge in even more contexts beyond the classroom and the game, thus making the knowledge less context-dependent and attached to specific circumstances. Factors to consider related to learning include times of day, locations, smells, surrounding people, and emotional states; the more learning experiences where these factors vary, the better. Hence, it stands to reason that role-playing games add new layers to our social reality, as well as associations with these various factors, meaning more potential cues. More research is needed on the educational impacts of RPGs with regard to transfer and context-dependent learning.

Stories and Analogies

Humans also appear to have a stronger ability to remember stories than other types of knowledge (Didau & Rose 2018). Narrative helps us see the causation between information and contexts (Didau & Rose 2018). For example, reading facts about the papacy might seem irrelevant to a learner in their own life, but enacting the story of a member of the papacy might create a causal link that reinforces the knowledge, as the context is more personally relevant to the role-player. This point is key because role-playing games center upon the creation of narratives as a primary mode of engagement.

Gärdenfors (2006) speculates that this reinforcement of memory through story is related to the meaning-making humans tend to undergo when interpreting narratives. In context-dependent learning, within which knowledge often is bounded by a specific set of circumstances, ostensibly people cognitively organize such knowledge according to contexts within which it is useful and meaningful. As narrative is inherently a meaning-making process that involves some degree of *experience taking* and/or *perspective taking* (Kaufman & Libby 2012), people become more involved with stories, finding them personally relevant. According to Kaufman & Libby (2012) experience-taking is a more passive, intuitive state in which an audience receives a text and begins to identify and internalize a character, i.e. when reading a book or watching a film. Alternatively, the authors describe perspective taking as a more active, conceptual state in which a person imagines the consciousness of another person such as in role-playing. In this case, their understanding of that other person is inextricably linked and related to their understanding of their own identity. In our view, both states can be understood in terms of *narrative transportation* (Gerrig 1993) from communication studies, a process

through which people become absorbed when engaging in a story to the extent that their attitudes, intentions, and even behaviors may change to reflect the story and the characters within it.

This process is especially important when considering RPGs, which not only require some degree of narrative transportation through vicarious engagement watching a story unfold, but also through enactment of the characters within the story. Players are encouraged not only to witness a story's unfolding, but to make meaningful choices within it, which makes the story more personally relevant. A fact about the papal leadership in the medieval period that a student previously considered boring suddenly becomes immensely relevant to their personal lived experience -- even if that experience was brief in a fictional environment. Through this process of perspective taking, players can sometimes develop increased empathy toward people who are different from themselves (Leonard et al. 2021). Thus, knowledge can expand from a strictly cognitive domain -- i.e. learning facts -- to more affective and behavior domains, i.e. having emotional connection to the stories of others and behaving accordingly within a fictional framework. Information not only has a new context, but one that is emotionally compelling and motivating, as a player's concrete actions can affect the story. Despite these gains, educators should take care to stress that the experiences gained through RPGs is not equivalent to the lived experience of people in their actual lives (Kangas 2015), especially individuals who have experienced marginalization or other forms of trauma (Leonard at al. 2021).

As we mentioned before, when using RPGs in education, the debrief is important for encouraging the intended learning to occur, as well as for helping to contextualize knowledge Crookall 2014; Geneuss 2021). When using narrative in a debrief, participants are engaging in work with *analogies*: connecting what occurred in the larp with other contexts. Analogies create abstract relationships between otherwise distinct concepts, helping us to construct meaning. Analogical reasoning is a cognitive underpinning of the ability to notice and draw similarities across contexts (Vendetti et al. 2015). Therefore, analogies can be especially potent when connected to performative storytelling. Forming analogies allows students to understand how two distinct concepts, situations, people, or dynamics are similar, as they share the same relational structure (Powell 2021b). We argue that such processes can help aid in successful transfer.

Alibi and Identity Defense

Participating in an RPG and stepping into the magic circle gives us *alibi*: social permission to behave in ways we normally would not due to personal inhibitions and/or social norms (Montola 2010; Bowman 2013; Deterding 2017). For example, a student who has never occupied a leadership role before and who considers herself "bad at history" may lead the papal selection proceedings quite eloquently if given that specific role in the fiction.

Players often discuss finding skills available to them through play that were previously outside of their conception of their identity or abilities (Bowman 2010; 2014). Scholars have used

specific terms to describe this phenomena and related experiences. For example, *the Batman Effect* (White et al. 2017) was coined in a study observing that young children were able to persist longer at a difficult task when imagining themselves as Batman. *The Proteus Effect* (Yee & Bailenson 2007) refers to players taking on characteristics of their characters in Massively Multiplayer Online Role-playing Games (MMORPGs), despite the fact that these characteristics were in contrast to their conceptions of their ego identity. Considering these concepts with relation to the student who was previously "bad at History," the alibi of the leadership role gave her the confidence to share her knowledge with the group and portray characteristics she normally might consider "impossible." This experience of *agency* is an important feature of analog role-playing games, which tend to offer an unprecedented degree of creative choice compared to other games, narratives, or other activities. Agency is particularly important to cultivate in learning situations (Westborg 2019), as it can lead to students self-reporting higher rates of motivation (Gjedde 2014; Algayres 2018), school engagement, perceived competence, and self-efficacy after the game (Bowman & Standiford 2015).

Additionally, one of the major issues that can interfere with the learning process is *identity defense* (Illeris 2015).When confronted with new knowledge, people may *assimilate* it into their existing schema of understanding, adjust their existing schema to *accommodate* the new concepts, or reject the information altogether. In some cases, people reject the new information to protect their sense of self, or *identity*. Our identities are composed of many contents both internal to our personal psychology (Erikson 1968) and socially imposed (Stets & Serpe 2013; Bowman 2022) and can include aspects such as beliefs and values as part of our core self-concepts. Notably, these core beliefs and values may be beneficial or detrimental to the person and their relationship to others. In the above example, if a student believes she is "bad at History," she may have difficulty assimilating or accommodating any new information in her History class or other historical sources. She may get easily distracted in class due to cognitive overwhelm and resistance related to this belief, leading others to reinforce her belief that she is "bad at History." She may suffer from low self-esteem as a result, further believing she is incapable of being a leader. She might reject any evidence to the contrary -- such as performing well on a History test or successfully organizing a group work assignment -- because identities protect themselves through the identity defence, defending our experience of being a unique individual, regardless of any negative beliefs about that identity. Once triggered, the identity defense can lead us to reject any knowledge that threatens it, which is why changing our worldview can be incredibly difficult. In order to experience transformative learning, the identity defense must be encountered and bypassed, which does not happen easily and is difficult to design activities to achieve.

Alternatively, in RPGs, participants are given a character, who has a completely different identity, even if the player shares similarities in common. This character may have a different backstory and social support structure, which can lead to different beliefs about the self. In our example, the student embodies a cleric with a strong background in leadership and excellent

command of the various social and political dynamics present within the Catholic infrastructure. Thus, the player can lean on the identity of the character, thus performing actions that she previously thought herself incapable of doing. In this case, the alibi of character lessened the triggering of the identity defence, allowing her to explore the content more freely. Furthermore, her beliefs about herself that form her identity may begin to shift, especially if she begins to behave more like her character in daily life, a process known as *ego bleed* (Beltrán 2012).

However, as much as alibi can lower the identity defense, it also can become a hindrance to transfer. If the player continues to believe that she is "bad at history" and leadership, regardless of her performance as the character in the game, then that knowledge and skill set may remain bounded in the context of the RPG. Interestingly, others may observe a person's identity shifting in terms of confidence or leadership, while the person still holds onto a negative self-concept (LeClaire 2020). Thus, part of the processing after a RPG experience should include *integration* practices: ways to integrate takeaways from the game to one's daily life, including shifts to one's identity (Bowman & Hugaas 2019). For example, the student might work with a school counselor to help her shift her *narrative identity* (Singer 2004; McAdams & McLean 2013), using the game as a jumping off point. Alternatively, the player might engage in journaling focused on better understanding herself with this new information. Through such processing, the student may come to acknowledge that she was the person who successfully performed those actions, and thus perceive herself as capable and resilient (Bowman & Hugaas 2021). While such realizations can happen in traditional learning environments, we believe that RPGs have a particularly potent capability to inspire transformative learning moments as a result of alibi, character, and narrative -- as long as alibi does not interfere with the integration process.

Systems Thinking

Regardless of the complexity of the mechanics, as with many digital games, TTRPGs involve systems. These systems can be many: mechanical, economic, social, psychological, political, etc. They can be consciously introduced as a means to explore a particular concept or simulate a specific action in the world, e.g., mechanics for intimacy and violence, games about social hierarchies. Alternatively, these systems can be designed outside of the creator's conscious intent, e.g., unconsciously integrating oppressive beliefs or economic systems. Regardless of the type of system, by playing role-playing games, participants learn how the system works and the consequences of their actions within it.

Research examining children playing digital games indicates that, without a debrief, the players may learn the system, but miss important aspects of the theme (Linderoth 2004). If learning the system is the objective, then such a reaction is beneficial. However, if the goal of the scenario is to teach about an abstract concept such as loyalty, for example, then learning the system may or may not

have anything to do with the goal. Thus, not only is debriefing beneficial, but also choosing a system that is complementary with the educational goals. Indeed, in some cases, the system may work against the theme, hence our recommendation to match carefully the game design with the learning objectives and curricular goals. For example, a system like *Apocalypse World* includes fewer mechanics than *Dungeons & Dragons*, with many of those mechanics focused on social interactions rather than violence. In this case, when working with a group to practice social skills and new forms of interactions, *Apocalypse World* may have a less complicated design with more specific design goals aligned with your learning objectives. Alternatively, an instructor may not wish to include mechanics at all, instead encouraging students to act out their practicing of social skills. In this case, the game still has a system, but the system does not allow for mechanical resolution of actions.

Note that all game systems have a potential didactic purpose, particularly with regard to scenario building and problem solving (Bowman 2010). Playing a complex game like *Dungeons & Dragons* can be tremendously advantageous to train systems thinking on a more general scale, as it affords participants with the ability to see how many small components of the system interact with one another. Similarly, mechanics can be extremely useful as a form of *scaffolding*: providing support for learning a skill the student has not yet learned how to perform independently. Rolling a persuasion skill and succeeding can have a similar effect on the player's identity and self-efficacy as can acting out persuasion through role-playing. Additionally, mechanics and game narratives, as mentioned before, can serve as analogies. Killing a dragon in *D&D* does not teach players how to perform violent acts, but it may incentivize them to learn how to work together as a group to achieve a common goal through mutual trust. The important takeaway here, regardless of the game, is that facilitators should match the system with the goals of the activity.

Perspective Taking, Empathy, and Conflict

As mentioned above, two commonly cited benefits of RPGs are perspective taking and empathy (Meriläinen 2012; Leonard et al. 2021). Perspective taking is especially interesting with regard to worldview. As with our discussion on identity defence, many people struggle understanding the perspectives of others, particularly individuals who have different ideological and cultural backgrounds. Such individuals will often approach the way they operate in the world in radically different ways that may seem incomprehensible to others. Thus, role-playing is often used as a tool to facilitate greater cultural understanding and empathy, as players may learn how to better understand the mental, emotional, and behavioral states of others by occupying a similar perspective through play.

Similarly, RPGs are almost always designed to facilitate the negotiation of conflict, whether through violent or nonviolent means. Indeed, the term "mechanics" is often short for conflict resolution mechanics. In tabletop RPGs, such mechanics may be based on statistical probabilities in

the interest of a perception of fairness, hence the rolling of dice or other systems, or they may be more narratively-driven. Regardless, conflict is embedded in most role-playing games, including social conflicts between factions. In fact, one of the first things players do in traditional role-playing games is choose a profession, as well as a faction in which they belong. These factions often shape the perceptions of the character in meaningful ways, regardless of how strongly they identify with the cultural norms and beliefs, both of the group and about the group. To borrow language from above, just as learning occurs in a specific context, so do people as they grow up within specific groups. While some role-playing scenarios may demonize a particular group as "unilaterally evil," RPGs hold a strong potential to highlight perspectives from different sides to a conflict, as well as their approaches to handling conflict.

Conflict theory highlights three major approaches not only to addressing conflict, but also to conceptualizing it; indeed, role-playing scenarios are often used in non-RPG settings to practice conflict skills. Specific learning objectives are often tied to paradigms about how people should address conflict. For example, *Conflict management* is often taught in professional settings such as business leadership trainings, which emphasizes ways to emotionally regulate and de-escalate conflicts (Cahn & Abigail 2014). *Conflict resolution* focuses upon addressing specific issues that have arisen and finding ways to solve the conflict, meaning the expectation and hope are that the conflict will not emerge again. This term is curious with regard to conflict resolution mechanics as it indicates a sense of finality after the mechanical action is completed, as if no further discussion is encouraged. Again, such an approach focuses on the perception of fairness, as the dice and other randomizers are treated as great equalizers, giving everyone roughly the same playing field, despite the fact that both players and game masters will sometimes lie about the die rolls for story-based reasons (Fine 1983). An alternative to both of these approaches is *conflict transformation* (Lederach 2014), which conceives conflict as ongoing and change as a series of processes that unfold over time. Unlike with the other two approaches, conflict transformation views disputes as opportunities to envision positive change in the future. Conflict transformation approaches tend to be systemically focused and long-term, as they emphasize collaboration as a means to create win-win scenarios for everyone involved in complex disputes. Experiments using role-playing games as a tool for conflict transformation in education and role-playing communities are emerging as fruitful spaces for intercultural dialogue, practicing skills at addressing conflict, and examinations of power dynamics (England 2014; Svanelind 2017; Pöllänen and Arjoranta 2021; Khosropour et al. 2022).

When exploring conflict through perspective taking, in order to encourage students to see beyond the worldview of both themselves and their characters, we believe that post-game debriefing is especially essential. Through a structured formal debrief, participants can not only share their perspectives and their character's worldview, but also listen to the perspectives of others. Unlike many traditional narrative structures, role-playing games resist attempts to impose a single narrative; indeed, the very nature of play is *subjective diegesis* (Montola 2003), meaning that the game takes place in the

minds of each of the participants, who will have their own version of events necessarily distinct from one another. As such, to enhance the learning process, using the debriefing activity to make space for these perspectives to be voiced is essential to learning about the complexities of conflict. Furthermore, a lack of such processing can lead to in-game disputes becoming off-game animosities through *bleed-out*, when emotions, thoughts, beliefs, relationship dynamics, and physical states spillover from character to player (Bowman 2013; Leonard and Thurman 2018). Such animosity can work against the learning objectives of the educational activity if not properly processed, as well as affect relationships between participants, temporarily or permanently altering the dynamics of the group (Bowman & Standiford 2015).

Complications to Learning in RPGs

As mentioned above, RPGs are excellent at training several skills at once. For example, in any given group combat encounter in a traditional tabletop game, players might engage in tactical problem solving, mathematical equations, team work, leadership, and perspective taking. However, this benefit can also become a liability due to *cognitive overload*. If players are unable to process the information due to excessive stimuli, they may miss vital information needed for the learning or feel overwhelmed and shut down completely. As mentioned above, paying attention to the demands of the system compared to the intellectual and emotional demands of the exercise becomes important, particularly if specific learning objectives are meant to be achieved or specific curricular materials meant to be learned. On the other hand, sometimes cognitive overload may be the "point" of the exercise, for example in certain crisis simulations in which no clear win conditions exist. In these cases, the players are meant to experience the overwhelm and futility of the complex situation. Regardless of the goals, we recommend considering the amount of information given, the number of tasks players are expected to perform simultaneously, and the emotional intensity of the scenario in order to evaluate the level of cognitive overload. Often, adjustments should be made in later *iterations* of a game design or facilitation based upon what the participants can and cannot handle in previous playtests.

Another complication is that players may engage with a game differently than the designer or facilitator intended. In games that afford a high degree of agency like analog role-playing, this risk increases. Students may derail from the learning objectives and enter *gamer mode* (Frank 2012), where they focus on winning according to the affordances of the system rather than other intended considerations such as the theme (Linderoth 2004). This issue can arise especially with a player base familiar with competitive digital games, as participants will develop behavioral patterns similar to a *muscle memory* (Bowman 2018) in which they play out familiar dynamics from one game in another regardless of facilitators priming them otherwise. Some strategies to forestall this issue are:

- Clarifying the learning objectives or curricular goals before the start of the game;

- Reminding the students of these goals if needed during the game or between sessions;
- Facilitating a proper formal debrief that reinforces these goals;
- Choosing a system that aligns with these goals;
- Taking care not to include excessive competitive elements.

Conclusion

When considering their didactic potential, we have discussed how role-playing games can help players:

- Remember information easier through the use of narrative
- Understand the causation between information and context through analogies
- Create meaningful connections between knowledge and personally relevant experiences
- Create more cognitive cues for recalling knowledge
- Use knowledge in additional contexts
- Navigate complex systems
- Learn how to conceptualize and address conflict
- Bypass the identity defence through the use of alibi
- Increase empathy and understanding through perspective taking
- Transfer skills and knowledge through integration processes such as debriefing

However, this list barely scratches the surface in terms of the didactic potential of RPGs. As the limits of RPGs are human imagination, they can be used to simulate virtually every possible human interaction -- as well as speculate about non-human experiences. Additionally, more research is needed to measure these impacts and establish the degree to which these theoretical frameworks match with player experience.

Additionally, we do not perceive role-playing games as a panacea to education. Just as facilitators should choose the right system to suit their learning objectives, they should also choose the best learning activity to achieve those goals. Even schools that teach with role-playing games throughout the entire school year such as Østerskov Efterskole in Denmark (Hyltoft 2012) still make use of more traditional forms of learning such as lectures and research. Including RPGs means introducing both chaos and complexity to learning environments, and thus, must be handled with care.

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