TABLETOP ROLE-PLAYING GAMES AND THEIR POSSIBLE USE IN EDUCATION FOR SUSTAINABLE DEVELOPMENT

AN EXPLORATION OF ETHICAL LEARNING AND ROLE-PLAY

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Abstract

Aim: This research aims at exploring the possible use of Tabletop Role-playing Games (TRPG) in ESD research and practice. The scope of this thesis is narrowed to specifically examine the opportunities that a TRPG can provide for young people to experiment with and creatively explore ethical problems relating to sustainability.

Theory: This thesis employs a combination of two theoretical frameworks by Garrison et al (2014) and Kronlid and Öhman (2013). The former was used to identify educative moments that occurred during gameplay while the latter was utilized in a value-oriented comparative analysis of the game sessions and subsequent reflections.

Method: Two groups of four to five young people aged 14-16 played a popular TRPG over four gaming sessions lasting two to four hours. During the recorded game sessions, the players were led through two scenarios relating to real world sustainability problems. Following the game sessions, students were interviewed as a semi-structured reflection. Both the transcripts from gameplay and the interviews were analyzed using the theoretical frameworks stated above.

Results: From each group, several educative moments were identified both from the planned scenarios as well as unplanned events that occurred as a result of players' choices in the game. These educative moments were clarified in the interviews and further insights on the game as well as the group ethical decision making process were gained. There are numerous questions that arose from the results which could lead to future research in this area. It is hoped that the results at least demonstrated the potential for further practice with and research into TRPGs in ESD; opening up doors into an exciting field of educational work and play.

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List of Acronyms Used and Definitions

D&D - Dungeons and Dragons - the specific tabletop role-playing game that was used for this study

ESD - Education for Sustainable Development - education which focuses on the subject of sustainability, that is concerned for the welfare of humans and non-humans in the past, present and future. A further definition of this field of research will not be discussed within this thesis, nor will a strong distinction be made between sustainability education and ESD, as these terms may be used interchangeably in this paper. For more on this discussion, see e.g. Kopnina (2012), Sauvé (1996, 1999, 2005).

GM - Game Master - the person in a tabletop role-playing game whose role it is to describe the setting, play the non-player characters and adjudicate rulings to further the narrative

NPC - Non-player character - a person within the collective imagined narrative that is not being played by a regular player but voiced by the GM, could be a major character for the PCs to interact with or any minor character. *see GM and PC.*

PC - Player Character - a person in a tabletop role-playing game who role-plays a single character in the narrative which has their own personality, ideals, goals and morality.

TRPG - Tabletop Role-Playing Game - a style of gaming that involves improvised and cooperative story-telling with the addition of game mechanics and rules that are designed to add realism to the narrative.

XP - Experience Points - often in video game RPGs and some TRPGs, experience points are awarded to players who complete certain tasks which can, and often does, include killing creatures. The cumulative experience points gained throughout the game allow the player to 'level-up'; gaining more abilities, becoming more powerful and able to complete more daunting tasks.

Introduction

In Franck and Osbeck's book on Ethical Literacies and Education for Sustainable Development (ESD) (2017), Franck highlights the importance of learning from sustainability where students have "opportunities to advocate and develop as knowing and acting subjects" (p.10). He then discusses the practice of being and becoming 'sustainabilists' where the students ``have the capability of discerning, reflecting on and assessing issues to be highlighted, interpreted, discussed, and critically and constructively penetrated within sustainability education" (Franck and Osbeck, 2017, p. 13). If educators and students would like to implement this idea (and others like it that promote a democratic learning process of ESD) in an educational context, they must find a space that encourages experimentation and the practice of different ethical concepts. A place where opportunities for discussing and critically assessing issues occur naturally. Imaginative tabletop role-playing games (TRPGs) may provide such spaces for educators and students to cooperatively examine ethical and sustainability matters which may not be addressed in other realms of life. This thesis will explore the use of TRPGs in ESD with a specific focus on creating spaces for growth in ethical literacy.

If the goal is to explore the spaces created by TRPGs for growth in ethical literacy, it is imperative to show briefly where ethical literacy fits within the greater realm of sustainability education particularly with respect to young people. Growth in ethical literacy can mean that young people are becoming more prepared to wrestle with the difficult questions that will be asked of them in an uncertain future on an Earth in decline. Questions about what it means to live equitably, conscientiously and compassionately towards humans and nature (Wals, 2017). Furthermore, the ethical dimension of ESD has become a growing and important field of research for many academics, especially in Sweden, which shows that this type of investigation can yield further advancement in ESD in general (Kronlid and Öhman, 2013). A further discussion into ethical literacy, young people and ESD will continue in the literature review below.

Why should the TRPG be researched as a tool that could be used in ESD? This is a question of relevance not only in this crucial time for our planet but in the advent of the current TRPG renaissance. An estimated 13.7 million people are playing the most popular of these games, Dungeons and Dragons, worldwide and this number is steadily increasing (Camp, 2019). With this resurgence of roleplay gaming, much could be gained from harnessing a popular tool for work in ESD. In her work on ethical literacy, narratives and tweens, Osbeck (2017) states that through fiction reading we "come into contact with destinies that we never would have the chance to be part of. Through sympathetic imagination we almost experience others' lives, explore them and try out other selves" (p. 58). This idea of sympathetic imagination comes from Martha Nussbaum, who in 2010, clarifies the importance of this imagination in education:

> [Sympathetic imagination] is the ability to think what it might be like to be in the shoes of a person different from oneself, to be an intelligent reader of that person's story, and to understand the emotions, wishes, and desires that someone so placed might have. The cultivation of sympathy has been a key part of the best modern ideas of progressive education, in both Western and non-Western nations. The moral imagination, always under siege from fear and narcissism, is apt to become obtuse if

not energetically refined and cultivated through the development of sympathy and concern. Learning to see another human being not as a thing but as a full person is not an automatic achievement: it must be promoted by an education that refines the ability to think about what the inner life of another may be like - to understand why one can never fully grasp that inner world, and why every person is always to a certain extent dark to every other. (p. 741)

This perspective can be seen as being anthropocentric but it may be possible to extend this sympathetic imagination to nature as well. Nussbaum's work has been focused on literary narratives as she believes they have the power to influence the ethics and values of young adults (Osbeck, 2017). This, in turn, may extend to them the possibility of becoming moral subjects capable of making ethical actions in regards to sustainable development (Franck, 2017). How much more could be gained if the same young adults were thinking and acting through characters in an imaginative narrative instead? Collaborative and participatory story-telling is exactly what is involved in a TRPG and this is what separates the TRPG from typical roleplaying, drama and video games and their use in education. Therefore, the use of TRPGs in ESD ought to be the subject of research as it could be used as an effective tool for researchers examining ethical decision making and the effects of imaginative role-playing. In addition, this investigation could be useful for educators who are looking for ways to incorporate practicing ethics in an educational setting that is both pedagogical and enjoyable.

A Guide to TRPGs

At this point, it is necessary to give a brief guide on how a TRPG can function in an educational environment in order to provide a full picture of what is involved for those that are not familiar with these types of games. In a typical TRPG, there are at least two to perhaps as many as eight participants who sit around a table (or similarly in an online environment) to play; cooperative play is an essential part of the TRPG. Participants take on different roles within the game but a main goal for most groups is to create a compelling narrative through the weaving of both planned and improvised scenarios and encounters. There are two main roles filled by those playing the game: the players, who play only one character in the story (PCs or player characters), and the game master (GM), who narrates the setting as well as playing the non-player characters (NPCs) in the story. These stories can be set in any fantastic world that can be imagined typically within the sci-fi or fantasy genres. Worlds filled with features like medieval castles, dragons and unicorns or magic-powered technology. The narrative itself is formed by a dialogue between the GM and the PCs as well as the PCs' interactions with each other. Usually the PCs form a party or team that work together to achieve goals they could not otherwise achieve on their own such as finding lost artifacts, rescuing hostages, gaining fame or acquiring wealth. Whether those goals are altruistic or selfish depends entirely on how the PCs are roleplayed. Players can portray any morality from a charitable priest who gives all his wealth to those less fortunate to a devious assassin who would do anything for the right price. The game demands players to make decisions that benefit their own interests but also to balance those with their group's interests in addition to the interests of other characters introduced by the GM. The players maintain their own personal identity, their character's identity along with a group identity which are all subject to change as the narrative evolves.

The GM's role, which will be discussed extensively further, is to facilitate the PCs interaction with the world that is being described as well as adjudicate the rules of the game. The rules and mechanics of the game are intended to add boundaries and realism to the story by using the randomness of drawing cards or rolling dice. Figure 1 shows a short transcript from a game which exemplifies this type of interaction.

> GM: You see large eggs that are broken along the side of the path.
> PC: Can I try to identify the eggs?
> GM: So you get up close to the eggs. Roll a nature check if you have the proficiency in that skill.
> PC: 21 [a high dice roll]
> GM: You look at these eggs and while you have not necessarily seen these specific kinds of eggs before, you have seen something like them. You know that they are reptilian, more oblong in shape. But they are a lot larger than you've ever seen before.

Figure 1: A typical interaction of a GM with a PC who is trying to learn more about the imagined environment around them

A player is not able to perform any action they can describe, such as jumping up 15 metres to the top of a wall, but they may attempt something that is possible based on their skills and sometimes a dice roll, such as attempting to climb that same 15 meter wall. The dice rolls simulate the chaos of life, attempting to add realism to the situation. It is hoped that this brief explanation gives some understanding into how a TRPG works. What is important to grasp is the unique space a TRPG can create where players can pretend to be someone else, try different things they are not able to in real life and then see the consequences of those actions. These repercussions may be relevant for the narrative and the imagined world the group is playing in but are generally not consequential to the player's real lives. In this way, experimentation and practice of different moral positions is possible with only partially significant consequences being the result; a unique space indeed.

Research Aim

The aim of this thesis is to explore the possible value of using TRPGs for ESD. There is a paucity in the literature into the use of TRPGs for ESD and therefore, this presents an opportunity for this study to begin to fill in the gap. This will be shown further in the literature review that follows the introduction. This should be considered the general aim, however, the scope of this thesis is narrowed to specifically examine the opportunities that a TRPG can present for young people to explore ethical questions that relate to sustainability.

Research Questions

The following research questions refine the aim stated above and also correspond to the theoretical framework used as well as the methodology:

1. How can educative moments with regards to sustainability arise in a TRPG game session run with young people?
2. Upon further reflection of these moments by the students, what insights can be gained into how a TRPG can be used in ESD with a specific focus on how young people

demonstrate their own values compared to those of their character within and without the game?

Theoretical Framework

Two different theoretical frameworks will be used in conjunction with one another to aid in analyzing the two research questions shown above. The first framework presented below will be used to analyze transcripts from the gaming sessions themselves while the second will be used to evaluate reflection interviews to explore the research questions respectively.

The first is a work by Garrison, Östman and Håkansson (2015) where they present a theory on the use of what they call companion value spheres (epistemological, ethical and aesthetic); where value spheres meet and collide with one another is where learning occurs. A brief quote from the article will perhaps more effectively show why this framework will assist in exploring the first research question: "[T]he present environmental situation 'needs thinking and doing things that have not been done before'…and sustainability education has to 'create opportunities for new values to evolve'. Our paper will explore such opportunities in terms of what we call the educative moment" (Garrison et al, 2015, p. 184). The framework they present demonstrates where educative moments can occur. This will be used to attempt to find these moments as they might happen in a TRPG gaming session.

Kronlid and Öhman (2013) provide the second framework that will be used to analyze the students' reflections of the educative moments identified from the first step of the analysis. Kronlid and Öhman (2013) give a more general structure designed for several different uses within environmental ethics. One of the uses they describe is to "clarify the moral content of environmental moral reactions, norms, reflections, etc. as these are manifested in texts and various educational practices" (Kronlid and Öhman, 2013, p. 35). While another use of their framework they purport is for the analysis of group conversations which may give insight into how students interpret ethical decisions on both an individual and relational level (Kronlid and Öhman, 2013). This framework will be used as a combination of these descriptions for the group reflection process following the gaming sessions. Further consideration of both frameworks mentioned in this section will be made in the theory section of this thesis on page 14.

Method

Two groups of five to six players aged 14 to 16 years old were included in this study where each group played four gaming sessions two to four hours in length. The researcher of this study played the role of the game master while each participant played a single player character. The TRPG used in this study was Dungeons and Dragons (D&D) 5th edition (Crawford et al, 2014, Player's Handbook). These sessions were recorded and transcribed for further analysis. These gaming sessions included scenarios that were constructed to give opportunities for educative moments, however, as it is partially improvised, some occur without planning as shown in the results section. Following the gaming sessions, group and individual interviews were conducted with the participants which were also audio recorded and then transcribed. The interviews were designed in a semi-structured way to allow the students to engage in ethical reflection. Questions for these interviews were derived to be open-ended, encouraging the

students to contemplate choices made during the game without the expectation of a right or wrong answer. Additional information regarding the specifics of the method, including descriptions of the gaming scenarios as well as interview questions, can be found in the corresponding section in this thesis on page 18.

Opportunities and Limitations to the Study

When one person is fulfilling multiple roles in a study, in this case as educator, game master and researcher, this presents both limitations and opportunities in the study. Typical scientific research on education demands that the researcher be a detached spectator to the goings-on in an educational environment in order to avoid value bias (Elliott, 2006). There may be a strong case to be made that in this study, the researcher as educator and game master may be unintentionally biased towards eliciting certain responses and actions during game play. For instance, the participants may look to their teacher and their facial expressions in order to gain insight to whether their proposed action is perceived as a 'good idea'. This situation may be difficult to avoid, which shows the possible limitations of this method. Elliott (2006), however, argues that qualitative research done by education practitioners can yield different results than a spectator generating quantitative data; forming instead practical insights and judgments from a more common sense inquiry. In a later paper, Elliott (2015) clarifies that it is possible for teacher researchers to "create an ethical space for learning in which the individuality and creativity of the learner as an autonomous subject are respected and she/he is allowed to take responsibility for their learning" (p. 5). This is a goal in this study which is possible if the educator is also the researcher. Furthermore, the students may feel more comfortable with their own teacher which may contribute to creating such spaces. Finally, with the researcher as the practitioner, the researcher can gain first-hand insight and learning into the educational practice in question (Elliott, 2015). This topic will be dealt with more extensively in the Discussion on page 40.

This study is also limited to a small amount of participants over a short amount of time using only one kind of TRPG. This means that this study is not an attempt at being representative of the age group of the participants or all TRPGs in general. The aim of the study, as shown above, is to explore what *could* be possible in using TRPGs for ESD. This limits the scope of the study to something manageable for a master's thesis but also presents the opportunity for a deeper investigation into a smaller data set, though the transcriptions still contain several hours of dialogue. This can be seen in the Results and Analysis section on page 22, where the reader is provided with the so-called "thick description" (see Geertz, 2008) of the gaming sessions and interviews in order to give a richer analysis as well as giving more context and insight into the gaming world.

Outline for the thesis

The following list gives an outline and a brief description of the sections found within the rest of the thesis:

Literature Review: A comprehensive look at relevant literature regarding TRPGs, Role-playing, and Sustainability Education research spheres and their intersections (page 9)
Theory: A broader discussion on both theoretical frameworks used in the analysis of the gaming sessions and interviews (page 14)

Method: Details the methodology used in this study describing aspects such as the participants, materials used and the method itself (page 18)

Results and Analysis: An in-depth analysis of the gaming sessions and interviews including excerpts of transcripts from each to give thick description (page 22)

Discussion: Examines the implications of the results section and attempts to answer the research questions as well as contribute to ESD research (page 35)

Conclusion: Highlights the important results and discussion as well as makes recommendations for further research into TRPGs in ESD. (page 43)

Literature Review

The main problem found in the literature, is a paucity of research in this specific area. Figure 2 shows four broad research areas (Sustainability, Games, Role-playing and Education) which overlap to form more specific research areas. Several articles exist which cover three of these overlaps: RPGs and Sustainability which consists of video game research into sustainability; TRPGs in Education which has looked at TRPGs for use in general educational activities; and Roleplaying in ESD which uses roleplaying for sustainability learning without using a gaming system. However, there seems to exist little or no research into TRPGs for use in ESD specifically. Garcia (2016) states there is a lack of empirical data for research into TRPG use in education in general. Therefore, there seems to be a need for an exploration into this area considering that TRPGs

Figure 2: The intersections of research fronts of sustainability, games, role-playing and education. The overlaps between these fields specifically looking into the three areas circled in red show where some research has been conducted: RPGs and Sustainability, TRPGs in Education and Role-playing in ESD. However, there is a lack of research into the middle section which combines all four research fronts.

provide not only a unique collaborative experience but an enjoyable one as well. This literature review will focus on the areas of research surrounding TRPGs and ESD. To simplify and narrow the scope of this review, only three of the intersections in Figure 2 will be discussed: TRPGs in Education, RPGs and sustainability and Role-playing and ESD. The research into those three

avenues should provide a valuable basis for future research into the intersection of all four major fields shown in Figure 2: TRPGs and ESD.

Tabletop Role-playing Games in Education

The first theme of research that is relevant to TRPGs and ESD is how TRPGs have been used and examined in an educational context. The articles selected in this category represent the majority of the literature that will be reviewed as they give important insight into useful methods for the study of TRPGs, which will be discussed further on. They also set the groundwork for where TRPGs have already been scrutinised and where further work can be done.

The first subset that can be identified within this theme is the use of TRPGs in a formal classroom context with only qualitative analysis and observation. Clarke et al (2018), Cook et al (2017), Woods (2017), Otty (2017), Glazer (2015) and Zalka (2016) have each separately used TRPGs in a classroom setting and reported qualitative observations. The latter five focus on their use specifically in English writing and narrative courses while the former provides a general layout for use in different classroom contexts. The commonality behind the use of TRPGs in these papers is the desire to provide engagement for all students in topics that might seem to drain creativity rather than inspire it. While all of these studies used different TRPG games and mechanics, they all used simple and less numbers-based gaming systems or simplified already existing systems in order to make the games more accessible and easier to run in a classroom setting. Other similarities emerge when looking at the results where each study reported on their success with engaging all students (whether they are 'strong' or 'weak' academically), building skills in self-reflection, giving agency to students and formation of community. Woods (2017), Glazer (2015) and Zalka (2016) contain literature reviews into roleplaying, gaming and education and provide pedagogy-based rationales for choosing to use TRPGs in a classroom. Woods' (2017) dissertation is exceptional as it also contains a deep look into the history of the TRPG and why it has significantly higher pedagogical potential over digital or video game RPGs. What is missing from these studies is more extensive research that goes beyond what happened when the researchers first ran their games. All of these studies merely contain suggestions for the future use of TRPGs without increased concrete trials that could solidify their findings instead of being solely anecdotal.

The second subset that was found belonging to the theme of TRPGs and Education is of papers that focus on the specific transformative aspects of an RPG on moral or creative development of players who engage in TRPGs. Each of these studies use quantitative measurements to assess the efficacy of TRPGs in various contexts. One study attempted to understand the transformative qualities of using TRPGs to develop four dimensions of learning: knowing, doing, being, and relating. It was determined that these four dimensions linked well to four levels of reality experienced in TRPGs: character, player, person, and human being, and helped develop connections as well as self-reflection skills (Daniau, 2016). Similarly, Dyson et al. (2016) quantified a change in creative potential and emotional creativity in students before and after four gaming sessions compared with a control group who did not play a TRPG in the same time frame. This study concludes with TRPGs bringing positive change on creative potential but not on emotional creativity. In a similar vein, Zdravkova (2014) and Wright et al (2017) demonstrated the positive effects of TRPGs on moral and ethical development. The former study used online TRPGs to improve ethical literacy in computer engineers while the latter

investigation was performed to gain more of a general understanding of TRPGs as "a moral training ground" (Wright et al, 2017, p. 4). All of the studies in this subset show the possibility of using tests to gain quantitative and qualitative data with regards to studying TRPGs and education. However, as these are the only studies found in this realm[1], there seems to be a need for the generation of more data to further shed light on the positive effects of TRPGs in both a pedagogical and sustainability sense.

An essential concept related to TRPGs in Education is the question of how much, if any, do role-playing games reflect reality? When looking at video games, Simkins and Steinkuhler (2008) discuss two different camps that could be perceived in having opposing views: narratologists and ludologists. Narratologists see games as being similar to other media (like novels) and can be seen as such while ludologists claim that games exist as a completely separate form of media because of the fact that they are played and have rules which must be followed for the game to function. Nussbaum (2010) does not include games in her theory on sympathetic imagination, only referencing literature and art. However, she includes music, fine art and dance and therefore may lean towards being a narratologist and may extend her theory of developing sympathy through imagining yourself in someone else's position when asked about TRPGs (Nussbaum, 2010). Simkins and Steinkuhler (2008) offer a middle ground by stating,

> [R]ather than focusing on the game as something outside of life, we should understand games as meaning-generating spaces within life. In games, ordinary rules of social action are changed but that does not mean they are not important and consequential (p. 338)

They go on to argue that, not only are RPGs consequential but provide a unique learning environment:

> RPGs are potentially powerful spaces for practicing and developing skills in critical ethical reasoning, as they have the unique ability of providing experiences that are entirely coconstructed by both designer and player. Not only is the experience of game play coproduced, but the meaning of the games is coproduced, providing the kind of learning environment that, according to Dewey, is essential for the development of competency as a participant in a democratic society. (Simkins and Steinkuhler, 2008, p. 339)

While this paper discusses mainly video games, this theory directly applies to tabletop RPGs. Daniau (2015) confirms this by asserting that TRPGs have not only learning but transformative potential. However, to achieve a desired transformation, the experience of merely playing a TRPG may not be enough. Daniau (2015) argues that significant debriefing must occur for actions that happened in a game to have an affect on individuals outside of the game. For the research questions, this observation, if true, is highly relevant as any ethical or ecoliteracy gained within the game might not be transferred outside of the game if debrief, discussion and reflection does not occur.

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[1] Other studies were found that looked into TRPGs outside of an educational realm. These include those that looked into motivation behind playing TRPGs (Coe, 2017) as well as tying how people play TRPGs and how that links to their actions in real life (Waskul and Lust, 2004; Mizer, 2015; Garcia, 2017; O'Neal, 2011).

Several learning theories of interest were applied in the research that has been discussed already. Of these, two have seemed to emerge as essential in TRPG study: experiential and transformative learning. Experiential learning theory appears directly in Clarke et al (2018), and Simkins & Steinkuehler (2008) where they discuss Dewey as well as in Ely (2018) who uses Kolb's theory. Gordon & Thomas (2018) go on further to state that, "significant learning experiences occur from a process that engages students, and has a high energy level in class. The outcomes from these experiences are significant and lasting change for the student, and are of value to their lives" (p. 173). This is not surprising as TRPGs are always experiential so it follows that researchers would employ these theories.

Related to experiential learning, is transformative learning theory which was developed by Mezirow. Chen & Martin (2015) explain Mezirow's theory by stating, "At the heart of transformative learning theory is a significant shift, via disorienting event, in the foundational assumptions that underlie an individual's worldview" (p. 88). Disorienting events are produced in a TRPG and so they could contribute to transformative learning. Daniau (2016) also explains that the TRPG, "aims at raising the participants' awareness about their own meaning schemes, such as specific beliefs, attitudes, and emotional reactions" (p. 429). This is important to acknowledge as this is part of what can separate a TRPG from an educational role-play as the game requires deeper understanding and reflection upon the discrepancy between the character's beliefs and the player's own beliefs.

Role-playing Games and Sustainability

As shown previously, little research has been found that focuses specifically on sustainability education and TRPGs. However, there has been some work on video game RPGs (VRPGs) and ESD. VRPGs offer some of the same strengths as TRPGs as they allow the player to become a different character and practice making ethical decisions, as Schrier (2015) writes,

> Games may also be specifically suitable for practicing ethical thinking around sustainability. Games are complex systems with which to experiment, test, and play with various choices, conditions, and outcomes. Players can adjust variables, such as attitudes, behaviors, and resources, and reflect on any effects that emerge in a game's dynamic system (p. 677)

While a VRPG provides options for players to make decisions, the options are always limited as a computer cannot function as a game master (who interprets and makes rulings based on player, character and setting interactions) can (Ellis and Hendler, 2017). A TRPG contains virtually unlimited options and ways a team of players can attack a problem. While these genres of games differ, it is useful to see how research has been conducted in a similar field.

An article by Karen Schrier (2015) presents a study about how people make ethical decisions in video games compared to reading descriptions of sustainability scenarios. Her main research question was: Can games provide a holistic understanding of the ethical decision making process related to sustainability and environmental management? She used an off-the-shelf video game called Fable III with players playing by themselves. She found that the players in the game were more likely to make the 'ecological' choice based on both logic and empathy

whereas the control subjects based their decisions solely on logic-based reasoning. These findings seem consistent with the ethical thinking and moral development studies of TRPGs (Daniau, 2016; Wright et al, 2017) where an RPG seems to significantly play on emotional states. In Schrier's (2015) study, we also see that sustainability related issues were prioritised lower than moral dilemmas presented in the game. It would be valuable to see if this was the case in TRPGs as this could give insight into how, in some cases, humanity has kept sustainability issues as a lower priority in reality.

A similar question could be asked then of TRPGs: How can a TRPG provide insight into the ethical decision making process related to sustainability? This question could be paired with a comparison to Schrier's (2015) work but also adds another dimension: group decision making. TRPGs are necessarily played with others and, generally, problems are solved through teamwork and dilemmas are decided in a group setting. This inevitably yields different perspectives of the characters within the narrative, which may also be different perspectives from those that are actually playing the characters. With a five person game, including the game master (who may present the sustainability scenario but can also influence and interact with it), nine different perspectives could exist at the same time.

In a masters thesis, Peng (2015) created a sustainability RPG video game based on the consequences of out-of-control consumption. The results were based only on user feedback:

> The users provided great feedback about this game that was successful in my efforts to amend the game to draw users' attention to the problem of waste and the importance of recycling. Some participants realized the damage to the environment of throwing too many toxic non-degradable wastes into landfills. A few users also pointed out that it was amusing to have unfavorable healthy food as the recovery items to attract the audience to eating healthy. Overall, the characters and environment design are engaging and attract users' attention (Peng, 2015, p. 50)

Though this is not conclusive evidence of a successful sustainability RPG, Peng's (2015) project provides a basis for a method of creating a similar TRPG which contains exploitation and anti-consumerism themes.

One final warning on this matter is given by Ideland and Malmberg (2014) where they notice how some 'sustainability games' have been used to promote neoliberal consumerism. In these games, the world's future is shown to be dependent on everyone's individual choices rather than a product of an overall economic system. This is important to stress that if a TRPG is to be sustainability focused, that it not necessarily promote a "discourse of education for sustainable development [that] is characterized by scientific and mathematical objectivity and a faith in technological development and consumption" (Ideland & Malmberg, 2014, p. 181). There must be scenarios given that challenge the players' own values but also show the possibility of larger systemic issues.

Role-playing and Education for Sustainable Development

Though TRPGs have not necessarily been used specifically in ESD research, general role-playing has been shown to have merits in both ESD specifically and education in general (Chen & Martin, 2015; Gordon & Thomas, 2018). This section presents a selection of research

which uses role-playing in an ESD context which give relevant perspectives on the possibilities for TRPGs to productively contribute to ESD research.

Each of these studies: Brazier (2014); Ely (2018); Gordon & Thomas (2018); Paschall & Wüstenhagen (2012); Österlind (2018) present a method in which students take on the role of a stakeholder in a sustainability problem. While some aspects of the simulations are different (amount of students, the length of the event etc), each of the investigations use a similar method. The typical set-up includes a research phase in which students are allowed to determine their role's position in the problem, followed by a 'play' phase where stakeholders discuss and decide on actions and then those actions are resolved. Finally, the experience concludes with a debrief where the students discuss the events that took place in the role-play phase. The results for all five studies were taken qualitatively from students' comments and surveys. The reported findings, while varied, focused around these topics:

- Generating empathy (Ely, 2018; Gordon & Thomas, 2018; Österlind, 2018)
- Increased engagement and enjoyment in course material (Brazier, 2014; Gordon & Thomas, 2018; Paschall & Wüstenhagen, 2012; Österlind, 2018)
- Change in personal behaviour (Gordon & Thomas, 2018; Paschall & Wüstenhagen, 2012)
- Increased use of strategic thinking skills (Gordon & Thomas, 2018; Österlind, 2018)
- Increase in sustainability knowledge (Brazier, 2014; Ely, 2018)

These studies show that there is obvious value in using role-play in ESD and this leads to a further question: If these role-play simulations are helpful for students learning about sustainability, why should we bother with using a potentially more complicated and lengthy process involved with the TRPG? Perhaps with the more immersive and robust gaming experience that a TRPG offers, more educational value can be hoped for.

Theory

Justification of Theoretical Frameworks

An overall aim for this thesis is to set up a platform that could be used to justify and aid further research into the use of TRPGs in ESD research, whether qualitative, like this study, or quantitative. It is hoped that the Literature Review has shown the paucity of this kind of research. The goal with the rest of this paper then, is to show why it might be sensible to fill in this void for educators, students and researchers. To do that, it was determined that a two step process would be useful to show some of the opportunities that TRPGs could give to young people who play the game and then reflect on the game. The first step is to find points during a game where learning *from* sustainability (see Franck, 2017) may be occurring. The second step is to reflect on these learning moments with the students so that further insight into their thinking in-game and out-of-game may be gained. This two step process is referred to in both the specific research questions and within the Method below. The frameworks used to analyze each step in the research process were chosen for several reasons and these are detailed here.

The First Step - Identifying Educative Moments - Garrison et al (2014)

Garrison et al (2014) present a framework that can be used to identify what they call 'educative moments' within an environmental education context. It is built upon the concept of companion values where in "teaching and learning there exist a mutual interrogation among epistemology, ethics, and aesthetics, although in practice one of them might be in focus and the others function as companions" (Garrison et al, 2014, p. 183). To be clear, the authors define these value spheres in these ways:

> Epistemological activities are concerned with rational values, such as truth. Artistic activities deal with aesthetical values, i.e. values that concern immediately felt sensory qualities that arouse emotions of like and dislike. Ethical activities deal with values concerning how we ought to conduct ourselves along with ideals for how to approach nature and other humans, and such (Garrison et al, 2014, p.192 and 193)

The researchers contend that when and where these spheres intersect one occurs, there exists an elusive educative moment where existing values can be critiqued and explored and new values possibly emerge. In this case, as mentioned previously, the field of ethical literacy is in focus of the research and so the educative moments will feature ethical dilemmas colliding with the other two value spheres.

This framework was chosen because it provides a method of identification for the kinds of moments this research is looking to find within the TRPG game sessions. We are looking to see if opportunities exist where young people can practice being 'sustainablists' (Franck, 2017 and see page 2 for the definition). This method requires the researcher to find points where the students are dealing with several layers of a problem, something that is not one dimensional. Garrison et al (2014) believe that ESD should include

> critical and creative engagements with the plausibility and legitimacy of normalizing the trope of catastrophe. As our analyses will show that educative moments are minor catastrophes for the student and/or teacher, minor catastrophes that we will show condense greater cultural catastrophes into a smaller but no less intense context (p. 184)

These are the moments that are being sought after; where the PCs and GM are encountering minor catastrophes together within the game and what unfolds is the educative moment.

The theory of companion values and educative moments that Garrison et al (2014) tie together is grounded in many of the same ideas, authors and research that this thesis has already drawn on. These include an emphasis on democratic and an emancipatory style of education promoted by Wals and Jickling (2002). A quote from Wals and Jickling (2002) that Garrison et al (2014) use in their framework shows why their study fits well for this research: "[E]ducation has first and foremost something to do with creating possibilities, not defining or prescribing the future for our students. These possibilities arise when [educators] promote exploration, evaluation, and critique of emerging ideas and the creative contribution to their development" (Wals and Jickling, 2002, p. 230). Creating possibilities is what this research is after, therefore it seems intuitive to use Garrison et al (2014) if that is their goal as well.

The Second Step - Analyzing Reflections - Kronlid and Öhman (2013)

Kronlid and Öhman (2013) take a different approach from Garrison et al (2014) where instead of giving a specific way to identify kinds of moments in an educational context, they provide a general framework that could be used in many different ways but with a focus on environmental ethics that Garrison et al (2014) lacks. If there was any doubt the place of prominence environmental ethics should hold in ESD, Kronlid and Öhman (2013) put this skepticism to rest as they show the importance of ethics in relation to overall ESD research. The authors then examine an exhaustive list of books and articles to develop the structure to their framework. They determined that research is divided into those concerned with value-oriented environmental ethics and those interested in relation-oriented environmental ethics. Value-oriented ethical theory as a research theory focuses on who or what is considered a moral object, human-nature relationships and definitions of nature's value. While relation-oriented "takes the vantage point that moral agents are situated in morally relevant relationships with humans and non-humans, and that the justification of actions and principles will take these particular relationships into consideration" (p. 29) The authors structured their research into these two camps where you can evaluate empirical data from either or both lenses.

Kronlid and Öhman's (2013) work was chosen for the second step of analysis because their focus is on ethics within sustainability education. An aim of this research is to inquire into the kinds of spaces a TRPG creates when dealing specifically with sustainability ethics problems. It follows that a framework that explicitly is written for environmental ethics would be chosen. The authors' choice of delineating between both value-oriented and relation-oriented could help to give different perspectives on the same data. Furthermore, when Kronlid and Öhman (2013) provide suggestions on how their framework can be used they state, "[T]he suggested framework could add analysis tools that not only relate to how [moral and ethical] meanings are created and sustained, but also to the nature and content of students´ moral and ethical meaning making in educational situations" (p. 35).

With the use of post-game reflections, investigating the reason why certain choices were made in the game should give insight into how TRPGs relate to ESD and the real world at large. Furthermore, distinctions or similarities between PCs' demonstrated values and those that are purported by their players may also give understanding into how a TRPG contributes to the young people's ever-changing value schemes.

Application

How Garrison et al (2014) will be used

In the third part of their work, Garrison et al (2014) give two empirical examples of how they found educative moments within varying contexts. Conversations between students and teachers were recorded and the authors show the interrogation of different value spheres that occur in these situations. For example, young students studying salamanders explore both ethical and epistemological value spheres as they both care for and want to learn about the salamander simultaneously. This method of identifying educative moments by finding where the

epistemological, aesthetic and ethical value spheres meet and collide within conversation will be used similarly in this study, as exemplified in the Results section on page 22. Not only do the examples they provide show how to use their framework, the authors also demonstrate how they would take the next step following the identified educative moment:

> It is easy to imagine that this situation could have been used as an entrance for a discussion and reflections concerning moral dilemmas – as situations where there will be no solutions without a loss or pain– and where there will be a possibility to be creative. Moreover, it could have been used as an entrance for having other students share the situation where they have been subjected to bodily, deeply felt environmental ethical values and their consequences when it comes to the interrogation between the different value spheres. Such sharing will also implicate a possibility to develop new values. (Garrison et al, 2014, p.197)

Here the authors argue that reflection on the educative moment can yield even greater possibilities for the learner. This leads effectively into the second step of the analysis where after such a reflection occurs, another framework is necessary to examine and make meaning of what occurred.

How Kronlid and Öhman (2013) will be used

After the post-game, semi-structured, reflective interviews, Kronlid and Öhman's work will be used to study different aspects of this reflection. The framework be used mainly to compare the participants' stated values with those that the character they played may have exhibited. Using the value-oriented perspective, there could be parallels drawn between the imagined world and the real world and how people can play characters within each. For instance, the way a PC viewed human-nature relationships in the game may be similar or different from the player who plays them. This comparison could yield understanding into the nature of roleplaying and ethical decision making which points to how useful a TRPG may be for ethical literacy and ESD. While the relation-oriented analytical scheme provided by Kronlid and Öhman (2013) was going to be used to analyze the underlying relations found in Scenario 2 (see the Method Procedure for its description), the results from the interview did not have a good fit with this kind of analysis. The semi-structured interviews may have touched on some of the paradigms presented in that half of the framework but it was not enough to draw worthwhile conclusions. Therefore, in the end, only the value-oriented framework was used as mentioned above. This was a brief description of how this theoretical framework will be used, however, the Results section may give a better picture of its use in action.

Method

Background to the Method

Each of the studies previously mentioned in the Literature Review use methods of examining the efficacy of role-playing and from them, useful knowledge can be gleaned for future studies. One theme that arose in many of the studies was the use of simplified rules in an RPG (Clarke et

al, 2018; Cook et al, 2017; Woods, 2017; Otty, 2017; Paschall & Wüstenhagen, 2012; and Zalka, 2016) whereas Schrier (2015) was able to assess a play-through of a popular commercial video game. While it might seem wise to use a simpler style of game, there is also an opportunity to evaluate the effects of a popular commercial TRPG for its use in ESD (as Wright et al (2017) and Daniau (2016) had done in their studies). Glazer (2015), alternatively, employs a constructivist method where part of the task for the students is building the game itself. This emancipatory style of education strengthens their capacities and helps them determine for themselves how to live sustainably (Wals, 2012). Furthermore, all of the studies using TRPGs have the educator or researcher cast as the game master to allow some measure of control over the game. While this may ensure that the game develops in a certain way, this removes some of the students' agency from the game. It may be fruitful to observe what happens for students not only as player characters but playing the role of game master as well. Both Paschall & Wüstenhagen (2012) and Daniau (2016) also mention helpful suggestions from their experiences for running a successful educational roleplay including:

- Face to face interaction (do not use online tools), allow students to build content, encourage debate and creativity, allow it to be fun, combine urgency with optimism (Paschall & Wüstenhagen, 2012, p. 537-538)
- Use small groups, long playing duration, playful atmosphere and confidentiality, bring participants to develop, enrich, consolidate, and support both the group's imagination and their learning process (Daniau, 2016, p. 439)

The most useful methods that may be used in studying popular TRPGs in ESD were those employed by Wright et al (2017) and Schrier (2015). Wright et al (2017) looked into how Dungeons & Dragons can contribute to moral development in its players. The study consisted of morality tests (Defining Issues Test and Self-Understanding Interview) before and after the experience to show possible change, however, a weekly journal was also used after each gaming session. The journal entries could provide insight and add an element of reflection to the game that is possibly missing from a typical gaming session. Schrier (2015) allowed the video game to present decisions involving sustainability and observed the individual players choices. This could translate to a TRPG by presenting a team of players with certain decisions and observing outcomes. The benefit that the TRPG gives is that even using a commercial gaming system, such as D&D, settings and situations can be tailor-made to test certain capabilities in the players. Therefore, a combination of the methods used by Wright et al (2017) and Schrier (2015) could prove advantageous for future research.

Participants

The gaming portion of the study includes participants aged 14 to 16 from a school in northern Sweden. The gaming participants were split into two groups, the first (five males and one female) playing at the end of the first term while the second group (three males, one female and one who does not identify as a gender) played their gaming sessions near the beginning of the second term. The students selected to play the game were those who were interested in participating without any other selection criteria as this study is not meant to be representative, but rather explore possibilities that TRPGs could offer for ESD. Another reason for this selection is practical: the researcher works as a teacher at this school and is able to see these students at least once per week, along with special school events, where there is a group that has been

formed that is currently playing TRPGs. The third reason this age group was chosen for research is the interesting time of life this captures, where some of their core values and identities may be forming which may have an impact on their future adult behaviours (Finlay et al, 2015). Finally, the first group did not have any experience with TRPGs before but most, if not all, seemed to have extensive involvement in video game RPGs. The second group had been playing the game for about a term with a student as the game master, and so had much more experience with how the game worked. This discrepancy will be discussed further on in the Discussion section on page 32. Permission to participate in the study was granted by both the participants and their guardians where necessary where anonymity was guaranteed by the researcher.

For the interview and reflection part of the study, the goal was to conduct group interviews with all the participants from the gaming sessions in order to gain insight with the group dynamic still in place. However, due to the pandemic, it was difficult to gather the participants except in small groups or by themselves. In addition, some students from the gaming sessions that did not participate extensively in the identified educative moments from the gaming sessions were not interviewed due to the difficulty of scheduling during this time as it did not seem prudent for this study to include them. Therefore, in the end, from the first group one interview was conducted with the students playing the Sorcerer and Warlock (male and female respectively) and a separate interview with the Wizard (who was male). The second group interviews consisted of one with the Bard and Druid, and one with the Monk alone (all males). A third interview was given to the Warlock and Wizard from this group but the main topic of conversation was the reason behind their lack of participation during the sessions. This is a possible limitation as the same group dynamic that was present in the games was not during the interviews. This also presents the possibility of insights being shared, however, that might not be shared if that group dynamic was in place. For instance, if a more shy participant felt more comfortable with the smaller group, they may share some of their observations they might not divulge otherwise. Again, this will be thoroughly examined in both the Results and Discussion sections further on.

Materials Used

A commercial, off-the-shelf TRPG called Dungeons and Dragons (D&D) 5th Edition developed by Wizard's of the Coast was used in this study (see Crawfod et al, 2014). To avoid intellectual property infringement anything written about the game falls under their Fan Content Policy, where writing can be published using their intellectual property if financial gain is not . With the renaissance of TRPGs in modern culture, it seems appropriate to use the most popular off-the-shelf game (Camp, 2019). However, as stated previously, this game is not meant to be representative of all TRPGs and a future study could look at the use of different TRPGs for use in ESD. In addition, D&D 5th Edition presents an easily accessible and adaptable version for play and design, which may have contributed to its popularity, as well as an online tool (D&D Beyond) which allows players creative character building and using without getting lost in the mathematics. In the preface to the Player's Handbook for D&D 5th Edition (Crawford et al, 2014), some understanding can be gained as to what the game designers believe the goal of the game is:

> "Playing D&D is an exercise in collaborative creation. You and your friends create
> epic stories filled with tension and memorable drama. You create silly in-jokes that

make you laugh years later. The dice will be cruel to you, but you will soldier on. Your collective creativity will build stories that you will tell again and again, ranging from the utterly absurd to the stuff of legend. (p. 4)"

While words like learning or sustainability are left out, the game designers are concerned with narrative, collaboration and creativity. The flexibility of the game allows the game master and the players to make the narrative whatever they want to create collaboratively. This could generate the possibility for educational spaces and educative moments to be curated and discovered organically.

Other materials used in this study include a variety of many-sided dice suitable for the D&D game, including the twenty-sided d20 used to help determine many outcomes in the game; battle maps and miniatures to help simulate combat encounters which could add tactics and depth; the D&D 5th Edition Player's Handbook and Monster Manual which contains the rules for the game and statistics for some of the creatures used in the story; computers and/or pen and paper used to show character sheets which aid players in reminding what special things their characters can do; audio recording equipment for both the game sessions and the interviews.

Procedure

As mentioned previously, there were two groups of players who participated in a series of gaming sessions. The first group met over four days with the sessions lasting three to four hours each day, totalling approximately sixteen hours of gameplay. This group was new to D&D and TRPGs so some time was given to explaining how the game was played including early in-story scenarios designed to feature different aspects of the game while learning through experience. This group used co-created characters where the player gave input on the personality, race, class, morality etc of the character while the game master filled in the details used for the game mechanics. The second group, alternatively, was made up of students who have played the game before and had created entirely their own characters for these games. This group played four sessions over a month-long period each roughly two to three hours in length, totalling approximately twelve hours of gameplay. This group's previous experience seemed to have stream-lined the gameplay and thus resulted in less time spent discussing rules and mechanics and less time needed overall.

The gaming sessions were organized and run a game master, in this case, the researcher who has experience with this role before. The sessions had a roughly-planned overarching narrative that tied together two main scenarios related to ethical and sustainability issues where the students, who are each playing a character in the narrative, make decisions and act based on the situation and how they believe their character might behave. The setting for the narrative combines a fantasy, post-medieval landscape whose renaissance began in part due to magic-fueled technology. The overarching narrative presents the party, the group of PCs, are a group of reporters for a popular newspaper. The task asked of them in the beginning is to report on a story about war refugees in a swampy area of a nearby region. *Scenario 1* asks the PCs what to do with a crocodile family protecting their young as the group travels through the swamp. The party is first attacked by the adult crocodiles who subsequently attempt to flee with their young if they are outmatched. *Scenario 2* depicts a more complex struggle between humans and orcs where the humans, fleeing from a war, attempt to make a new home in the swamp which is under the protection of an indigenous orc tribe. The PCs are asked to settle the

dispute after the humans have begun to change the environment through farming and settlement and the orcs try to defend their ancestral home. However, as the game narrative is not created solely by the game master, these planned scenarios are merely a part of what could unfold while the game is happening. Therefore, the descriptions of both the relevant planned and unplanned scenarios and what happened during game-play are featured more extensively within the Results section. These sessions were audio recorded and transcribed in order to be subsequently analyzed.

The analysis of the game sessions used the theoretical framework described above by Garrison et al (2014) where educative moments that occurred during gameplay were identified. Following this preliminary analysis, interviews were conducted with different groups of students, as outlined above in the Participants section. What is important to acknowledge about the interviews was their semi-structured and conversational nature so that it formed a reflection of the gameplay. These interviews were prepared with several questions relating to the participant's own values and how those values and relationships with other players and the group may have affected choices in-game. These questions were used as a guide but it was stressed that the interviewer should listen closely to answers and add follow-up questions that may occur in a natural reflection on an event in order to facilitate a deeper discussion. Gillham (2000) underlines the importance of this noting that a researcher must maintain "expert openness" (p. 3) so that they may perceive something they might otherwise overlook and thus miss out on potential insights. The general structure of the interviews consisted of the researcher playing audio from portions of the gameplay and/or describing the scene using the transcriptions followed by a few questions regarding the events that took place and their possible implications. Examples of some of the prepared questions include: If you, yourself, were in a situation similar to your character with the crocodiles, what would you do? What were your feelings on the conflict between the humans and the orcs? Further questions that followed during the interview and the relevant discussions can be found in the Results section further on. These interviews were transcribed as well and analyzed, as mentioned previously, using Kronlid and Öhman's (2013) ethical theoretical framework. This was done to give a detailed qualitative analysis that could be used in future work.

Results and Analysis

Identifying Educative Moments using Garrison et al (2014)

The Theory section provides a justification and explanation for the theoretical framework used in the analysis of the game sessions. As a reminder, Garrison et al (2014) show that values are rarely encountered separately; rather, epistemological, aesthetic and ethical values interrogate and intersect one another in teaching and learning. They contend that educative moments occur when these companion values are deliberated over together by the educator and students. It is possible to use this framework to identify educative moments that occur in a D&D game where the educator presents situations in which the player characters (PCs), role-played by the students, can explore value conflicts. Through a preliminary identification process of educative moments, further consideration into these moments by the students could yield critical and

creative reflection. Garrison et al (2014) posit that this will lead to the emergence and evolution of new values held by the students, and subsequent educative moments.

Identifying Educative Moments - Group One

In *Scenario 1*, the PCs are attacked by several crocodiles with their young close by as the party journeys through a swamp. At first it seems that the crocodiles have the upper hand so the wizard in the party first tries to distract them by making an illusion that looks like he's harming the babies. One of the crocodiles leaves the fight and

Wizard: Yeah, I'm going to cast a missile at the babies.
GM: There are seven babies here and you can cast 3 missiles at once. Basically what happens is that you kill three of the babies. (*laughter from most of the party*, Sorcerer: Oh my god!, Barbarian: Just blown up!)
Wizard: I just killed 3 babies.
Sorcerer: Why the babies?
Wizard: I don't know, easy targets.

Figure 3: *Group 1, Scenario 1* - an excerpt from the conversation surrounding how to manage a wildlife attack

begins to move towards the babies but on the next turn the wizard then casts a spell that kills three of the seven young crocodiles. Figure 3 shows an excerpt of the dialogue that describes this act.

Following the framework by Garrison et al (2014), here we can see a clash in aesthetic preferences; enjoyment from most of the party at the thought of killing young crocodiles and distaste from the student playing the Sorcerer. This intersects with the right and wrong of destroying innocent animal lives in the ethical value sphere. There is aesthetic enjoyment in the game where characters get to use fantastic super powers but the students may feel a responsibility to show restraint in light of the moral dilemma. This creates an educative moment which can be seen more obviously as the fight with the crocodiles continues. Later on, the crocodiles are clearly attempting to flee but the party is conflicted about

Warlock: I want to shoot one at the babies.
GM: Can you explain why? We seem to have some people in the camp of not killing them [the Sorcerer]. The rest of you seem intent on killing them.
Warlock: I'm going to go here [to leave] but there's at least one thing I can do before I go.
GM: But you know they aren't going to do anything to you. I'm just curious, why are we killing them?
Wizard: For XP.
GM: You don't level up with experience points [XP], only when you get to a certain point in the story.
Warlock: I know, I'm going to attack the other one.
GM: I'm not telling you to stop killing them, I'm just asking why.
Warlock: No, I've changed my mind. I'm just going to walk away.
GM: Everyone, you have noticed your teammate walking away from the fight. Sorry, I wasn't trying to influence you, just asking why.
Wizard: Yeah why?
Warlock: Because I didn't want to kill four babies! I'm thankful they almost killed [the Rogue]. So this is my way of saying thanks.

Figure 4: *Scenario 1, Group 1* - Shows a short deliberation by the Warlock and Wizard about motivations surrounding their character's choices

whether to leave them alone or continue to harm them. We see an internal conflict within the student playing the warlock in Figure 4.

The student playing the warlock is conflicted between being able to do something because it might be fun or grant a game-mechanical benefit and feeling that her character should not engage in the activity because it could be seen as morally wrong to do so. This is an educative moment, as described by Garrison et al (2014) as there is a clear internal and external deliberation due to an interrogation in all three value spheres: epistemological - using logic to gain the possibility of receiving a game-benefit in the form of experience points; aesthetic - feeling of pleasure in using special game abilities; and ethical - doing the right thing by leaving the crocodiles alone even if there may not be any narrative consequence in this case.

Garrison et al (2014) suggest that educative moments often happen surprisingly when "creative possibilities for the future open up suddenly in classroom practice because our students unexpectedly introduce companion values" (p. 184). This occurred during a gaming session when a new character and player were introduced to the party. The original party (Rogue, Barbarian, Warlock, Wizard and Sorcerer) must decide what to do with the stranger and if they would like to include him in their group as an equal member or otherwise. This scenario occurred organically and was not part of the original plan for the game but was necessary as another student joined the game after we had already started. In addition, the new character (the

Barbarian: Why shouldn't we kill you?
Artificer: Because I have advantages against -
Wizard: We can sell you for parts
Barbarian: You are worth a lot of money on the black market
Artificer: No, my kind is not made any more, we are trash. You would get nothing for me.
Barbarian: We can use him as a slave.
Sorcerer: No, we should be friends. We can work together.
Wizard: Let's enslave him!
Rogue: He's a robot and we are humanoids. He was made by us.
Warlock: Let's reprogram him!
GM: Just so you know, he's not a robot. He's sentient. He has feelings and everything that your characters have, he's just made of different material. You can't reprogram him.
Artificer: That's rape. Don't touch me. I helped you.
Sorcerer: Welcome to the crew…
GM: Let me try to reiterate what has happened: First [the Artificer] was like, "Just give me some gold and I'll join you" And then [the party was] like, "No, let's just torture you instead or we'll make you our slave." And now you are saying, "Okay, no, we can just be friends". Is that what just happened?
Barbarian: Basically yes
Sorcerer: Yes, that's what we're telling him.
Warlock: That's exactly what we're saying here.
Wizard: We can be friends, but he gets no payment.
GM: (To the Artificer) Okay, so what do you do with that?
Artificer: I can help you out, if you don't enslave me. I am in the swamp to hunt down Aberrations. I have nowhere else to go so I join them.
Wizard: How about if you help us out, we can help you hunt down these Aberrations later?

Figure 5: *Group 1, Unplanned Scenario* - A conversation between the students regarding their strange new ally.

Artificer) is unlike the other characters as he is essentially a construction made of leather and metal who has been given sentience through some form of magic. Figure 5 gives an excerpt of the conversation that ensued.

In this conversation between the students' characters, there is a conflict between the epistemological and ethical value spheres. The party first discusses the nature of this new character who is different from them. The students are debating about what it is that turns something from an object to a person, which is an epistemological argument. Tied together with this, is the ethical discussion of how a group should treat a person (if, indeed, they are a person) especially when they are an outsider to the group. In the end, they decide the right thing to do is to treat the newcomer as having somewhat equal status to them once they see that the Artificer is expressing feelings that may be similar to their own. This educative moment, that occurred spontaneously, has opened the door to further reflection upon important questions on sentience and "human" rights. This will occur in a further interview with the students.

Continuing with this group, a final educative moment can be found. In this scenario, *Scenario 2*, the party found a town that was recently settled by refugees in the middle of the swamp. The refugees have used magical means to terraform the area into arable land and have begun growing crops. The leader of the village tells the party that they are witnessing the beginning of a great empire that will turn this desolate land into a paradise. Their plan is to fund the construction with trade and mining of dragonshards - gems of great value that fuel the magical economy. They can find the dragonshards with the help of the leader's son, who has a special mark of finding which allows him to locate the dragonshards if they are within 1000 ft of him. They have already found two nearby the town, and thus began construction of the town in order to find and trade more. During the night, the indigenous orc people created a distraction and kidnapped the boy in order to force negotiations with the refugee villagers. In tracking down the orc tribe, the party learns that all is not what it seems with the new village. The orc leader informs the party that he has attempted to talk with the refugee leader but he refuses to listen and the villagers continue to take over the land. The wildlife have mostly left the area since the villagers arrived and began destroying the ecosystem. The villagers must stop this land transformation or it will irreversibly destroy the swamp and ruin the indigenous way of life of living off the land. After much deliberation, the leaders of the refugee village and the orc people have agreed to allow the party to act as impartial judges to find a solution. The GM plays the roles of both leaders but the transcript will use their character names and roles (Tyborin for the orc leader and Lincoln for the refugee leader). The following figure, *Figure 6* is an excerpt of the student's discussion on the matter.

This scenario presents a clash in value domains between finding what is the reasonable solution to this crisis, or the epistemological answer, compared to what is the morally correct way to settle this, or the ethical answer. We see that the Artificer is looking for the ethical solution by asking the two leaders to simply cooperate. The rest of the party, especially the Sorcerer, is concerned with a scientific answer of how the leaders can both get what they want using the technology, in this case magic, that is available. The group must deliberate between the rights of two people groups and what is sustainable for the land. This involves integrating the ethical and epistemological levels of thinking together to arrive at a solution which, for this group, resulted in the creative idea of allowing for growth upward so that multiple needs could be met. This

educative moment will be further reflected upon by the students as they discuss land rights of native populations to give insight into their decision making process.

Artificer: What did Columbus do in this situation?

Sorcerer: They are very different.

Wizard: A lot different. He took slaves.

Warlock: What if they refresh the land?

Wizard: They need to take the land into consideration.

Tyrborin, the orc leader: How?

Warlock: Nutrition -

Artificer: How about we take Lincoln and the orc leader, and just sit and every suggestion from now on has to go through the village leader and the orc leader. And they can discuss every situation.

Sorcerer: But the orcs will always say no. Let's not divide it then. That's not going to work.

Wizard: Let's kill all the humans. *(seemingly as a joke)*

Artificer: Not dividing it. Just so they both get what they want.

Warlock: They need to give the land nutrition. Put their poop in the ground so the ground will still be healthy.

Sorcerer: Wait, let's make the city float like with magic. Like build up and not out. I got the solution!

Tyborin, the orc leader: The city of Zharashk is built on stilts. Like high up over the ground. This seems not to be as destructive. How can you grow food upwards?

Warlock: We can use levels and magic.

GM: Tyborin asks Lincoln if he can teach them to hunt so they are not so reliant on farming for food. Then we can use this suggestion -

Wizard: Maybe they can have farms thanks to the magic.

Tyrobin, the orc leader: I'm not interested in farming. We will continue to travel and hunt as we always have.

Lincoln, the refugee leader: But what about the dragonshards? It seems like you are siding with the orcs in this. What do we get out of it?

Wizard: Tunnels, underground.

Warlock: You get an offer of food and the chance to live here.

Sorcerer: You get something, you ungrateful -

Warlock: You can't have everything you want.

Sorcerer: And there's peace. You are going to be able to expand. People are going to be able to work as hunters and farmers.

Wizard: I feel like we're bad at this.

GM: Bad at what?

Wizard: Fixing this problem.

Figure 6: Group 1, Scenario 2 - The party attempts to resolve a conflict between two groups, the orcs and humans, who cannot agree on how the land should be lived on

Identifying Educative Moments - Group Two

The second group (Bard, Monk, Wizard, Warlock and Druid who are all played by different students than the first group) faced *Scenario 1* similarly to group one with a slight difference. This time, the group was informed through an NPC that the crocodiles, along with other swamp species, were endangered and protected by a powerful house that claims dominion over the region. A different response can be seen to this change as shown in FIgure 7. Most of the party members seem to want to keep the crocodiles alive except those who have been hurt by them. As with the first group we see a collision in the aesthetic feelings of some group members with the ethical concerns of the other group members. The Bard and Wizard were almost eaten by the crocodiles and they show feelings of anger and seek vengeance while the others in the group give a sense of responsibility to keep the crocodiles alive. Later in the same fight as all the crocodiles are now leaving, the Bard shows a change of heart as shown in Figure 8.

> *At this point in the fight against the hunting crocodiles, one of them has gotten hurt enough that it is scared into fleeing.*
>
> **Bard:** I think we should kill the mother
> **Druid:** No! Why though?
> **Bard:** She bit me. I was in her mouth. Several times.
> **Warlock:** We're just going to leave them and save [the Wizard]
> **Bard:** Leave them?
> **Wizard:** Save me.
> **Druid:** No, just leave them.
> **Wizard:** Hello, I'm still in the mouth
> **Bard:** Yeah, I think we leave them but I want to kill them
> **Warlock:** No!
> **Bard:** Especially the mother. I got eaten, there's a difference.

Figure 7: *Scenario 1, Group 2* This scene shows how several members of the party might feel towards the crocodiles after they have nearly killed some of the members.

The educative moment here can be seen as aesthetic feelings clashing with either epistemological reasoning or ethical responsibility. It is difficult to ascertain which of these each member of the group is using to choose not to harm the crocodiles as when asked in game why they chose not to continue to hunt the crocodiles, the Bard replied, "Then reasoning came into the mind." The Wizard responded with, "I made amends with my emotions." while the Druid asserted, "Peer pressure!". The interviews with the groups where they reflect on this situation may yield the true nature of their choices and how they were made.

> **Bard:** But I don't know what I should do. I could use Bardic Inspiration on [the Monk] but I don't know why we should attack them. Can I just say, "don't attack them" and leave?
> **Wizard:** They bit me. They bit you. They bit us.
> **Bard:** Yes, but still, I don't want to get killed by scary half-orcs or orcs.
> **Wizard:** We bite them back!
> **Monk:** I'm going to knock this one out.
> **Bard:** [Monk], do not harm them!
> **Monk:** No…
> **Wizard:** Bite!
> **Bard:** What do you mean, no…?
> **Wizard:** Chomper!
> **Bard:** I do not want to die!

Figure 8: *Scenario 1, Group 2.* An educative moment that shows a possible value change with the Bard.

Scenario 2 provides an educative moment for Group 2 when the party was left to discuss the situation as a group, trying to find the best solution for the conflict between the orcs

and the humans. In Figure 9, the party is deliberating over several different layers of ideas from separate value spheres:

Druid: What are the options here?
Monk: The villagers should start shifting their lifestyle towards one that is similar to the orcs and eventually -
Druid: But will they want to do that or will they actually do that?
Monk: They should at the very least stop expanding and live more like -
Druid: Will the villagers do that though? Will they actually, when we leave? Or after some years, they will start expanding again.
Monk: Yes, that's because - well that's an issue with every solution right? Who's to say they won't keep going after we leave?
Druid: I want to make this into a nature reserve.
Monk: We can do that if they have the same sort of lifestyle as the orcs. Because the orcs live here very sustainably. So if they have the same lifestyle, it would be sustainable.
Druid: But if the city starts expanding more -
Bard: But if they don't live in the city, if they just have the city that's already built and they just live with the orcs
Monk: That's not my idea, my idea is get rid of the city completely. They should have the same lifestyle as the orcs.
Bard: Oh, you mean like destroy the city? Well, that's never going to happen. We're talking about humans, you know how greedy they are? And I'm a dwarf and you know how greedy humans are?
Druid: So we're kind of stuck here.
Monk: I say at the very least, stop expanding the city and go from there. Get them to agree to stop expanding the city completely and then go from there? Are we all in agreement, say I?
Party: I.
Druid: What kind of power do we have though?

Figure 9: *Scenario 2, Group 2* - An excerpt of the discussion the party had about what to do about the conflict over land between the human villagers and the orc tribe

The epistemological truth about what a sustainable lifestyle might look like here is tied with the ethical consideration of who should lead this lifestyle. It seems that the Monk is concerned more with the epistemological while the Druid and Bard bring up the ethical which develops into the educative moment. The party then takes it further by combining the epistemological with the ethical once again when they ask where power is located and if that power should be wielded to force others to live more sustainably. This moment and the other educative moments described above will be reflected upon in interviews with the students from each group. Kronlid and Öhman's (2013) framework will be used to analyze these reflections to gain insight into the game and it's possible uses in ESD.

Interviews and Analysis

As explained in the Theory section, Kronlid and Öhman (2013) divide their framework into two orientations: value and relation-oriented. Both of these perspectives will be used to examine both the game-play and ethical choices made by characters and then some of the conversations and answers given by the students in post-game reflections. The names of the students are omitted and replaced by what character class they played during the game sessions so it is simple to reference back to the previous results. This analysis will go through each educative moment by the Scenarios detailed in the Methods and Results sections above. The value-oriented viewpoint will provide some observations on the possible nature and values of both the PCs and the young people who play them. This section will first be split up by group and follow in the same order of the educative moments as well.

Value-Oriented Analysis - Group One

For this group, the interviews for the Warlock and the Sorcerer were conducted together while the Wizard was separate due to availability. In Scenario *1* from the game sessions, we saw the majority of Group 1 attempt to kill the crocodiles while they fled from battle. However, the student playing the Sorcerer did not choose this path and after some waffling, the Warlock decided against this as well. During the reflection interview, both of these students were given the opportunity to explain what they, themselves, would do in that situation. Figure 10 shows an excerpt from the interview. Two questions are being asked which feature in Kronlid and Öhman's (2013) value-oriented analytical scheme: "what is constituted as moral objects?" and "What kind of values of nature are constituted?" (p.32). Beginning with the first question, Kronlid and Öhman (2013) define being considered a moral object as "being morally relevant. That is, that one's well-being, interests, health, preferences, flourishing, functions, etc. ought to be taken into account beyond whatever instrumental value one might have for the other" (p. 27). It seems that the student playing the Sorcerer, while they may not hunt the crocodile, holds an instrumental view of their lives and does not assign an intrinsic value to them. The Warlock, however, begins to consider that animals' lives matter or verges on what might be considered as Biocentrism where "all organisms have intrinsic value by virtue of

Interviewer: The crocodiles are leaving, what would you do?
Warlock: I would leave too.
Sorcerer: I would have gone because there's no point in fighting them or giving unnecessary stuff. Putting fuel to the fire.
Interviewer: And [Warlock], why would you leave?
Warlock: Because they are also lives, it's just unnecessary too. If they are leaving and they're not going to hurt you and you're not threatened by them, why kill them?
Interviewer: What do you think about humans killing animals in general?
Warlock: It's bad.
Interviewer: Yeah, in all cases?
Warlock: Like, we need food right? And, some animals are like born to be killed but I mean wild life animals. Of course, their lives matter as much but like - I don't know, it's a hard question.
Interviewer: Yeah it is a hard question. [Sorcerer], what's your take?
Sorcerer: Depending on why you do it so it's not a yes or no. It's a grey question. So if you have the intent to get food from them or like you need something that they have, sure let's kill them. Like you need to survive because that's what every animal does. Except for herbivores, but whatever. But you don't kill them for their skin to sell, you know. In that way, I think that's a bit unethical because there's just greed behind it, not need I guess. That's my stand.

Figure 10: Excerpt from interview with students playing the Warlock and Sorcerer.

Figure 11: Part of the interview with the student playing the Wizard

having a good of their own related to their flourishing" (Kronlid and Öhman, 2013, p. 28). With the second question of the value of nature, the Sorcerer seems to have a more anthropocentric view towards nature in general, displaying a what is called a need value: "Natural resources are valued because humankind is dependent on nature for its basic well-being and survival" (Kronlid and Öhman, 2013, p. 26). The Sorcerer student's attitude seems similar to the character he was playing. He explained that while he believes he is a rational and pragmatic person, he wanted to play a 'non-emotional, super rational' person. The Warlock also seems more or less consistent with the character she played. Her character at first wanted to kill the crocodiles in the game, but then decided against it as she thought about it more. In the interview, she also hesitates in the moment until she makes some decision. This is opposed to the Wizard, whose character reacted in a completely different way than the person playing them might have. As Figure 11 displays, the student demonstrates a biocentric point of view where he cares not only for the crocodiles themselves but for their future as a species and would only harm them in self-defence. His character, rather, wanted to kill the crocodiles either for tactical reasons or for experience points and takes an anthropocentric approach to the battle.

When moving on to a discussion about sentient life that occurred due to the *Unplanned Scenario*, where a character was introduced that was living but unlike the other characters in the group, the question of who counts as a moral object came up once again as can be seen in Figure 12.

Figure 12: A discussion on why the robot-like Artificer was treated differently by various members of the group.

In the game, it seemed like the Sorcerer was taking on a social animal ethics position where, "Non-human animals with the ability to engage in relationships have intrinsic value" (Kronlid and Öhman, 2013, p. 28). And yet, when the student explained his reasoning, it was an anthropocentric and instrumental way of looking at the situation. The Warlock clarified that her reaction in the game was more of a reaction to the student playing the Artificer rather than her playing her character as if she wanted to enslave or 'reprogram' the Artificer. A similar sentiment was made by the Wizard who also added that, "I think like, so at first we were kind of just joking...but it was kind of weird if someone new just joins but I was still fine with it so I made a joke like it was a semi truth. So it wasn't that's not what I actually wanted but there was some truth behind it." The interviews did not proceed in a way to gain further insight into the students' thinking about sentient life with respect to Kronlid and Öhman's (2013) work and so the value analysis of group one will continue from here with regards to *Scenario 2*.

Scenario 2, the struggle between the humans and orcs over land use, points in the direction of Kronlid and Öhman's (2013) third question they propose in their value-oriented theoretical framework: "How are the ontological relations of Humans and Nature constituted?" (p. 32) The answer can be split into two categories, separated and integrated, which means that humans tend to say that nature is either a part of human life or separated from it. Of course, these seemingly contradictory moral positions can be present within one person (Kronlid and Öhman, 2013) but again, examining what was said during the reflections on the game compared to actions during the game can yield further understanding into TRPGs.

In Figure 13, the Sorcerer and Warlock discuss the conflict between the orcs and humans. The Sorcerer compares it with colonialism and the struggles between indigenous populations and people groups who move into a territory. The Sorcerer approaches this situation, once again, in an anthropocentric way as he does not mention the destruction of the environment in itself is part of the problem. From Kronlid and Öhman (2013), this could be seen as viewing nature and

> **Interviewer:** How did you feel about that whole conflict?
> **Sorcerer:** Pretty real I guess.
> **Interviewer:** In what way?
> **Sorcerer:** Two people fighting over land and territory. It's quite usual or had been hundreds of years on Earth.
> **Interviewer:** What are some examples?
> **Sorcerer:** Colonization? And maybe like, the Sami and the Swedes in Norrland, that part. That thing. Meaning, usually it ends up with one of the groups being spat on by the other...And I wanted to try avoiding that so that they instead could work together for a brighter future.
> **Warlock:** As [the Sorcerer] said, maybe not exactly that. It's common that people don't get want they want. I mean the orcs just wanted the swamp or forest to be healthy and stuff.
> **Interviewer:** And for them to be able to continue their way of life.
> **Warlock:** And the humans just wanted to rebuild right? So like, both of them had the point , both of them wanted something good, just that like, they should try to meet in between so not the humans get all they want and the orcs get all they want and I mean the orcs wanted something that's good for the nature which not only benefits them but also the humans right?
> **Interviewer:** So do you think that, with that kind of thought in mind, do you think that, you made the right decision?
> **Warlock:** Maybe.
> **Interviewer:** Something that you mentioned is that it's not just the orcs and the humans but also have the environment itself. Do you feel like that was the best compromise?
> **Warlock:** I mean, if both of them should have get what they wanted then I think that was the best thing to do, to like meet halfway because otherwise one of the groups gets more of what they want and the other group gets less and then there would be just more fights.

Figure 13: The students playing Warlock and Sorcerer talk about the conflict between the orcs and the humans

humans as historically separate entities. The Warlock almost makes the connection between humans and nature when she says, "the orcs just wanted the swamp to be healthy and stuff". However, she never goes further by showing a relationship between what is happening with nature is inherently linked with the people, and thus her response remains anthropocentric as well. The Wizard, finally, does make this distinction when he is summarizing what happened in the game, as shown in Figure 14. He shows that the destruction of the environment is central in this conflict and this shows a more integrated and non-anthropocentric way of looking at the situation. The implications of this value-oriented analysis for Group 1 will be discussed further in the Discussion section, while Group Two's reflections on the scenarios and gameplay will continue here.

Interviewer: Do you remember the stuff with the orcs and the humans?

Wizard: Oh yeah, we thought that the orcs were the bad guys but they kind of weren't

Interviewer: Why weren't they the bad guys?

Wizard: So I don't remember exactly why, the humans were I think because they were kind of taking over the swamp because they were terraforming it to like be a big town. They wanted to mine these diamonds to build up the town and transform the swamp into something else. And the orcs had lived there for centuries and like moved from place to place to not disrupt the nature and they were like living like all over the place. More like humans stayed at one area and transformed it into something that it hadn't been. And so the orcs and humans eventually came to an agreement where they would like kind of do half way and the humans wouldn't stay in one are and destruct the enviornment there, instead they would try to involve the swamp more and then the part of the decision was to instead of building out, we wanted them to build up right?

Figure 14: The discussion with the student playing the Wizard and *Scenario 2*

Value-Oriented Analysis - Group Two

For Group Two, there was also a problem in getting all the participants together at the same time for the interview so the students playing the Bard and the Druid were interviewed separately from the student playing the Monk. In *Scenario 1* we saw that this group was intent on keeping the crocodiles alive but their motivations may not have been non-anthropocentric in nature. In the responses captured in Figure 15, the Bard was concerned with self-preservation in the

Interviewer: You said, "I don't want to get killed by scary half-orcs" In the end, what was your motivation for not killing the crocodiles.

Bard: Oh because I remember, probably because they said that there were half-orcs in this region with the dragon mark and they were protected endangered animal species. Oh, they will blah blah blah if we blah blah blah. Oh, what if these are endangered, then we will get hella killed. I do not want to get into any more trouble and I do not want to die.

Interviewer: Fair enough. Was that similar for you?

Druid: For me, it was more like, it's morally correct. When they were attacking us, it was self-defense but when we were going to hunt them down it was more like poaching. So that's my motivation.

Interviewer: So because they were endangered then that's why it's different?

Druid: Yes.

Interviewer: If you, yourself, were in the same position, assuming you have the same power to survive. What would you do?

Bard: I would probably kill them. Because I would probably get so annoyed and angry.

Interviewer: If they were retreating though, would that be different?

Bard: I would probably not chase them and think logically and treat my wounds.

Druid: I would probably do the same thing, not chase after them if I knew I was safe.

Figure 15: The students who played the Bard and Druid discuss about their actions in the game with the crocodiles compared to how they would act in real life.

game and believes he would behave the same in real life. These fall into the category of anthropocentrism because there is no concern for the welfare of the animals themselves, only of self-defense. The student playing the Monk, though the response is not shown, also gave similar reasoning for keeping the crocodiles alive. The Druid, however, gives a non-anthropocentric answer showing shades of biocentrism as the Warlock from the other group did as well. The students' own thoughts on the human-animal relationship also conflict with their previous and in-character responses as shown in Figure 16. Here we see that the student playing the Bard presents the less anthropomorphic and almost ecocentric (that is the concern of not just animals but their relationships with other species that form an ecosystem) statements while the Druid

Interviewer: What's your position on humans killing animals?
Bard: It depends on how they do it. If it's like - I do not like poaching. I think that -
Interviewer: Like lions, endangered species?
Bard: I do not like hunting endangered species and I don't want to like interrupt with the wildlife too much. But since we've had like cattle and livestock for so long, it's a bit too late to change that and it's still that lifestyle to change everyone. So I still eat meat a lot and I love meat so I'm fine with that but I don't like real like killing animals. Or like, you know the Indians when they killed the buffalos or Native Americans I should say. When they killed them, they always used everything and that's like how I think. You should always use all the materials.
Druid: You shouldn't throw anything away.
Interviewer: Do you think that's how the meat industry does that?
Bard: No, they absolutely do not.
Druid: Absolutely not.
Bard: They throw away so much and so much goes to waste. It depends on how they - so I don't like the killing itself but it depends on how you do the killing. If it's for like self-defense then, ah , okay, you were about to die but for getting food and harvest for your village, it depends how it seems or the background of the situation.
Druid: I'd always value a human life over an animal life. Like always in any situation. But in which situation would you not?
Bard: If I see a Hitler and a animal in a building, I would save the animal.
Interviewer: Well that's an interesting question.
Druid: We're not going into that topic though. But like, sometimes killing animals can help the - like when they hunt the reindeer to like make the group smaller so that they can get more food.
Bard: Sometimes it's good to kill animals to when - because sometimes animals will go into other ecosystems and ruin the ecosystems. So now it's going to make this animal and that animal and these species go extinct.

Figure 16: A further discussion with the Druid and Bard on their thoughts on human-animal relations.

values human life over animals. The Monk also gave an understanding of ecosystems but it is difficult to determine where he values the life of an ecosystem when he states, "basically, all living things consume other living things, apart from the producers, they just kind of get food straight from the sun. Other than that, all animals will eat other living things whether they eat plants or other animals. So it makes sense for humans to eat other animals as well." These seemingly contradictory stances in the students gives credence when Kronlid and Öhman (2013) state that "the framework should not be used as a map of moral life, but should rather be regarded as a patchwork of, sometimes inconsistent, positions that can be combined in order to understand the at times inconsistent ways of moral agents" (p.37).

Continuing with moral inconsistencies, it was brought up in the reflection with the Bard and the Druid that while their characters made an effort to keep the crocodiles alive, the same effort was not applied to orc warriors after a battle. When asked about this, the Druid replied that this was

ironic given his statement about human life over animal lives. They both defended these actions by stating that they might not have had enough information or they assumed these orcs were terrorists and so, did not attempt to save more than one or two of them. This led to an interesting discussion about capital punishment compared to dying in battle but that will not be analyzed further here. What the Monk brought up when confronted about this gave a different perspective however (in Figure 17). Not only was his character worried about the orcs and their treatment but his concern extends to others he had not met. Kronlid and Öhman's (2013) framework might describe this as a kind of global anthropocentrism where moral objects are "People that are geographically distant yet emotionally and mentally close

Interviewer: Do you remember what you wanted to do with the dying or dead orcs.

Monk: Bury them

Interviewer: Tell me about that. Why?

Monk: Well, they also have customs and like their own thoughts about stuff. They're alive, so why shouldn't they get buried just because we had a fight, you know?

Interviewer: Do you think that if your character was in the battle itself, would you have tried to also not kill the orcs? Because you have the ability to just you know to knock them out. What do you think you would have done

Monk: Try to knock them out, not kill them?

Interviewer: Is that part of your character's ethos? Is that part of your character's thoughts?

Monk: Yeah, because you'd lose a lot more for killing them because they have their own lives and that impacts everyone around them as well. And it would impact them more than me to kill them than to knock them. Because if I can just stop them, then I'm safe so it's the same end result for me but very different for the others around the paths and who is not there.

Figure 17: The Monk's response to the 'orc terrorists'.

to me" (p. 26). The student playing this character would go on to confirm that he tries to use this way of thinking in his own life when making decisions that involve the people around him.

Finally, regarding *Scenario 2*, the Druid and Bard discuss extensively about the scenario and what the 'right' thing to do was. Without including the entire transcript of their discussion, they began comparing the situation to the Sith and Jedi of the Star Wars movies but then decided that the scenario more resembled colonization, similar to those in Group 1. The Bard brought up that

Interviewer: What if there were no orcs and there was no one there to say that these people are living unsustainably or ruining the environment?

Bard: But then it would just be like a normal city I guess, a new expanding city. Because every city lives like that, kind of. Most of them do.

Interviewer: Do you think you would intervene in that case?

Bard: No

Druid: No, I would definitely not because it happens everywhere.

Bard: We wouldn't see the negatives, we would only see the positives.

Interviewer: So what if I added a little bit more information, like I described "As you were going through the swamp there was a bunch of wildlife but as you go near the settlement, you see that the wildlife, there's no one around. You notice that things are a little bit less swamp like, vegetation is dying, maybe there's some more dead trees. Would that be enough to -?

Bard: Then I would be like, ugh, this is kind of disgusting. What have they done? Like, why is this? And they're like, "Well, it's because of industry going on" But it depends on how bad it is. Because if it's like, "here's it's all green and it's like a swamp and here it's black, desolate, it just looks ruined." Well, this is not going to work, this isn't going to work in the long run, you're going to have to move eventually and you're just going to ruin this land. Then I would probably intervene.

Interviewer: So as the Druid, would that -

Druid: I'd absolutely like intervene there. Like, "Where's your leader?"

Interviewer: Is that what you, yourself, would do?

Druid: It's a hard thing to say, I don't know what I'd do. I'd probably comment about it to the people I'm travelling with, "Oh like, they're really destroying this place or this swamp" But I'd probably not have the courage or the will to rise up and start a movement, probably not.

Figure 18: An excerpt of the discussion surrounding Scenario 2 with the students playing Bard and Druid

future generations must be considered - an intergenerational anthropocentric view. Then they discussed the state's role in caring for its citizens followed by a deliberation on culture and land rights. Their views were mostly human-centred but to see if they would bridge their concern with integrating nature and human activity, the Interviewer asked a final question found in Figure 18. The student playing the Bard comes close to showing this integration. One could make the case that he is demonstrating that nature has inherent systemic value which "implies that in whatever has a value of its own, this value is a product of the interactions between the parts of the system – non-human and human" (Kronlid and Öhman, 2013, p. 28). The comparison between how the Druid character would act as opposed to the student playing them provides interesting implications that will be reviewed in the Discussion. The next Figure 19 depicts the Monk's response to the scenario, who talks about sustainability but still approaches it from a mostly anthropocentric manner. He is talking of nature from a predominantly needs-based instrumental value perspective when mentioning the value animals provide for food. This also provides evidence for Kronlid and Öhman's (2013) assertion that not every anthropocentric perspective is automatically environmentally hostile. In this case, more time may be necessary to assess the students' full values. This concludes the value-oriented analysis from the reflective interviews. Conclusions from this and other parts of the interviews will be drawn and considered in the following Discussion section.

Interviewer: How did you feel about this whole conflict?
Monk: Well, the humans were very in the wrong because they had been warned that what they were doing wasn't sustainable and just hadn't listened and then when it was explained to them and they didn't really care and just said they also have the right to live there without thinking about the orcs and their right to live there as well. And the orcs kind of went to the last resort of forcing them out after trying everything else.
Interviewer: Do you think they have the right to do that?
Monk: Well, it was - they tried to talk to the humans about living peacefully about changing their lifestyle peacefully but the humans hadn't listened and didn't care and it was either, forcing the humans out and then at least one party gets to live there or neither party gets to live there in the long term. Maybe burning down the windmill wasn't a great idea, maybe scared them out without destroying anything
Interviewer: Hypothetically, what if the orcs could have adopted the human's lifestyle by starting to farm and changing the land. Why didn't you take that perspective?
Monk: The orcs had lived there and had seen similar situations to this before so they had experience with these kinds of things and knew how it would probably play out and there were issues not just about the food situation but the destruction of the environment around and the animal situation and there would be issues with getting other sources of food from animals and just like plant based food.
Interviewer: So does the conflict go beyond just the orcs and the human's perspective?
Monk: Yeah, I mean, the orcs and the humans perspectives are kind of the big part of the conflict but also it is representative of a larger issue of not listening to other perspectives and not trying to find the middle ground that would work for everyone.

Figure 19: The student playing the Monk explores different situations relating to Scenario 2

Discussion

The research aim for this thesis was to explore the possibility that TRPGs could provide a viable space for ethical learning *from* sustainability (see Franck, 2017). Two subsequent steps were taken to begin this exploration: Identifying possible educative moments from within the game and then reflecting on those moments as well as the game in general with the students who played. These steps will provide different insights into how a TRPG could function in a ESD setting as well as contribute to a platform for possible further research.

A viable space for ethical learning *from* sustainability?

As this was the aim from the outset, did the results show that a space can be created where it's possible for young people to learn *from* sustainability? To be clear, the results from this thesis are not representative for all cases of TRPG use but again, is merely research into what could be possible. Educative moments from gameplay that occurred, some that had planning involved and some that were unplanned, were identified and these point to the possibility of the kind of learning that may be occurring within the game. First of all, the educative moments had a common theme of always involving the ethical value sphere interrogating either or both of the aesthetic and epistemological spheres. This should not come as a surprise as D&D and most TRPGs are set up with ethical dilemmas and morality as a feature of the game. In fact, D&D includes a game feature called Alignment which is defined in this way in the Player's Handbook for the Fifth Edition:

> A typical creature in the game world has an alignment, which broadly describes its moral and personal attitudes. Alignment is a combination of two factors: one identifies morality (good, evil, or neutral), and the other describes attitudes toward society and order (lawful, chaotic, or neutral) (Crawford et al, 2014, Player's Handbook, p. 122)

While this could be seen as a simplistic view of morality, this shows that the game designers intentionally have made room for including ethics as part of the game. This is why, along with experiencing moral dilemmas in play, the researcher was drawn to this research on the outset as there may be potential there for use in ESD with a focus on ethical literacy.

Does the presence of educative moments within the game assert that, indeed, TRPGs can create spaces for ethical learning? Not necessarily but Garrison et al (2014) believe that educative moments are opportunities for creative inquiry and blending of value domains. In their own words,

> an important part of sustainability education is to enhance a critical and creative approach, without falling into relativism, and our hope is that as values begin to play off of one another in unpredictably creative and ameliorative ways, we might evolve new values never before imagined, what we call an educative moment (Garrison et al, 2014, p. 200)

This could mean that when the players experience an educative moment, it could lead to the kind of creative experimentation that Franck (2017) depicts as the practice of 'being and

becoming sustainablists' (see page 4). Indications of this experimentation can be seen in the differences and similarities between a PC and the young person who roleplays as them. The student playing the Sorcerer character, for example, in his own words, was playing a hyper-rational version of himself. He was able to experience some of the consequences that an anthropocentric and need-value position had on the people and nature around him. The student playing with the warlock, instead, remarked that she felt when it came to the intense situations when they had to make a difficult decision, she ended up defaulting into her own thoughts, personality and morality in the discussions:

> [S]ince I said like, I don't usually do the actions I do in real life. But when you come to that part [with the intense discussion], I think you think more like you and not like the character. You like, I was thinking who was doing wrong and how we should solve it and like thinking from both perspectives and that was not just my character but how I would think in that situation if it would happen in real life. And then you are there as a group too. So all of us had to come up with something. I think it was fun because everybody got something to say and all of us made a decision together so I think it was fun (Transcript from Interview with Warlock and Sorcerer).

A similar sentiment was brought up by both the Druid and Bard that when things 'got heated' they were not in-character anymore. This does not necessarily detract from the learning experience but instead, may give the students feedback and insight into their own thinking on these topics in addition to how they themselves function in a group making these decisions. In either case, whether the players are playing someone else or themselves, the students are engaged in a discussion which has them practicing making difficult choices relating to sustainability. The important distinction between this and general role-playing in a classroom setting is the narrative element. The TRPG may provide narrative consequences that are meaningful to the players while maintaining the ability for the players to experiment without full real-life consequences. It is hoped that this unique space has been shown to exist with the presence of educative moments as well as the reflections that occurred afterward.

An analogy for the educative moments that occur within the TRPG could be seen as the opening of a doorway into new experiences, conversations and ideas not met before for both the educators and students. To continue along with the open door analogy, one must walk through the door to get outside and that is where the reflective interview can come in. When asked where he has conversations like these reflections in other areas of his life, one student responded,

> Not really about like, not about the game or like something that i've done, that's mostly like if you are writing an essay or something. But then you are still limited to like you have to meet a good grade or something. You don't usually have interviews or something about what you have done, it's mostly like you have to, like someone interviews you and you have to like look good and stuff, where here it's just you're wondering what I think and like there's no wrong answer (Transcript of Interview with the Wizard from Group 1).

This statement might say more about the state of western education than about the game. However it also indicates the importance of ruminating on ideas, choices and actions outside the game instead of merely engaging in moral dilemmas within a TRPG. As mentioned in the

literature review, an impactful game may only be as transformative as the debrief that follows it (Daniau, 2016). If anything, the interviews that occurred from both groups gives credence to that idea.

If an educator was to use this method in an ESD setting, the importance of this debrief cannot be stressed enough as it seems to give the students and educator a space to critique, analyze and clarify what went on during the game and make evident what might be significant to real life. Going further with this idea, the educator may also use this method as a way of gauging or gaining insight into their student's value-orientation as exemplified in the second step of the Results section. If this were to occur, it would be recommended that more consistent and deeper reflections occur after, for example, every game session. Wright et al (2017) accomplished this with weekly journals, however, the semi-structured interview may give the educator/researcher the possibility of going deeper, listening more and discovering insights previously unsought (Gillham, 2000). This would not necessarily require lengthier discussions but after several sessions, the educator may see a progression or themes evolving from the students. It would also give the students more opportunity to give the educator/game master feedback for the game, possibly making the experience more emancipatory. The roles within the game between educator and students will also be considered later in this Discussion.

Immersion and Experience within and without a TRPG

Having two different groups in the study allows for possible comparisons to be made regarding their experiences and choices within the game and in the reflection afterward. As mentioned in the Participants section of the Method, Group 1 had not had any experience with TRPGs before we began the gaming sessions but most in the group had extensive experience with video games and some with video game RPGs as well. Group 2, conversely, had already been playing in their own group with a student game master prior to the gaming sessions. Without making sweeping generalizations about all TRPGs or all groups, these differences lead to questions about the relationship between the amount of experience and immersion and how these might affect gameplay and decisions made during the game.

To begin, the first group was not familiar with some of the rules and how the game could be different from previous gaming experiences. This may have led to misconceptions or misinterpretations that had an effect on choices that were made and thus, the values that the characters were demonstrating. An example of this was seen in Group 1's run-through of Scenario 1 (*Figure 4, page 22*) where the game was stopped to explain that experience points were not gained in this game in order to 'level up'. Not only did this interrupt the game and broke the narrative but this misunderstanding from the players directly affected their choices. It cannot be taken back but it would be interesting to see if the response to the crocodiles may have been different if the players had known this prior to their decision to continue to attack. The student playing the Wizard acknowledges in his post-game interview that the idea of XP (or experience points, see the List of Acronyms for more details on this phenomenon in RPGs) influenced his decision to attack the crocodiles after they were already fleeing and that this idea of XP came from his previous experience with video games. Of note here is that D&D 5th Edition, the game this study used, can include experience points (the game itself includes several variable rules that allow for increased flexibility of use and style) but it was decided to

not include these as the researcher believed this may incentivize the players to kill creatures just to 'level-up' the PCs. It could be said that without informing the students of this prior to play, their actions and motivations to their actions confirmed that this suspicion may indeed be true.

That the second group chose not to kill the crocodiles as they fled does not necessarily give further evidence to this. This group was granted different information regarding the crocodiles' protected and endangered status which could have, and probably did based on the Bard's response (see *Figure 8* on page 26) and reflections made by the other students, informed their choice. However, the different responses from each group elicits further questions that may deserve further research to determine the primary actors on the players. Questions such as: How do the mechanics of gameplay, such as experience points, inform the demonstrated values of PCs and players about human-nature relationships? How much experience in a TRPG prior to play is necessary to avoid these misconceptions in game-play so that reliable data on value orientations can be generated?

The first group was also, in general, less character-driven and it could be said, less-immersed at times in the narrative than the second group. This could be seen in the times when the PCs of the first group acted in a certain way at the beginning of an interaction but behaved differently as the interaction continued. An example of this can be found in *Figure 5* on page 23 where the Wizard first wants to enslave the Artificer but then offers the hand of friendship less than a minute later. The student playing the Wizard acknowledges that he was mostly teasing the student playing the Artificer and then wanted to make sure the player felt included later. Both the Sorcerer and Warlock from the same group also noted that their reactions in this situation were less character-related and more related to their relationship with the player. This kind of behaviour happened more often in the first group and may have informed their choices and affected their immersion. William J White's (2014) phenomenological research on TRPGs defines immersion as

> located in the minds of the players, in their experience of play, rather than in the technological sophistication, verisimilitude, the "realism" of the medium. [W]e begin to see immersion as a function of the game-player's subjective experience, rather than of the technical means used to create that experience (p. 84)

In his conclusion, he states that character identification is the fundamental mechanism for immersion where

> Character identification of this sort seems to rely on a kind of distance from the character, rather than an undifferentiated total identity with the character. This relationship seems to fall somewhere between that of the author to his or her protagonist and that of a person to the social roles her or she enacts in daily life (White, 2014, p. 89)

It seems as though the relationship between character identification and immersion is exemplified in the differences in the two groups in the study. The first group did not have as much input in character creation while the second group had made the characters on their own and had already played them prior to the recorded gaming sessions. This might have affected their ability to identify with the characters they were playing and thus, affected their immersion as can already be seen. In the post-game interview, the Warlock states,

> It's like you start to like, it's just a game right. And you think I can do this and this because it's funny right? Just when you were there and all the other characters - you didn't do all the actions you would do in real life, just for fun. You did it for fun. We were already attacking them and everybody was laughing, and like why not join in.

This statement shows that in that instance, in Scenario 1, the Warlock was not identifying with her character. Later in the same interview, the Warlock was asked if the game master should have encouraged more realistic, character-driven behaviour, she responded with, "Yeah, if you had said like, 'take the actions you would take in real life' or something. It would have been different." This relates back to Nussbaum's sympathetic imagination, as discussed on page 4 where it is important for the students to practice being in another's shoes (Nussbaum, 2010). If immersion is broken by either lack of identification with the characters or events which take the players out of the experience of roleplaying, this may result in a disruption of the ability to practice making real ethical choices in the imagined world. It may be said that the first group required more experience points as players in order to be more immersed and gain more from the TRPG game-play. Once again, further study is necessary to provide evidence for the relationship between experience, immersion and ethical choice.

Group Dynamics and Influences on Choice

Different influences on the students' choices, such as the amount of experience of the group as well as character identification, have already been discussed but it would be remiss to not consider the effects the group itself had on the individual students. A beneficial trait of the TRPG is the collaborative nature of the experience where the doors, continuing from the analogy above, are being opened by multiple people within the group. It may be easier to find the interrogation of value spheres when group decision making is involved resulting in educative moments possibly occurring more often. This also makes it difficult to truly ascertain individual value orientations with regards to sustainability issues, such as anthropocentrism or the human-nature relationship, as the group interactions may play such a large role in the choices that are being made.

Group dynamics influencing choice was already exemplified in Group 1, with the group's treatment of both the crocodiles and the Artificer. The Warlock, Wizard and Sorcerer all stated the factor that peer pressure played in those situations. In Group 2, however, this aspect was realized in a different way: In the transcripts from the gaming sessions, the Bard, Monk and Druid speak and act far more regularly than the Wizard and Warlock, especially during the discussion over Scenario 2 with the conflict between orcs and humans. Due to the lack of participation, the interviews with the students playing the Wizard and Warlock from Group 2 was focussed on why this occurred. They were asked if gender identity was an issue (as the Bard, Monk and Druid identified as males while the Wizard and Warlock identify as female and the other does identify as a gender) and they replied that this was not a large factor in their participation. Rather, they suggested that it was a product of their own personalities; that they felt either ill-equipped to add to the discussion or that they were too shy and did not feel the desire to add their voice. It is here that it is important to note that in D&D 5th Edition, most of the time players are free to speak and do things as they will and so it is possible for some players to hog the spotlight and/or dominate the discussions. It is only in combat where the action is divided into turns, where each player is forced to only act on their turn. In the game with Group 2, both

the Wizard and Warlock were forced to make an individual decision regarding the crocodiles in Scenario 1 because they had their own turn to act. This begs the question of whether the game should be run in turn order entirely to ensure equal opportunities for players of all personalities and confidence levels. It may be more efficient and effective for the game master to encourage equitable participation rather than forced turns. The importance and influence of the role of the game master will be discussed further on, however.

In terms of group dynamics, this study has, hopefully, shown a potential strength of a TRPG where the cooperative gameplay element may allow future researchers to gain understanding into ethical and sustainability decision making with small groups of young people. This perspective has also established the significance of context; that any individual choice made within the game has several factors which could exclude the choice from being called truly individual. Therefore, any comparisons between PCs and their players' values must also acknowledge the context surrounding the decisions that were made. In a similar study to this one on using D&D as a moral training ground, Wright et al (2017), found that those participants who exhibited the most positive value change were those that participated most often. The conclusion that Wright et al (2017) made would be interesting to validate in an ESD context in future research.

Game Master Role, Instrumental versus Emancipatory Education

A final consideration must be made for how the game master (GM) affects the players in the game and how this relates to possible educational consequences for the students. As noted previously, the GM has several different duties in the game. The GM is described as inventor, writer, storyteller, actor and referee by the game designers who go on to state that the GM "is the creative force behind a D&D game. The GM creates a world for the other players to explore, and also creates and runs adventures that drive the story" (Crawford et al, 2014, Dungeon Master's Guide). If the GM is indeed a force that drives the story, it could be said that the GM is a great influence on the players' choices and what they do as every decision made is mediated by the GM (Garcia, 2016). The students who participated in this study recognize this as well. The Sorcerer from Group 1 states that, "I felt like you just gave us information, not really directions on like how to act. Like if you do this, this will happen." The Bard and Druid from Group 2 believe the influence goes further here:

> **Bard:** But you influence our choices definitely. It's in the way, how you describe it and sometimes when we say something we just look at you and-
> **Druid:** You are like what?-
> **Bard:** And sometimes you give the seal of approval and sometimes you're like, "ha?"
> **Interviewer:** Do you think that it can be avoided?
> **Bard:** No
> **Druid:** No -
> **Interviewer:** Unless I hide behind the GM screen like -
> **Bard:** But I think it's fun to have someone outside of it. To also see what they think like "wait, you don't agree with us?" And then we think about what we said and

we're like "ha."
  Druid: You get to reflect on your choices a bit more. So I think it's good.

These students felt that the descriptions the GM chooses shapes how they perceived an encounter. Additionally, they felt that even the reactions and facial expressions give them hints or signs of approval or disapproval. As the researcher, it was difficult to limit these reactions and remain neutral in the midst of a heated discussion. One of the ways this could be avoided is allowing the discussions to occur without the GM being present. This was attempted with Group 2 as the researcher noted his own influence on the discussion from Group 1 and wanted to limit this in some way. The resulting discussion with Group 2 without the GM present was fruitful and allowed the students to share ideas without reprisal from the teacher. However, as the Bard and Druid explained, this influence is not necessarily negative as clarifying their actions gives them a chance to reflect on their decisions as characters.

One theme that has continually surfaced throughout this research is the importance of democratic and participatory education. These ideas appear in Franck (2017), Wals (2012), as well as in the frameworks used in this study: Garrison et al (2014) and Kronlid and Öhman (2013) among others. The emphasis from these texts is that teachers should ensure that students have a voice and participate on an equal level as the teacher. Wals (2016) would describe this style of learning as emancipatory, which contains co-owned objectives and self-determined plans. In contrast, an instrumental perspective which aims at changing learner behaviour and values and has been criticized as verging on indoctrination and anti-democratic (Wals, 2016). In this study, then, was the learning experience of the students instrumental or emancipatory? It could be argued that it is a blend of each. The approach was instrumental in that the researcher presented specific scenarios related to sustainability that were going to occur no matter what the players chose. In the TRPG community, this is often referred to as the GM 'railroading' the players into situations - where there is little choice in parts of the narrative. It could be said that the researcher forced a sustainability theme onto the players and so their own agenda was not recognized necessarily. However, it could be said that there were also emancipatory elements as after the scenarios were presented, there was little expectation as to what the PCs and students would do with those scenarios. The fact that the narrative between the two groups was moderately different, with variable outcomes occurring in every scenario as well as much of the narrative in between scenarios being completely different, suggests that the students had at least some autonomy. Furthermore, as Wals (2016) suggests that the emancipatory approach involves guiding into, facilitating and creating spaces where people make sense of the world and make their own judgments. It has been argued that this is what happened during the gaming sessions. Therefore, as there seem to be aspects of both instrumental and emancipatory, this method may be considered a blend of the two. Wals et al (2008) submit that a blended method could be useful in addressing larger social practices and lifestyles rather than focussing on small behavioural change.

As suggested by the Bard and Druid above, the GM would find it difficult to avoid influencing decisions as the world is being described from the GMs lens. It is perhaps impossible to avoid some of the instrumental nature of the game when the GM is also the teacher, even when full participation and choice is encouraged. For TRPGs to become more emancipatory and possibly more democratic, it is possible to run a 'sand-box' type of game where the situations the PCs find themselves in are largely self-determined and are consequences of the PCs' interactions

with the world around them. This runs the risk of sustainability-related scenarios never occurring, however, it could be argued that it is difficult to avoid situations that do not have implications on sustainability. The next step could be to allow the students to take on the role of the GM as well. This could be of great interest for a future study where the quantity and quality of the sustainability scenarios that occur in a completely student run game is compared to when the teacher is the GM.

Another perspective regarding the GM role is about who is doing the learning. Often it seems that educational research is absorbed solely with student learning and disregards the importance of the educators' learning. We have seen that the educative moment can involve both students and the teacher (Garrison et al, 2014). It should be possible and encouraged that the teacher is learning along with the students. Franck (2017) surmises that the democratic education from sustainability looks like a space where

> children and teachers will act together in communicative and democratic knowledge processes, and both are expected to take responsibility for contributing to creativity and development. More precisely, both may transcend formal and dualistic concepts of teaching-learning processes by sharing their experiences, knowledge and apprehension with each other (p. 15)

With this type of relationship, if the teacher is the GM, they can treat it as a learning experience for themselves as well as the students. In this way, the teacher is developing in their own practice as the GM role often mirrors useful teaching practices outside of the TRPG (Garcia, 2016). Similarly, when the GM is also the educator and researcher, it allows for the researcher to be an active participant instead of a spectator. As mentioned previously, this yields first-hand and practical insights that have been shared here (Elliott, 2006).

One final advantage of the teacher playing the role of GM is that it puts them in a position to tailor the experience to the students who they already know. Garcia (2016) succinctly states that GMs "make learning participatory; they co-construct a fulfilling, challenging learning experience and do so in relation to the interests and needs of their participants. They mediate fun and offer epic opportunities for even the shyest participants to step forward and save the day" (p. 179). Once again, this approach seems like the blend of the instrumental - where the teacher is shaping the experience based on perceived needs - with the emancipatory - where the students take on what has been set before them, experimenting, creating and shaping themselves. Nussbaum (2010) seems to concur with this when she expresses that when students delve into sympathetic imagination, "teachers must think about what the student's particular blind spots are likely to be, and choose texts [or scenarios] in consequence" (p. 742). Relating this back to the study at hand, if the researcher had been less concerned with avoiding influencing Group 2's decision making process, he could have encouraged the shy Warlock and Wizard to participate more in the practice. Possibly better still, the researcher and teacher could have created scenarios that related more to the interests of these students while still relating these to sustainability.

Conclusion

To summarize this thesis in one sentence, an analogy will be used that was utilized previously: This thesis was meant to open doorways into a new realm of possibilities for young people, educators and researchers interested in incorporating TRPGs in an ESD context. It is hoped that through showing examples of educative moments as well as further reflecting upon the experience with young people, that the potential of this kind of research and practice has been demonstrated.

For young people, aged 14-16 in this case, TRPGs were used to provide possible spaces to practice and experiment being 'sustainabilists' (Franck, 2017). Whether the students are portraying themselves as characters in an imagined world, roleplaying someone else entirely or a mixture of both, the players were able to experience and play out difficult decision making regarding sustainability problems. Through a semi-formal reflection on educative moments, the students had the opportunity to continue to explore their ideas as well as contemplate and clarify their interpretations and meaning-making. Both of these experiences reportedly made a space that was rarely found in these students' lives, free of the pressures of formal schooling and grades. Not to mention the possibility of the young people taking on the role of GM themselves, possibly building other skills like organization, leadership and creativity.

For the educator, the TRPG could provide a place to connect with students in a combination of instrumental and emancipatory approaches where encounters are designed to challenge students and then the students shape the world and further encounters through their actions. The TRPG may also give the educator the opportunity to practice valuable teaching and learning skills of their own. Finally, the educator may be able to formatively assess students' ethical and group decision making skills on a continual basis through playing and reflecting as the students play the TRPG over time.

For the ESD researcher, the TRPG is another medium to study similar to literature and drama which could yield many insights into ethical literacy and group decision making with young people. This thesis barely skimmed the surface of the amount of research that could be done into TRPGs in ESD. Further work into the GM's role, game versus real world reality and quantitative effects of the game on young people's ethical literacy are just a few of the jumping-off points that could be studied in the future. The sheer amount of different ethical topics covered (from human-nature relations to sentientism and then colonialism) points to the potential of research that could be done in this area.

One final thought that has been understated up this point is the enjoyment which the participants and the researcher had while pursuing this study. In each of the reflective interviews, the students made a point to state their enthusiasm for the gaming experience and all wished to play more. The students also seemed to enjoy the reflective process after the game and some expressed the wish to add a debrief time after their future gaming sessions. The fun nature of the experience may add more promise to the game's future use and study.

GM: A bright light is now shining on an open doorway to future TRPG use and research in the realm of ESD. What do you do?

References

Biesta, G. (2015). What is education for? On good education, teacher judgement, and educational professionalism. European Journal of Education, 20(1), 75-87.

Byrne, J., Ideland, M., Malmberg, C., & Grace, M. (2014). Climate change and everyday life: repertoires children use to negotiate a socio-scientific issue. *International Journal of Science Education*, *36*(9), 1491-1509.

Camp, P (2019). How many D&D Players Are There Worldwide? Retrieved from https://dungeonvault.com/how-many-dnd-players-are-there-worldwide/

Crawford, J., Wyatt, J., Schwalb, R. J., & Cordell, B. R. (2014). Dungeons and Dragons 5th Edition Player's Handbook. Wizards of the Coast LLC.

Crawford, J., Perkins, C., Wyatt, J. (2014). Dungeons and Dragons 5th Edition Dungeon Master's Guide. Wizards of the Coast LLC

Daniau, S. (2016). The Transformative Potential of Role-Playing Games—: From Play Skills to Human Skills. *Simulation & Gaming*, *47*(4), 423-444.

Elliott, J. (2006). Educational research as a form of democratic rationality. Journal of Philosophy of Education, 40(2), 169-185.

Elliott, J. (2015). Educational action research as the quest for virtue in teaching. Educational Action Research, 23(1), 4-21.

Finlay, A. K., Wray-Lake, L., Warren, M., & Maggs, J. (2015). Anticipating their future: Adolescent values for the future predict adult behaviors. *International journal of behavioral development*, *39*(4), 359-367.

Franck, O. (2017). Highlighting Ethics, Subjectivity and Democratic Participation in Sustainability Education: Challenges and Contributions. In *Ethical Literacies and Education for Sustainable Development* (pp. 1-17). Palgrave Macmillan, Cham.

Franck, O., & Osbeck, C. (2018). Challenging the concept of ethical literacy within Education for Sustainable Development (ESD): Storytelling as a method within sustainability didactics. *Education 3-13*, *46*(2), 133-142.

Garcia, A. (2016). Teacher as dungeon master. The role-playing society: Essays on the cultural influence of RPGs, 164-178.

Garrison, J., Östman, L., & Håkansson, M. (2015). The creative use of companion values in environmental education and education for sustainable development: exploring the educative moment. Environmental Education Research, 21(2), 183-204.

Gillham, B. (2000). Research interview. A&C Black.

Geertz, C. (2008). Thick description: Toward an interpretive theory of culture. In The cultural geography reader (pp. 41-51). Routledge.

Ideland, M., & Malmberg, C. (2015). Governing 'eco-certified children'through pastoral power: critical perspectives on education for sustainable development. *Environmental Education Research*, *21*(2), 173-182.

Kopnina, H. (2012). Education for sustainable development (ESD): the turn away from 'environment'in environmental education?. Environmental Education Research, 18(5), 699-717.

Kronlid, D. O., & Öhman, J. (2013). An environmental ethical conceptual framework for research on sustainability and environmental education. Environmental Education Research, 19(1), 21-44.

Nussbaum, M. C. (2010). Democracy, education, and the liberal arts: two Asian models. UC Davis L. Rev., 44, 735.

Osbeck, C. (2017). Discourses of Available and Sustainable Lives: Ethical Literacy Offered to Tweens Through Fiction Reading. In *Ethical Literacies and Education for Sustainable Development* (pp. 55-72). Palgrave Macmillan, Cham.

Sauvé, L. (1996). Environmental education and sustainable development: A further appraisal. Canadian Journal of Environmental Education, 1, 7-34.

Sauvé, L. (1999). Environmental education between modernity and postmodernity: Searching for an integrating educational framework. Canadian Journal of Environmental Education (CJEE), 4(1), 9-35.

Sauvé, L. (2005). Currents in Environmental Education: Mapping a Complex and Evolving Pedagogical Field. Canadian Journal of Environmental Education, 10(1), 11-37.

Schrier, K. (2015). Ethical thinking and sustainability in role-play participants: A preliminary study. *Simulation & Gaming*, *46*(6), 673-696.

Schrier, K. (2017). Designing role-playing video games for ethical thinking. *Educational Technology Research and Development*, *65*(4), 831-868.

Simkins, D. W., & Steinkuehler, C. (2008). Critical ethical reasoning and role-play. Games and Culture, 3(3-4), 333-355.

Wals, A. E., & Jickling, B. (2002). "Sustainability" in higher education. International Journal of Sustainability in Higher Education.

Wals, A. E., Geerling-Eijff, F., Hubeek, F., van der Kroon, S., & Vader, J. (2008). All mixed up? Instrumental and emancipatory learning toward a more sustainable world: Considerations for EE policymakers. *Applied Environmental Education and Communication*, *7*(3), 55-65.

Wals, A. E. (2012). Learning our way out of unsustainability: the role of environmental education. In *The Oxford handbook of environmental and conservation psychology*.

Wals, A.E. (2017). Afterword: Ethical Literacies and Sustainability Education: Young People, Subjectivity and Democratic Participation. In *Ethical Literacies and Education for Sustainable Development* (pp.163-167). Palgrave Macmillan, Cham.

White, W. J. (2014). Player-Character Is What You Are in the Dark: The Phenomenology of Immersion in Dungeons & Dragons. Dungeons & Dragons and Philosophy: Read and Gain Advantage on All Wisdom Checks, 82-92.

Wright, J. C., Weissglass, D. E., & Casey, V. (2017). Imaginative Role-Playing as a Medium for Moral Development: Dungeons & Dragons Provides Moral Training. *Journal of Humanistic Psychology*, 0022167816686263.