Game-based Teaching and Learning to Promote Understanding of Current Issues and Tolerance

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Abstract. These games are joined by groups in a wide range of countries who are acting to create peace in their own communities through local organizing. These models and associated games offer rich content for discussion of social justice using a modified Catholic Social Teaching framework. This article reports on specific games analyzed in our past research studies and offers suggestions for classroom game play for teachers interested in newer forms of teaching and learning that foster student inquiry.

Keywords: Social Teaching, game-based learning, gamification, middle education, secondary education.

Introduction

With increased focus on digital games that improve outcomes across content areas (Dede et al., 2004; Gros, 2007) and positive reviews from researchers (Squire, 2006; Plessey, 2013), game-based learning is emerging as an instructional method with impact. This paper explores selected games that support the Catholic Social Teaching Framework and highlights findings from our prior research studies in gaming.
Games fit well with the interest in constructivist learning. The role of the constructivist instructor is to provide students with ways to assemble knowledge via engaging methods that allow for learning by doing – active engagement (Bonwell, 2003; Kauchak, Eggen, 2003; Smaldino et al., 2005). Using this curricular framework, learning is a search for meaning in which the process of learning is the focus and primary concepts are investigated rather than isolated facts (Maddux et al., 2001). Students reflect on their learning experiences and construct their own understanding of the world. Current findings suggest that today’s learners indicate a preference for active learning, or learning through doing, the use of interactive lessons, friendly competition, and trial and error (Fox et al., 2005; Borrenson-Caruso & Salaway, 2007). While video gaming has often been associated with violence, other game designers have been devising games to help players understand sources of conflict, develop humanitarian perspectives toward people in need of aid, and foster peaceful attitudes. Games such as Climate Change Challenge, Dafur is Dying, Food Force, Peacemakers, Peace Doves and World Peace are examples. These games are joined by groups in a wide range of countries who are acting to create peace in their own communities through local organizing (Peace Direct, 2013). These models and digital games offer content for discussion of social justice and can provide a rich discussions and an array of beneficial community actions for students to take.

Major aim of research: to analyse the using the games during the socialization process.

Objectives of the research:
1. To analyse the social teaching perspective.
2. To discuss the possibilities of Bringing games to K-12 Classrooms.

Methodology of research – literature analyses; modeling.

1. Catholic Social Teaching Framework

The games we have selected to share fit well under the construct of Catholic Social Teaching (2014). Of the ten principles that are the foundation for the social teaching of the Catholic Church, we have selected six as categories appropriate frames for discussion of the varied games presented in Table 1.

<table>
<thead>
<tr>
<th>Catholic Social Teaching Themes</th>
<th>Game Titles</th>
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While many of the games are concerned with human dignity, a non-digital resource, *Game Face*, best connects with this theme because it deals with assumptions we make about people; specifically girls and women that limit our understanding and valuing of who they are or can be. Used in small discussion groups at the middle school level, *Game Face* is a kit with photographs of individuals performing some action. On the back of each photograph are questions that cause players to examine their initial thoughts about each person portrayed. Below is one photo from the game (see Fig. 1).

Cheryl Haworth, an Olympic bronze medalist in weight lifting, is identified on the back of this card. The card presents these questions for the small group of students viewing the card to discuss. “If you saw Haworth in street clothes, would you think she was an athlete?” And, “Is there a difference between the way you expect a female athlete to look and a male athlete to look?” *Game Face* is designed for school counseling, but teachers are also using it. The game has student participants discuss their assumptions about what they see. Discussions are intended to foster respect and community building, minimize stereotyping, counteract peer pressure and reduce bullying. While *Game Face* is not in digital format, it relates so well to issues currently important in American schools, we decided to include it. This experience could be easily “gamified” by having the teacher...
present photographs that can help students / teams to examine perceptions and assumptions and then award points to the team based on the depth of their reflections as they challenge their own assumptions.

A second theme of Catholic Social Teaching (CST) is concern for community. We exist in relation to others. We are encouraged to love our neighbors and together build a just and caring society. Depicting how the United Nations intervenes and assists developing countries in crisis through the World Food Program, Food Force is a digital game that asks players to join the World Food team to help feed millions of hungry people in political crisis on the island of Sheylan. For grades 7–9 (USA format), this game requires physical dexterity to accurately hit targets to feed as many people as possible.

A caring society is concerned with economic justice and fairness to even its poorest members, the third CST theme. Ayiti, The Cost of Life depicts how poverty circumscribes people’s lives. Students develop problem-solving skills while playing an online role playing game to experience the conditions in Haiti. The recent earthquake (January 2010) has mired this country even further in distress and use of this game in a social studies class more pertinent to the curriculum that emphasizes current events. Extensive class discussion is needed as many American students do not live in abject poverty or view education as a privilege. The suggested grade level is 9–10th grade and the content can be an eye opener for many students.

A second game that shows poverty and its effects on community is the digital simulation, Real Lives. This simulation highlights economic, social and health problems people face world-wide. Gamers get to experience life born as another person somewhere on the planet. They face challenges and make decisions based on real global facts and original cultural reference points. Players experience how their decisions throughout the game begin to affect their levels of personal happiness and integrity. This simulation provides players with diverse points of view that can challenge them to think more responsibly about people around the world in need. Similar to Ayiti: The Cost of Life, this lesson activity will likely raise awareness for many. The suggested grade level includes middle as well as high school students. These games match the concern for income inequality that is being discussed world-wide.

Another CST theme, Stewardship of the Environment points to the responsibility we have to care for God’s gifts to us and one of these is the environment. This category includes an array of games selected: Stop Disasters, Climate Change Challenge, and Energyville. Stop Disasters examines ways to minimize and react to disasters (wild fires, droughts, hurricanes, tsunamis, earthquakes) through 10–20 minute games, which can be played solo or as a collaborative team. Teacher resources, video clips, and information on the worst disasters are provided. Suggested grade / age levels is 9–16 years; middle / high school.

Climate Change Challenge is a single player game, targeted for mature players. Available on the BBC website, it asks players to take on the role of the President of Europe and balance conflicting concerns related to a changing climate: reducing carbon emissions,
providing enough resources for the population and maintaining political popularity. *Energyville* is a game presented by Chevron (oil company) developed by the Economist Group. The game challenges players to power a virtual city through 2030 and keep the economic, environmental, and security impacts low based on the choices they make. Students learn about the complexities of energy management and how energy affects our cities and our lives.

Rules and responsibilities, another CST theme, fits with a host of games provided by *iCivics* a Web-based education project, operated in partnership with Arizona State University and Georgetown University, USA. Twenty one different games designed to foster development of understanding of civic responsibilities illuminate the concepts of Rights and Responsibilities and the Role of Government. For a society to function well, individuals must follow through on responsibilities. A democratic society is built through the rights its citizens enjoy. One *iCivics* game, *ACTIVATE*! offers students an opportunity to explore issues at the personal, community, state, and national levels. They soon learn that democracy is kept alive through the active participation of its citizens. Another *iCivics* game, *Do I Have a Right?* asks players to assume the role of a new lawyer in the context of operating a firm that specializes in Constitutional law. Potential clients present their complaint as they enter the law firm. Players use both inductive and deductive reasoning as they determine whether the expressed complaint has merit based on their knowledge of the amendments.

The last Catholic Social Teaching theme we explored and matched to specific games is Peace Promotion. Game titles include *Peacemaker, Peace Doves, Dafur is Dying,* and *World Peace.* *Peacemaker* is a simulation of the Israeli–Palestinian conflict. Its strengths include providing players with a large picture from both a visual and issues perspective of what is happening in the Middle East. Students come to realize the responsibility an individual may assume in governing a country as they take on the role of the Palestinian President or the Israeli Prime Minister. Making decisions can help students learn what variables are considered in trying to establish peace in that area of the world. Students are encouraged to discover the issues surrounding this area of the world; however, the massive amount of killings occurring in this region make the game suitable for mature students only. Therefore, suggested grade level is high school and beyond.

*Peace Doves* is a simulation that enables students to learn which countries possess nuclear weapons in their arsenal and the number of known nuclear warheads per country and about the non-proliferation treaty of 1970. Worldwide, the white dove is a symbol for peace. The doves are used to disarm countries possessing nuclear weapons. Students must have prior knowledge before engaging in this simulation for the information to resonate. Conceptual knowledge includes politics and the tensions that exist in global relations and how nations use nuclear weaponry as a strategy to keep other nations at bay. Suggested grade level includes upper high school grades. *Dafur is Dying* depicts the horrors of genocide. It is a narrative-based simulation offering an animated glimpse of what life is like for the millions of displaced Darfurians residing in refugee camps. This
Ugdymui palankios aplinkos kūrimas

is a sensitive but important global issue to share with students who are mature enough to understand that genocide is not only a past occurrence, but also continues to be a political strategy used in many parts of the world. The suggested grade level is high school, but it has been used at the middle level (ages 13+).

Problems of the world are placed on a plywood board in game, World Peace and grade 4 students proceed to solve them. One of the game creators, John Hunter, a teacher in Virginia, explains the purpose of the game in a YouTube video¹, a TED talk² and in a new documentary, World Peace and Other 4th-Grade Achievements, and book of the same title. A DVD and discussion guide for the film can be purchased for $250. Currently there is no actual game to purchase or manual as Hunter believes that such materials would be restrictive. Development of a virtual game is being considered. In the meantime, teachers are creating their own games based on his model.

2. Bringing Games to K-12 Classrooms

Games can be used at the beginning, during or end of a unit or be stand alone experiences. They can serve as introductions to a larger unit or significant theme, help students face a powerful and current issue, illustrate policy-making, serve as a unit summary, or a game can be an experience in and of itself. However, using a game as an instructional method requires teachers to change their traditional role in the classroom and demands advanced teaching skills. Leading a game, whether a board game or a digital one, asks teachers to move from the role of providing information to that of facilitating instruction that enables students to investigate and discover potential solutions or ideas. Conducting a game requires in-depth planning as well as sophisticated discussion and questioning skills.

There are three different ways to use games in the classroom. First, teachers could “gamify” their curriculum by adding game elements (points, badges, rewards) to things that are not designed to be games. Or, teachers could design a simulation, a recreation of a real-world scenario or current event for students to experience. While these may not necessarily be games, they could be gamified. Last, teachers could use pre-made games that are designed to play to win. Any of these three methods can be used with either board or digital games.

Several suggestions may guide the beginning teacher and student as game users to a successful experience. Setting the tone for game play is essential. Some students prefer traditional instruction and will need to establish and accept norms for game play. A clear understanding of rules, and/or required social interaction is reassuring. Playing the game multiple times enables the teacher who is new to gaming find some of the challenges that

¹ Retrieved from: http://www.youtube.com/watch?v=iOC0mrmljHo.
will deter or slow down game play for students. For some games, students will need prior preparation in content knowledge. For example, college students who played *Dafur is Dying* in one research study were unaware of the genocide or the geography (Sardone & Devlin-Scherer, 2010b). Starting with a small group rather than the whole class enables a teacher who is new to gaming pilot the directions, get a sense of the pacing, and prepare for the questions students may ask as they play. The pilot group of students can also be asked to assist in guiding their peers in playing the game when it is introduced to the whole class.

Further suggestions for teachers and teacher educators come from our own research findings involving classroom game play. First, some surprises. We found that the majority of teacher candidates were not video game players and therefore, we had to nudge candidates to engage in digital game play. Candidates questioned their ability to manage students as they cited they were worried about management and curriculum coverage, just as experienced teachers often are. Candidates were surprised at the wide range of free, digital games available.

We found that engagement in game play reduced gaps in candidate content knowledge, and when asked to teach the game to K-12 students, candidates were influenced by K-12 students’ acceptance of games as a viable way to learn (Sardone & Devlin-Scherer, 2010a; 2013). Teacher candidates actually learned more about their field through game play. This tells us that perhaps the intensity of knowledge associated with the job of teacher is partially revealed through a gaming lens. Lastly, some game factors foster classroom use such as the length of the game (shorter seems better), accessibility and cost matter (free, Web-based is better), manageability matters (leveled play options help in the inclusive classroom as well as a teacher’s guide), and the content contained within the game must be tied to curriculum standards (Sardone & Devlin-Scherer, 2010b).

**Conclusions**

If educators want classroom gaming to be viewed as a useful strategy, as we do, practice with games needs to be first introduced at the preservice level and followed up in professional development workshops for in-service teachers. According to a recent comparative analysis of national teacher surveys, only 12 % of teachers reported learning about games “in a pre-service teacher preparation program” (Pressey, 2013, p. 18).

After their game experience in one research study we conducted, social studies candidates viewed games as an instructional method that has potential for introducing lessons and as supplements to lessons and units (Sardone & Devlin-Scherer, 2010b). However, games are ready and able go beyond lesson introduction and supplements, so there is more work for both teachers and teacher educators to do. Faculty of ten report that their role is to help students become independent learners (Yopp, 2003). With the use of newer forms of teaching and learning that foster student inquiry, such as the games depicted in this article, the richness and depth of preparation for K-12 students can be enhanced.
References


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**GamesBy CSJ Theme**

**Human Dignity**

*Game Face* http://www.tolerance.org/magazine/number-28-fall-2005/feature/game-face

**Community**


**Economic Justice**

*Ayiti: The Cost of Life* http://ayiti.globalkids.org/game/

*Real Lives* http://www.educationalsimulations.com/ (for purchase $29)

**Environmental Stewardship**


*Climate Change Challenge* http://beta.lpb.org/index.php/stem

*Energyville* http://www.energyville.com/

**Rules and Responsibilities**

*“Activate!”* http://www.icivics.org/games/activate

*Do I Have a Right?* http://www.ourcourts.org/flashgames/dihar/index.html
Žaidimų panaudojimas mokymo(si) procese, padedant suvokti šiuolaikines problemas ir ugdant toleranciją

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Santrauka

Straipsnyje analizuojamas žaidimų panaudojimas mokymo(si) procese, padedant suvokti šiuolaikines problemas ir ugdant(is) mokinių toleranciją. Autorės, pasitelkdamos Jungtinių Amerikos Valstijų ir kitų pasaulio šalių pavyzdžius, įtikinamai parodo, kad mokymo(si) procese naudojami žaidimai vaidina svarbų vaidmenį. Edukacinei pobūdžio žaidimai yra įvairiai grupuojami ir klasifikuojami, kad galėtų būti pritaikomi kurtiant bendruomenių gerovę. Suklasiukuoti modeliai yra labai įvairūs savo turiniu ir siūlo įvairias socialinio teisingumo diskutavimo galimybes, panaudojant katalikiškąją socialinio mokymo(si) dimensiją. Todėl šiame straipsnyje daugiausia aptariami specializuoti žaidimai, kuriuos mokytojai gali taikyti per pamokas ir semtis įvairių inovatyvių idėjų, kaip pajvairinti pamokas, sudominti mokinius ir ugdyti jų tiriškumą ir gebėjimus. Straipsnyje pateikiami ir aprašomi konkrečių žaidimų pavyzdžiai, skirti mokyklos konsultantams, demokratinei visuomenei, bendruomenei kurti ir stiprinti, sveikai mitybai skatinti, socialiniams ir ekonominiams teisingumui įgyvendinti, aplinkosaugai stiprinti, klimato kaitos supratimui žadinti, pilietinėms teisėms ir įsipareigojimams įgyvendinti, siekti taikiai sugyventi ir pan.

Esminiai žodžiai: socialinis ugdymas(is), žaidimais pagrįstas mokymas(is), žaidimų įprasmia

Įteikta / Received 2014-05-20
Priimta / Accepted 2014-06-29