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EPIC: a framework for using video games in ethics education

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Ethics education can potentially be supplemented through the use of video games. This article proposes a novel framework (Ethics Practice and Implementation Categorization [EPIC] Framework), which helps educators choose games to be used for ethics education purposes. The EPIC Framework is derived from a number of classic moral development, learning, and ethical decision-making models, including frameworks and theories associated with games and ethics, as well as prior empirical and theoretical research literature. The EPIC Framework consists of seven ethics education goals (e.g., building ethical awareness, practicing reflection, and enhancing character), and 12 strategies associated with ethics education, which are also present in video games (e.g., role-play, modeling, and simulation). Each of the framework's categories is described in detail, and the limitations of the framework are also discussed.

Keywords: games, ethical thinking, moral development, ethics education, video games, theoretical framework

Introduction

The purpose of this article is to describe and analyze a novel framework—the Ethics Practice and Implementation Categorization (EPIC) Framework—which can be used to systematically categorize current and future video games such that they could be more readily used in ethics education. The EPIC Framework helps educators identify and better incorporate games to be used for ethics practice in both classroom and informal learning environments. The EPIC Framework is a multilayered approach, and involves identifying ethics education goals (e.g., building ethical awareness, practicing reflection) and also selecting ethics education strategies (e.g., role-play, simulations) to meet these goals, and then using this process to select appropriate video games to meet both goals and strategies.

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Ethics defined

There are a number of different definitions for ethics and morals, and often these terms get used interchangeably. Typically, morals refer to 'universal truths, or public rules or principles' (Tierney, 1994, p. ix), or the code or set of principles that drives a person's decisions, behaviors or actions (Wines, 2008). Ethics, on the other hand, are referred to as the cognitive and reflective processes related to applying moral principles to situations and choices (Wines, 2008). Meng, Othman, D'Silva, and Omar (2014) also define ethics as the investigation of these processes; they explain that it is 'a science which concerns the question of right and wrong in human behavior' (p. 134, quoting Lillie, 1971).

There are many different approaches to how one defines an activity, attitude, or behavior as being ethical, including utilitarian, deontological, or Kantian ethics (Shafer-Landau, 2010), and there may be different moral orientations used by people, or the 'perspective from which one approaches decision making' (Levitt & Aligo, 2013, p. 195); for example, a justice-oriented approach to ethics (maintaining equality and fairness; Botes, 2000; Glover, 2001) or one that is care-oriented (maintaining relationships and other's needs; Botes, 2000; Gilligan, 1982).

The term 'values' is often used in concert with 'ethics' and 'morals' and is usually deemed the outcome of one's ethics and morals, or the guidelines that dictate what matters to an individual, family, institution, or community (for more about types of values, see Schwartz, 1994).

Regardless of the term, approach, belief system, or orientation used, which may change over time or between types of scenarios (Levitt & Aligo, 2013; Schrier, 2014a; Schrier, Diamond, & Langendoen, 2010), we need students to hone and practice the skills and thought processes necessary for what I call 'ethical thinking' (Schrier, 2014a, 2014c; Schrier & Kinzer, 2009). Ethical thinking is the assemblage of skills and cognitive processes related to determining how to act ethically and how to think through ethical choices and scenarios (Schrier, 2012; Schrier, 2014a, 2014c; Schrier & Kinzer, 2009). Ethical thinking, therefore, is a set of critical skills and practices that can be taught, for example, in a classroom or informal learning setting. The skills, concepts, and processes related to ethical thinking may include interpretation, analysis, and prioritization; systems thinking and multicausality; awareness of and reflection on one's personal ethics, societal ethics, and other systems of ethics; perspective taking and emotional understanding; bias identification; as well as logic and reasoning (Schrier, 2014a, 2014c). Ethics education may not just involve skills practice; it may also integrate character development, citizenship and civic engagement, comparative ethical frameworks (e.g., deontological, utilitarian, Kantian), cross-cultural studies of ethics, social aspects of ethics, and comparisons of institutional versus personal ethics (Frey, 2010; Lynn, 2010; Morris & Wood, 2011).

Ethics has been taught in and applied to a variety of different fields, including engineering (Doorn & Kroesen, 2013), business (Brown, 1994; Wines, 2008; Maclagan, 2012), accounting (Liu, Yao, & Hu, 2012), marketing (Celuch &

Saxby, 2013), counseling (Bradley & Hendricks, 2008; Levitt & Aligo, 2013), forensics (Barnao, Robertson, & Ward, 2012), and hospitality (Lynn, 2010), as well as in the K-12 classroom (Elliott, 2007; Paul & Elder, 2012). However, there are no clear, agreed-upon guidelines in any of these fields, or in K-12 in general, of how ethics or ethical standards should be taught (Paul & Elder, 2012; Ryan & Bisson, 2011).

Yet, there is a great need for ethics education (Schrier, 2014a, 2014c; Paul & Elder, 2012; Elliott, 2007). Academic programs cite business and accounting scandals (Floyd, Xu, Atkins, & Caldwell, 2013; Riemenschneider, Leonard, & Manley, 2011), and a rise in cheating and plagiarism (Riemenschneider et al., 2011), as evidence of why it is essential to have ethics education in higher education, or to even start earlier by integrating it into K-12.

Even if there is no ethics 'crisis,' however, ethics education is still integral to human development and full participation in humanity (Nussbaum, 2010), as well as to democratic engagement. Ethical thinking is essential for both everyday ethical decisions and longer-term, more complicated challenges (Schrier, 2014a; Schrier & Kinzer, 2009). Paul and Elder (2012) identify ethical thinking as one of the core critical thinking competency standards. People need to develop ethical thinking as a key literacy, just as they would other critical literacies (Jenkins, Clinton, Purushotma, Robison, & Weigel, 2006; Kereluik, Mishra, Fahnoe, & Terry, 2013; Patrick, 2003).

Moreover, the purpose of a liberal arts education is to prepare students to be lifelong, engaged learners (Bloom, Englehart, Furst, Hill, & Krathwohl, 1956; Nussbaum, 2010; Wines, 2008), to lead a good life (Sicart, 2009) and to 'prepare the student to take a meaningful role in participatory government as an active and informed citizen' (Wines, 2008, p. 485). Nussbaum (2004) explains that people need:

> … narrative imagination. This means 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 and wishes and desires that someone so placed might have.
>
> (Nussbaum, 2004, sec. 4, para. 1)

Effective ethics education is a major component of this approach to learning.

There have been studies suggesting both the general effectiveness of ethics education (for example, in the case of business ethics, which is more effective when training is coupled with students' consideration of personal ethics, perceptions of ethics, and attitudes toward ethics; Hejase & Tabch, 2012; Zgheib, 2015), as well as its ineffectiveness (for example, in the case of medical ethics, the training may be too cognition-focused and detached, rather than considering the psychological and social aspects of a situation or person; Campbell, Chin, & Voo, 2007; Kleinman, 2011). However, the potential effectiveness of ethics education in various domains (Ryan & Bisson, 2011) is not the focus of this article. Rather, this

article posits that one possible primary or supplemental activity that could be integrated into an ethics curriculum is the playing of, discussion of, and interaction with, video games. Based on this assumption, it is important for educators to choose the most appropriate game to meet their specific pedagogical goals and strategies. To aid in this process, this article puts forth a framework to help identify relevant video games for use in ethics education. In the next section, I will discuss why games may be appropriate for use in ethics education.

Using games for ethics education

Studies have suggested the effective use of media in ethics education, such as film, movies and television (Pierce & Wooloff, 2012), literature (McMillan & Gentile, 1988) and cartoons and comics (Rule & Montgomery, 2013). Other strategies such as role-playing exercises (Brown, 1994; Doorn & Kroesen, 2013) and the use of cases and scenarios (Bagdasarov et al., 2012; Maclagan, 2003; Peacock et al., 2012) have been used frequently as well, and will be discussed further later in the article. In one example, Fleischmann, Robbins and Wallace (2011), developed interactive cases for information systems students, where the students needed to take on different roles in a group, and make interdependent ethical decisions. From this, the researchers created a scalable educational simulation that could be used at other institutions to teach students about global ethical challenges.

Based on this previous research, it is not a stretch to consider that another form of media, video games, which can provide opportunities for role-playing and simulation, and/or other effective educational strategies, may be used in ethics education as well. There has been a growing body of research around the effectiveness of using games for learning and education (Schrier, 2014b), and an increase in the design and development of these games, or use of commercial off-the-shelf games (COTs) for these types of purposes. Often, these types of games for education are called serious games, educational games, learning games, games for change, social impact games, or games for learning. These terms have overlapping meanings and usages, for example, the term 'serious games' typically refers to using games for so-called serious purposes like health, educational, or government-led training, but has a slightly different meaning than social impact games, which focus on games with an overall purpose of sparking social good and real-world change (Schrier, in press). The specific term to use is less important than the idea that games are being used for a variety of educational purposes. For example, games have been suggested to be effective and relevant for learning diverse topics, such as history and social studies (e.g., López & Cáceres, 2009; Schrier, 2014d; Squire, 2011), literature and literacy (e.g., Ferdig & Pytash, 2014), research methods and statistics (Boyle et al., 2014) and science, technology, engineering and mathematics (STEM) (Bertozzi, 2014; Werner, Denner, & Campe, 2014). Wouters, van Nimwegen, van Oostendorp, and van der Spek (2013) found that games are effective for learning and retention, potentially even more so than other methods of instruction. Moreover, Greitemeyer and Osswald's research on prosocial games,

such as *City Crisis*, suggests the possibility for prosocial effects of games, such as increased helping behavior, and activation of prosocial thoughts (2010). Christen, et al., describe how games may potentially support the practice of empathy for *game* characters and not just other people, and a feeling of responsibility for game characters (2012), which Schrier's research also supports (Schrier, 2016). A national survey conducted by the Joan Ganz Cooney Center found that 9% of teachers used games every day, 55% of surveyed teachers used games in their classroom at least once a week, and another quarter of respondents used games at least once a month (Joan Ganz Cooney Center, 2014).

Games have also been suggested to use for ethics education and to help practice ethical thinking and ethics-related skills (Consalvo, 2005; Gilbert, 2010; Schrier, 2014a, 2014c; Steinkeuhler & Simkins, 2008; Zagal, 2009, 2011), though this has not been extensively empirically studied (Schrier, 2014a, 2014c). Video games, and games in general, may have elements that are suited to ethics education, in that they can motivate participants to experiment with new identities and roles, take risks and push boundaries and practice certain behaviors, without worrying about the dire consequences that could occur in real life or in a traditional classroom (Paul & Elder, 2009, 2012; Schrier, 2014a). The ability to play in experience alternate perspectives and systems of ethics, and try out different possibilities with varying consequences, also make the use of games in ethics education particularly compelling (Schrier, 2014a, 2014c). For example, Schrier et al. (2010) describe *Mission US: For Crown or Colony*, a game created by PBS/WNET and Electric Funstuff for middle school students, to encourage the practice of historical empathy-related skills, reflection, and ethical thinking skills. Schrier et al. (2010) explain that the Boston Massacre is a key moment in the game, because each player receives slightly different vignettes showing what happened, since what happened is still unknown. Teachers could pause the game and use this in-game moment to question students as to their differing perspectives on the event, motivate students to discuss any differences, and to reflect on why each player received varied vignettes. In the next part of the game, students would decide what happened at the Boston Massacre at an official deposition, where their responses (and whether they lie or not about what they saw) would have consequences for their game's ending, and for how their character's relationships with the non-playing characters (NPCs) would turn out. The researcher's findings suggested that the game helped enhance skills such as empathy and historical empathy, ethical reasoning, and awareness of ethics issues (Schrier et al., 2010).

The purpose of this article is not to evaluate the overall or specific effectiveness of games in ethics education, or to posit that individual or general games *will* support ethics education. Instead, it is to help those educators, researchers, and designers interested in further investigating, implementing, or experimenting with games in ethics education more effectively choose potential video games, with consideration to ethics education strategies and pedagogical goals.

Review of previous frameworks

To develop the EPIC Framework for using games in ethics education, the previously-developed ethics, education, and games-related frameworks were identified, investigated, and analyzed. A full literature search for ethics curriculum, games, and ethics was used to identify the appropriate frameworks for study. This section summarizes the major frameworks used and their key components.

Relevant ethics and education frameworks

Major frameworks that have been applied to ethics education were considered. The following criteria were used to decide which frameworks should be included in this review: (1) frequency of reference and citation; (2) relevancy to ethics education and moral development; and (3) critiques and/or incorporates one or more other relevant frameworks. Thus, the following databases were searched using search terms 'moral development framework' and 'ethics education framework': EBSCO Host (all databases) and Science Direct. Then, the two most frequently-cited frameworks were culled from the top 25 most relevant (as defined according to that particular database's search engine) published journal article results as determined on June 18, 2015. The two resulting frameworks that emerged were Kohlberg's Theory of Moral Development and Rest's Four Component Model, each of which have been frequently cited and applied to the creation of ethics pedagogy and in conceptualizing moral development. Next, based on the above criteria, I also added a newer (2013) framework, the Transformative Model, which builds on three earlier ethics and learning models. This framework was selected based on my evaluation of newer scholarship connecting moral development and learning to action and community.

Kohlberg's Theory of Moral Development. This is a classic model of moral development, which posits that people go through specific stages of development in a linear fashion. According to this theory, how one makes moral judgments depends on where s/he is in the stage of moral development (Riemenschneider et al., 2011). Kohlberg (1969) explained the three levels as: (1) the preconventional level (people make egocentric decisions and focus on how those decisions affect the person); (2) the conventional level, where individuals consider common values and norms when they make decisions; and (3) the postconventional level, where individuals autonomously create and apply universal principles based on society and community (Kohlberg, 1969; Levitt & Aligo, 2013). Gilligan expanded on Kohlberg's theory by focusing on the potential differences between how men and women develop morality (Gilligan, 1982; Levitt & Aligo, 2013), suggesting that one's individual character and values can shape decision-making, and that care is additionally an important component of moral judgment (Gilligan, 1982).

Rest's Four Component Model. While there are numerous proposed models of ethical decision-making, there is no standard model of ethical decision-making in games or out, and few models are grounded or have been validated empirically

(Cottone & Claus, 2000; O'Fallon & Butterfield, 2005; Rogerson, Gottlieb, Handelsman, Knapp, & Younggren, 2011). Addressing all of the different ethical decision-making models is out of scope for this article, but can be further investigated in Cottone and Claus (2000) and O'Fallon and Butterfield (2005). One framework, created by Rest (1986), is discussed as it has been applied in a number of ethics curricula (Meng et al., 2014), as well as to ethics games (Staines, 2010). Rest's (1986) framework has four major components, including identifying and becoming aware of the ethical issue, making a judgment or evaluation, becoming focused and motivated toward a specific goal, and implementing an action, based on one's goal (Meng et al., 2014; Narvaez & Rest, 1995). The decision-making comes from both the intuitive and personal feelings of what is right or wrong, based on prior knowledge and experiences, and it also comes from a critical evaluation and reasoning through the evidence and situation to make a judgment (Meng et al., 2014).

Transformative Model. This model, developed by Tello, Swanson, Floyd, & Caldwell, 2013), incorporates key elements from Bloom's Taxonomy of Learning, Fink's Taxonomy of Significant Learning, and the Transformational Learning model, each described below. The purpose of this model is to show how people 'understand and apply knowledge aimed at creating greater value for themselves, organizations, and society' (Tello et al., 2013, p. 107). The model also connects this knowledge to action and behavior using the Theory of Reasoned Action (see Ajzen & Fishbein, 1980), which is beyond the scope of this article.

Bloom's Taxonomy. Bloom's Taxonomy (1956) is a useful model for evaluating how well a particular pedagogical activity or exercise spurs higher order thinking (Arthur, 2010; Tello et al., 2013). It consists of six different levels, which starts at the lowest level, remembering or recall, and moves up to understanding/comprehension, applying, analyzing, synthesizing, evaluating and creating new opinions and ideas (the top level) (Arthur, 2010; Tello et al., 2013). A useful discussion of Bloom's Taxonomy and relevant chart appears in Krathwohl (2002). One critique of Bloom's Taxonomy is that it focuses on the basic acquisition of new facts and concepts, rather than on the later reflection on that knowledge (Tello et al., 2013; Wineburg & Schneider, 2009). That said, a number of studies have applied Bloom's Taxonomy to ethics education, including Tello et al. (2013). The elements of Bloom's Taxonomy that inspire Tello et al. (2013)'s Transformative Model include being able to: (1) define key concepts, theories, and principles, such as being able to identity and integrate other's perspectives and ethical possibilities; (2) frame problems and issues, including understanding the consequences of decisions; and (3) generate positive, creative ethical outcomes, by understanding and applying ethical concepts to solutions.

Fink's Taxonomy of Significant Learning. Fink's taxonomy focuses on developing one's values, ethical self-awareness, and understanding one's own identity and value system (Floyd et al., 2013; Tello et al., 2013). Unlike Bloom's Taxonomy, which is more hierarchical, Fink's is more integrated and non-hierarchical, and incorporates the affective elements that he felt Bloom's was missing (Tello et al.,

2013). Fink's model includes the elements of Bloom's, such as the development of foundational knowledge, application of the knowledge, and integration and comparison with other knowledge, along with new elements such as human and self-awareness, caring and empathy and inclusion of other's feelings, and a desire for lifelong learning (Fallahi, 2008; Tello et al., 2013). Fink's Taxonomy has been applied effectively to ethics education (Tello et al., 2013) and curriculum in general (Fallahi, 2008; Fallahi et al., 2009). The elements of Fink's Taxonomy that inspire Tello et al. (2013)'s Transformative Model include being able to: (1) learn how to learn and communicate those learnings; (2) understand one's own values and ethical perspectives; and (3) develop ethical self-awareness, and developing a set of core values and character.

Transformational Learning. The Transformational Learning model, developed by Mezirow (1991, 2000), focuses on critical reflection on experience, as well as personal growth, and integrates the cognitive and personal aspects of learning (Merriam, 2004; Mezirow, 2000; Tello et al., 2013). This model focuses on being self-directed, practical and problem-oriented, action-oriented, and collaborating with others (Tello et al., 2013). Transformation Learning has also been applied to ethics education (Tello et al., 2013) and other curricula centered on the development of critical thinking (Flores, Matkin, Burbach, Quinn, & Harding, 2012). The elements of Transformational Learning that motivate Tello et al. (2013)'s Transformative Model include being able to: (1) Reflect on the validity of past truths and assumptions; (2) Test one's assumptions and adopt new insights and meaning; and (3) Create a framework for reasoning through and weighing the costs and benefits to ethical decisions.

Relevant games and ethics frameworks

The major frameworks that have been applied to the practice of ethics in games, how ethics are designed in games, how games function as ethical systems, and the use of games for ethics education, were considered for this review. As this is a burgeoning field, however, there are only a few frameworks currently available and most were recently published and not yet empirically tested. The following databases were searched using search terms 'ethics education and games': EBSCO Host (all databases), ProQuest, and Science Direct on June 18, 2015. Because of the newness of the field and limited amount of relevant journal article and book search results, any relevant publication's references were also searched further for related books and articles. From these relevant articles and books, a number of frameworks were culled and the following criteria were used to determine which frameworks should be included in this review: (1) relevancy to ethics education; and (2) relevancy to how games and ethics intersect. In addition, I included a newer (2011) framework from my own empirical research on ethics and games. While these frameworks do not necessarily focus on the potential educational aspects of games, they are useful in understanding how ethics may be reflected on,

negotiated, and expressed through games. The four frameworks are reviewed below.

Sicart's theory of games. Sicart (2009) contends that games do not just express ethical choices as part of their gameplay, but that they themselves are also ethical systems that express values (Sicart, 2009). As Sicart explains, game players, designers, and reviewers are all ethical agents, which themselves are also integrated into a complex web of systems—such as social, historical, and ethical ones (Sicart, 2009). This is an important distinction, because it suggests that games are not just expressing ethics content (like a book might explain ethical theories or pose ethical dilemmas), but it explores how games are ethical systems that may impact other systems, and that games and game designers are part of broader ethical, cultural and economic systems. Players themselves can interact within those systems, affecting how ethics and values are negotiated and experienced.

Zagal's 'Ethically Notable' games: Zagal (2009, 2011) describes a framework for identifying which games are ethically notable games, or games that are particularly able to encourage ethical reflection and reasoning. Zagal (2011) describes that these types of games involve rationalized responses and emotional responses, explaining that:

> … games that encourage rationalized responses typically engage players' critical thinking and problem-solving skills … games that elicit emotional responses often encourage players' investment in the narrative and fictive elements of a game while simultaneously facilitating their reflection on their in-game choices and decisions.
>
> (Zagal, 2011, p. 20)

Zagal explains that elements such as narrative and gameplay can encourage participants to reflect on and evaluate their ethics, address the social context of ethical issues, and consider varying consequences of different choices and actions (Zagal, 2011). He explains that the ethics of the game's play (its mechanics, rules and goals, and its broader system, narrative and/or themes), as well as the player's in-game actions, choices, and behaviors, contribute to helping the player reflect on and reason through ethics (Zagal, 2011). The very existence of this type of framework further suggests that some games may be better at eliciting the skills associated with ethical thinking, and it is an initial step in identifying the relevance of certain games to curricular needs. Also relevant is Zagal's supposition that there are both emotional and intuitive, in addition to reasoned and analytical, responses in games that are integral to the ethics component.

Stevenson's classification framework for ethical games. Stevenson (2011) created a framework for classifying and critiquing ethical games. Most relevant to this analysis is Stevenson's classification of the major types of ethical games. He posits three levels of ethical games, which suggest the differential ways that the game's ethical system interacts with the player's behavior:

1. Static, or games that integrate ethical themes through their goals and game play, whereas the player does not make any actual ethical decisions that might

impact the game (Stevenson, 2011). For example, a game's goals, themes, or mechanics may encourage the player to question the system's ethics or the nature of violence (Stevenson, 2011). This is similar to reading a book, where the main character works through ethical dilemmas, but the reader has no direct impact on the book's narrative, and instead may work through the possibilities as part of her imagination.

2. Adaptive, or games that invite ethical decisions made by the player, but which do not have obvious quantifiable consequences as a result of those decisions, in terms of any rewards or penalties or game changes (Stevenson, 2011). Stevenson describes that the typical adaptive game has a branching narrative, where players can gain access to slightly different narrative content, or a different order of events, even if the ultimate outcome is the same.
3. Systemic, or games that include player's ethical decisions, and also change in regard to those decisions, in quantifiable and measurable ways (Stevenson, 2011). In this type of game, decisions could result in changes in, for example, reputation, goodness or evilness, or karma, such as in games that have an alignment statistic, or a friendship/trust statistic (Stevenson, 2011).

Schrier's model of ethical decision-making in games. While there is no standard model for ethical decision-making in games, Schrier (2011) identified the main components of ethical decision-making in one particular role-playing game, *Fable III*, based on empirical data and a coding scheme that was derived from the data using Invivo coding and thematic analysis. The framework consists of the four types of skills and thought processes used, as well as the player 'drivers' or underlying motivators of decision-making in games, which interact with the skills and thought processes used. The skills and thought processes were categorized into four different classifications: (1) reflection-related; (2) information gathering-related; (3) reasoning-related; and (4) empathy-related. For more about the model, see Schrier (2011, 2014a). This model is useful in further identifying the different aspects of ethical thinking and decision-making, and suggests that players do practice ethical thinking in video games.

The Ethics Practices and Implementation Categorization Framework

Upon investigating the aforementioned frameworks, I developed the EPIC Framework. The EPIC Framework consists of two levels of use—educational goals and strategies (see Table 1 for a summary of the goals and strategies in the framework). In other words, educators may use the framework to find relevant and effective games for teaching and encouraging the practice of ethics, based on their unique educational goals, educational strategies, or both. Depending on one's educational needs, different mixes of goals and strategies could conceivably be used. Distinct sets of strategies could be used to meet the same goals, and there is not necessarily a clear or direct relationship between strategies and goals. In other words, sometimes using emotion, simulation, and application to real-world issues

Table 1. The multilayered EPIC Framework includes consideration of both educational goals and strategies to meet those goals. The goals and strategies could be mixed and matched in different ways to help educators and designers select the most appropriate games for a particular educational need

Educational Goals
E1. Enhance ethical awareness
E2. Enhance emotional intelligence
E3. Practice care or empathy-related skills
E4. Practice ethical reasoning
E5. Practice ethical reflection
E6. Enhance character
E7. Cultivate facility with major ethics issues, approaches, and frameworks
Strategies
S1. Emotion, mood, and tone
S2. Diaries or personal reflection devices
S3. Role-taking and role-playing
S4. Story or narrative
S5. Modeling through avatar or character
S6. Choices and consequences
S7. Simulation
S8. Social interaction and collaboration
S9. Deliberation, dialogue, and discourse
S10. Applications to real-world issues
S11. Procedural exploration and interaction
S12. 'Nudges' or contextual and/or personalized clues

are the appropriate strategies for meeting a goal of enhancing emotional intelligence, and in another situation, social interaction, choices and consequences, and story and narrative might be more appropriate.

An important caveat is that the framework does not critique or judge whether individual games are effective in meeting these goals, but rather, it helps educators identify which goals and strategies are relevant for their educational purposes, so the educator can more easily find matching games. Further research is necessary to understand whether the games chosen actually meet the goals, strategies, and other needs of ethics educators.

The EPIC Framework: educational goals

This section explains the seven educational goals, which were drawn from the aforementioned frameworks, theories, and research literature, and related to ethics education and ethical thinking-related skills, processes, and practices. This framework does not privilege the development of particular ethics-related skills over other skills, but rather explores which types of skills may be desirable and could be potentially practiced using a video game.

Regardless of the method of instruction used to deliver ethics education, goals and objectives must be first established (Ryan & Bisson, 2011). For example, Weber (1990) posited that ethics education must establish a goal or set of goals before the curricula can be created (Ryan & Bisson, 2011). Each of the goals listed

below is broad and general to fully capture the spectrum of ethics education needs. As such, educators may want to take these goals and shape them to their students' unique needs and their own pedagogical plans. These goals have been established in the literature as part of the ethical decision-making and ethics education process; one is not necessarily more important and the goals may overlap or be interrelated.

E1. Goal one: Enhance ethical awareness. The goal of enhancing ethical awareness is to help people become more aware of their own 'ethical and moral … decisions and actions' (Montgomery & Walker, 2012, p. 95). Developing ethical awareness includes the practice of many relevant skills, such as the awareness that a moral dilemma or issue even exists, identification of one's own and other's perspectives on a given situation, interpretation of the situation, and imagining cause and effect (Meng et al., 2014). Rest calls this type of awareness, moral sensitivity, which is the first stage in his aforementioned theoretical framework, and is described as, 'an awareness of how one's actions affect others and the different responses that are available to the actor in an ethical scenario' (Jordan, 2007, p. 324; citing Rest, 1983, 1986, 1994). Awareness is a core aspect of ethics education, because it helps people become more cognizant of their ethical identity and moral orientation, which in turn often leads to more sound ethical decisions in the future (Butterfield, Trevino, & Weaver, 2000; Lynn, 2010; Meng et al., 2014). For example, Levitt and Aligo (2013) explain that for counselors, making ethical decisions is not assured, even if the counseling professional is talented, intelligent, and experienced. A more salient factor may be the counselor's self-awareness. Greater self-awareness leads to personal and professional growth, which in turn leads to more grounded ethical practice (Levitt & Aligo, 2013). A number of the aforementioned frameworks express the importance of ethical awareness, including Transformative Learning, Fink's Taxonomy, Transformational Learning, and Ethically Notable Games.

E2. Goal two: Enhance emotional intelligence. Enhancing emotional intelligence is another relevant goal in ethics education, and is defined by 'capacity to reason about emotions, and of emotions to enhance thinking' (Mayer, Salovey, & Caruso, 2004, p. 197). The term 'emotional intelligence' was popularized by Daniel Goleman's book of the same name (Goleman, 1995), and has been debated as whether it is a form of intelligence or grounded in psychological research (Mayer et al., 2004). While this debate is not the focus of this book, teaching the components of what some educators and researchers refer to as emotional intelligence may be useful. Emotional intelligence has four parts, as explained by Krishnakumar and Rymph (2012), and include: (1) being able to identify emotions; (2) using emotions appropriately; (3) understanding emotions in others; and (4) managing one's own emotions. Goleman's model is similar, in that it involves self-awareness (1), self-regulation (2 and 4), and empathy (3), and also includes social and motivational factors (Goleman, 2004).

Krishnakumar and Rymph (2012) explain that both positive and negative emotions are an integral part of ethical decision-making, particularly in interpersonal

and social situations. In the Rest (1986) model of ethical decision-making, emotions can be used by the decision-maker to aid in interpreting and gathering information on a situation (Krishnakumar & Rymph, 2012). Different emotions have been suggested to influence how a person processes decisions, affecting the outcome of a decision (Krishnakumar & Rymph, 2012). Regardless of how an emotional state affects a decision—emotions do affect decisions (for better or worse)—so it follows that being emotional aware can help a person better navigate their ethical decisions. Ethical decision-making is related to being able to negotiate societal mores, norms and values (Kohlberg, 1969), thus there is suggested relationship between this and emotional awareness and emotional management (Krishnakumar & Rymph, 2012). Becoming more emotionally intelligent, particularly in being aware of and managing one's own emotions, helps people make more sound ethical decisions (Krishnakumar & Rymph, 2012). A number of the aforementioned frameworks express the importance of emotional awareness, including Kohlberg's Theory of Moral Development, Rest's Four Component Model, Transformative Learning, and Ethically Notable Games.

E3. Goal three: Practice care or empathy-related skills. Empathy is also integral to moral development and ethical practice (Jollife & Farrington, 2006). Building on Kohlberg's six stages, Gilligan (1982, 1987) explains how care is also a component of moral thinking, and that people's relationships and connectedness with others matters in how people think through ethical decisions. Likewise, Noddings (1984) explains that morality requires a 'sentiment of natural caring. There can be no ethical sentiment without the initial, enabling sentiment. … The second sentiment occurs in response to a remembrance of the first' (p. 244). There are four core components of empathy, which include

> '(1) the capacity for an automatic or unconscious affective response to others that may include sharing others' emotional states; (2) a cognitive capacity to take the perspective of another; (3) the ability to regulate one's emotions; and (4) a level of self-/other-awareness that allows some temporary identification between self and other, but also ultimately avoids confusion between self and other'
>
> (Decety & Jackson, 2004; Decety & Moriguchi, 2007; quoted in Gerdes, Segal, Jackson, & Mullins, 2011, p. 112).

Therefore, this goal overlaps with other goals listed in this framework. Part of this goal is to help people identify, consider, care about, and integrate other's perspectives and ethical points of view (Schrier, 2014a, 2014c; Schrier, 2015). A few of the investigated frameworks express the importance of empathy, including Schrier's ethical decision-making framework, Gilligan's critique of Kohlberg, and Transformative Learning.

E4. Goal four: Practice ethical reasoning. This goal relates to helping people identify and practice analyzing, interpreting and evaluating ethical issues, choices, and situations. Lynn (2010) explains that people need to be able to think through ethical issues and use the results in other capacities and situations (Khan & McCleary,

1996; Lynn, 2010). Ethical reasoning relates to a number of skills, such as prioritizing, establishing pros and cons, evaluating the issue, analyzing evidence, identifying biases, and interpreting (Schrier, 2011). This includes being able to address individual ethical issues as well as organizational or institutional ethical issues (Elango, Paul, Kundu, & Paudel, 2010; Morris & Wood, 2011). Many of the investigated frameworks express the importance of reasoning to ethical thinking, including Schrier's ethical decision-making framework, Rest's Four Component Model, Zagal's Ethically Notable games, Bloom's Taxonomy, and Transformative Learning.

E5. Goal five: Practice ethical reflection. Another potential goal in ethics education is reflection. Reflecting on ethical issues and decisions and thinking through their consequences, as well as integrating how one's assumptions and information may have affected and influenced one's decision and its outcomes (Lynn, 2010; Smith, 2011), is critical to ethics education (Montgomery & Walker, 2012). Merriam (2004) explains that being able to critically reflect on and critique one's assumptions, along with engaging in reflective discourse with others, is an important part of mature cognitive development (Merriam, 2004). Likewise, Dewey explains that reflection involves '"assessing the grounds [justification] of one's beliefs," the process of rationally examining the assumptions by which we have been justifying our convictions' (Mezirow, 1990, p. 5, citing Dewey, 1933, p. 9). Critical reflection and reflective discourse are often flagged as being an essential part of the 'transformative learning' model, as described earlier (Merriam, 2004). Merriam explains that, 'having an experience is not enough to effect a transformation' (Merriam, 2004, p. 62), what is necessary for true learning is changing based on one's reflection on that experience (Merriam, 2004; Morris & Wood, 2011). Although it seems as though reasoning and reflection are quite similar, reflection focuses on thinking through and interpreting one's beliefs and assumptions to gain further understanding or acceptance (Dewey, 1933; Mezirow, 1990, 1991), whereas reasoning focuses on interpreting, sifting through, and analyzing causes and consequences, events, objects, people, situations, and scenarios (Schrier, 2015). Reflection and reasoning can overlap in the meaning, and may also be used in tandem with moral judgment (Paxton, Ungar, & Greene, 2012), but are separated in this framework because the steps leading to either reflection or reasoning in a game may be different. Some of the previously described frameworks suggest the importance of reflection to ethics education, including Schrier's ethical decision-making framework, Zagal's Ethically Notable games, Transformational Learning, and Transformative Learning.

E6. Goal six: Enhance character. Another goal involves providing character education, such as helping people understand the connectedness of humanity, treating others with dignity and respect, valuing participation in civic life, and being an engaged, active citizen. The specific character traits may vary, but the need for teaching a foundation in character is a common goal for ethics education. Sommers explains that 'respect, responsibility, trustworthiness, caring, justice, fairness, civic virtue, and citizenship' are all essential (2004, p. 506)

There are a number of different methods where games or other educational interventions could impart guidelines about character. Researchers have argued about the best method, such as through inculcation, modeling values, or by letting students determine their own path (values clarification approach) (Simon, Howe, & Kirschenbaum, 1995). For example, the values clarification approach involves helping people build their own values through, 'by asking good questions, being a good listener, encouraging self-knowledge, and demonstrating trust in the seeker's ability to find the answer' (Simon et al., 1995, p. 485). Sykes (1995) critiques the values clarification approach, and explains that we need useful feedback on our values and moral choices, otherwise it is too ambiguous. Sykes argues that students need a grounding in a moral system or being provided with moral road maps, 'before they are allowed to make those choices' (p. 492).

Regardless of the method, or use of multiple methods, a goal in ethics education could be to enhance an individual's foundation in character overall. An educator should be mindful, however, about which approach(es) a game takes—whether it is inculcation of clear standards of values, modeling of behavior by characters acting with good values, or a values clarification approach with more control over building and shaping one's character—or some hybrid. Some of the previously described frameworks suggest the importance of enhancing character in ethics education, including Rest's Four Component Model and Transformative Learning.

E7. Goal seven: Cultivate facility with major ethics issues, approaches, and frameworks. Along with a foundation in character and values, another goal is to ensure that people are aware of and have facility with key ethical issues, approaches, and frameworks. For example, while some people may privilege a justice moral orientation over a care orientation, or a Kantian approach over a utilitarian approach, understanding the range of ethical theories and traditions is useful (Felton & Sims, 2005; Walker, 2012). Moreover, knowing and understanding the important problems and issues facing humanity is useful as an ethical thinker and participant in society (Felton & Sims, 2005; Nussbaum, 2010; Walker, 2012), as any outcomes or solutions could be applied to other circumstances and situations. Some of the previously mentioned frameworks suggest the importance of facility with issues and approaches in ethics education, including Bloom's Taxonomy and Transformative Learning.

The EPIC Framework: educational strategies

In addition to goals, I have identified 12 strategies that are associated with effective ethics education, and which may also be implemented with or designed around video games. Depending on which strateg(ies) an educator wants to use, they can use the framework to help them identify the best match—such as a game that uses the strategies they want to incorporate into a classroom activity. Many video games could use multiple strategies, just as they could fulfill multiple goals. In addition, many of these strategies overlap and could be subsumed or integrated into other strategies. Thus, the strategies listed here are not entirely distinct, but

Table 2. The list of 12 possible game strategies in the EPIC Framework, as well as examples of current games that use each strategy. Some games will use more than one strategy.

Strategy	Description	Examples
S1. Emotion, mood, and tone	Games that convey emotion in ways that help us see new perspectives on humanity.	*Flower, Journey, Gone Home, Dear Esther, Passage, Parenthood, Akrasia, Loneliness, Howling Dogs, Nevermind*
S2. Diaries or personal reflection devices	Games use journals, diaries and other personal reflection devices and opportunities.	*Reliving the Revolution, Mission US.*
S3. Role-taking and role-playing	Games that use roles and characters to help explore different ethical perspectives and identities, or one's own.	*Fable, Mass Effect, Dragon Age, Migrant Trail*
S4. Story or narrative	Games that use story to express ethics.	*Mission US, Stanley Parable, Dys4ia, Walking Dead, Howling Dogs, Dear, Esther, Every Day the Same Dream*
S5. Modeling	Games that model behavior using characters and/or avatar.	*Mass Effect, Fable, Fallout, Mission US, Awesome Upstanders*
S6. Choice and consequences	Games with ethical choices and decision-making, which have an effect on the game play	*Fallout 3, Fable series, Skyrim, Walking Dead, The Stanley Parable, Papers, Please, Quandary, Spec Ops: The Line, the Yahwg*
S7. Simulation	Games that simulate an issue, topic, event or aspect of humanity.	*Sweatshop, Papers, Please, Peacemaker, Don't Starve, Black and White, The Sims*
S8. Social interaction	Games that invite ethical questions due to their social nature, such as those with community rules and norms, guild interactions, or interpersonal connections.	*WoW, Minecraft, Way, Counterstrike, League of Legends*
S9. Deliberation, dialogue and discourse	Games that encourage dialogue, discourse, debate and deliberation on various issues, choices, or consequences.	*Argument Wars, Reliving the Revolution*
S10. Application to real-world issues	Games that either may enable players to consider real-world problems or contexts, or ones that may not have initially obvious connections to ethics, but the story around the game (addiction, violence) spurs real-world ethical questions and problem-solving.	*The Migrant Trail, Candy Crush Saga, Grand Theft Auto, Blackwell Deception, Rapelay, Super Columbine Massacre, The Shooting at Sandy Hook, Call of Duty* series
S11. Procedural exploration	Games that clearly posit an opinion or argument on an issue through the gameplay and mechanics.	*McDonalds Game, Airport Security, Unmanned, Papers, Please, pOnd, Every Day the Same Dream, Free Culture, Road Not Taken, Way, Triad, Lim, Loneliness, What Race am I?*
S12. 'Nudges'	Games that provide contextual clues, calibrations, and/or personalized pushes to help shape behavior.	*Way, Nevermind, SchoolLife, Gone Home*

could be used in tandem with each other (See Table 2 for a summary and brief description of the strategies).

S1. Strategy one. Emotion, mood, and tone. Krishnakumar and Rymph (2012) explained that part of emotional intelligence is being able to identify and manage emotions. A game that evokes emotions or exhibits the emotions of others could ostensibly help people practice emotional identification, awareness, and management skills. People often express that works of art are 'moving,' such as film, books, or dance (Gerdes et al., 2011), which helps opens them up to practicing empathy and becoming more emotional aware. This also can be true of games, in that games can also 'move' people and be emotionally meaningful (Shea-Dinkin et al., 2013). Gerdes, et al., explains that, 'Using the medium of art can be a way to engage people in training or retraining the mirror neurons for affective sharing and the cognitive pathways for self-/other-awareness, mental flexibility, and emotion regulation' (2011, p. 122). Video games that may exhibit this strategy could include *Gone Home*, an independent game that evokes a powerful and sustained mood, and tells an emotionally charged story through the first-person navigation of a house (see more about the game in Darvasi, 2014). Likewise, *Dear Esther* provides a game world with which to nonlinearly explore poetic reflections on the life of one's avatar. *Nevermind*, a game in progress, bases its gameplay on the results of the players' biofeedback sensors (it adapts to scared or stressed responses, and becomes harder as the player is more fearful), with the aim of helping people become more aware of their reactions to stress and feelings of fear, as well as more able to manage and regulate it.

S2. Strategy two. Diaries or personal reflection devices. Researchers have expressed the need for reflective practice in ethics education (Merriam, 2004; Montgomery & Walker, 2012; Smith, 2011; Mezirow, 2003). Some techniques include the inclusion of portfolios or diaries to help 'students to consolidate and assess their learning of a discipline and its practices' (Smith, 2011, p. 211). Games that can incorporate contemplative practice or reflective moments may help further reflection, as well as ethical awareness (Montgomery & Walker, 2012). A game could also use a reflective moment, such as a deposition or discussion in game of previous events, and these moments could even take place outside of the game, but using the game's content or choices. Examples of this type of game could include *Mission US: For Crown or Colony?,* which, as described earlier, enables students to reflect on the Boston Massacre during an in-game deposition. Many teachers also take the opportunity to do a guided reflection with students outside of the game as well (Schrier et al., 2010). For example, Schrier, 2006; explains that when designing *Reliving the Revolution*, a mobile educational game about the Battle of Lexington, the game experience included a deliberation and reflection after playing the mobile component, which enhanced learning opportunities (Schrier, 2006).

S3. Strategy three: Role-taking and role-playing. Another potential strategy is the encouragement and use of role taking and role-playing in a game. Gerdes et al. (2011) explains that role-playing, psychodrama and other related techniques help to promote 'perspective-taking, self-/other-awareness, and emotion regulation …'

(p. 123) and in particular helps develop empathy-related skills. A number of studies have suggested the efficacy of role-play in ethics education (Morris & Wood, 2011). For example, Doorn and Kroesen (2013) explain the use of role-play in engineering ethics, which helps them expand their perspectives, become aware of their decisions, and come up with new ethical solutions. Brown (1994) explains that role-play was used effectively to integrate ethics into a business course. Observing how different roles or people approach a problem can also be useful (Frey, 2010). An example of the use of role-playing in a game is the *Fable* series, a series of video games where you can take on the role of a citizen of Albion, a fictional universe, and go on missions and 'level up' your character. In taking on the role of your avatar, or the main character in the game, you can make ethical decisions in the game, such as whether to drain or preserve a lake, or sacrifice a friend or villagers, in the case of *Fable III* (Schrier, 2011, 2014c).

S4. Strategy four: Story or narrative. Another possible strategy is the use of story or narrative. The use of story in cases and scenarios is well established in ethics education, as cases 'provide narratives that convey real world situations and problems' (Frey, 2010). Frey (2010) explains that stories work as 'moral exemplars,' modeling specific types of action or values, they can help students become more aware of their own and other's ethical perspectives, and enable the practice of ethical reasoning and experimentation with different moral possibilities. Story allows access into other people's lives and opens us further to practicing empathy. For example, Cragg (1997) explains that, 'to weaken the grip of prejudice in a society, people, particularly children have to be brought into contact with images, stories, experiences that challenge stereotypes and change perceptions' (p. 236). Moreover, story provides a context to how we view ethics, which helps us further understand ethical issues, our own ethical assumptions, and makes us more ethically self-aware (Floyd et al., 2013). Personal narratives can be particularly compelling for addressing ethical issues, particularly when students construct the narratives themselves (Bagdasarov et al., 2012). Using narrative in a game could also serve as an assessment tool, in that the student's own narratives could be evaluated (Hatcher, 2011). The strategy of using narrative and story in a game also relates in part to Stevenson's framework's Adaptive game type (2010), which explains that interactive stories enable participants to play through different ethical story options, even if the quantifiable outcomes are the same. Stevenson uses *The Witcher* as an example, a game 'in which players are presented with various short-term decisions that often end up having unforeseen long-term ramifications' (2011, p. 40). However, some story-based or interactive narratives do have quantifiable outcomes as well. Examples of a video game with narrative choices include *The Walking Dead* game series, which takes place in a post-apocalyptic world, and is based on *The Walking Dead* comic book series. The player, as the main avatar, makes dialogue choices, such as whom to save from zombie attacks, which have a short-term effect on the story, but also affect one's relationships with other characters (NPCs) and how the NPCs view the avatar. The story, so far, has ended up in the same narrative result, even if the mini-choices differ. Likewise, in the computer game, *I Have No Mouth*

and I Must Scream, the player plays as five different characters from the original Ellison short story of the same name. Throughout the point-and-click puzzle adventure game, players also make choices, such as which dialogue options to choose, which leads to slightly different game endings.

S5. Strategy five: Modeling through avatar or character. Another possible strategy is the use of modeling. A game's character or one's avatar model, could model particular behavior or choices, and a player could experience those choices through observations of or the playing as this character. Modeling was mentioned as a potential strategy in character education (Simon et al., 1995). Noddings (2003) also explains that modeling is an integral component of ethics education. There is overlap between this strategy and others, as modeling is part of the power of stories (Frey, 2010). This strategy seems to relate tangentially to Stevenson's Framework's first category, Static games, wherein the player experiences the gameplay and observes the characters, to gain an ethical understanding of the game. An example of this might be *BioShock* (Stevenson, 2011), in which the player plays as the main character, Jack, and both observes and plays as him, and through this, engages with the game's moral system and ethical philosophy. (For more about *BioShock* and ethics, see Travis, 2010; Cuddy, 2015).

S6. Strategy six: Choices and consequences. Another strategy involves providing choices for people to work through, such that the player could experience their consequences. Providing ethical choices in clear scenarios is a strategy that some games are starting to incorporate into gameplay (Melenson, 2011; Schrier, 2014a). Making choices and experiencing their consequences is another core component of case-based instruction (along with story). Cases have been a frequently used and effective strategy in ethics education (Lynn, 2010; Wines, 2008; Maclagan, 2003), and have been suggested to help people practice necessary ethics-related skills, such as ethical awareness, reflection and empathy (Noddings, 2003; Bagdasarov et al., 2012). They also help people repeat and iterate through possibilities and get feedback on those possibilities and their consequences (Upchurch, 1998). The choice and consequences strategy overlaps with other strategies, such as simulation, role-playing and story-based strategies.

As described in the framework section, Stevenson's model delineates levels of ethical choices on the game play and their impact on the game's simulation of processes and its ethical system. This strategy more closely relates to Stevenson's Systemic ethical type, in that the player's choices have a measureable and consequential effect on the game play, game world and/or character or role of the player. This strategy could be implemented in a way that is very simple—the player makes a choice and gets clear feedback, which has been suggested to be an effective strategy (Peacock et al., 2012). Or, this strategy could involve a complex web of choices and consequences, which may have both long- and short-term effects on gameplay, character, story, or the game experience. Examples of this type include the *Fallout*, *Dragon Age*, and *Mass Effect* series, which are large-scale, COTS role-playing games that involve the player (as an avatar he or she created) making ethical decisions that have quantifiable and story-based consequences,

such as differential relationships with NPCs, loyalties to particular groups, karma ratings, and access to dialogue and story options. For more about these games and ethics, see Melenson, 2011; Schrier, 2011). Likewise, in *Quandary*, players are given ethical scenarios, and invited to choose how to help shape a new civilization on a fictional planet, Braxos; these choices have consequences for themselves and others in the new Braxos society.

S7. Strategy seven: Simulation. Another strategy that is related to choices and consequences is the use of simulation to experiment with processes, issues, or ideas. A game can simulate, for example, an ethical system or a key ethical issue, and enable a player to try out different possibilities related to it. In a sense, this is similar to a case, in that it allows the participant to play out different scenarios and experience changes, results or outcomes. Participants may not make specific choices, per se, but may act, express, or behave in ways that affect the game's system. Games and simulations go beyond a story or case, however, because it can algorithmically incorporate many factors, and model an issue from many perspectives. A simulation is also more scalable than a non-digital case, such that the data and outcomes could be analyzed and implemented anywhere, and shared among participants (Fleischmann, Robbins, & Wallace, 2011). A player can then experiment with this model iteratively to learn more about it, to enhance their ethical awareness, understanding of issues or frameworks, or to better reason through scenarios. A simulation does not necessarily need to have a realistic or real-world counterpart (for example, a fantasy role-playing game could simulate a currency or ethics system that has no direct connection to the real world), but the simulation strategy can be used in tandem with strategy 10 (application to real-world issues) for enhanced impact. An example is *The McDonald's Game* (by Mollendustria), which attempted to model the different processes related to McDonald's restaurants, including growing crops and cows, slaughtering cows for meat, making corporate business decisions, and front end restaurant management (hiring, cashiers). Players need to interact with each of these processes simultaneously to ensure that McDonald's runs smoothly and profitably, while making ethical decisions along the way, such as whether to add antibiotics to meat or lower wages. Another relevant game is *Sweatshop*, which simulates a sweatshop and enables players to act as a manager and make decisions about hiring child labor and providing access to water or breaks.

S8. Strategy eight: Social interaction and collaboration. Another strategy involves using social interaction, whether with real people, or virtual characters (NPCs). This can either involve collaborative or competitive gameplay. For example, studies have suggested the importance of social interaction in ethics education (e.g., Maclagan, 2003), such as in the formation of an ethical identity, in developing ethical awareness, through the modeling of behavior (Bandura, 1977), and in the practice of empathy-related skills (Belman & Flanagan, 2010). Examples of this include *Way*, a collaborative two-person game, where participants work together using only non-verbal communication to overcome game obstacles and problems (Schrier & Shaenfield, 2016).

S9. Strategy nine: Deliberation, dialogue, and discourse. Another strategy used in ethics education is deliberation. Noddings (2010) discusses the importance of dialogue in moral education, and explains that in 'dialogue, both parties speak, and both parties listen. They work their way sensitively toward the resolution of a problem' (Noddings, 2010, p. 147). The practice of deliberation and argumentation has been useful for learning critical thinking, perspective-taking, reflection, civic engagement and social studies learning (Gastil & Dillard, 1999; Kuhn, Goh, Iordanou, & Shaenfield, 2008; Mezirow, 2003). Examples of this include *Argument Wars* on iCivics.com, which is an educational site for learning civics, social studies, and government. In *Argument Wars*, created by Filament Games, the player argues real historic cases as a lawyer by building arguments and deciding when and how to refute the opposing lawyer's arguments (Schrier, 2014d).

S10. Strategy 10: Application to real-world issues. In this strategy, a game helps players apply their skills to real-world problems and contexts, and/or understand and meditate further on ethical issues happening in the world. A number of studies have suggested making connections to real world issues in ethics education, and explained that learning skills and frameworks becomes more useful and relevant when connected to real world applications (Ritter, 2006; Ryan & Bisson, 2011). Using realistic cases or issues potentially helps students learn ethical thinking and decision-making skills, as well as implementation skills (Felton & Sims, 2005; Ryan & Bisson, 2011). The theory of situated cognition, or combining learning with context, also supports the strategy of mixing theories with authentic tools and realistic problems and issues (Brown, Collins, & Duguid, 1989; Schrier, 2006). An example of this is *The Migrant Trail*, a game that takes the real world issue of immigration and immigration control, and enables participants to play as an illegal immigrant escaping Mexico into the US desert, making decisions about whether to sacrifice group members or use rations on the sick and weary. *Migrant Trail* participants can also play as an immigration officer, providing multiple perspectives on the real-world issue.

Moreover, games could even help players *solve* real-world ethics-related issues and provide knowledge and insight to unsolved ethics problems. For example, in the game-in-progress, *SchoolLife*, participants play through different scenarios that are related to bullying. Through the players' responses, the game (and its designers) better learn the complexities of bullying—such as how to better simulate and make more realistic future in-game interactions around bullying, and also how to better handle it (Hodson, 2013). The upcoming game, *The Sudan Game*, from University of Southern California's GamePipe Lab and Carnegie Mellon asks participants to walk through the real-world steps to peace in the Sudan, based on the realistic perspectives of the many different tribes. Participants play as tribe members and need to work together to test each sequence of events to evaluate if it leads to a peaceful outcome (Landwehr, Spraragen, Ranganathan, Carley, & Zyda, 2013).

S11. Strategy 11: Procedural exploration and interaction. Procedural exploration and interaction is another educational strategy reviewed, and is the least

empirically studied for its role in ethics education. Games, unlike other media, involve a mix of mechanics, rules, goals, and gameplay. Bogost explains that games actually 'mount claims through procedural rhetorics' (Bogost, 2007, p. ix), or in other words, games make arguments about its meaning through the ways in which people play it. Unlike books or television, games are making arguments through 'rule-based representations and interactions' (Bogost, 2007, p. ix) and not just text or images. In some ways, this strategy overlaps with simulation strategies and modeling, and seems, at first glance, akin to a player's observing and experiencing the gameplay that Stevenson (2011) describes in Static type games in his classification framework. This strategy, however, goes beyond a simulation and emphasizes the complex, interactive nature of games. Even if no obvious ethical choice or behavior is required, and there is no clear-cut consequence of a choice, the very rules of play that a player must navigate can lend themselves to making claims about ethics, ethical systems, and ethical issues, and can potentially support related skills and concepts. While one could argue that all games have the potential to make procedural claims about ethics, one clear-cut example is *Papers, Please* by Lucas Pope. In this game, the player acts as an immigration officer for an ambiguous Eastern European country, and needs to detect issues with passports and other documentation based on current rules and regulations. The officer's performance results in financial compensation, which have repercussions for one's in-game family; not following the rules could end in termination. At points in the game, players can decide to break the rules to help certain immigrants enter the country, with potentially destructive consequences. Through the playing of the game and its rules, players begin to understand the game's ethical system, and experience its brutal arbitrariness, as well as the suffocating nature of the bureaucracy surrounding immigration (Singal, 2013).

S12. Strategy 12: 'Nudges' or contextual and/or personalized clues. Another possible strategy is the concept of 'nudge' or the use of triggers, both social and situational, to compel different types of actions and behaviors. The concept of 'nudge' was popularized by Thaler and Sunstein (2009), who use a behavioral economics approach. This concept has been applied to health, design, business, policy, and training contexts, with varied results (Selinger & Whyte, 2012). Nudge refers to subtle changes and calibrations that can affect decision-making and choices (Selinger & Whyte, 2010). It is based on research that people use shortcuts and heuristics, and are influenced by biases, when needing to make quick decisions or are aroused or tempted (Selinger & Whyte, 2010).

For instance, a game might use different contextual clues, just-in-time feedback, non-player character interactions, particular text and wording, avatars, a well-configured interface, or even other players to nudge players, and help them become more ethically aware or sensitive, motivated, or reflective of ethics. One could argue that any well-designed game provides nudges in the form of contextual clues (from explicit arrows to more implicit valuing of particular behaviors with points or progress toward goals). For example, *Gone Home* provides a virtual home with objects and rooms that the player can explore. It uses a mix of locked

Table 3. An example of the strategies and goals (highlighted in gray) that are potentially employed by one game, *Fable III*, as suggested by empirical results (see more at Schrier, 2010, 2016), and extrapolated from personal gameplay experiences with *Fable III* (however, these would need more empirical evidence to support). *Fable III* could potentially meet different permutations of goals and use different strategies to fulfill those goals; however, evidence does not lend as much support to *Fable III*'s ability to meet goals E6 and E7, or use strategies S1, S2, S7, S10, or S11. Designers and educators could use this chart to identify a particular game's potential for meeting particular goals and strategies

		Goals						
		E1: Ethical awareness	E2: Emotional intelligence	E3: Empathy	E4: Reasoning	E5: Reflection	E6: Character	E7: Facility with issues
Strategies	S1: Emotion							
	S2: Diaries							
	S3: Role-play							
	S4: Story							
	S5: Modeling							
	S6: Choices							
	S7: Simulation							
	S8: Social							
	S9: Deliberation							
	S10: Real-world							
	S11: Procedural exploration							
	S12: "Nudges"							

doors and hallways, and interactions with narrative scraps and objects, to compel players to navigate the house in meaningful ways. Designers and educators could more explicitly use nudges to support specific types of moral behavior or edifying experiences. For example, *Way* matches players anonymously and virtually, and enables only nonverbal communication between the two. The pairs need to work together to solve in-game tasks to reach the end goal. The game provides limited nonverbal gestures and sounds, such as movement of one's avatar's arms to point, and a 'shout' to ostensibly direct, halt, punish, and/or alter one's partner's behavior (Schrier & Shaenfield, 2016).

Games could even adapt to a particular player or group of players to provide personalized nudges based on one's emergent needs, limits, values, behavior, or goals. There are no such games available at this time, and this may be an open area of research consideration and design. That said, there are broader ethical considerations for using a strategy with the aim of influencing and modifying behavior, particularly based on how one is currently behaving, or the personal information and data a person contributes. While all of the strategies described in this article may raise ethical concerns, privacy and other issues should be particularly deliberated while implementing this type of strategy (Kapsner & Sandfuchs, 2015).

Conclusion and next steps

The purpose of this article is to propose, describe, and analyze a novel framework, EPIC, which can help educators identify potential video games for ethics education and facilitate the incorporation of video games into informal and formal ethics learning contexts. This framework can be used to help educators, policymakers, and designers select appropriate games that match both education goals and strategies for specific ethics education needs and activities. The framework could be used to identify gaps in existing games, and to evaluate the types of games that should be developed for ethics education. It can also be used by designers to guide the creation of new video games that can fill those gaps and help better support ethics education. Finally, designers and educators who are creating a game for ethics education could use the framework to communicate to others a game's potential for meeting particular goals or strategies. For an example of one game (*Fable III*) and how it may be used to meet the goals and strategies in the EPIC Framework, please see Table 3.

The EPIC Framework consists of seven education goals (e.g., ethical awareness, reflection, and empathy) and twelve educational strategies related to ethics education (e.g., role-play, story and narrative, and choices and consequences) (see Table 1). While educators may have other goals and strategies, the ones included into the framework are best supported by the current research literature on ethics learning, games and ethics, as well as by existing COTS and educational games.

There are many other ways to approach the intersection of games and ethics, and to identify appropriate video games, such as by relevant ethical or social issue

(e.g., genocide in Darfur or cyberbullying), genre of game, by the approach to ethics taken (e.g., utilitarian, Kantian, virtue, pluralism, ethics of care), or the values embedded in a game (Flanagan, et al., 2007). Although these perspectives are beyond the scope of the EPIC Framework, they should be considered alongside this framework when selecting an appropriate game. The choice of game and creation of an educational strategy should refer to the sociocultural context of the game and its play, as well as the game's design itself, as well as any emergent interactions among them. Moreover, educators need to be mindful of the age appropriateness of the games that they use. For example, *Mission US* is appropriate for middle school students but may not be appropriate for college students, while *The Walking Dead* would be appropriate only for mature audiences (college age or mature high school students). Games such as the *Mass Effect* series or *Dragon Age* series may be too lengthy to incorporate into a formal curriculum, and some games may only be available on consoles or mobile devices that are not available to all students and/or school districts. Moreover, the EPIC Framework is more focused on identifying the pedagogical needs and strategies used to teach ethics, and does not take into consideration a students' previous knowledge or skill level. Knowing this would be useful, too, for educators searching for appropriate games and developing ethics curriculum. Thus, age and other factors, should be additional elements considered when educators choose relevant games for their classrooms and educational settings.

Moreover, the EPIC Framework has not been empirically tested and the games provided as examples have not been tested, in general, for their efficacy in ethics education. Further testing is needed to understand whether these are the most relevant goals and strategies in ethics education, whether specific strategies can be used in tandem to meet ethics learning goals, and to what extent video games are beneficial in ethics learning and development. Investigating the extent to which specific elements in video games (e.g., role-play or modeling) can support the practice of ethical thinking and learning, including which specific ethics skills and concepts and under what types of conditions and factors this practice is best supported, would also be useful next steps.

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Dear Esther, The Chinese Room, 2012
Dragon Age II, BioWare/Electronic Arts, 2011
Dragon Age: Inquisition, BioWare/Electronic Arts, 2014
Dragon Age: Origins, BioWare/Electronic Arts, 2009
Fable III, Lionhead Studios/Microsoft Studios, 2010
Fallout III, Bethesda Softworks, 2008
Fallout: New Vegas, Obsidian Entertainment/Bethesda Softworks, 2010
Gone Home, Fullbright, 2013
I Have No Mouth and I Must Scream, The Dreamers Guild/Cyberdreams/Night Dive Studios, 1995
Mass Effect, BioWare/Electronic Arts, 2007
Mass Effect II, BioWare/Electronic Arts, 2010
Mass Effect III, BioWare/Electronic Arts, 2012
The Migrant Trail, Gigantic Mechanic, 2014
Mission US: For Crown or Colony?, WNET/Channel 13/Electric Funstuff, 2009

Nevermind, Flying Mollusk, 2015 (early access beta)
Papers, Please, Lucas Pope/3909, LLC, 2013
Quandary, Learning Games Network, 2012
The McDonald's Game, Mollendustria, 2006
The SUDAN Game, USC GamePipe Laboratory/Carnegie Mellon, in progress
The Walking Dead (game), Telltale Games, 2012
The Witcher, CD Projekt, 2007
SchoolLife, Giant Otter, in progress
Sweatshop, Littleloud, 2011
Way, Coco & Co., 2011