Video Game-Based Pedagogy in the Philosophy Classroom

Troy Seagraves
Purdue University

Javier Gomez-Lavin
Purdue University

Abstract: Game-based pedagogy, when carefully implemented, can be a powerful pedagogical method in the philosophy classroom at the college level. This method requires students to play games and leverage their game experience when engaging with course content. Inspired partially by the promise that game-based pedagogy and other innovative teaching methods increase student engagement and connections, we crafted a course that employed these methods, with an emphasis on video games. This resulted in the Introduction to Philosophy through Video Games course that we describe here. We feel that we successfully promoted student engagement and connections with philosophical material by combining such course readings with playing assigned video games, structured reflection assessments, and team-based active deliverables. By detailing the justifications for such a course, the challenges we overcame, and the limitations of this hybrid method, we hope to inspire other educators to develop similar game-based philosophical classrooms.

Introduction

As educators, we have found that video games increase student engagement and connections with philosophical topics in the university classroom. When carefully deployed, such as in the Introduction to Philosophy through Video Games course we describe below, video games can function as powerful pedagogical tools. When we required students to play video games and integrate their gaming experiences with the course content, video games became a medium by which students engaged with a wide variety of philosophical topics. Additionally, we required students to regularly complete handwritten, structured reflection assessments throughout the semester and produce team-based active deliverables. We observed that the combination of games, reflection assignments, and active deliverables increased student engagement with the course material and the connections students made with the material. In what follows, we summarize

the literature justifying our approach to teaching philosophy. Later, we give a case study of the construction of our course that features the described methods. Finally, we conclude with a discussion of the insights and difficulties facing the implementation of courses like ours.

Kinds of Engagement and Connections

Promoting student engagement and making connections with course material are important goals for educators, as studies suggest both are correlated with positive learning outcomes.[1] Student engagement comes in two forms: a set of student behaviors and a set of *affects* that motivate students. The former consists of behaviors like paying attention, turning in assignments on time, and attending class. The latter consists of mental states like feeling the topics are worth learning, feeling included, and feeling supported by an instructor. The behaviors in the first form of engagement are most clearly associated with the promotion of learning outcomes. When a student attends class, they are more likely to acquire knowledge of the course material and receive more opportunities to correct mistakes through interacting with the instructor. In short, attending class increases opportunities to learn.[2] Similarly, when students are better able to pay attention, they are more able to learn the material. Unsurprisingly, there is a strong correlation between students' ability to ignore distractions and their achievement of learning outcomes.[3]

While the first form of engagement pertains to behavior, the second form pertains to motivations. We can term this second form *affective engagement*, and it promotes the achievement of learning outcomes by reliably motivating students to learn course material. Affective engagement indirectly promotes achieving learning outcomes as students who are more motivated to learn are likely to employ those engagement behaviors noted above.[4] These motivations can have multiple sources, but it is noteworthy that students who feel that the course content is useful or worth learning are more likely to participate in class and display engagement behavior.[5]

Like engagement, connections made by students can promote the attainment of learning outcomes. Making connections involves noticing a relationship between one idea or topic and another. When a student makes connections in this way with course content, they tend to consider the content useful to achieve some proximate or distant goals.[6] Demonstrating the benefits of affective engagement that we described above, students find the learned topic more worthy of learning. Connections between the course content and the students' own lives also positively correlates with completing assignments on time.[7] The aforementioned effects are perhaps unsurprising since the more a topic becomes connected to something the student cares about, the more likely they are to give attention to that topic. Making connections also allows the student to see the topic from a new perspective and transfer their knowledge to new problem-solving situations.[8] In other words, by making connections, a student can approach the topic in different ways (as many

ways as they've made connections), readying them to use their knowledge to solve new problems.

Game-Based Learning

Game-based pedagogy uses games played by learners to achieve some pedagogical goal. This method of teaching can be contrasted with traditional methods that usually involve lectures and time for discussion and that feature readings on a selected topic. To be clear, instructors may address games in *both* methodologies, but the way in which they address games differs. In game-based pedagogy, the learners play games, but in traditional pedagogical methods, games are merely used as examples or topics for class discussions. For example, a course that requires students to play *Bioshock*—a historical fantasy, narrative-driven adventure game—employs game-based pedagogy, but a course that merely discusses the philosophical themes of *Bioshock* employs traditional pedagogical methods. A class that merely discusses games, then, is not automatically a class that employs game-based pedagogy. A course employs game-based pedagogy only if the students are required to play games to achieve some pedagogical goal.

Game-based pedagogy shows promise in increasing student engagement. Using games to teach course content is usually paired with some instruction on the relevant course content. For example, Kurt Squire discusses teaching the history of technological development to secondary school students.[9] Students were required to read and listen to the instructor on this history, and then they were required to play *Sid Meier's Civilization 3*. In the game, which, true to its namesake, has players guide a civilization from antiquity to the space age with "4X" (that is, explore, expand, exploit, and exterminate) turn-based game mechanics, students progressed their virtual society through several epochs of technology. While Squire allowed students to interact with the (virtual) history of technology, Rebekah Shultz Colby describes a different way to use game-based pedagogy.[10] She had students in a first-year writing course play *World of Warcraft* extensively and construct research projects centered on the game. This is a massively multiplayer online role-playing game, in which players create avatars that interact in real time with hundreds or thousands of other players across the globe. In Shultz Colby's course, some students analyzed dialogues in online forums discussing game mechanics while others conducted interviews of players in the game. The game provided a space for the students to create their own writing content. Inspired by the observations of the above authors, we aimed to teach an introductory philosophy course where students played games alongside classic philosophical readings.

Courses like those described above that incorporate games can promote engagement in students and help them make connections. One of the main benefits of using games is that students make a connection between the course content and the game that they play. This avoids a major weakness of courses in

higher-level education: many topics discussed are *decontextualized* in that students have little access to the phenomena on which their courses discussions focus.[11] For example, a course that covers the ethics of war but does not give its students access to the testimonies of veterans would be decontextualized—the students may feel intellectually distant from the context of the issues they discuss. Most decontextualization is understandable; some intellectual distance can bring to light important issues, and the myriad details of a context can be distracting. Even so, game-based pedagogy does not suffer from decontextualization. Since the phenomena discussed in a course pertain to the game the students play, the course content is *re*contextualized—the students, having engaged directly with the game, can make connections quite easily; the course content seems more relevant to them.

Games, when used for pedagogical ends, also exhibit benefits that mirror the these aspects of student engagement. For instance, games capture players' attention and motivate them to perform those tasks conducive to achieving the game's goals. Games can maintain the attention of students for an extended period of time.[12] Brandon Ashinoff presents a wealth of research that provides significant evidence that video games positively influence players' executive function, spatial attention, distractor processing, and attentional capture (players are more likely to ignore task-irrelevant stimuli).[13] In other words, game-based pedagogy helps students pay attention and ignore distractions—part of engagement behavior noted above. For example, *Return of the Obra Dinn* tasks players with investigating the fates of crew members of a ghost ship. This becomes the most salient goal of players when in the game: the player focuses on investigating the ghost ship and ignores task-irrelevant information like the shape of their computer monitor or even the color of the water surrounding the in-game ship. In other words, even though the goal is *given* to the player by the game designer, the player adopts the goal as an immediately important goal to achieve, and they ignore data that is not conducive to this achievement. Games also motivate students to achieve the game's goals, and when these goals have a pedagogical purpose, students are consequently motivated to achieve the learning outcome. Many find that game-based pedagogy motivates students to pursue pedagogically relevant tasks more than traditional, non-game-based pedagogy.[14] Games often involve a simplification of real-world phenomena—allowing players to focus on what the game designer wants them to—and tend to include a tutorial stage where the player quickly learns how to play the game.[15] These facts, coupled with the fact that games tend to be fun for players, result in a low barrier of entry, allowing students who do not identify as gamers (or philosophers) to enter a community with game-focused (or philosophical) discourse.[16]

Other Pedagogical Methods

There are various methods that, especially when paired with a game-based pedagogy, help promote student engagement. We focus on team-based learning, active deliverables, and structured reflection assignments. First, team-based learning requires students to collaborate in small groups toward completing a shared, long-term assessment over several weeks.[17] Evaluations of these assessments have both individual and group components. This dual-level evaluation motivates students to participate in the relevant task since they interact. That is, if one does poorly with their individual task, the whole group may be negatively affected; and students may find it hard to complete their individual tasks if the group, as a whole, is dysfunctional. Since an individual's poor performance may negatively impact the group's evaluation, students feel accountable to their peers. In completing the relevant task in team-based learning, students will need to collaborate over several class sessions (or weeks) to co-generate a product. That is, the task that the teams complete ideally *produces* something that they can present to nonexperts. To motivate the collaboration of the team members, it is important that the product has a low level of complexity. More complicated products tend to motivate students to divide their labor, undermining the collaborative nature of team-based learning.

Next, we consider active deliverables. These are products made by students that display their work from the course. These also involve some self-direction from the students, making them active (as opposed to passive) in completing the product. Importantly, these deliverables help students feel a sense of ownership over their work. Parties from outside the course (employers, family, friends, researchers) should be able to recognize the product as expressive of a student's work. Passive deliverables, like exams, do not necessarily achieve this result. To achieve this recognizability, the relevant products need to be of a form in which those unfamiliar with the course content can appreciate. For example, an active deliverable might be a prepared presentation, a game demo, or a web application. Pedagogical strategies that employ active deliverables foster a sense of ownership of educational experiences in students—the learner feels that they produce their own knowledge rather than merely passively receive knowledge from an instructor. In other words, the students have a sense of autonomy in their learning and feel that their education is self-directed when they are tasked with producing these deliverables.[18] As one can imagine, a course that combines active deliverables with team-based learning reaps the benefits of both. In practice, such a course employs long-form group projects where said group produces one of these active deliverables.

Lastly, we consider structured reflection assignments. These are written assignments where students relate the course content to some other matter external to the course. Such assignments may come in the form of a journal that students keep, written packets to be turned in on specific dates, or exams requiring students to recognize and discuss some connection between the chosen course

content and a personal experience, world event, separate body of literature, or extracurricular interests and activities. Importantly, the matters that students relate to the course content need not be autobiographical; the kind of assignment we have in mind is broad enough to include nonautobiographical content. Also, the reflections are structured to require students to answer questions related to the course content: in effect, the reflections produced by students need to echo the importance of the readings.[19] This kind of assignment shows promise in promoting student engagement, particularly because it involves drawing connections between bodies of information: the course content and the student's personal experience, a world event, an interest of the student, and so forth. As one might expect in light of the above, structured reflections promote student motivation by helping them make connections to it, see the content as relevant, and ultimately value the course content.[20] Such reflections in general seem to promote student engagement.[21] The data shows that when students make connections with the course content in their reflections, they find the content more worthwhile to learn and so exhibit engagement behaviors that facilitate achieving the learning outcomes. Further, students who regularly produce such reflections have more success in achieving learning outcomes than students who did not complete such assignments,[22] and students who produce such reflections cultivate critical thinking skills.[23]

In light of the above, it seems that games, especially when combined with structured reflection assignments, team-based learning, and active deliverables can be powerful tools to increase student engagement and, as a result, promote the achievement of learning outcomes. The driving force behind the latter three is the focus on the game experience the student acquires. We brought these tools together in the philosophy classroom and conducted a course that leveraged the strengths of game-based pedagogy with those of the other pedagogical tools.

Case Study: Introduction to Philosophy through Video Games 2022–2024

The Technological Hurdles

This section briefly describes the implementation of our course, focusing on the technological and logistical challenges. (Readers who are not interested in these topics are welcome to skip to the next section.) Initial discussions about developing a philosophy course that featured video games were held in early 2022 and came out of a broader plan to increase student engagement and interest in our department and specifically in our innovative Bachelor of Arts in Artificial Intelligence. Early sketches of the course paired traditional pedagogical methods alongside either instructor-led video game playthroughs or prerecorded video game playthroughs hosted on online streaming services, such as YouTube or Twitch. Our plans quickly

changed, however, as we were awarded a small internal grant from our college that enabled us to buy thirty-six Nintendo Switch Lites and a small assortment of games to preload on each console. These Switch consoles are some of the most popular handheld portable gaming systems on the market today and had a relatively low entry cost of about $200 a system.

Designing a course around students actively *playing* games, rather than merely featuring gameplay as course content, presented a series of opportunities and challenges to adapt to. Having thirty-six consoles enabled us to run either a class of thirty-five students and one instructor, which represents a typical course cap for introductory level undergraduate classes in our college, or it could enable us to run larger lectures of seventy students with two smaller "recitation" styled sessions in which students play video games on the Switch consoles. Pairing students with a specific console for the semester allowed students to play multiple sessions, saving their progress across playthroughs. This enabled us to feature a diverse range of games, including those that require longer time commitments.

Though it would perhaps have been ideal to pair each student with one console that they could keep throughout the semester and hence play games outside of class time, this was not possible due to cost and questions of equity. On the one hand, we could have required that each student purchase a console and the various games required for the semester, likely totaling an end cost on a par with many expensive textbooks and course materials required by a number of STEM courses; however, we felt that this requirement would deter student interest in the course. Further, this decision would present questions of equity, as we'd have to determine how to distribute our own Switch consoles among incoming students. Lastly, there were concerns about how to manage unanticipated but inevitable damage and gradual degradation of the devices. But this early decision ramified through the structure of early and current versions of the class. As an analogy, imagine crafting a philosophy course where the reading materials or course packets could only be accessed by students *in class*. That was in effect our challenge, and opportunity, to manage as we designed the course; namely, how to balance the need for students to spend a nontrivial amount of time with the games with the typical demands and needs of a college introductory course (e.g., lectures, discussions, and assessments).

Our use of a portable, handheld console provided us with several benefits beyond the game library described above. It gave us great mobility as we could flexibly move between physical classroom spaces without worrying about power- or utility-related (e.g., wired internet) constraints. We even brought the consoles to a variety of events across campus outside of class, both for engagement and recruitment purposes. This choice presented us with three sets of challenges. First, there were difficulties in implementation. As it turned out, managing thirty-six copies of a game involved creating individual profiles on each Switch, and we started with four games on each Switch. It was a nontrivial undertaking to purchase and

install the resulting 144 games. Furthermore, these are *portable* consoles and thus have a built-in battery that provides approximately two to three hours of use, requiring at least an hour or so to fully charge once depleted. We built a custom charging rack that fits in a protective travel case, allowing us to easily charge the Switches and move them *en masse* to classrooms. Finally, given current concerns about cybersecurity and campus wireless resources, we had to work closely with our IT department to connect our consoles to our university IT services. While these implementation challenges resulted from our choice of Switches, any reliance on electronic gaming systems will face similar challenges.

This readily leads into our second major consideration: How could we *scale* the class to match increased demand? Since students would not be taking the consoles home, we could in theory run as many thirty-five-student courses or recitations as allowed by our charging constraints and the limitation of eight individual users per console. In practice, however, we found few logistical savings by increasing the number of sections or recitations. As the time involved in the transport, cleaning, charging, maintenance (including updating the relevant software), and management of the consoles only increases for each additional section added, we found that an optimal arrangement was to have two course listings with two recitation or lab sections for each course, which allows for a maxim of 140 students per semester in our courses. Despite the difficulties in implementation and scaling, we were able—with some creative problem solving, and with the help of numerous student volunteers and various administrative staff—to overcome these difficulties.

As we developed the course, we realized that many of these issues could be overcome by moving to a dedicated computer lab space that would enable us to take advantage of the larger number of lower priced (or free) titles available to Windows PC machines—for example, through online platforms like Valve corporation's Steam service. Additionally, having a dedicated computer lab would allow us to structure the class more along the lines of a STEM class, where portions of the course are run as a practicum in a dedicated lab space. Further, this would mitigate our issues with console maintenance, cleaning, and charging as the computers would remain in the same place and would not be moved around several times each day. Ideally, such a lab would allow for students to come in and use the software even outside of class or to help them develop their own group or individual projects. Of course, the journey from wanting a computer lab to finding or building one is rarely a simple or straightforward path.

On our campus many of our computer labs are already earmarked for use among several colleges and entities across campus, and many either use incompatible hardware (e.g., Apple desktops) or are not customized for gaming applications. Building a new computer lab requires not only the funds to purchase all the machines—which can easily approach the high five-figure range—but the political will to find dedicated space and ensure that it is adequately set up

to manage dozens of computers, which includes all the relevant IT and utility management. All in all, at least in our experience, computer labs are surprisingly scarce resources on campuses.

We were lucky that an internal call for "instructional equipment" proposals emerged around the same time as our search for a lab space. We assembled a budget and worked with the relevant stakeholders to help us find designated space and manage the logistical issues involved; and we were, ultimately, awarded a grant that provided the basis of our own lab. This lab is a modular, multi-use space that hosts new courses (including the one we're describing here) for our BA in AI degree, allows for AI and VR related research, and functions as a hub and maker space for our students. The details are largely irrelevant here, but the journey from our being awarded the funds to opening the lab took about eighteen months and required the help of scores of administrators, vendors, facilities personnel, and of course our student and faculty volunteers. Ultimately, due to space considerations, we had to reduce the number of PCs from a desired thirty-six (to match our earlier class configuration) to twenty-one. Despite these changes, and the long road from blueprints to a working lab, the benefits have been immediate and clear: with lower costs we're able to host a library of over forty games for instructors to choose from.

The Games and Lessons

Our present, lab-based, iteration of Introduction to Philosophy through Video Games has been taught five times with three different instructors, several graduate and undergraduate TAs, and 250 students participating. Though each instructor has a remarkable degree of latitude in structuring their course, the iterations so far all share some common elements; specifically, a *modular* format with lab-based sections, a focus on team-based learning, and what we've termed active deliverables—both briefly discussed earlier. Broadly, the course features a series of modules themed around a philosophical topic or tradition. We will focus on two examples for the sake of instruction. We paired the topic of epistemology (broadly construed) with detective, information-management games like *L.A. Noire* and *Return of the Obra Dinn*. Both games require that players gather information and make inferences based on evidence to reach a desired end. The latter of the two games does this particularly well since players lack guidance even in how they acquire their evidence. This restriction forces the player (and student) to engage in evidence *gathering* as well as drawing conclusions based on their evidence. Such games pair well with classic issues regarding induction (i.e., Nelson Goodman's new riddle of induction) and how one should draw conclusions or form beliefs (like W. K. Clifford's famous view on the ethics of belief). Inquiry occurs often, but in *Obra Dinn*, the activity of investigating evidence and drawing conclusions regarding the identities of the crew members is on full display for the player. Students would, then, engage in inquiry and immediately analyze their own activities via the lens of the course content.

One iteration of the course required students to identify when and how much their beliefs about the identities of crew members enjoyed evidential support from what they gathered. We then walked students through Clifford's ethics of belief and contrary views from William James. On the one hand, students were able to see the relevance of the debate between Clifford and James since it bears on the kind of activity they had just engaged in with great vigor. On the other hand, since we iterated this pairing of gameplay and philosophical reflection on the relevant activity, students slowly built the habit of finding ways that the philosophical content is relevant. In other words, the students cultivated a habit of reading philosophy and immediately applying it to some aspect of their own lives. This habit clearly promotes the feeling of relevance of philosophy.

Another example module pairs readings in personal identity with games like *SOMA* and *Citizen Sleeper*. Both games feature an android main character with a human's consciousness uploaded into it. The game mechanics and themes differ greatly since the former is a survival horror game while the other is not. Regardless of which game the instructor chooses to use, both games clearly invite discussions on personal identity and pair easily with classic readings from Locke and Parfit. In *SOMA*, the main character has memories of the consciousness that was uploaded into it, and players are left with the question of what relationship holds between the main character and the person whose consciousness was uploaded. This game also features division cases where the player must copy their own consciousness into another body to progress through the story. Students play through these plot points, then analyze these cases via readings like Derek Parfit's famous teletransporter cases. Like in the above example, students approach these texts in a recontextualized way: each thesis has immediate relevance to how the student understands their own actions in-game. Additionally, the students not only learn about debates about personal identity in a more engaging way, but they also develop the habit of applying philosophical material after reading it.

Making the desired connections often requires some assignment that instructs the students to do so. Our structured reflection assignments did this, consisting of three main parts. Students were first required to keep a "game-log" where they recorded their gameplay experiences. This log included directions focused on a theme so that students would not record data irrelevant to the pedagogical point of the module. For example, in the epistemology module noted above, students ideally would record how they gathered their evidence, the kinds of principles guiding their inquiries, and whether their methods resulted in success. The second part of the reflection assignment usually involved an essay assessing reading comprehension; the student would answer a prompt based on the reading for the module. This question helped prepare them for the final part: a multipart essay question where the student would describe some philosophical position in the module's readings, then leverage their gameplay experience (from their log) in evaluating this position. The

student, in effect, would use their own personal experience in crafting a criticism (or defense) of a philosophical position. With the above example, students would leverage their experience in evaluating Goodman's views on induction.

Now, we turn to team-based learning in our modules. Students were often placed in long-term groups that function across lectures and lab sections. Many assessments required cooperation among team members such as group presentations and final projects. For example, one major assessment required students to pitch a new video game based on a philosophical thought experiment—one team devised a choice-based narrative game around the categorical imperative. Some teams went above and beyond and even produced working game demos. One memorable case featured the player character, in a top-down 2D JRPG-style game working through Descartes's meditations before they face and defeat the evil demon with the light of reason. Additionally, teams are encouraged to develop camaraderie through low-stakes, inter-team competitions (e.g., over best team names or game scores and completion). Overall, we found that aspects of team-based learning that instructors brought into our courses greatly increased student engagement and felt ownership over the course contents.

This strategy dovetails nicely with active deliverables, or the idea that some assessments should provide opportunities for students and groups to produce content that extends outside of the classroom. For instance, an assessment might allow students or groups to produce a podcast, a short form video, or, in our case, a video or board game idea—or even a full-fledged demo that students can place in a larger portfolio of work that they might share with others. Ideally, students would use these deliverables in their applications to internships and career or educational opportunities.

Taken together, then, we have found that blending innovative pedagogical approaches with a hybrid-class format that features students playing games together—while challenging to implement—has been immensely rewarding. We have noticed an increase in student engagement and interest and are now offering multiple sections of the course each semester. It also provides a clear point of contact for many students who might not otherwise have considered taking a philosophy course or even declaring a philosophy major or minor.

Discussion

Limitations and Possible Improvements

Our course had several limitations and difficulties, leaving room for improvements. As our course employed game-based pedagogy, we expected some of these limitations. First and foremost, there is the *problem of content*: since video games are primarily made for the sake of entertainment, it is difficult to find games that feature philosophical issues in a way conducive to a classroom. We encountered

this problem especially when we were limited to Nintendo's game library, but the problem persisted even when we expanded with a lab. Ultimately, most games are developed to be sold and derive their value partially from the kind of entertainment they can provide. Of course, one *can* uncover philosophical issues in any game if one stays sufficiently broad, but consider for a moment games that delve into certain philosophical issues in their narrative or gameplay. For example, *Bioshock* clearly features issues of free will as it guides players along various missions only to discover that, according to the narrative, they could not have acted otherwise. Prior to discovering this, the game serves as a Frankfurt-style case:[24] the player performs A, but had they tried to ~A, another character would say keywords ("Would you kindly . . .") to force the player's character to A. *Bioshock*'s narrative, then, presents the plays with an important kind of case in the free will debate and does so in a compelling way. Even so, it takes several hours of gameplay to discover that one is in a Frankfurt-style case, and it does not seem to be worth several hours of gameplay just to present a class with such a case.

The first aspect of the problem of content is that those games that feature some philosophical issue often do not do so in a way that is congenial with game-based pedagogy in an undergraduate class. Instructors often do not have time in the semester to devote to longer games. The second aspect of the problem of content is that it is often difficult to find games that feature the philosophical content one wants given the design and goals of the course. To our knowledge, for example, no games walk players through cosmological arguments for the existence of God, the definition of knowledge in relation to Gettier problems, or the relation between properties and substances. One encounters the problem of content immediately when constructing their course structure, but this problem can be overcome. Instructors will need to be creative in how to use the games available to them. For example, while *Return of the Obra Dinn* does not feature a definition of knowledge, it is a detective-like game where players need to draw inferences from evidence they gather. An instructor, with some creativity, can conduct discussions about the definition of knowledge using the students' in-game experiences as cases. We employed a similar strategy in our course. While *The Legend of Zelda: Tears of the Kingdom* does not feature player-vs.-player combat, we used the combat that the game features to motivate a discussion on rules of combat. This discussion evolved into a class discussion, supplemented with readings on the moral equality of combatants.

A second challenge presents itself in light of the first: the *problem of familiarity*. This is the problem that the instructor needs to be familiar with a vast array of games. As many instructors know, to best maintain a classroom, the instructor needs to have a recognized authority—the students need to take the instructor seriously. Even if the instructor of a game-based pedagogy course is knowledgeable in philosophy, students may not treat her with respect if she does not also know

a wide variety of games. This problem, of course, can be overcome by playing a plurality of games, but that requires a significant amount of time that an instructor at a university may not have. The instructor, then, will need to be creative in establishing the relevant authority if they lack experience playing a large number of games. For example, one of the instructors of our class has played very few video games and relied on testimonies of students when gameplay experience was necessary. When a student would bring up a particular game that featured a certain topic (usually, this contribution begins with "Have you ever played . . .?"), the instructor would have them describe the game for anyone in the classroom who was not familiar with the game (including the instructor). In a similar way, this instructor would regularly begin class by having students report their latest experiences playing the course-assigned game. These reports supplied the instructor with readily available connections between the course content and the game assigned, decreasing the need to rely on games they have not played.

Even if the instructor is familiar with a wide variety of games, a third challenge arises from misunderstanding the kind of familiarity that one needs to adequately identify those games to use in the relevant kind of class. This is a *problem of expertise*: the instructor needs experience playing the games that she requires students to play in the course. The instructor might be familiar with the game and believe that it has adequate themes that make it a suitable game for her course, but the gameplay matters. If the instructor lacks experience playing the game, then she risks requiring her students to participate in an activity that distracts from the pedagogical goals of the class. That is, even if the game features relevant philosophical themes, the activity of playing the game may still distract from or even undermine the understanding of this theme. Both authors fell prey to this problem in earlier iterations of the Introduction to Philosophy through Video Games course. In these versions, we required the students to play *Can Androids Pray*?, a game that explores themes related to belief in God. The player follows a dialogue between two agents who discuss whether they believe in God and an afterlife. Despite the themes related to philosophy of religion, the player merely selects dialogue options and waits for the characters to respond: the player, in effect, watches a visual novel when playing the game. Students did not receive the game well, and the visual-novel style of the game distracted many from the themes related to philosophy of religion. Students quickly became bored with the game and either skipped the dialogue or refused to finish the game. Since the instructors did not have extensive experience playing *Can Androids Pray*?, they did not foresee how students would react to it. To avoid this, educators running a game-based course need experience with the gameplay of the games they assign.

A fourth challenge arises after one identifies the games to play and the content to teach. This is the *problem of game time*: the course needs enough time allotted for playing the relevant games such that the students reap the pedagogical benefits

of playing and, often, of playing *together* given the group-based assessments that are used in the course. Whether one faces this problem largely depends on the institution where one teaches. We encountered this problem because we aimed to maximize the amount of time students could play the games assigned without cutting course content. While ours was a four-credit class, we only had fifty-minute recitation sessions. To optimize the amount of time for students to play the relevant games, we needed to 1) cut time out of lectures to play games or 2) cut time out of recitations to play games. We did both. Recitations became "lab" sections where students were tasked with playing the assigned games in the allotted time. While effective, this still only gave students fifty minutes per week to play. To increase that time, we cut lecture time and created a rotating extra lab session that occurred every other week. On the relevant days, half of the class returned to the lab and continued playing the relevant game instead of attending lecture; on the next class day, this half switched places with the other (so the other half returned to the lab while the first half attended lecture). Even with this solution, several students reported that they still felt that they did not have enough game time to fully appreciate how the games connected with course material. Other students reported that the decreased lecture time negatively affected their retention of course content. An instructor of a course that employs game-based pedagogy, then, must strike a balance between time reserved for lecture and time reserved for gameplay. There are several ways to strike this balance. For example, one might teach a version of this course that has extended lab sessions that provide more time for gameplay. Another potential solution is to supplement 2) with open lab times where students voluntarily play the assigned games if they desire more gameplay than what recitations provide.

A fifth and final challenge sits behind the others. This is the *problem of integration:* proper integration of the games into the class requires that the students *play* the selected games. Above, we drew the distinction between game-based pedagogical methods and traditional pedagogical methods, and we noted that games can be addressed in both ways. A course may feature video games, but in order to reap the benefits of game-based pedagogy, the students need to *play* the games as part of the course. It is tempting to merely feature video games as topics of discussion or examples to demonstrate a separate philosophical point. If the course addresses video games but does not require students to play the video games as part of the course, then no game-based pedagogical methods are employed. One of the authors fell into this temptation in a much earlier iteration of the course. That earlier iteration addressed video games but did not require that students play the majority of games featured in discussion. Instead, the instructor merely included references to video games in their lectures and showed videos of gameplay to motivate discussion of the course material. While this method may appeal to students who played the relevant games prior to the course, it does not

require that the students play the games in the course, so is not an instance of game-based pedagogy.

Insights

Our experience running Introduction to Philosophy through Video Games demonstrates the benefits of a hybrid method of instruction. Our hybrid method consisted of requiring students to play video games (game-based pedagogy) alongside reading texts and attending lectures. On top of this, students were required to complete structured reflections throughout the course and produce team-based, active deliverables. From our observations, the combination of playing games while also completing the structured reflections promoted student engagement. As they progressed through the assigned games, students were more willing to participate in class discussions and more willing to talk to their peers about their experiences. Regarding the latter, we observed students not only discussing, unprompted, their experiences playing the games but also their views on how course content related to the games. The engagement with course content extended beyond the course proper. For example, we assigned only half of Thi Nguyen's *Games: Agency as Art* for students to read throughout the semester, but several students reported to one of the authors that they intended to purchase the book to read the other half on their own.[25] This report followed an extended discussion outside of class where the students reflected on how Nguyen's views related to games we did not assign. In short, students were making connections between course readings and content external to the course as well as displaying motivations to continue philosophical inquiry. At the same time, it is clear that we would be better served with a greater range of data—including perhaps pre- and post-course surveys—to gauge students' reported sense of engagement.

While we sensed a high level of engagement from students, it is worth noting that achieving similar results will likely require more than simply having students play games and write reflections for class. Implementing game-based pedagogy adequately, as Niamboue Bado notes, often involves three phases of instruction: pregame, game, and postgame instructional activities.[26] Pregame instructional activities prepare the students to play the game and to orient them toward relating the game to course content. In our class, our pregame instructional activities were done in lecture: the instructor introduced the students to the relevant game, gave guides on how to approach one's first playthrough, and informed the class on the kinds of philosophical themes to have in mind when playing the game. The reflections also facilitated this last activity; each reflection prompted students to consider specific philosophical questions, answer reading comprehension-focused questions, and relate their gameplay experience with the relevant philosophical questions. Game instructional activities were designed to keep students on task while they play the game. For our class, this occurred during lab sessions—an

instructor managed the lab and guided students as they played. Sometimes, this would involve helping students work through puzzles in the games, managing the game-relevant equipment, and motivating students to relate the game to the course content. This guidance during lab sessions helps mitigate struggles students face when they fail in the game. If a student continually fails in the game, they will likely struggle to make the relevant connections to course content, undermining one of the major goals of game-based pedagogy. To help students make the relevant connections, guidance is needed. Postgame instructional activities debrief students and help them acquire the relevant pedagogical upshot of the gaming experience. In our class, these consisted of class-length discussions held at the end of every module. The structured reflections facilitated these discussions since they were due the week after these discussions were held. Game-based pedagogy works best when one uses all three kinds of instructional activities. Without pregame and game instruction, a student may get lost and struggle in their entry into the game. Without postgame instruction, a student may struggle to connect their game experiences with the course content. If instructors require that students play games, then the above threefold structure needs to be present to see the increase of student engagement.

Relatedly, the needed balance of time devoted to games and time devoted to course content merits repeating. Our hybrid model of instruction is conducive to the college-level model of instruction, which largely consists of traditional pedagogical methods. We recognize that since college instructors are familiar with traditional teaching methods, there is a tendency to spend more time employing those than devoting time to playing games. Doing so, of course, may involve devoting inadequate time to playing the assigned games. Just as with written assignments, to reap the benefits of game-based pedagogy, students need regular, adequately long sessions to engage with the game. Regarding the former, the frequency of the game sessions needs to be high enough that the students are able to see how the game (or just playing) relates to philosophy. A class that does not play games enough will not allow students to make connections or have the various gaming experiences that lead to higher engagement. A very early iteration of our course failed in this respect, and students reported that it felt like a philosophy class that featured some games rather than a class that uses games to learn. Regarding the latter, the game sessions need to be long enough that students can immerse themselves into the game. Students generally report that it takes them up to twenty minutes to get into a gaming mindset where they optimally play the game. Productivity prior to getting in this mindset is low. With fifty-minute sessions and roughly twenty minutes to get into this mindset, students are left with roughly thirty minutes of productive play per week. As several students reported, they often felt that they did not have enough time to get anything done in the game. This was especially bothersome to students when we played *Zelda*, where merely traveling to a desired

location may take a significant amount of time. In light of the above, we recommend that gaming sessions be lengthy and frequent.

Getting Lost in the Game?

We end with two related concerns about the negative impacts of video games: First, one may worry about how games in general can negatively impact a player's understanding of values. Nguyen argues that games, and the process of *gamification*, can facilitate "value capture," wherein the plural and diverse values that stem from a particular practice are reduced and deflated for the sake of whatever metric the game or gamified process has adopted.[27] In one of his examples, we can have many values attached to the practice of conversation—from information discovery to persuasion and inspiration—but in social media these values are often reduced to the gamified metrics of "likes" and "shares," which in turn reinforce certain content at the expense of other types (e.g., viral content). The worry is that by including games in the philosophy classroom, we may exacerbate this problem by encouraging students to engage with games as a way to also engage with philosophical content—and hence deflate or reduce the plurality of values that surround the process of philosophy. Second, one may worry that games in the classroom may distract students from the course content, undermining the point of employing games in the first place. Put another way, one may worry that since games direct our attention away from task-irrelevant information, we enable students to ignore the philosophical aspects of these games. Contrary to our goal of increasing engagement, there seems to be a danger of decreasing student engagement by letting students focus on in-game tasks rather than the philosophical content.

These two worries are serious challenges in successfully employing video games in the philosophy classroom, but they are not fatal. We believe that each one can be mitigated or overcome with creative course design and discussion. Consider the second worry. The fact that games guide the attention of players according to in-game tasks is parasitic on our task-oriented attentional capacities—we already attend to task-relevant information. To direct the student's attention to the philosophical content, the instructor of a game-based class needs to clearly identify the relevant task when directing students to play games. This identification is part of the pregame instruction noted above: students receive directions on how to play the game *and* directions on what aspects of their gaming experience are relevant. Assessment is key here. Students need to know what questions or themes they will be assessed on so that they engage with the game in a way to prepare for these assessments. In our case, the reflections served this purpose since they identified the relevant aspects of the gameplay and required students to record parts of their experiences that were relevant to these aspects. These reflections included questions where the students would leverage their in-game experiences to take a stance on some philosophical topic. Clearly identifying the course-relevant task

enabled gameplay to promote engagement with the course content and minimized student disinterest with the course content.

Turning to the first worry, there may not be a way around the concern of exacerbating value capture via merely identifying the relevant course-related tasks. So long as students engage with a simplified system of measurement (whether it be a game's ranking system or a class's grades), we run into the potential for value capture. We suggest that a class employing game-based pedagogy should discuss the problem of value capture. Indeed, we did exactly that in the ethics module for our Introduction to Philosophy through Video Games. This gave students an opportunity to both engage with value theory (including normative ethics) as well as reflect on the impacts of playing games. Acknowledging that there is a danger of value capture even sparked a discussion in one class about the relationship between Nguyen's characterization of the problem (as concerning easily commensurable values) and hedonistic utilitarianism. While this was the result of having some insightful students, this experience exemplified what we advertise above: students leveraged their own experience of oversimplified values in games when evaluating hedonistic utilitarianism. In other words, students were still able to leverage their game experiences to understand the course content. While playing games allows students to fall victim to the problem of value capture, their experience of simplified value systems allows them to engage in a discussion of the problem that may mitigate its negative effects.

Finally, there is a related worry about the kinds of content featured in games; as some games are famous for their depiction (and personification) of violent and antisocial behavior (e.g., the *Grand Theft Auto* series). But as with courses that use movies or books with salacious content, responsibility rests on the instructor to ensure that the pedagogical aims are met by the content introduced in class. It would be a mistake to assume that any game is appropriate in such a course, and as such, this concern is not one that carries much weight for the would-be instructor of a games-based course.

In conclusion, we see the value of our contribution here to begin to lay out the curricular and pedagogical tools already present in innovative philosophy classrooms across the profession—from active deliverables to team-based learning—and provide an honest and transparent account of our own journey to integrate gameplay as a pedagogical method for philosophy education. We hope that this can motivate other instructors to more easily adapt and build on our experiences as they look to integrate gameplay into their classrooms, and, ultimately, we hope that this work can serve as just the first of many accessible resources to help facilitate similar courses in the profession.

Notes

1. Connor-Greene, "Making Connections"; Finn and Rock, "Academic Success among Students at Risk"; Finn and Zimmer, "Student Engagement"; Smith, Rook, and Smith "Increasing Student Engagement Using Effective and Metacognitive Writing Strategies."

2. Finn and Zimmer, "Student Engagement." See also, Roby, "Research on School Attendance and Student Achievement"; Gottfried, "Excused versus Unexcused."

3. Rowe and Rowe, "Relationship between Inattentiveness in the Classroom and Reading Achievement."

4. Voelkl, "School Identification"; Wigfield and Cambria, "Students' Achievement Values, Goal Orientations, and Interest."

5. Wigfield and Eccles, "Expectancy–Value Theory of Achievement Motivation."

6. Hulleman et al., "Making Connections."

7. Hulleman et al.

8. Bransford and Schwartz, "Rethinking Transfer."

9. Squire, "From Content to Context."

10. Shultz Colby, "Gender and Gaming in a First-Year Writing Class."

11. See Shultz Colby, "Game-Based Pedagogy in the Writing Classroom"; Shultz Colby and Colby, "Pedagogy of Play."

12. Barab et al., "Transformational Play as a Curricular Scaffold"; Barab, Gresalfi, and Ingram-Goble, "Transformational Play"; Steinkuehler, "Learning in Massively Multiplayer Online Games"; Squire, "From Content to Context."

13. Ashinoff, "Potential of Video Games as a Pedagogical Tool." See also Vogel et al., "Computer Gaming and Interactive Simulations for Learning."

14. Alessi and Trollip, *Computer-Based Instruction*; Yien et al., "Game-Based Learning Approach to Improving Students' Learning Achievements"; Baid and Lambert, "Enjoyable Learning"; Kirikkaya, Iseri, and Vurkaya, "Board Game about Space and Solar System"; Huizenga et al., "Mobile Game-Based Learning in Secondary Education"; Iacovides et al., "Motivation, Engagement and Learning through Digital Games"; Clark, Tanner-Smith, and Killingsworth, "Digital Games, Design, and Learning."

15. For philosophy, this facet of games makes them a way to engage with thought experiments. See Schulzke, "Simulating Philosophy."

16. Jenkins et al., *Confronting the Challenges of Participatory Culture*.

17. See Michaelsen, Sweet, and Parmelee, *Team-Based Learning*; Michaelsen and Sweet, "Team-Based Learning."

18. See Toit-Brits, "Focus on Self-Directed Learning."

19. Connor-Greene, "Making Connections."

20. Smith, Rook, and Smith "Increasing Student Engagement Using Effective and Metacognitive Writing Strategies"; Connor-Greene, "Making Connections."

21. Huskin, "Engagement Strategies for Increasing Student Writing Success"; Zengaro and Iran-Nejad, "Exploring Reflective Engagement That Promotes Understanding in College Classrooms."

22. Smith, Rook, and Smith, "Increasing Student Engagement Using Effective and Metacognitive Writing Strategies."

23. Ahmed and Zaky, "Reflective Journal Writing."

24. See Frankfurt, "Alternate Possibilities and Moral Responsibility."

25. Nguyen, *Games: Agency as Art*.

26. Bado, "Game-Based Learning Pedagogy."

27. Nguyen, *Games*, 194–203.

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