Virtual Virtuality:
Low-Tech Classroom Activities from Virtual Worlds

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Abstract:

While using technology in the classroom is recognized as a way to engage students in learning, there are issues with these approaches that can make such applications difficult and undermine their efficacy. In spite of increasing technological sophistication and availability, problems using technology in the classroom include access to appropriate technology, time, cost, and student abilities. Given these issues, this paper proposes that technologies like virtual worlds intended for classroom use be reconfigured to use the content of virtual worlds while eliminating the technological elements. Referred to as "virtual virtuality," this approach uses the graphical elements of virtual worlds to effectively remove technological issues while also eliminating distractions and developing a more concentrated focus on the course topics and materials.

Key Words:

Virtual virtuality; virtual worlds; student engagement; classroom; active learning.

Technology in the Classroom

While the novelty and entertainment of having video games and virtual worlds in the classroom can be engaging, teaching using these particular media can also prove difficult. Despite evidence that classroom multimedia can benefit student learning (Neo & Neo, 2004), there are issues with its integration in classrooms around access to technology, time, cost, and student abilities. Individually or collectively, these problems can undermine the use of virtual environments in the classroom.

In order to address these issues, this paper takes on the objective of using interactive media such as video games and virtual worlds in the classroom and suggests activities that, while usable within virtual worlds, can also be approached in a low-tech way, referred to as "virtual virtuality." By converting virtual worlds into a more low-tech format, it is possible to get students engaged and familiar with the virtual

environments in a way that is less distracting than is typical for these activities (Herold, 2009). At the same time, this approach addresses technical and institutional issues with classroom technologies and offers opportunities to engage with a variety of topics in ways that are more effective and targeted than might otherwise be possible through using virtual worlds in more conventional ways.

Benefits and Issues with Virtuality in the Classroom

Bringing virtual world technologies into the classroom can be a useful teaching tool, especially when teaching digital natives. The classification of students as digital natives and the implications of their reliance on technology is a common theme in current educational literature (Berk, 2009). This is, however, a topic that has not gone without debate, with some scholars suggesting that although these students have technology embedded in their lives, their learning styles may not be as different from pre-digital learning or as universal as previously suspected (Bennett, Maton, & Kervin, 2008).

Whether all of the assumptions made about digital natives are true or not, there is evidence that students are disengaged in their university classrooms (Côté & Allahar, 2007; Mann & Robinson, 2009). In many cases, students who are disengaged are focused on using portable technology as a distraction (Carlson, 2005). Coupled with research that suggests that students prefer interactivity in the classroom in general (Bonwell & Eison, 1991), and especially that provided through technology (Shih & Kashyap, 2006), the inclusion of teaching materials and aids like virtual worlds and video games in the classroom appears to make sense as a means of increasing student engagement.

Potential benefits aside, the inclusion of these forms of technology in the classroom does present a number of stumbling blocks both in terms of access, time, cost, and ability. Access especially has a number of associated issues that make introducing and using technology within the classroom difficult. These difficulties include lack of virtual world programs in classroom settings and technical difficulties, both of which are exacerbated by a frequent lack of support. From an institutional standpoint, assuring that all students have access to these programs remains an issue. Reluctance to install and maintain the application programs required to access many virtual worlds is not unheard of in university settings (Pence, 2007-2008), and assuring that there are enough computers with the appropriate application can be a challenge (Conrad, Pike, Sant, & Nwafor, 2009).

Technical difficulties in the classroom have the potential to increase significantly when virtual worlds are relied on. Frequent upgrades to software may suddenly render virtual world application programs difficult or impossible to run in the classroom. Failure to update computer hardware like graphics cards or processors may also suddenly eliminate the use of virtual worlds, a situation that is especially problematic when a particular lecture or lab depends on their use. These issues are compounded by the fact that virtual worlds are not necessarily an institutional priority in classrooms and computer labs. So long as they are not widely used, virtual world applications are likely to come second to more widely used applications such as web browsers and word processors. Even when institutions are in support of using virtual worlds in education,

they may not have the financial or human resources to maintain the technology as necessary for these particular environments (Conrad, et al., 2009).

The second issue commonly faced when using virtual worlds in the classroom is time. Even the process of ensuring that all students are properly set up to get into a virtual world is time consuming. Beyond the time required to establish that students have access to an appropriate and functional computer, virtual worlds also require an account to be created before the user can get started. While this process can be simple or complex depending on the environment in use, it generally requires at least the selection a character, creation of a name, and providing a variety of personal information. Only after these steps are complete is it possible to access the virtual world. While this process only needs to happen once – assuming that students do not lose or forget their account information – it can be time consuming, especially when trying to select an ideal character and name (Castronova, 2001).

Once students have accounts, technical issues remain a real possibility. Although technical problems may not eliminate the use of virtual worlds altogether, there are a variety of issues that can arise and need to be addressed even with just the virtual world application. In exercises that are intended to be interactive, anything that renders the world unusable for students from excessive lag to graphics not rendering properly will require troubleshooting before the class can proceed, which further takes time away from engaging with the intended course content.

Beyond technical problems, another issue worth pointing out is that of cost. While some virtual worlds and games like *There, Second Life,* and *Runescape* are free, many others that could be desirable in terms of education such as *World of Warcraft, EverQuest*, and *Eve Online* require the payment of monthly or annual subscription fees. For an entire course focused on a particular world, this expense could be worthwhile, but as a single or occasional exercise it may be unreasonable to expect students to pay the associated fees, thereby limiting the selection of virtual environments available for education.

The final issue that tends to make using virtual worlds in the classroom difficult is ability. In critically discussing the digital native debate, it has been suggested that "While technology is embedded in their lives, young people's use and skills are not uniform" (Bennett, et al., 2008, p. 783). Although students appear to be uniformly competent using technologies like email and web browsers, their knowledge of other technologies and applications is highly variable (Kennedy, Judd, Churchward, Gray, & Krause, 2008). Using virtual world technologies not in common use therefore raises problems with respect to dealing with different levels of competency in one classroom.

Differing abilities also relates to the fact that introducing students to virtual worlds is a difficult prospect both for those who are familiar with the material at hand as those who are not. For those who are unfamiliar, the sudden influx of graphics, buttons, chat, navigation, instructions, and activities can become so overwhelming focus is lost in the effort of simply trying to process and navigate the world. Even students doing in work in *Second Life* who are familiar with other virtual environments report that they find the interfaces difficult to work with (Herold, 2009). For those who are familiar with the

environment, other activities can beckon, pulling students away from the group and the course objectives as they seek other activities (Hawkridge & Wheeler, 2009).

Virtual Virtuality

Given these issues, it is important to consider how virtual worlds might be incorporated into the classroom in ways that are not undermined to these issues. This paper therefore advocates for an approach to teaching with multimedia that incorporates "virtual virtuality." If virtuality in education comprises the use of representational technologies like virtual worlds in the classroom, then virtual virtuality is a way of replicating or borrowing from these technologies that does not necessarily require the technical elements of the original. Here, the experience of virtuality does not conform to the standard perception of what technically constitutes virtual engagement but is instead altered to better reflect the needs of particular classes and the issues associated with moderate to heavy technology use in the classroom.

The most direct way to accomplish virtual virtuality is through representation. Given the fact that current video games and virtual worlds are almost all graphically rendered, there are ample opportunities to use the graphical elements of these spaces without necessarily entering into the worlds directly. By selecting particular elements of virtual spaces – characters, scenery, dwellings, and virtual items are all possibilities – and then simply printing them out, it is possible to design activities that offer students an effective and more focused way of looking into and discussing a variety of topics that can be explored through virtual worlds.

Although relatively simple, this approach effectively eliminates many of the issues that arise when using virtual world technologies immediately in the classroom. These activities requires only one computer technically capable of running the appropriate application programs and, if desired, one subscription to each virtual world of interest. Because the instructor can prepare ahead of time, no class time is lost creating accounts, and there are no technical elements beyond the initial printing to give rise to in-class issues. Since many of the more difficult aspects of the virtual world are eliminated from the experience, such as navigation and changing character appearance, there is no learning curve for students who are unfamiliar with the technology, and no opportunity for students who are familiar to wander away. Finally, and perhaps most importantly, in many cases dealing with virtual virtuality in the classroom is engaging for students who enjoy the interactive nature of the activities even without a more conventional virtual experience.

While it would be possible to project images on a screen and discuss them, it is possible to create an experience that is much closer to the original and more interactive simply by relying on printouts of images that students can handle. Rather than providing a universal image onscreen, virtual virtuality offers significant opportunities for student choice in the materials that they deal with, limited only by the selections made and introduced by the instructor. Furthermore, by developing activities that take interaction beyond simply discussing an onscreen image, students can be engaged through a learning activity that, in some cases, comes very close to that which would be possible within the virtual world itself.

Beyond the technical, accessibility and interactivity benefits associated with this approach is the fact that virtual virtuality also allows an instructor to target the virtual material to exactly what is necessary for any given course and class. The scope of virtual worlds is increasing. The sheer volume of content available in most virtual environment is staggering and, for the new user, can be overwhelming (Herold, 2009). To combat this effect, using virtual virtuality allows the instructor to employ only the elements of the virtual world that are useful for the course in general or the class at hand, rather than attempting to navigate the whole of the virtual world and its many features.

The most effective way to discuss virtual virtuality is look specifically at some of the options available for classroom use. There are a number of different topics and approaches that can be taken when using this approach, depending on the course or discipline in question. To date, these activities have been primarily used for considering with identity and consumption. However, there are other possible applications of this approach that also have the potential to be useful, all of which rely on interactive representations of virtual worlds in different ways and to different results. Out of these many opportunities, two broadly applicable topics that could be effectively dealt with are culture and society and stereotypes.

Identity

Many virtual worlds include options for creating and customizing characters and avatars. The construction of a virtual identity can be an important way of considering both how individuals actively construct their identities as well as the ways in which others read and interpret the identities of other individuals. Given the degree to which identity and self-presentation is discussed in a variety of disciplines ranging from English and anthropology to media studies and sociology, considering identity through virtual virtuality can be a useful exercise in a number of different classrooms.

Printing a series of virtual characters and allowing students to choose one and explain their choice is a straightforward way of discussing both preference and choices in appearance. Characters may be from one game or world specifically, or a variety from many different online environments to broaden the selection. Spreading out the images on a table or tables around the room offers an opportunity for students to get up and investigate the selection available before making their choice. Alternately, a selection of images could be passed around the room or given to smaller groups in a package.

Once choices have been made, students have materials in-hand through which identity can be discussed. Discussions on identity can initially focus on why students made the choice they did as well as what they think that choice says about them and how they might be perceived by others. Because the images are fixed, discussions can also be expanded to talk about what students did not like about the options available to them and why, as well as what they might change about the character they have selected. These topics create opportunities for discussions about identity in a way that is self-reflexive, since it is based on students' own choices, without being too personal.

This exercise can also be inverted to focus more heavily on creation and give students more opportunities to construct and engage with a character actively. Rather than presenting finished avatars, students are provided with a variety of undressed avatars and a selection of clothing, features, and other items taken from the virtual world or worlds being used. By creating their own avatars, students may be better able to think through some of the processes of identity formation. Furthermore, because the characters they are creating are influenced by but different from the self, this exercise may offer opportunities to consider and interrogate their own identity creation and presentation in a self-reflexive way.

The focus on creation can also be taken a step further to deal with how individuals read the identities of others, as well as some of the difficulties inherent in interpretation (Goffman, 1959). Rather than creating their own ideal character, students are asked to create a particular persona or identity – either of their own choosing or one that is assigned are possible –through the items that they have available to them. Examples could include a wide variety of options, such as a rock star, a librarian, someone who is shy or timid, someone who is aggressive or outgoing, or even a particular character from a book or television show, or person from a particular era in time. Once students have created their characters, having classmates attempt to interpret their meaning can be used to highlight the difficulties of "reading" other individuals in online environments as well as in general.

Consumption

By refocusing identity activities, it is also possible to use virtual virtuality to discuss consumption. Given that consumption is commonly considered in courses dealing with economics, advertising, and communications, this approach can be applied in a number of different classrooms as a way to engage students. Depending on how virtual virtuality is set up in the context of a class, it can also lead into discussions around pricing, cost, and consumer preferences and habits.

In its most basic iteration, virtual virtuality can be used to discuss consumer preferences and the choices that people make when they consume. Rather than only providing characters, students are also given a selection of virtual goods. Depending on the virtual world or game, images of goods could include clothing, weapons, jewelry, physical features, transportation, pets, houses, or furniture. After assembling their preferred avatar and the goods they would like to have, students are asked why they chose the items that they did. The discussion can also be expanded to consider whether there were any items that students wanted but could not find and why those items might not be available or in demand.

This exercise can be further expanded to cover the cost of goods. Many virtual goods associated costs, either in terms of trading offline for virtual money (Boellstorff, 2008) or from working for in-world currency (Castronova, 2003). By printing the costs associated with each item on the back of its image, students can calculate the cost of their virtual lives. They are then able to consider whether these purchases are worthwhile to them, given their cost and the work that could be involved in being able to afford them. Making the costs of virtual goods concrete also creates an opening to discuss the reasons why individuals might buy virtual or, more broadly, other intangible

goods. This pricing can also be used to raise questions around the pricing of different virtual goods. Since virtual goods do not typically have material costs, interrogating prices can be used to talk about more intangible factors that come into play in consumption, such as skill, time, or branding (Grubb & Hupp, 1968).

Culture and Society

Examining society and culture is the main focus of sociology and anthropology, while other disciplines and subfields also engage these ideas. In moving away from close readings of identity and consumption, virtual worlds can also support these disciplines in investigating ideas around culture and society. These environments are the products of humans, and so they frequently mirror many conventions of human life (Taylor, 2002). However, the freedom to be creative and fantastical within virtual worlds also means that new and even impossible formations of human culture and society are possible.

In terms of using virtual virtuality, there are thousands of elements of virtual worlds that could be provided for students to choose from and analyse. Images could include shopping malls, settlements, individual dwellings, concert venues, ruins, cities, or, in some worlds, replicas of offline sites like the Taj Mahal, Paris, or Harvard University. While there are any number of different ways of analyzing culture or society, some options might include what kinds of behaviour are visible, what the structures suggest about the people who have created them, why a particular group has developed its group or area of the world in a particular way, or what kind of culture might be present within the image or images of the group. Furthermore, it could also be useful to discuss why people might choose to build the things which students are viewing within a virtual world, and what the implication are of this kind of creation. In this way, images from the virtual worlds become artifacts through which to interpret a culture. Students are able to talk about how they would interpret a particular culture without having the benefit of familiarity with the group in question.

The breadth of virtual world content also offers opportunities to consider culture and societies that, unlike most conventional examples, may be unfamiliar to students. While students may have a passing familiarity with a range of cultures and societies, virtual world examples can be found with which students are unlikely to be familiar, since they exist only virtually. Among cultures and societies that could be examined are role-playing groups ranging from medieval fantasy or cyberpunk through to Gorean fiction or steampunk. While not unheard of, they offer rather uncommon and highly developed, albeit virtual, expression of society and culture through their cities, dress, habits, and group organization.

These topics can also be handled so as to further engage the freedom available within certain virtual worlds like *Second Life*, which is almost entirely based on user-generated content. B. Stephen Carpenter writes that "The limits of Second Life as a virtual environment for engaging educators and learners as active participants in the educational experience rather than passive recipients of someone else's pre-constructed curricula are confined to the users themselves" (Carpenter, 2009, p. 3). Rather than remaining confined to existing groups for analysis, an instructor can create virtual content specifically developed for the topic being discussed.

The possibilities for creation in virtual worlds that support user-generated content are virtually limitless. With some time and skill, an instructor can create virtual towns or cities in a particular style, populated with virtual characters dressed in specific ways and posed as if they were engaged in different activities. These intentionally created scenarios could provide a way to highlight particular elements of society or culture for students to analyse through virtual virtuality. Although somewhat labour-intensive, virtual worlds can support scenarios that are intentionally created to meet the needs of a course and provide a particular site for students to analyse without having to be within the virtual world.

While this interactive approach could certainly be used immediately within virtual worlds, engaging virtual virtuality here can also serve as a safety precaution. Virtual worlds, it must be remembered, are inhabited by virtual characters that are being controlled by real people. In many cases, these people have significant attachments to and investments in their online identities and the virtual world that they inhabit (Wolfendale, 2007). Unfortunately, this valuing of the virtual is not something that students are necessarily aware of or sensitive to, despite their status as digital natives. Therefore, by initially limiting the interactive nature of their exploration and analysis of the virtual world, it is possible to maintain distance between students and virtual residents who might not be comfortable with the analysis made or the ways in which students interact with them and their spaces.

Stereotypes

Discussing stereotypes about sensitive subjects such as race and gender can be uncomfortable for students (Goldstein, 2000). Using virtual characters in a classroom setting may allow a more comfortable approach to dealing with stereotypes in a productive way. Virtual worlds and video games are recognized to mirror common stereotypes of race (Nakamura, 1999) and gender (Taylor, 2003). Providing a series of images for comparison and discussion of how different groups of people are portrayed digitally provides a basic starting point for looking at media representations and their accompanying stereotypes. In these cases, it may be easier to talk about the stereotypes introduced by the designers – people other than the students – than those believed by students themselves. Maintaining distance from stereotypes while still addressing their occurrence and implications could allow for discussions that feel safer than dealing with the issues in a more personal way.

While this approach is relatively simple, the use of video games or virtual worlds also opens further opportunities to engage in difficult discussions. Many video games and virtual worlds are recognized to play off common stereotypes in problematic ways, even when dealing with fantastical rather than human characters (Leonard, 2003). Discussing stereotypes presented through fantastical or recognizably digital characters offers distance that may be productive. By considering what kind of stereotypes are depicted in fantastical characters, their interrogation may not feel as difficult as with non-fantasy examples in which students could be invested.

As with culture and society, instructors have some freedom to create their own content for analysis that best addresses the subject. For stereotypes, it is possible for instructors to create a series of characters with which to discuss stereotypes without

falling back on those that are both familiar and challenging to deal with in the classroom. For instance, virtually creating groupings of characters with different unnatural colours of skin, styles of clothing, and examples of where and how they live and behave is a way to essentially invent a group of people with no background, and with whom students are unlikely to have an attachment.

Since these characters will be unfamiliar, there is potential to discuss stereotype formation. Asking students what assumptions they would make about a particular character or group of characters and having them explain why can give rise to discussions about where stereotypes come from. These characters enable discussions without judging a recognizable group of people, or dealing with student reservations about having to make those judgments. The presentation of images of completely new groups of people – which would nearly impossible outside of virtual worlds – with which students are not identified or have no previous associations may allow for difficult discussions. Rather than interacting with people in a virtual world who might take offense at being evaluated, using virtual virtuality allows for these discussions to happen in a way that is safely removed and specific to the issues the instructor wishes to deal with.

Conclusions

Despite its usefulness in the classroom, virtual virtuality should not necessarily eliminate virtual worlds in the classroom. First-hand experience with interactive media can serve an important purpose in developing skills and engagement that benefit students (Carpenter, 2009). To this end, all of the described subject-specific activities are equally replicable with students actually within a video game or virtual world. Character creation, consumption patterns, examinations of society and culture, and the discussion of stereotypes are, with care, all possible within virtual worlds.

By introducing virtual worlds and games into the classroom through virtual virtuality, however, some of the common technical issues in dealing with these spaces in frequently under-equipped classrooms and labs can be circumvented. At the same time, virtual lessons can be developed in a ways that are specifically focused on course materials, thereby eliminating many of distractions associated with engaging in virtual worlds. Finally, using virtual virtuality in the classroom may aid in finding ways to deal with sensitive tasks and issues in a way that is approachable and not likely to offend.

The use of virtual virtuality in the classroom is perhaps deceptively simple, with printed paper replacing the technologically advanced computers, application programs, and internet connections. Given the issues inherent in using virtual worlds like *Second Life* within the classroom (Herold, 2009), though, virtual virtuality is one way to harness the benefits found in virtual worlds for educational purposes. Without being undermined by the issues associated with Second Life specifically and technology in general (Carlson, 2005; Côté & Allahar, 2007), students are better able to engage in effective, active, and interactive learning in the classroom.

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