

**Becoming a (Virtual) Skateboarder:
Communities of Practice and the Design of E-Learning**

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Abstract

This paper explores the potential value of using a theory of learning as participation in communities of practice as a basis for the design of e-learning. An analysis of a popular videogame is used to illustrate how digital technologies can be used to provide learners with an experience of moving from novice to expert in a distinctive, though virtual, community of practice. Implications include a shift in focus from organizing content to designing experiences as a starting point for creating new forms of e-learning.

Purpose

Last night, I spent two hours engaged in a rather unusual pastime for a middle-aged woman: I was practicing liptricks and grinds in an empty concrete swimming pool. If you aren't familiar with this rather specialized terminology, these are

skateboard moves, the former consisting of skating up a ramp and balancing on the edge, and the latter of riding your board on two wheels along a ledge or suitable narrow surface. It took a lot of practice, but I felt pretty proud of myself when I was able to repeatedly keep my balance, and most importantly, not lose it coming out of the trick. Then I decided to put on a really eye-catching purple t-shirt and skate out on the street, where I met up with several other skaters and showed off my new skills.

By now, I assume that you are either impressed by my daring in taking on such an unconventional hobby, or certain that I am just lying or delusional. You may or may not change your mind when I tell you that I wasn't skateboarding in the "real world. I was playing the videogame *Tony Hawk Underground*, which itself is a rather transgressive activity for an adult woman. In this game, I can participate in a set of practices and communities that would be difficult, if not impossible, for me to experience outside of this digital space. I have entered what seems to be, in many ways, a new community, with its own language, dress codes, conventions, values, icons, and views of the world. I have learned a great deal about this community through actual participation in the practices of the community. I have found myself mastering tricks and accomplishing goals that I never would have thought possible, that I initially found to be extremely difficult and frustrating. My motivation to learn has been continually renewed and extended by my successful mastery of what have become, for me, meaningful practices within the parameters of this virtual world.

My purpose in this paper is to consider what lessons adult educators might draw from popular recreational games such as *Tony Hawk Underground* for the design of e-learning. My interest in this topic was stimulated by how "deep" a

learning experience playing *Tony Hawk Underground* proved to be, despite my preconceptions that the game was, at best, about “mashing buttons” on the controller, to achieve rather arbitrary goals embedded in a rather shallow depiction of young male popular culture. A second stimulus was the growing interest among educators in the use of videogaming technologies to create “serious games,” i.e., games that can be used for educational purposes. Unfortunately, many of the initial attempts to develop serious games have led to games that are not very compelling, and often focus on isolated skills and information. I draw particular inspiration from the work of Jim Gee (2003), who argues that we can learn much from recreational videogames about how to create more complex and engaging digital learning experiences.

Current E-Learning Practices

Current forms of e-learning vary in the extent that digital technologies are used as supplements to or replacements for traditional face-to-face instruction. At the more limited end of the spectrum, digital technologies such as listservs and websites are used to extend discussions beyond the classroom or for posting syllabi, assignments, and other resource material. At the opposite extreme are courses and training programs offered entirely through technologies such as web-based learning management systems or instructional software.

It is widely believed that digital technologies have the potential to support radically new and potentially more powerful forms of learning (e.g., Garrison & Anderson, 2003). However, much e-learning tends to be organized in ways that mirror traditional forms of instruction, reflected in the wide array of digital “learning management systems” that are intended to enhance teachers’ ability to disseminate information, monitor and assess student learning. As John Seely Brown

(2000) has observed, e-learning is still in its early forms, and we have much to learn about its inherent capacities and its potential to create a new “learning ecology.”

Much of the literature addresses e-learning in the context of formal education and training, and perhaps it is not surprising that the legacy of courses and content continues to be pervasive. To find more expansive and innovative examples of how digital technologies can be used to support learning, we must look elsewhere. A growing number of educational scholars are turning to a perhaps surprising source of insights into digital sites for learning: videogames.

Videogaming: Serious Play

As a multi-billion dollar industry in the United States, videogaming has become a pervasive part of society, recruiting growing numbers of both women and men gamers of all ages. Despite the stereotypes of videogames as “shooters” that emphasize violence and scantily dressed women, videogames take quite varied forms, ranging from addictive puzzle type games such as *Tetris* and *Bejeweled* to complex simulation games such as *SimCity* and *Railroad Tycoon*. In contrast to other forms of entertainment media, such as TV and movies, gaming is interactive: players are actively engaged rather than passive consumers, knowledge and ideas are used, not simply acquired, and typically players can pursue allow multiple routes in problem-solving. More than one scholar (e.g., Gee, 2003; Jenkins, 2003; Papert, 1993) has pointed out that gaming supports learning that is far more compelling and complex than traditional forms of education. Gee’s (2003) work demonstrates that analyses of how videogames support sophisticated and challenging modes of learning can offer educators considerable insight into the unique affordances of digital technologies.

Videogames' potential to support engagement in complex thinking and practices has led to growing interest in the development of games for more overtly educational purposes, in contexts ranging from health care to politics. However, many games developed for education and training purposes tend to be much less rich and complex than games for entertainment. Such educational games frequently resemble simple puzzle-type games, or offer a simulation as a superficial gloss for the presentation and acquisition of basic information, rules, or procedures. This approach to educational games seems to assume that the key function of a game is to make learning more effective by making it "fun" (by hiding the fact that you are learning "content") and "active." Such approaches do not recruit the full capacity of digital technologies for creating compelling environments and goals, and often are driven by acquisition of content. A typical concern of this kind of approach tends to be how to ensure that content is covered and how to fit games within existing curricula/content objectives, as in schools or in professional training.

A second approach to the development of digital games for learning emphasizes the potential that games offer for engaging people in experiences that they otherwise would not have access to, with the goal of developing their abilities to engage in meaningful practices within and potentially beyond the game space. By far the best examples of this approach to educational gaming come from the United States military, which has a long history of using sophisticated technologies for training. Examples from the military include *America's Army*, a game that simulates basic training and was distributed as a recruitment tool, and *Full Spectrum Warrior*, a commercial game derived from a military basic operations training simulation. Some commercial simulation games, such as *SimCity* and *Civilization 3* have been

used in classrooms and after school programs to help students learn about complex systems or representations of history.

Here I will adopt the second approach as a starting point for exploring what insights can be derived from videogames for enhancing e-learning for adults. As I noted above, videogames take many forms, and have different affordances for learning. The game that I will discuss in this paper, *Tony Hawk Underground* could be described as a “credible interactive simulation”(Foreman, 2004), a type of game that creates an immersive “world” with engaging graphical environments and compelling goals, and that require creative and strategic problem-solving. *Tony Hawk Underground* offers a particularly intriguing example of how digital technologies can be used to provide learners with an experience of moving from novice to expert in a distinctive, though virtual, community of practice. Skateboarding as a social practice, and its potential to illustrate deep and meaningful forms of learning are likely to be unfamiliar to many educators, and its novelty adds to its power as an example.

In next section I will describe the assumptions about learning that inform my analysis, more specifically the theory of learning as participation in communities of practice (Wenger, 1998). I then move to an analysis of how *Tony Hawk Underground* supports four aspects of learning associated with participation in communities of practice. I will conclude with some implications or “lessons learned” from *Tony Hawk Underground* about the design of e-learning for adults.

Situated Theories of Learning

A growing number of scholars in different disciplines have been challenging long-standing conceptions of learning as a purely cognitive, “in-the-head” phenomenon, and proposing *situated* theories of learning (e.g., Brown, Collins, &

Dugid, 1989, Gee, 1992, Lave & Wenger, 1991, Rogoff, 1990)). While such theories vary in their characterization of the relationship between individual and social context, they share the assumption that learning is not simply influenced by context, but is intimately constituted by the social, whether it be the language that is used to give meaning to experiences, the tools and technologies that mediate our abilities to know and do, or the worldviews that shape our perceptions and interpretations. The social is implicated both in the process and in the desired ends of learning. Our social worlds shape not only the opportunities we have to develop certain kinds of knowledge and abilities; they also affect our sense of how to use those skills and knowledge to achieve particular ends and to represent ourselves in certain ways.

In this paper I will draw in particular from Wenger's (1998) conceptualization of "communities of practice" (Lave & Wenger, 1991; Wenger, 1998; Wenger, McDermott, & Snyder, 2002). Communities of practice are "groups of people who share a concern, a set of problems, or a passion about a topic, and who deepen their knowledge and expertise in this area by interacting on an ongoing basis" (Wenger et al, 2002, p. 4). Learning occurs through participation in the practices of a community, as individuals develop ways of thinking and reframe their identities and interests in relation to the community (Lave and Wenger, 1991; Wenger, 1998). More specifically, Wenger (1998) identifies four aspects of learning within the community of practice framework: (a) learning as doing, or changes in how we engage in social practices, (b) learning as experience, or changes in how we make meaning of our lives and our worlds, (c) learning as becoming, or changes in our identities, and (d) learning as belonging, or changes in our relationships to the community and practices.

The concept of communities of practice is not without its limitations, both in how it is conceived and how the concept has been interpreted and applied. The common view of communities as uniformly supportive and noncontentious was critiqued by Wenger himself, yet communities of practice have frequently been re-interpreted in the guise of “learning communities” that can be intentionally created to serve as mutual support groups for improving professional practices in schools or other organizations. Furthermore, establishing the boundaries of communities of practice, or the nature of “membership” in such communities can be problematic, particularly since membership is not defined by institutional affiliations or other external markers. However, as I will attempt to demonstrate in this paper, the value of this conception for adult educators lies less in the precision of its definitions, and more in the views of learning that can be elicited from this perspective. Typical approaches to e-learning tend to reproduce and reinforce common practices of “schooling;” and often, as Wenger (1998) suggests, “School learning is just learning school” (p. 267). I hope to show how digital technologies can be used to support more holistic and meaningful learning opportunities situated within compelling and engaging representations of communities of practice.

Learning in Tony Hawk

The Tony Hawk game series is one of the most popular videogame franchises. Tony Hawk is an iconic figure in the skateboarding world, who became world-famous for his creative and daring skateboarding moves. The structure of the game has varied to some extent as newer versions offer additional features, but the core gameplay has remained relatively consistent. Players must learn complex sequences of moves that comprise different skateboarding “tricks,” which they must perform to accomplish a set sequence of challenges within a certain time frame, or to compete

with other players. The time, effort, and skill required to master tricks and complete the challenges are extensive. Becoming an expert in the Tony Hawk skateboarding world requires many hours of practice and desire for mastery. Educators may gain considerable insight into the design of e-learning from understanding how the game creates a community compelling enough to sustain players' motivation and commitment to learning

The version that I will describe, *Tony Hawk Underground*, (THUG) includes a "Story Mode" which takes the player through a sequence of "chapters" reflecting a loose narrative about a skater's beginnings in the streets of New Jersey to her/his rise to fame and recognition. In this discussion, I will draw examples primarily from the Story Mode since it offers a deliberately structured environment for introducing new players to the "social world" of THUG.

Images of the Possible: Imagined Worlds, Imagined Selves

The first thing a player sees when she starts the game disk is an opening series of video clips accompanied by music. The clips capture real skaters engaged in the primary practice of skateboarders: doing tricks, in parking lots, on city streets, on top of picnic tables, down outdoor stair railings. Occasionally the clip shows a skater carrying his board (the skaters appear to be uniformly male) on a subway or along the street, but the player quickly grasps that the main occupation of skaters is just that – skating - and not simply rolling smoothly along a sidewalk, but leaping and twisting with skateboard in the air, balancing on the end of the board, and yes, falling, again and again. Often there are other skaters nearby, as well as observers, and even, in the concluding clip, a very large audience at what appears to be a formal competition.

The clips end, and the player is presented with a simple menu offering choices such as “story mode,” free skate,” and “create-a-park.” If the player waits a few minutes without selecting an option from the menu, another set of video clips launch, but this time, the videos feature digital skateboarders, names of tricks they accomplish appear on the screen (as they do in the game) and the title “demo” appears in a corner of the screen.

What is the significance of all this? In a few minutes, the new player has been introduced to central practices of “real” skateboarding communities, potential identities and how they are manifested (such as typical clothing), supporting and intersecting practices and communities (i.e., the music industry), and a view of the “world” through the eyes of a skater (i.e., the landscapes that support different tricks and moves). And then, if this isn’t enough to intrigue the player, the second set of clips suggests how the game resembles “real” skateboarding, giving the player

examples of what she or he might be able to do as a participant in this virtual social world. In other words, the player has learned a lot about the game and what he or she might be able to do and become within the game, but without any overt or direct instruction. New players are not presented with any “objectives” or potential outcomes of playing the game; instead they are given images of desired practices, along with images of the learning process along the way (recall those clips of unsuccessful attempts at skating tricks).

Wenger (1998) identifies imagination as a crucial process in learning to participate in and identify with communities of practice. Through imagination, we can see beyond our current worlds and identities, and project ourselves into new ones. The more evocative and compelling the imagined possibilities are, the more motivated we become to learn how to attain them. The beginning of THUG is structured in a way to elicit the potential player’s imagination, in a structure open-ended enough to allow each person’s imagination to fill in the details of his or her own particular vision. An implication for the design of formal e-learning is to draw on the affordances of digital technologies to offer learners an introductory “experience” that gives them the opportunity to observe the practices and participants in the communities of practice that they aspire to join. Such “experiences,” like the THUG example, are compelling because they can evoke an emotional response and offer learners a more concrete, holistic image of desired goals than the typical list of decontextualized goals and objectives that often are presented to learners at the outset of a learning experience.

Learning as Becoming: Creating Identities

The game places no restrictions on the player’s choice of actions, even as a newcomer. Players have the option of leaping right into free skating mode or even

designing tricks or skate parks. As I noted above, the Story Mode option offers a more scaffolded learning environment within the context of a loosely structured narrative. In Story Mode, the player enters the world of THUG through an open bedroom window, finding a character (who will become “you”) engaged in an important social practice: repairing a skateboard. A friend, Eric, leans in through the open bedroom window, and excitedly announces the arrival of a pro skater, Chad Muska, who has come to demonstrate tricks in the local skatepark (actually a concrete playground that includes an empty swimming pool).

The focus shifts back to the first character, and the player is now given the opportunity to customize the character, or make it “your own.” A menu appears, with various options for editing the character. Players can select one of nineteen pro skaters (based on real-life skaters), or create their own character, choosing from an extensive series of potential attributes. The great detail possible in character construction – players are offered choices about everything from hair and skin color to arm bands and logos – implies the importance of individual identity within the skateboarding community. At the same time, the kind of attributes that are offered, such as tattoos and knee pads, imply certain communal elements. The choices available within categories of attributes offer clues about codes for self-presentation, as well as, by omission, what may be inappropriate or beyond the bounds of the community. As a simple example, wearing a dress is not an option, but players can choose from among six or seven different sneakers. Even body type can be manipulated to convey a certain identity; for example, the player can enlarge or reduce his/her biceps, or make his/her character fat or thin.

At the very beginning of gameplay, a novice is likely to have little or no conception of the meaning of various codes for appearance within the skating

community. Notably, players can change their character's appearance throughout the game, which allows the player to reflect his/her changes in identity in more concrete physical terms. I found myself creating a more "edgy" character as I progressed in the game, changing my clothing from a rather staid t-shirt and shorts to a halter top and camo pants, and my hair style from long and straight to a short, choppy red cut. My research assistant, also playing the game for the first time, initially selected a premade character almost at random, but as she progressed in the game, she gradually designed a character that looked quite a bit like her "real" self. Players using a Playstation 2 can take advantage of the "Put Your Face in the Game" option. This option allows players to insert an image of their own face onto their character, based on a digital photo, potentially enhancing identification with the virtual character and the player's commitment to the game.

In much adult education, primary attention is devoted to recognizing and valuing learners' existing identities, rather than offering opportunities for them to take on and experiment with new identities as part of a learning experience. We may devote time to having learners introduce themselves, encourage them to share experiences, and incorporate their current interests into learning activities. THUG illustrates an advantage of digital technologies for learning: learners can begin to experiment with new identities from the outset of the learning experience. Creating the physical appearance of a character is symbolic of this process, which continues as the player is immersed in a world in which her or his "new" identity immediately is recognized and validated.

As with any community of practice, there are restrictions placed on the identities that are possible or permissible in THUG. In the "real world" skateboarding is dominated by young males, and the participants in the skating

community of THUG are almost exclusively young males as well. Among the proskaters, there is only one woman. When they appear in the narrative, women are typically are in stereotypically passive roles, in need of help or observers. While these limitations may accurately reflect the current skateboarding community, they do suggest ways in which such “realism” might negatively affect a potential player’s ability to envision her or himself as a participant in the community. On the other hand, the game does allow players to design female skaters, who are certainly poorly represented among real-world skaters, thus perhaps offering an opportunity for players to experiment with alternative identities within the game. [As an aside, the number of female skaters has grown tremendously in the last five years. One study indicated that in 2002, 26% of all skateboarders were women, including a growing number of women approaching middle-age (McLaughlin, 2004).] Thus, an issue for educational designers is what extent should the community be portrayed as it is, biases included, or portrayed as it might be, to contest barriers to the participation of groups not currently well-represented?

Learning as Doing: Engagement in Practice

I now return to the opening scenario, where the player’s character (appearing as he/she has designed him/her) swaps a few insults with Eric, finishes up work on his/her board, and slams out the door. The screen shifts to a bird’s eye view of the surrounding city neighborhood, with an accompanying narration by the player’s character (let’s call her Elissa, after the one female pro skater). The player can observe skaters performing tricks in different settings, including the streets, the playground, sidewalks and alleys, see the drug dealers, who “don’t like” skaters according to Elissa, and get a taste of Elissa’s attitude towards the neighborhood: “what a dump.” In this brief sequence, the player is introduced to more important

aspects of the THUG social world. The player observes the social practice of repairing and upgrading skateboards and the value placed on the board. The practice of observing experts (in this case, Muska) is also introduced. Continuous background music is another component of the world. This preliminary introduction to a constellation of practices contributes to the creation of a compelling, convincing social world which gives meaning and invites participation

All of this takes place quite quickly, and with good reason, since the player's actual engagement in practice is the primary vehicle for learning as well as the primary source of pleasure in the game. After the brief tour of the neighborhood, the player finds herself (as Elissa) on her board, on the sidewalk outside her front door. Her most pressing task is to gain sufficient control of her board to remain on it. In the meantime, skaters and pedestrians pass on the street and sidewalk, and Eric waves from down the sidewalk. The player has an immediate choice of either practicing on the board in a trail-and-error fashion, or making her way to Eric, who asks for a favor, that you retrieve the pieces of his skateboard that have been scattered on the rooftops by some hostile drug dealers.

A very simple form of direct instruction is offered to help the player respond to Eric's request. Instructions appear about how to jump (without the skateboard) by pressing several keys in sequence. Arrows in the sky point to the three pieces of the skateboard that must be retrieved by jumping up on rooftops. The task is not timed, and the player can repeat it endlessly until s/he is successful. This type of direct instruction is associated with specific goals throughout the early stages of the story. The player/learner can always see the immediate relevance of the information in relationship to a particular task, and learning really does become doing, engaging in actual practice. This approach is in sharp contrast to traditional educational

approaches, which often present facts and information to learners in isolation from actual practice. The ineffectiveness of such an approach quickly becomes obvious to a player who picks up the THUG guidebook and tries to learn the combination of keystrokes for a trick by reading the instructions. Of course, the book can be quite useful as a reference tool during game play, but only once the tricks have acquired meanings that are situated in actual game play (practice).

New players are introduced to a key aspect of practice – placing value on different “tricks” - more indirectly. Names and point values for tricks are also provided whenever the player completes a trick, intentionally or unintentionally. This feature alerts the player to the “meaning” of various combinations of moves; certain combinations can be recognized and there are different values assigned to different moves. As a new player, you can use this information in a “self-directed” manner, to identify and practice new tricks.

Additional goals in the first chapter give players the opportunity to master additional moves, including skitching (getting pulled behind a vehicle, or in the case of the first lesson, a dog), grab tricks (holding your board), and reverts (turning when landing back on a ramp). A crucial aspect of this instruction is that the skills presented are always integral to actual practices (within the game) and the practices themselves have meaning within the social world of the game. For example, an early goal is to impress the visiting expert skater Muska by doing tricks to achieve a certain score. If you succeed, he praises your skill and gives you his own skateboard to replace your own rather worn out board. Other chapters include goals such as doing favors for friends, bribing security guards, rescuing other skaters, and competing in local, national, and international contests. The goals incorporate and

build a sense of the player's place in the social world of the game and her/his relationships to others.

These examples have several implications for the design of e-learning. First is the value of integrating various modes of learning into an e-learning experience. The above examples illustrate opportunities for learning by observing (a form of anticipatory learning) as well as by doing, and learning by trial and error as well as by direct instruction. All of the tasks have meaning within the THUG social world; there are no multiple choice questions or other "school"-like activities. Information is provided "just-in-time" when it is relevant to practice, not as isolated facts to be remembered and retrieved. The player's learning is loosely directed by the structure of the story, but he or she has considerable freedom to practice, experiment with learning that is not part of the official "curriculum.

Learning as Belonging: Relationships

"Learning as belonging" can be thought of as the changing ways we define our relationships to a real (or imagined) community. As Wenger (1998) suggests, we define ourselves by what we do and know as well as by what we don't know and do. Identities are also relational, as we are defined by others according to how well we can exhibit the attributes of other members of the community. Sometimes these memberships are institutionalized, such as through certification requirements for professional practices. However, most assessments of "belonging" occur informally. At the most basic level, we can distinguish between "insiders" and "outsiders" of a community of practice, by whether someone acts, speaks, dresses, and believes in ways that align with other members of this group. To be accepted as a construction worker, I have to talk, act, and think differently than if I am to be accepted as a fashion designer. These distinctions can also take place within social groups, for

example, in the extent that you are a novice or expert, or more or less fully engaged in the practices of the community. A “hard-core” gamer has very different attributes and relationships to gaming communities than a “casual” gamer; a nurse intern can be easily distinguished within the nursing community from a veteran nurse.

Typical classroom-based education, as well as many forms of e-learning, treat learning as an activity separate from practice, and often limit the extent that learners can enhance their participation in and sense of belonging to a practice community (beyond the classroom). Often, too, there can be divergence between learning to belong within a classroom, and learning to belong within the practice community. For example, in my own work with preservice teachers, I have often heard them express a sense of conflict between the ways of thinking and speaking that are rewarded within the university classroom and those that are appropriate within the school setting where they student teach. Games such as THUG offer examples of how digital environments can create experiences of learning to belong within practice communities. Of course, these experiences are simplified and cannot prepare learners for the full range of issues that she or he might face in learning to belong to a real-world practice community. However, by introducing only key attributes of community membership, digital environments can reduce complexity of these real-world communities and give learners a starting point and motivation for further learning.

Right from the start, THUG locates the player within a meaningful social world; you have a home (or at least a bedroom), familiarity with a wider neighborhood, and at least one friend. It also introduces a certain set of relationships within the skating community (pro skaters and the rest of us who wish to emulate them; your “peer” skaters whom you both assist and compete with) and between the

skaters and other groups (the drug dealers, police, pedestrians). From the very beginning of the game, players are encouraged to see themselves as “skaters,” as part of a community that shares potentially appealing attributes and engages in meaningful and satisfying practices. The game is structured to encourage this sense of belonging by locating players as “insiders” from the very beginning. As players complete missions and move to different levels of the game, their relationships and interactions within the game change: you are recognized for your skill by experts, you master increasingly difficult tricks,

Here I will point out just three aspects of learning relevant to belonging as a skater. One is the use of specialized language. Skaters have their own vocabulary that identifies them as participants in a particular set of social practices. Skateboards are “rides,” or “decks,” various aspects of the landscape include “vert ramps,” “half pipes,” and “flatland.” There are a host of specialized terms for different tricks, some of which I mentioned earlier: grinds, lip tricks, ollies, reverts, spine transfers, and skitching, to name a few. This specialized language is spoken by characters (including the player’s own character) in the game, as well as appears in print, in the onscreen trick descriptions, the various game modes, and in game manuals.

Also important to belonging within this community is how skaters interact with each other, in a teasing, insulting manner. Eric for example, exclaims in the opening scene that your ride looks like it’s “held together with duct tape.” These types of interactions reflect a second aspect of establishing relationships within the community, through one-up-manship, competitions and “showing off” to other skaters. The player’s identity and status within the THUG narrative is to a great extent dependent on his or her ability to perform complex tricks before an audience.

In the very first chapter, the player must compete with Eric to accomplish several tricks, and show off his or her skating combos to impress Muska. On the whole, Story Mode follows an iconic narrative for skaters: unknown kid from city streets proves him/herself through many competitions, until she or he wins widespread recognition, corporate sponsors, and invitations to skate around the world. The narrative allows the player to experience a progressive set of new and continuing relationships within the practice community.

A third way that THUG encourages a sense of belonging to a skating community is through creating opposition to other practice communities. In the first level, members of the drug dealing community are introduced as “hating skaters.” While this might seem to be just a convenient vehicle for creating dramatic conflicts, the division between the groups does serve to more fully define the attributes of the skaters, potentially making them more appealing as a group to affiliate with. The dealers harass the skaters, by breaking Eric’s board, stealing goods from the skate shop, and even kidnapping Eric. Your character and other skaters also have run-ins with the police and other authorities, though typically over relatively minor infractions. Sometimes with a little encouragement, the police will allow skaters to transgress the “rules,” such as skating in forbidden places, such as in an empty office building. Later on in the game, the player/character occasionally intervenes in criminal behavior and otherwise helps other skaters as well as nonskater, for example by catching a bank robber, helping a private investigator, and retrieving a lost purse. Thus, skaters are presented as “positively” rebellious; their values lie in utilizing public spaces for the pursuit of personal expression. While they resist rules that interfere with these pursuits, they uphold a set of ethical principles that

distinguish them from “criminals” as we typically define them. The player learns this ethos indirectly, through the types of goals that are presented in the game

Considerable attention has been devoted to developing “learning communities” within the parameters of e-learning experiences (see, for example, Garrison and Anderson, chapter 3). While such communities can have considerable value (and I will discuss them in the final section of this paper), they typically are organized around different types of practices, relationships, and meanings than the practice communities in which learners will ultimately seek to participate. THUG offers one example of how digital technologies can be used to introduce learners to several key aspects of belonging to a particular community beyond the virtual classroom: language, forms of interaction, and relationships to other practice communities. One can readily imagine how similar elements could be incorporated into e-learning for other practice communities.

One critique of using participation in communities of practice as a basis for the design of learning is that such communities can be exclusionary and can become habituated to practices that are dysfunctional or unjust (Fenwick, 2003). Digital technologies offer the potential to design virtual worlds that allow players to negotiate the boundaries of communities, and to re-design the parameters of the social world. As I will discuss in the next section, an important aspect of full participation in a practice community is the ability to reconfigure the identities, meanings, and practices associated with that community.

Learning as Experience: Making Meaning

Communities of practice create and reinforce particular ways of making meaning of actions, things, people, and environments; in other words they support particular “world views” or ways of “reading the world.” Learning to make meaning,

to see the world in ways consistent with the community is an important aspect of participation in a practice community. It's a common joke to claim that if you visit your general practitioner for help with back pain, she will recommend pain medication, a chiropractor will recommend back adjustments, an orthopedic surgeon will recommend surgery, and a physical therapist will recommend therapeutic exercises. Each health professional views the problem through the lens of their own professional practice. It is quite likely, also, that each professional will believe that his or her perspective is a more "accurate" diagnosis of the problem, since we are often unaware of the limitations of our own viewpoints.

In the adult education literature, considerable attention has been given to adult education's role in perspective "transformation." Far less attention has been given to the value and significance of perspective-building, though this is typically a fundamental purpose of adult education as well. Let's take a look at how THUG supports particular ways of making meaning, or understanding the world.

One set of meanings integral to the THUG community are associated with the central practice of skating: Right from the very start, the game is designed to encourage players to not only recognize the importance of tricks in general, but also to differentiate between types of tricks, and to understand how they are composed. Every time the character does a trick, intentionally or unintentionally, several pieces of information appear briefly on the screen: the name of the trick, its point value, and the sequence of keystrokes that comprise the trick. Very new players won't be likely to pay much attention to the specific information (I was too busy trying to keep my skater in motion), but they will quickly grasp the first lesson: there are different kinds of tricks, accomplished by varied combinations of keystrokes, and tricks have different values. Gradually, the player learns to

recognize certain tricks, and types of tricks, since they are organized into various categories and variations. Some of this meaning-making can occur through direct instruction, as in certain goals that require recognition and mastery of particular tricks. However, since there are a myriad of possible tricks, attempting to teach each trick through “skill and drill” would make the game incredibly tedious and unappealing. Instead, the provision of the onscreen information once the player has already (often unintentionally) completed a trick, offers opportunities for learning through a sort of scaffolded process of trial and error. Meanings associated with tricks become more and more detailed and complex, as the player is exposed to and gains the ability to attend to more particular distinctions among tricks. For example, one of the first tricks the player must learn to do is a “grind” – skating along the edge of an object such as a railing, ledge, or fence. As a new player, I really enjoyed this trick and as I practiced it on various surfaces around the neighborhood, I gradually discovered variations on the grind, such as using different sides of my board, and I also learned different names for each type of grind trick. I also learned, by accident, another trick involving surface edges: “lip tricks” which require you to balance on the edge of a vertical ramp using one edge of your board. What first appeared as relatively undifferentiated actions involving the board came to have very different and specific meanings.

Another set of meanings integral to THUG are associated with the contexts or environments for skating. These meanings are never directly taught, but are learned as the player develops more knowledge and skill with a wider array of tricks. Various aspects of the environment in the urban neighborhood of the first chapter take on new meanings as you begin to view them from a skater’s perspective. For example, railings and fences begin to stand out as opportunities for

grinding; an empty swimming pool becomes a site for lip tricks, a passing car becomes a chance to skitch. Pro skater Mike Valleley, in the 2003 documentary *Drive: My Life in Skateboarding*, claims that skateboarders look at the world differently from nonskaters, as opportunities for skating, and this type of perspective certainly is cultivated in THUG.

While my focus has primarily been on the story mode of THUG, other modes within the game illustrate how still other sets of meanings, or perspectives, are developed and recruited. THUG gives players the opportunity to “make meaning” through design modes, including “create-a-skater,” “create-a-goal,” “create-a-trick,” and “create-a-park”. Each of these design activities recruit and expand the players’ understanding of various aspects of skaters, goals, tricks, and skate parks, separately and in combination, within and across design tasks. For example, to create a skate park, the player must combine knowledge of different types of tricks and the affordances offered by different objects into a vision of how these elements might be combined to offer certain types of skating opportunities and challenges. This passage from a create-a-park guide posted online by a THUG player illustrates this design knowledge: He is discussing how to use quarter-pipes in a skate park:

QP's should be the Great Equalizers. By that I mean they are used to connect everything to everything else, and most of your flow will come from expert use of these pieces. Experiment with different shapes of pipes to find something that's fun. Put a plain old HP in your park for the Vert fans. Connect rails to your QP sides for some hot Acid Drop/Revert action. Put more rails HIGH over your QP's for some nice altitude. Put your QP's in a U-shape so you can Spine Transfer. The special QP parts(like the Mega Rollin) are good for

regular transfers, and work well without being connected to a line.

Putting two of them opposite of each other works well. The short QP doesn't really have a place as far as flow goes, unless you have a 1-flat platform sticking out for no reason. Then you can just line them up along the break, and everything looks smooth and professional. (Numbermind, 2004)

These design activities encourage players to develop a deep understanding of meaning systems associated with THUG, and they become able to more fully participate in the practice community through creating and recreating practices and landscapes of that community. Interestingly, this aspect of participation often spills over into the “real world” as players design goals and skate parks as challenges for other players.

These features of THUG suggest ways that digital technologies can be designed to support adult learners ‘ participation in meaning-making. Perhaps most important is that meanings in codified form are embedded in and associated with actual practices. Also important is that learners have the opportunity to engage in design activities that deepen their understanding of existing meaning systems while at the same time creating new designs and meanings.

Discussion

“ . . . a curriculum would look more like an itinerary of transformative experiences of participation than a list of subject matter” (Wenger, 1998, p.272)

I have attempted to illustrate, using a framework of learning within communities of practice, how digital environments can be designed to support more motivating and meaningful learning. By identifying elements of THUG that facilitate participation in a particular community of practice, as limited as it may be,

I hope to suggest ways of rethinking the design and use of digital media for learning. Ironically, THUG offers a useful example precisely because it was not intended primarily as an “educational” game, but rather, THUG is designed to support learning of the practices and meanings that make the game itself a pleasurable and engrossing experience. Thus, THUG avoids the “trappings” of formal education and can encourage us to view learning environments in new and perhaps enhanced ways.

Of course, this strength of THUG is in other ways a limitation. THUG has no overt goal of improving skating practice in the “real world;” in fact, a majority of THUG players are not “real-life” skaters. Adult educators typically are concerned with creating educational opportunities that are intended to have impact beyond the learning situation itself; that is, we want to assist health professionals in improving patient care, to help adult basic education students respond to literacy demands in workplaces, to assist community members in learning how to organize and address social problems. Of course, there is evidence that traditional didactic instruction often has little impact on or transfer to actual practices. This question of “transfer” is important, and controversial, and one that I will refer to throughout the following discussion.

In the remaining sections, I will discuss a key implication of understanding learning as participation in communities of practice: revisioning the role of the adult educator in digital learning as designing experiences, rather than organizing content. I draw on Wenger’s (1998) conception of educational design, though he does not discuss virtual learning situations. Next I briefly identify some issues related to the correspondence between the virtual practice community and actual communities of practice, that may have a bearing on the “transfer” question. Lastly,

I discuss the nature of practice communities around gaming, how they support and extend learning, and how these practice communities might be used to further align and promote the interplay between learning within and outside digital worlds.

Designing Experiences, Not Organizing “Content”

In adult education, and particularly in e-learning, typical instructional design approaches are based on cognitive and behavioral theories of learning, and start with carefully delineated cognitive, behavioral, or affective learning objectives, that are to be achieved by a carefully controlled sequencing of activities, presentation of information, and practice opportunities, and assessments. Also popular among adult educators (at least in theory), though less frequently applied to design of e-learning, are “learner-centered” educational approaches based on humanistic assumptions that learning experiences should be focused on learners’ psychological and developmental needs, and thus are much more loosely structured and emergent in design.

As Wenger (1998, p 264) argues, the “codification of knowledge into reified subject matter” separates learners from practices by inserting a mediating experience, that of “education” or “preparing” for practice by acquiring knowledge and skills in isolation from practices. This codified knowledge, while it may have value, is quite different from knowledge as it is leveraged or enacted for participation in practice communities. Similarly, a focus on learners’ “needs” isolates and reifies a way of expressing and understanding psychological states that are taken out of the contexts of participation in which they acquire meaning and value and purpose.

The type of educational design suggested by a view of learning as participation in communities of practice is quite different. This design assumes as

its starting point the goal of engaging learners in meaningful practices, practices that are meaningful not simply within the context of education, but in relationship to broader practice communities. The focus shifts from organizing content or subject matter, to designing opportunities for varying levels of participation in practice. Questions for educational designers shift from “what knowledge, skills, or attitudes do learners need to acquire,?” and “how should this content be organized to facilitate acquisition?” to “what are the attributes of particular practice communities?” and “how can I create spaces for learners to engage in practices, to create identities, develop relationships, and make new meanings in the context of these practice communities?”

Two points are important here. The first point is that “content” in codified form, is still available and an important part of the design for learning/participation, but it is not the central focus. In THUG, players have access to a wide range of codified knowledge, in the form of manuals, walk-throughs, descriptions of tricks, tips from other players, and so forth. However, it is easy to see that such information has little or no meaning except in relationship to available modes of participation; in other words, to actual experience with THUG gameplay. Consider the following description of a particular kind of trick:

An ollie is a jumping trick. Just jump in the air and do a spin to get an ollie. Ollies don't show up straight away when you go up on a vert ramp, because it is waiting for you to do a trick, like a grab trick. If you don't perform one, when you land, it will count it as an ollie. To do an ollie, just press X to jump, and then spin around.(Baker, 2004)

This information is likely to be meaningless, or at least difficult to grasp, without prior experience with THUG. Not only are there words that refer to things that the

reader may not be familiar with, she or he also won't understand the significance of this information, when it may be useful and why someone would want to know it in the first place. It is surprising how often learners are faced with similarly isolated pieces of information in educational settings.

The second point is that not all learners will need or want the same experiences. Only in formal education do we tend to assume that all people can and should know the same information or be able to do the same things. In real-world communities of practice, some kinds of knowledge and skills are shared; they are important for membership in the community. But other types of knowledge and abilities are distributed, across people, tools, and contexts. One feature that makes THUG a successful context for learning is that the player can participate in different ways, depending on level of skill, interests, and so forth, and that these opportunities are available throughout the game. Of course, there are limits placed on the player's choices as well, particularly in Story Mode, which requires that players complete a set of goals to progress through each chapter. These limitations are at least partly due to technological limitations, but they also serve the purpose of ensuring that players do gain a certain level of proficiency (though how they do so is relatively open to choice). Questions for educational design include "what kind of experiences should all learners have, to facilitate their participation in the community?" and "how much freedom should learners have to shape their own experiences, to engage in new, perhaps unanticipated forms of participation?"

Realistic or Realist?

Digital technology makes it increasingly possible to design virtual learning spaces that provide access to different kinds of experiences, identities, practices that cannot be created in a traditional classroom or even in more "real world" settings.

THUG is just one example. However, recreating with any accuracy or completeness the entire range of experiences and aspects of participation in a practice community is obviously so complex as to be impossible, even with the most sophisticated technology. A danger is that digital learning spaces, such as games, that are too far removed from other practice communities will result only in learning to play games. Relevant questions for the design of learning spaces (digital and otherwise) might be “What elements are most important to include in offering opportunities for participation/learning?” “How closely should the learning space reflect the elements of “real” practice communities?” and “How much variation might be valuable, in allowing learner/participants to experiment with new modes of participation, that might in turn inform ‘real’ practice communities?”

In making such decisions, we first must acknowledge that digital learning spaces are not the best mode for all types of learning. Some kinds of experiences cannot (yet) be recreated in virtual spaces (nor might we want them to be). I cannot have even a remotely convincing experience of giving birth to a baby in a virtual space, nor of helping to deliver one. However, there are other aspects of participation in childbirth (which is embedded in various social practices and practice communities) that might be introduced in a digital space. Thus, the first task is deciding what aspects of participation can be most productively addressed through what sorts of configurations of media, designs, and resources.

The game designer Miyamoto’s distinction between “reality” and “realism” in games is relevant and helpful here. He argues that games do not have to simulate the “real world” with complete accuracy in order to be compelling or meaningful (in fact, too much realism may not be pleasurable or attractive). Games should, however, be realistic, that is, they should create experiences and worlds that feel

and appear real to players (Aonuma, 2004). The extent to which they should be representations of “real” practices depends, in part, on what are the most salient aspects of the practice community, for newcomers as well as oldtimers. In at least some cases, small details can be quite important; as an example, a prototype for *Biohazard*, a computer game designed to help firefighters learn how to respond to chemical terrorism was criticized by real firefighters as “unrealistic” because the virtual firefighters’ boots were not accurately represented (Schell, 2004). While to an outsider, this detail might seem trivial, it reflected the significance that the firefighters placed on their uniforms as a reflection of their identities within and relationships to their practice communities.

The recruitment and expansion of possible identities may be more important than entirely “realist” content: According to Wenger:

.it is more important for the informational content of an educational experience to be identity-transforming than to be ‘complete’ in some abstract way. This is especially true in a world where it is clearly impossible to know all there is to know, but where identity involves choosing what to know and becoming a person for whom such knowledge is meaningful”(1998, p. 273)

Practice Communities of Gaming/Learning

In this paper, I have not discussed the practice communities that have developed in connection with and in support of THUG as a game, in the ‘real world.’ Such communities, which include face-to-face relationships and interactions among players as well as interactions on the internet, are significant sources of new practices, identities, relationships and meanings, that intersect with , enhance, revise, and reinterpret the practice communities as constructed within the parameters of the game. Indeed, videogaming itself is a set of social practices,

associated with certain identities, relationships and meanings. In other words, players do not simply have the experience of being a skater within the game; they also become part of a community of “gamer-skaters” who engage in various practices associated with THUG as a videogame.

As others have stressed (e.g., Gee 2003), to ignore the role of such gaming communities in how players engage in gaming practices, is to miss a crucial dimension of how games, or other digital media, can support learning. Digital media can offer experiences that are not possible in the “real world;” however, as Wenger (275) also suggests, any educational design that remains self-contained and closed is limited in the extent that it can foster meaningful engagement in practices beyond the educational setting. Instead, education “must aim to offer dense connections to communities outside its setting [learning communities] must use the world around them as a learning resource and be a learning resource for the world” (275) Such interactions occur not simply through the practice community’s “internal” interactions around the game itself, but also how that community interacts with other relevant practice communities. In the case of THUG, these communities include “real-life” skaters but also other gaming communities, practice groups concerned with other aspects of popular culture that intersect with and are a part of skateboarding (such as certain kinds of music and performance groups; fashion designers and consumers), groups concerned with other “street sports,” and the host of other practice communities in which THUG players. On Tony Hawk game message boards, gamers often pose questions about “real-life” skateboarding. Examples from one such message board include “How do you do a kick flip in real life,” “why not many black skaters [in the game],” and “Anyone know who does the song in the Volcom Chichagof Trailer in THUG?” The same site sponsors an Extreme

Sports message board that THUG players refer to for discussions of “real-life” skating and other sports.

The more these kinds of connections are fostered, the less likely it will be that e-learning (or any learning) will promote misunderstandings or misrepresentations of other (real) practice communities, or become irrelevant or useless in relation to participation in wider communities of practice. Digital learning thus becomes only one of many experiences that can be recruited for engaging learners in not simply acquiring but also creating new practices, identities, relationships, and meanings.

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