Dance Dance Education and Rites of Passage

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ABSTRACT

The experience of a successful adolescent learner will be described from the student’s perspective about learning the video game Dance Dance Revolution (DDR) through selected passages from a phenomenological interview. The question driving this investigation is, “Why did she sustain engagement in learning?” The importance of this question came out of the need for background on how to create an after school program that was to use DDR as an after school activity that might engage adolescents and tweens to become more physically active and reduce the risk of adult obesity, and to increase bone density for these developing young people through playing the game over time. The difficulty of creating this program was the risk that the students would not sustain engagement in the activity, and thus we would not have a viable sample for the bone density adolescent obesity study. Implications of this study include understanding the potential construction of learning environments that motivate and sustain engagement in learning and the importance of identity construction for teachers to motivate and engage their students. In addition to the analysis of sustained engagement through the four socio- and cultural-cognitive theories, four major principals were extracted from the operationalized themes into a framework for instructional design techniques and theory for engaging learners for game design, training, and in classroom learning.

Keywords: Affinity Groups, Apprenticeship, Cooperative Learning, Dance Dance Revolution, Engagement, Exergaming, Games, Identity Construction, Initiation, Instructional Design, Motivation, Phenomenology, Play, Positive Interdependence, Rites of Passage, Self-Determination Theory, Semiotic Domains, Social Learning, Transformation

INTRODUCTION

This article seeks to understand what engages young people in learning, and what sustains their interest to continue. It explores the elements that inform the lived experience of a chosen play activity and the possible social learning theories that might inform it. Four theories were chosen and operationalized for coding the transcript of the phenomenological interview because of their focus on motivation, social learning, and identity construction: Communities of Practice (Wenger, 1998), Affinity Groups (Gee, 2001), Social Interdependence (Johnson & Johnson, 1994, 2009), and Self-Determination theory (Deci & Ryan, 2002).

All of these theories seek to explain the motivation behind learning as socially constructed and distributed phenomena; all seek to describe the process of identity construction as an impetus for situated learning. The assumption in this study was that it is through the process...
of identity construction that engagement is sustained and supported through the process of group affiliation and is distributed through apprenticeship, modeling, group interaction, interdependence, and situated in space.

IDENTITY CONSTRUCTION RITUALS AND RITES OF PASSAGE

Traditionally, communities gather to provide ceremony for initiation and status transition for such things as the celebration of status change, where a child becomes an adult, and initiation, where single people become married couple. Although there may be many more transitions and rituals in today’s society because of the great variety of cultural subgroups (i.e., churches, car clubs, self-help groups like Alcoholic Anonymous, and hobby groups like The Peoples’ Revolutionary Knitting Circle, etc.), many of these groups traditionally necessitated face-to-face interaction. But with the Internet and today’s computing power, these relations can be mediated digitally through portals like Facebook, Xbox Live, Second Life, and other social networking tools—as well as expert systems that provide feedback based on performance, such as a video games like Dance Dance Revolution (DDR).

The DDR game club might be represented as a ritual rite of passage to understand how and why people build identities around their play, and sustain engagement to ultimately develop expertise. Central to the rite of passage is the initiation ritual (Van Gennep, 1960), where new roles and status are conferred through public performance where play (Geertz, 1973), the subjunctive mood (Turner, 1969), situates the activity, so that rules, roles, and consequences are suspended and participants can explore new identities, associated activities, and their semiotic domains and thus develop new status.

With this in mind, well-designed video games and their fan bases may represent and express new forms of the rite of passage and initiation ritual. Like a rite of passage, games are structured activities that are valued by certain cultural subgroups, depend on play as a subjunctive mood, represent expert systems that resemble apprenticeship activities, and involve performance initiation. The subjunctive mood observed in games and ritual are said to decontextualize the action and provide a suspension of rules, roles, and consequences found in ordinary life to allow for the exploration of new identities, rules, roles, actions, and social affiliations and status in a safe space. Games can do this well.

The ritual and process of identity construction may be an organizing principle in understanding motivation and engagement. The four social learning theories presented for discourse analysis seek to provide the impetus for motivation and engagement and how to structure it, and rely upon aspects of identity construction; these theories do not present themselves as descriptions of the identity construction process. Each theory has a different focus and seeks to describe aspects of identity and focus on an element that informs identity construction: Community (Wenger, 1998), Activity (Gee, 2001), how individuals interact with each other (Johnson & Johnson, 1994, 1999), and needs of the individual (Deci & Ryan, 2002). For the purposes of this study, these theories were operationalized to provide insight for designing instructional environments that will motivate and sustain the engagement of the learner.

PURPOSE OF STUDY

This interview was to inform design features to develop a program for pre-adolescent exercise with DDR for the study of obesity reduction and increasing bone density. The study was also intended to get a sense of why a young woman sustained engagement with DDR over 3 years to develop expertise, and how educators might replicate that kind of commitment to learning and practice. This study may be especially pertinent to designing instructional contexts,
BACKGROUND OF THE STUDY

Health care professionals have observed an increase in levels of childhood obesity. This increase has been attributed in large part to physical inactivity. Physical inactivity can lead to obesity and poor cardiovascular health, and it can also have negative effects on bone health. Bones function to support a mechanical load (a force exerted by body weight, muscle, growth, or activity). Bone is constantly formed and reabsorbed throughout life in a generally balanced way. However, in a three- to four-year window during puberty, bone formation is accelerated. In that period, as much bone material is deposited as will be lost during a person’s entire adult life. During these pivotal years of bone development, physical activity is important for optimizing bone health, as it has been shown to reduce the incidence of fractures later in life.

Because it is difficult to motivate children to participate in the type of cardiovascular activities that adults engage in (running, cycling, aerobics), new strategies must be developed, and these may demand elements that motivate the learner to sustain engagement over a longer period of time in order to promote and sustain life habits for physical conditioning.

DANCE DANCE REVOLUTION IS NOT YOUR TYPICAL VIDEO GAME

DDR is a game that you set up with mats, a TV, a game console and a game disk, and up to four people can play simultaneously (Figure 1). To play DDR, a participant responds to a series of directional arrows (see Figure 2), displayed on a video or TV screen to perform choreographed dance steps or hops synchronized to music. Song tempo and degree of difficulty increase as the player successfully progresses in the game. Because of the game’s popularity and its cardiovascular exercise and jumping (bone-building) components, it could represent an appealing model for reducing physical inactivity in children.

DDR may be a possible solution to increasing activity and mechanical load because of the amount of jumping activity, but the young person must be motivated to start, and engagement must be sustained for the activity to produce valid and reliable measures of obesity and bone density.

The issue under investigation was how to help young people start an activity and sustain it; the simple answer to this was, seemingly, to make it fun—to make it a high-interest activity—but many toys, games, and activities are often tried once and then put aside. What came out of the interview was:

- The importance of aligning the outcomes with a desirable activity,
- Autonomy-supporting environments,
- The importance of group and environment to the construction of status and identity that makes belonging to a group desirable along with the sustenance of a common activity,
- The importance of status and relation for reinforcement,
- The centrality of group performance,
- the role of play as a subjunctive mood and portal to engagement,
- And again, the importance of identity construction for transformation to instantiate sustained engagement conveyed through affiliation, apprenticeship, positive interdependence, and expertise. The big idea here is that perception leads to transformation.

INTERVIEW-EE/INFORMANT

To explore this, we recruited Ellen as a DDR expert and possible employee to lead an after-school program at one of our sites at the Minneapolis Public Schools. We posted a hiring
description for DDR experts and had a number of responses. One respondent, Charles, shared that he had a lot of friends who were really good at DDR, and Ellen was listed as one of those people. Ellen came into the lab to show us her DDR play, and we were impressed with her expertise.

What was interesting about Ellen was that she was not from a subversive or reactionary subculture. Ellen is part of one of the least studied cultural subgroup in schools (Buckingham, 2007)—an urban, middle-class teen that is successful in school, is respectful to teachers, has a part-time job, plays varsity soccer, in traveling band, is part of the International Baccalaureate Program, and has a satisfying home life.

These elements of her identity were surprising. We usually assume that video game players are a disenfranchised fringe group at school who do not engage with the typical academic fare. Ellen was able to balance not only her academics and music instruction, work a part-time
job, but also play sports and have friendships. These elements of balance were enticing and we wanted to know how she was doing it so that we might try and replicate not only the physical health benefits in our bone density study, but also some of the psycho-social and affective elements necessary for sustaining engagement (Chapman, 2003). She seemed like a great role model for creating a curriculum that would rely heavily on identity development and she was an intriguing informant to help us understand how play identities might lead to work habits that help form healthy minds and bodies.

**METHODOLOGY AND REVIEW OF LITERATURE**

The question driving this investigation is, “Why did she sustain engagement in learning?”

According to Chapman (2003), engagement is more than behavioral time on task. When looking to measure growth or change, or even to understand whether a learner has truly engaged, an educator should also look for evidence of commitment and positive attitudes related to the activity and subject matter.

- Engagement is not just doing the work, it is a connection and an affinity to an activity supported from the affective domains (Chapman, 2003).
- Skinner and Belmont (1993, p. 572) report that engaged learners show sustained behavioral involvement in learning activities accompanied by a positive emotional tone, select tasks at the border of their competencies, initiate action when given the opportunity, and exert intense effort and concentration.
- Pintrich and De Groot (1990) see engagement as having observable cognitive components that can be seen or elicited through exploring the learner’s use of strategy, metacognition, and self-regulatory behavior to monitor and guide the learning processes.
These attributes do not appear in an activity because a student is told that it is good for them, and that they should commit to their betterment. Least likely is that they do an activity because we threaten, or just because we want them to.

A student must make a choice to commit to an activity and have that commitment reaffirmed over time to sustain engagement. True engagement in an activity is in some sense transformative and resembles identity construction, in that it changes who one is through cognitive, affective, and behavioral elements. It seems likely that without positive reinforcement (Skinner, 1938) the behavior may result in extinction and the game becomes another resident on the island of misfit toys. We look at social learning theories to explore issues of sustaining engagement through socially distributed reinforcement.

DDR is considered a high interest activity for many young people, and it does have a reward system that gives real-time feedback on performance with rewards for successful play. But, without aligning those rewards and achievement with social capital, they lack meaning and status, and the reinforcement system remains a token economy (Ferster & Skinner, 1957) whose tokens are unredeemable except as social capital.

The work of Buckingham on identity development may provide some insight for connecting identity with purpose, motivation, and sustained engagement. Buckingham (2008, p. 3) states that Identity is developed by the individual, but it has to be recognized and confirmed by others. Adolescence is also a period in which young people negotiate their separation from their family, and develop independent social competence (for example, through participation in “cliques” and larger “crowds” of peers, who exert different kinds of influence).

Identity and status were traditionally conferred through rites of passage, and there may have been many culturally-specific instances of these rites for different groups and related activities. Video games may represent a new wrinkle in the way that we enact and view rites of passage. They may offer a form of guided, ritualized behavior for identity construction and group affiliation as an autonomy-supporting environment (Ryan & Deci, 1999), Affinity Group (Gee, 2001), Social Interdependence (Johnson & Johnson, 1994, 1999) or Community of Practice (Wenger, 1998).

A rite of passage does not need to resemble the tribal practices that led to vision quests, ritual markings, or exodus. A rite of passage may be organized in three forms: the process of separation, transition, and integration, (Van Gennep, 1960), but all three of these rites may also be presented as single rite (Barnard & Spencer, 1996). What was important for Van Gennep was the idea of Liminality, or the threshold. The threshold in an initiation represents a portal—a representative movement from the status of one social space to another, where ritualistically, the individual or group makes a transition by passing through a metaphorical or literal portal to represent a change in social status and position.

In the context of Liminality, the activity space may be far removed from reality, and roles, rules, tools, values, and status may be situated in the flux of play as if a hybrid or interstitial space (Turner, 1969). This concept of the threshold and liminality seems to validate Geertz (1973) and his description of the “Center Bet” in describing the ritual of Balinese Cockfighting and Benthams’ concept of Deep Play. According to Turner (1969), there may be many rites of passage in a person’s life through sub-cultural affiliation (Cock Fighting, DDR, First Job) where identity and entitlement are inculcated through desire to become a respected and acknowledged group member, where the individual can share in and contribute to group activity, participate in group spaces, and publicly renew and further their status.

For Wenger (1998), identity is central to human learning; identity construction and learning are distributed through community and relations; learning is socially constructed; and motivation is based on a desire for sharing and participatory culture. The work of Wenger shares many attributes with Gee’s work, but the focus for Wenger was on socially distributed
cognition and learning as social participation. Earlier work (Lave & Wenger, 1991) explored the role of learning in apprenticeship, where newcomers would enter into a space where learning was situated and contextualized, and goals and purpose were evident due to entering the space. One entered the space to gain apprenticeship and attempt to acquire and learn the sociocultural practices of the community. Thus, the individual is drawn to the group and begins to engage and learn by finding their role in a distributed, networked, cultural-cognitive process with the purpose of the individual as an active participant in the practices of a social community and become an acknowledged member with skills, knowledge, and the requisite values. This participation leads to the construction of his/her identity through these communities. From this understanding develops the concept of the Community of Practice: a group of individuals participating in communal activity, creating their shared identity through engaging in and contributing to the practices of their communities.

The difficulty with this theory is that group membership is hard to define. A person may want to be part of group and claim group membership, but not have the identifiable characteristics that define the membership. Since identity is conferred from others, there are factors that can identify a person as a group member and as having identity markings. For Gee (2001), the activity is primary and provides the motivation and engagement, the source of group membership and the identity markings; for Gee the community and relations are ancillary and stem from the interaction related to the activity. He states that these communities and spaces are hard to identify without knowing exactly why people are there. Whether a person actually claims group membership or is acknowledged can be difficult.

For Gee, whether group membership is acknowledged—claimed or not—attributes can still be observed. The role of Gee’s work is central to operationalizing identity and group membership through offering observable sociocultural markers that come from semiotic domains central to the activity as evidence of group membership.

A semiotic domain recruits one or more modalities (e.g., oral or written language, images, equations, symbols, sounds, gestures, graphs, artifacts, and so forth) to communicate distinctive types of messages. By the word “fluent” I mean that the learner achieves some degree of mastery, not just rote knowledge... Semiotic domains are, of course, human creations. As such, each and every one of them is associated with a group of people who have differentially mastered the domain, but who share norms, values, and knowledge about what constitutes degrees of mastery in the domain and what sorts of people are, more or less, “insiders” or “outsiders.” Such a group of people share a set of practices, a set of common goals or endeavors, and a set of values and norms, however much each of the individuals in the group may also have their own individual styles and goals, as well as other affiliations.Gee (2001, p. 2)

This work allows for certain attributes of group membership to be observable rather than subjective. A young person may have grown up participating in an activity with parents and young friends, but during the puberty years, may reject that affiliation based upon new goals for group membership and status. A new group may be more desirable than a current group, and the young person may cast off markings that identify them with the old group such as a hat from a uniform, ways of speaking, values, etc. This does not mean that markings of prior group membership with parents, family, and childhood affiliations are not still observable—an accent or mannerism may indicate origins or influence. For Gee (2001), it is the activities and the group practices that provide evidence of social learning and group membership from semiotic domains, and it is activity that is central to identity construction.

For Deci and Ryan (2002), the focus comes from work on motivation with a focus on Autonomy, possibly built from early work
by White (1959), where organisms have an innate need to experience competence and agency and experience joy and pleasure with the new behaviors when they assert competence over the environment—what White called effectance motivation.

For Deci and Ryan, motivation is based on the degree that an activity or value has been internalized, and this is based upon the degree to which the behavior has meaning within the context of the arena of performance.

In order to sustain engagement for Deci and Ryan, motivation must be internalized—the external contingency must be “swallowed whole.” The learner identifies the value of the new behavior with other values that are part of the self. This process of engagement is the transformation of an extrinsic motive, one that is reinforced from outside the learner’s values, into an activity that is assimilated and internalized by the learner as an intrinsic value that becomes part of their personal identity. This process involves constructing values aligned with the group and environment, and thus assimilates behavioral norms that were originally external as part of a new identity. Based on the degree of control exerted by external factors, levels of extrinsic motivation can be aligned along a continuum. (Figure 3)

- **External regulation**: doing something for the sake of achieving a reward or avoiding a punishment.
- **Introjected regulation**: partial internalization of extrinsic motives.
- **Identified regulation**: doing an activity because the individual identifies with the values and accepts it as his own.

Identified regulation is autonomous and not merely controlled by external factors. It is motivation for an activity that has been integrated as part of the learner’s values, and refers to identification with the values and meanings of the activity to the extent that it becomes fully internalized and autonomous (Ryan & Deci, 2000).


Students’ learning goals may be structured to promote cooperative, competitive, or individualistic efforts. In contrast to cooperative situations, competitive situations are ones in which students work against each other to achieve a goal that only one or a few can attain. In competition there is a negative interdependence among goal achievements; students perceive that they can obtain their goals if, and only if, the other students in the class fail to obtain their goals.

In cooperative situations, students work with Positive Interdependence, where group members perceive that they are linked with each other, and that the success of each member is linked to the success of the others.

Twelve themes from these theories of identity construction, ritual and rites of passage, engagement, motivation, and social learning were taken to code the interview transcript to inform analysis and make decisions on what factors might be important for the construction of our after-school program for tracking design efficacy and measure performance.
Table 1. Themes for coding

<table>
<thead>
<tr>
<th>Play Subjunctive Mood</th>
<th>Activity Space</th>
<th>Desirable Social Grouping</th>
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</thead>
<tbody>
<tr>
<td>Ritual Rites of Passage Initiation, separation, integration</td>
<td>Positive Interdependence</td>
<td>Belonging/ Relatedness</td>
</tr>
<tr>
<td>Desirable Activity</td>
<td>Identified regulation</td>
<td>Apprenticeship</td>
</tr>
<tr>
<td>Affective Commitment</td>
<td>Autonomy/ Competence</td>
<td>Cognitive Theories of Action</td>
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THEMES FOR CODING

Of these twelve themes, there seemed to be four major themes, and the rest seemed to be interdependent sub-levels that were common across all of the theories. With this in mind, the major themes are:

• Play as Subjunctive Mood
• Activity Space
• Desirable Social Grouping, and
• Desirable Activity.

These themes were the most common descriptions of “why” when Ellen described her DDR play. These three themes also represent an aggregation of each theory, but with emphasis on activity, space, and groups, as well as the mood that needed to be present in those themes to be attractive.

DATA COLLECTION

The phenomenological interview methodology (van Manen, 1997) was used to try to elicit responses beyond descriptions of rationale to gather “thick descriptions” (Geertz, 1973) of affective, social, corporeal, and cognitive behaviors behind the activity and experience of playing DDR. And, also to encourage descriptions that were thick enough that the researcher might be able to identify instances of learning and engagement situated and distributed across networks of time and space, mediated through shared activity, and perhaps to see if there were evidence indicating what elements in the identity construction process inform motivation and engagement.

DATA ANALYSIS

The critical discourse methods as espoused by Gee (1999) and Fairclough (2003) not only provide methodologies that are fundamental to qualitative analysis, but are also fundamental to the study of “the scaffolding of human affiliation within cultures and social groups and institutions,” Gee (1999, p. 1) and “how do existing societies provide people with the possibilities and resources for rich and fulfilling lives,” Fairclough (2003, p. 202). It was for this reason that these methods were used to explore and code the phenomenological interview transcript. Although a sample of one participant is not very robust for generalization, it provided a starting point for more focused theory testing, as well as to provide insights for us as designers, theorists, and education practitioners.

INTERVIEW

This first excerpt from the interview begins to describe the motivation to learn to play Dance Dance Revolution. Ellen and I met on a nice spring day in the Whittier neighborhood near the Minneapolis Institute of Arts at a coffee shop called Spy House. When I asked her about her experience of playing DDR, she said:

*The first time I ever played Dance Dance Revolution was with my friends Tyler and Ben.*
They had it at Devon’s house and everyone was playing this game. Really, I wanted to hang out with them, I wanted to participate and so that’s when I started learning. Then it was after playing with those guys for so long that I really started to enjoy the game. I actually didn’t have a play station before that, so I went out and bought a play station just so I could play DDR, yeah ... yeah, I didn’t want to be left out of it. Games are fun and I just wanted to spend time with my friends and this is something that they were all doing.

The basis for Ellen’s learning was Belonging/Relatedness to a Desirable Group. This idea of relatedness and Belonging were fundamental in her development of skills and collection of resources to develop as a player. However, she did not have the feeling of connectedness until she was really able to engage in the activity as a participating member—Autonomy/Competence. This indicated introjected regulation, and Identified Regulation seems to require the performance and seems to require some external indication of having internalized the values of the group that are expressed through public performance in the group and a commitment to practice that showed her effort toward group success as an indication of Positive Interdependence.

Surprisingly, the activity was not initially a Desirable Activity, “I wanted to participate and so that’s when I started learning.” After some time participating, she found enjoyment along with her sense of Belonging to a Desirable Group. This phenomenon suggests precedence of Belonging to a Desirable Group for Ellen over engaging in a Desirable Activity, and also suggests that an individual can develop interest in activity that might not have been initially motivating due to a desire to belong. Speculatively, there may be some indication for the importance of Play as a Subjunctive Mood for developing affinity for an activity. It was clear that she had already identified with the people, but, based on the next excerpt, she had not identified or been identified with the activity. The descriptions she offers indicate that the activities need to be playful and not so serious, and that the activity should offer success for assured status. There must be an entry point for a public performance, and perhaps since this game was new, she could enter without the loss of status that would come from being new and unskilled while the skilled players watched her and perhaps lost interest in her performance, and possibly in her.

I was excited because this was something I could participate in. I’ve played Halo and I’m not that good at it and everyone was starting out on this for the first time, so I thought I could be one of those good people at it and get respect from people. I was really excited. They have this huge TV at Devon’s house and everyone’s around you. I was kind of nervous too because you have to do this in front of people. Well, we were all kind of sitting on the couch watching the men and I was like I want to try it. I mean, some of them were interested in seeing me probably because they knew I never played before and they made me where I was probably going to fail, but then I actually really wanted to do it, so I was like, I want to do it next! I thought I was going to be better at the game than I thought I was because I’m thinking, oh these guys they don’t have any coordination. This’ll be easy for me. I’m kind of in shape, so I was thinking it would be pretty easy and then I do some of these songs and I was like oh, I need to go down a level! I thought I caught on fairly quickly.

What was clear from this passage was the importance of the activity and her feeling that she could be successful participating and “be one of those good people at it and get respect from people.” There are several parts to this that are especially interesting:

1. Belief in her ability to succeed was essential in her willingness to perform publicly. Research on adolescents’ engagement in literacy, for example, has found that adolescent perceptions of their competence and
ability to succeed may be a more important predictor of whether they will engage, than their past performance. (Alvermann, 2001; Anderman et al., 2001; Bean, 2000; Guthrie & Wigfield, 2000). Studies of adolescents have also found that they prefer to perform where they know they will have success (Csikzentmihaly, Rathunde, & Whalen, 1996).

2. The fear of performing in front of the group with Autonomy/Competence, but that since people were just starting out, she might have a chance to be good at it and to be respected. This may have played an even larger role because she was one of the girls who watch from the sofa, not one of “the men” who play the games and perform.

3. The importance of the Activity Space and its affordances as well as the possible change in atmosphere with this new game, where there may have been more emphasis on Play as the Subjunctive Mood.

4. The role of Belonging/Relatedness seemed to be an important component in her participating in the activity and her feeling of becoming an acknowledged group member. The structure of the activity, according to the next excerpt indicated that DDR, as compared to other games, offered more of an Apprenticeship situation, where others were willing to teach and share; raising the level of success and fun through Positive Interdependence.

This makes a case for the importance of Affective Commitment, Belonging, and Competence, as well as a Cognitive Theory of Action. Although these seem to be sublevels of Desirable Activity and Desirable Group, that inform and reinforce action, they are important factors that indicate engagement and are likely fundamental to its sustenance, and also seem to indicate a form of reinforcement as socially distributed affect and cognition.

Ellen had created a Cognitive Theory of Action and knew that it was essential for her to perform to be acknowledged and claim membership—another indication of Chapman’s (2003) description of engagement, and evidence of Identifiable Regulation. To claim Belonging to this Desirable Social Group, she realized whether implicitly or not, that she needed to participate through performance (Autonomy/Competence) to Belong. This supports Deci and Ryan’s position that Autonomy, Belonging, and Competence are basic needs that underlie motivation and engagement and satisfy Skinner and Belmont’s (1993) assertion of affective involvement. What is central to these needs are the Activity Space where these young people could interact as a community through the game; the subjunctive mood of play that may have allowed for the desirability and beliefs in success; and the game itself, which seems to be structured to promote Positive Interdependence and can create Identified Regulation through structuring relations through space and activity.

Ellen had already aligned her values internally as Introjected Regulation, but she had not found an opportunity with a Desirable Activity where she might have success in the Activity Space and feel confident that she would succeed and enjoy the activity, “I could be one of those good people at it and get respect from people.”

_Halo_ and _Counterstrike_ she described as work (Sutton-Smith, 1997), which has consequences for failure—the desirable group may have been much more advanced in their performance in _Halo_ and _Counterstrike_, and perhaps took playing the game much more seriously and raised the stakes of the performance.

Games and play are often about choices without life-threatening consequences, but that does not mean that games are not taken seriously. They can be performance tests (Autonomy/Competence) and Ritual/Rites of Passage that allow for the development and affirmation of a place within a group, establishment of pecking orders, and through this, community status and entitlement; it is possible that the experience of being positioned to perform and possibly fail was some sort of initiation, a form of deep play (Geertz, 1973).
This act of bettering oneself in public can be risky situation—and it really must occur in public for a person to be seen as Competent/Autonomous and as an acknowledged group member (Belonging). This Ritualistic phenomenon was described by Geertz as the “Center Bet” in “Deep Play,” (1973) and based on Ellen’s description, it may be that as competence and expertise evolve, the play gets more serious and the stakes and status of the performance (Ritual) change, the fear of failure increases with the perceived change in subjunctive mood from play to work ethos.

THE PERFORMANCE/INITIATION

Previously, Ellen may have wanted to be part of the group, but Ellen stated that the games they were playing did not provide her with much interest to play, even though she wanted to belong to the group and participate in their space. Because of this, she may not have been considered as part of the group, but maybe more of a tourist or poser because belonging seemed contingent on being able to “do.”

I have a lot of friends who play Counterstrike and a lot of... almost every guy I know plays Halo. You can enjoy watching those games. I don’t enjoy it as much. Like I said, it’s just way more serious. They get more serious. Well, it’s like everyone is more quiet and focused, like they really get into trying to hunt these people down and kill them before they are hunted down and killed. DDR, you are playing against someone but then with Halo and Counterstrike you’re against all these people and you have to be, like, watching your back all the time. Even the people watching, they zone out and just watch it. For me it’s not as fun. As for DDR, it’s more like people jumping around and are less serious, but it’s still a lot of fun.

Prior to Ellen’s embrace of the game, she was a groupie. She could talk about how Devon did, but not about her own experience. This came, in part, as being recognized as a player by her community, but it was also a confidence that came of public performance (Autonomy/Competence); sustaining engagement with the practice; and working hard to develop status and identity related to the group and the activity and the freedoms and responsibilities that accompany them.

So, what followed was me just trying to find where I could go to play. Then I kind of got eventually frustrated with it—well, not frustrated, but I wanted to play more, so I decided to buy it for myself. Yeah.

You play by yourself to get better to play with other people. I mean, it’s always fun to play by yourself and unlock new songs and things like that. I got it for Christmas from my parents, so I didn’t have to buy it, but I had to persuade them and make sure they got me what I wanted. They didn’t really understand but they felt okay about it because it wasn’t something violent or anything like that. Then I was, like, look what I can do! They watched me. They thought it was kind of interesting. This was with my family on Christmas. Then my uncles and my little cousin, who was maybe like seven, they all got really interested by it. So my fifty-year-old uncles are trying it and they’re getting really excited. My little cousin, she’s getting excited too. She doesn’t even really understand what’s happening on the screen but she’s like jumping around on the pad.

In the DDR trial, Ellen was tested to see how she would respond to public failure: she could have quit and gone home, or she could have laughed it off and found the fun in learning and worked towards acceptance. Ellen found that there were others who were beginners that she could improve with, and more experienced players who were actually helpful and willing (Apprenticeship/Positive Interdependence) to teach. She, also, found that there is no substitute for experience, and that in order to become a part of the group, she had to go through the rites.
of practice and public initiation. According to Van Gennep (1960) this ritualized process is common to many societies where an individual passes from one stage of life to another, and it can involve separation from childhood environment, transition, and incorporation with new status. For Turner (1969), this game may not be as monumental as rites celebrating marriage or death, but it still represents a moment of social transition and eventual change in status. The importance of this is the public acknowledgement of Competence. This seems to be essential to identity construction and acceptance as a member of a group through the activity that is structured in a way that resembles positive interdependence, and may be the reinforcement for sustaining engagement.

It was through the activity that Ellen was conferred status and identity as member not only by her new friends, but through her family and the community, that had the power to convey her status and acceptance. She became a “gamer girl.” This conferred new identity and acceptance allowed her to become that gamer beyond her normal relations and to extend her community network and develop new relations and status:

Because we shared this thing, so it would be, like, oh, so whose house are we going to go to tonight to play DDR? Okay. Well, my friend Devon, his house was the main DDR house just because he had a great room for it and everything. And his parents didn’t really care how much noise we made or how late we stayed there, so his house is generally the DDR house. Tyler, who was my friend prior, we would get together and practice a lot. Michael, he bought DDR around the time that I did and we were basically kind of on the same level, and I got to know him better that way just by spending time with all these people. Nick, all these other guys, I had kind of known beforehand, but now we spent all this time together. So, it was basically we all met at Devon’s house and that’s what we would do for weekend-after-weekend-after weekend.

If we can draw from these Activity Spaces and domains and inspire the learner to feel a connection and affinity to traditional academic fare like engineering, literature, mathematics, and so forth as Desirable Activities, we may provide a portal to embracing academic learning. The challenge seems to be embedding the learning outcomes in a high-interest activity with a reinforcement network to sustain the activity and continue to validate the identity.

As Ellen’s ability with the game progressed, she was being recognized as a DDR “gamer girl,” and this conferred upon her a new identity and status. She began to find new connections through familiar school activities. Her familiar conversations changed to unexpected connections in school and at her job; as more people learned about her new status as a gamer girl, the more she began to meet others with an interest in DDR and to connect with the gamer culture. She had begun to move beyond her former status as an International Baccalaureate student (Academic), varsity soccer player (Jock/Athlete), Band Member (Musician/band geek) into a more generalized, pop-culture status, where she was seen as not so serious and more approachable.

It may have been important to Ellen to branch out and change people’s perceptions. Perception seems to be essential to transformation. We can work to create an identity, but it must still be acknowledged to have status. This may have been her first activity that was run by her contemporaries—autonomous and not overseen by adults.

Perhaps all her work in academics, sports, and band had made her appear to be too serious, and easily influenced by adults—a follower. She may have also felt constrained by all of her commitments and wanted to break out to meet new, fun people, “Really, I wanted to hang out with them ... games are fun.” The proposition that might follow as if a syllogism is that: Gamers are fun, and I want to be fun too.

It is only conjecture and anecdotal, and she did not abandon her commitment to band, sports, or academics—she graduated with an International Baccalaureate diploma—but as can be imagined, all her work in those areas may
have made it important to her to find friends who had interests beyond her everyday world, and that being a gamer would allow her to step away from conversations about the team, assignments, practicing certain pieces of music, and set her apart. Playing the game and being part of that community allowed her the ability to decontextualize and detach from work and become perceived as fun.

Developing these relations may be more than fun; it may be an apprenticeship to develop a coping tool. The importance of play, according to Vygotsky (1978), is decontextualization, where an individual can gain gratification and pleasure even in the midst of unresolved issues and larger, and time-consuming projects. The role of pretense and imagination can bring about pleasure and gratification in the face of uncontrollable circumstances; this can provide some relief through affective reward and pleasure. Perhaps the gaming provided an opportunity to decompress and laugh in the midst of all that responsibility and preparation. But, it was seemingly more than that. It was also a way to connect and extend her status by initiating new players and drawing on the interest and social capital, for example, in a hotel room on a band trip—another autonomy supporting activity space where the identity could be reinforced with status from new participants.

Yeah, it was a school band trip. So, a lot of us went and it turned out that a whole bunch of people knew what DDR was. It was interesting to see them play. Tyler and I, we kind of felt cool because our group that we had played with had progressed better than these other people that we were seeing play. They were like, oh man, this kid is so good and we play with him all the time. Tyler and I played against these people. Yeah, we beat them pretty bad.

In this instance, the game activity did extend beyond the familiar Activity Spaces like Devon’s basement; it even seemed to provide an activity that would make others see her as representative of a Desirable Group. The game and her new status seem to have supplanted the importance of being part of the gamer group in Devon’s basement. The activity became a means for extending her friend identity reinforcement network as an Affinity Group (Gee, 2001), where people affiliate because of an affinity for an activity, maybe to be part of the fun—to play. As the activity began to change for the group members, relationships started to change, and the emphasis on the game, itself, diminished.

Well, a lot of the guys that I started playing it with, they moved on to other games because that’s what they do. They focus in on something for a really long time and then they’ll find something else will be just released and everybody else will just be playing that, so they’ll jump into that. Then there was always the people who have it, like Tyler and I, who will still play it. We didn’t get bored with it; it’s just then there were other things. No, I don’t play it as much as I do anymore and my friendships through that have become different. I mean, we’re all still friends. DDR was just like this common thing that we had to, like, start us talking and then after that we talked about normal things. I became pretty good friends with a lot of people. I dated one of the guys that I met for awhile. I don’t know, it wasn’t, like, any different than like you meet people playing for a sports team. You have something in common and that’s what you’re coming together to do, and then you talk about other stuff because we’re not just focused on DDR. Well, at my work it’s kind of similar too. We’re all stuck working together and so then we get talking. Soccer and sports a lot. Any kind of group that you all come together and you have something to talk about and then we just eventually expand on that and that’s how we became friends.

The DDR game did facilitate relationships in ways that other games and activities did not, but in the end, the initial motivation may need to come from a purpose that only the individual can develop. But, play can facilitate this and may make the entrance to a group, the practice, and eventual mastery of knowledge, activity space, and activity more likely to be enticing.
and possibly provide for sustained engagement and eventual mastery. This makes a case for Play as a Subjunctive Mood and the importance of Positive Interdependence.

Playgroups, and the activities that support them, provide a common ground for interaction. There is definitely a pecking order that comes from demonstrable competence and evidence of knowledge from the semiotic domains from the game. Games are built upon play, pretense, and decontextualization, but once these activities no longer provide pleasure and gratification, the activity may quickly end and the relationships and spaces that contextualize and support them may change in the way that Ellen’s DDR group cooled off: “and my friendships though have become different. I mean, we’re all still friends.”

Games are structured forms of play, Dubbels (2008) that provide rules and roles that are defined to help members to decontextualize from the ordinary world where they have responsibility, deadlines, and environments that they cannot control. These same rules and roles also help them to know their status in the game, share common, spontaneous, and authentic experience without going too deeply into personal motives, negative feelings, and Freudian melt-downs. Corsaro (1985) called this play group phenomenon the Actors Dilemma. According to Corsaro, the Freudian meltdown, or over-sharing, is one of the most common causes of playgroup breakup. Perhaps play is the coping mechanism that allows for detachment and the ability to constructively work on what can be changed and separating out that which cannot be changed. Game roles may also allow for exploration of other peoples’ values and experience in a safe space without getting too deep or real, which represents an opportunity to try on and project different emotions, and build comfort and trust through a common experience.

In terms of identity construction, the game may take a form of a Ritual/ Rite of Passage: The Activity Space is no longer like the ordinary world. The rules and roles in a game are different and even changed for the sake of experimenta-
tion with social norms. Interpersonal boundaries can be tested without endangering status and relationships—it is a trial, a testing. As with Ritual/ Rites of Passage, when Play acts as the Subjunctive Mood, different parts of person can emerge and people can try on different personae without recrimination, because they are only playing.

**CONCLUSION**

In answering the original question, “Why did she sustain engagement?” it became evident that her motivation to sustain engagement over time changed. She was attracted to the activity because she wanted to be friends with the kids who hung out at Devon’s basement—she wanted to be an acknowledged member of the group, not part of the fan club. To do this she had to perform and risk ridicule and a possible reduction in status. Geertz (1973) described this spatially in that the further away one is from the “Center Bet,” or the central public performance, the lower your status and importance to the main event and performers.

To be part of this group, she needed to perform, but she was hesitant to try because the games being played did not mesh with her sense of play and fun. Perhaps because the play of these group members with these games (Halo, Counterstrike) was already too far advanced for them to tolerate a “newb” (new player) at the controller, and might create a break-down of the activity. In this case, the challenge is learning how to improve performance through the activity of playing better players than oneself.

Ellen decided that it might be better not impose her learning during prime-time play and risk the ridicule or contempt of poor performance. The lesson seems to be readying oneself to play in the “Center Bet,” which she did with DDR. If one is not contributing to the play, learning, and/or status of the group, perhaps spectators understand their place on the periphery, and that perception is the key to transformation, and this is mediated through play as subjunctive mood.
This ability to detach and decontextualize through play can be a very valuable trait when dealing with pressures of studying for exams, working, and other responsibilities that cannot offer immediate gratification. This inability to decontextualize and detach is one of the central behaviors inherent in Play Deprivation (Brown, 1999), a diagnosis used to make sense of the incredible violence of Charles Whitmore and his shooting spree from the bell tower at Texas A&M University. It was found that Whitmore was raised in a very rigid environment where he was not allowed friends or play. He experienced a life that looked very successful on the surface. But, in 1966 he committed what was the largest mass murder in the history of the USA. According to the National Institute for Play (1), Brown, who was a psychiatrist at Baylor College of Medicine at the time, collected behavioral data for a team of expert researchers, appointed by the Texas governor, to understand what led to Whitmore’s mass murder. What was found through interview, diary, and reconstructing is that Whitmore had been under extreme, unrelenting, stress. After many unsuccessful efforts to resolve the stress, he ultimately succumbed to a sense of powerlessness; he felt no option was left other than the homicidal-suicidal ... Whitman had been raised in a tyrannical, abusive household. From birth through age 18, Whitman’s natural playfulfulness had been systematically and dramatically suppressed by an overbearing father. A lifelong lack of play deprived him of opportunities to view life with optimism, test alternatives, or learn the social skills that, as part of spontaneous play, prepare individuals to cope with life stress. The committee concluded that lack of play was a key factor in Whitman’s homicidal actions—if he had experienced regular moments of spontaneous play during his life, they believed he would have developed the skill, flexibility, and strength to cope with the stressful situations without violence.

Brown continued exploring Play Deprivation as a construct and found similar patterns in other violent offenders, and even traffic deaths related to aggression and chemical issues. The role of play cannot be underestimated for its ability to decontextualize and reframe experience. Play therapy currently is a treatment in child psychology for helping children talk about and understand forces beyond their control.

RELEVANCE OF ANALYSIS

The utility of this analysis comes from these recalled phenomena as a pattern for planning instruction and understanding why people learn. We learn to become. We create and engage to gain new experience and entitlement and gain status without danger in our social network, as well as to learn from others, whether it is a workplace competency, gaining social skills, or as a means of adapting to stress.

The role of Play as a Subjunctive Mood in these Activity Spaces and Desirable Groups may be the organizing principle that makes these groups and activities desirable as part of identity construction, as well as the means for identity construction and reinforcement to sustain engagement. For a person to facilitate and construct an identity, they may need to play, just as children play as doctors, firefighters, teachers, mothers, and even animals and dinosaurs in games. It is through pretense that we are able to imagine and create cognitive theories of action and circumstance, and it is through play that we develop this capacity.

If we want to sustain engagement, we need to help students develop the capacity for Identified Regulation, where they may turn their play into meaningful performance when asked to perform in activities that begin to resemble rites of initiation and deep play. This process creates a subtle transition where the initial play activity becomes serious and is approached with the focus of work. Like what Ellen experienced watching advanced players of Halo and Counterstrike, and eventually what she experienced in practicing in addition to school, homework, and lessons, to prepare for DDR at Devon’s.
IMPLICATIONS AND LESSONS FOR DESIGNING INSTRUCTIONAL ENVIRONMENTS

This transcript from Ellen’s experience makes a case for developing instructional environments that allow for playful, autonomous group interaction structured as a game to allow for play in much the same way that ritual demands play. The group and space “Re–Place” and the rite offers “Re-Creation.”

The use of play as the basis for designing instruction should not be underestimated. Often we forget that play is our natural approach to learning. When working with very young people, such as infants, toddlers, and small children, we align instruction with their interests, and allow objects to help direct inquiry. It is through the use of toys and exaggerated actions and emphasis in modeling target behavior that we allow for failure to be an inherent and necessary part of learning. The hesitation many educators express with this approach is that we have much to do, and little time to do it. It begins to sound like the white rabbit in Alice’s Adventures in Wonderland running worriedly and anxiously “we’re late, we’re late!”

Stress pressure and anxiety are a natural part of learning, just as play is a natural part of learning, however, fear and threat scenarios are not often great motivators, in addition, fear and stress eventually take their toll on the body, mind, and spirit. Play may be the correct context for sustaining engagement and creating the initial portal for engaging learners in focused approaches to work and delay of immediate gratification for the kind of rewards that rigor and sacrifice deliver.

I have used these principles on several occasions to explore games and play as effective methods for aligning content and process with resistant and reluctant learners. I have used it to create games for reading instruction, literature instruction, engineering, mathematics, leadership, and organizational change. To demonstrate how this can be done, I created a game called Dry Dock to teach engineering that I will use to demonstrate the four major instructional design principles for play.

PRINCIPLE 1: PLAY AS A SUBJUNCTIVE MODE

Engineering can be a very fun class, but the curriculum I was supposed to teach was very un-fun. In fact the curriculum was the source of the dysfunction. I was being asked to start class by presenting standards, why the standards were important, and tell the students why they were learning what they were learning. I found that this was much more for the benefit of observers evaluating the quality of my teaching than it was to motivate and engage the students.

I use standards, and I feel it is important to share the larger scheme of things behind activities and what they might be preparing for, but I do it with Play as the Subjunctive Mood. The first thing I did was to quit thinking that these kids would commit to a curriculum just because it was posted up on the wall. It is not enough to tell students how they are going to fulfill standards and a rubric.

For most, fear of failure was not an issue. Many of them were accustomed to it. They had checked out as an act of integrity, and in doing so, had found that they could dictate terms to teachers because of their disruptive behavior. Although my departure from the scripted curriculum of having students redesign coffee mugs and the “do it or fail” curriculum did not always sit well with the administrators; it did result in engagement from my students (who did not drink coffee).

I told the students that we were going to be having a boat race, and that I would be bringing in my wading pool from home, and that we would be making sail boats out of Styrofoam to race across the pool. I structured all of the engineering, statistics, and technical writing so that they were embodied in the task, and that through experience, they could discover them. What was essential in this case was not so much joining a desirable group, but in participating in a desirable activity where
their group could interact in the activity space semi-independently, and that the task was one where they believed that they would have early and instant success.

In addition to this, I also tried an experiment where I used a different approach to creation of subjunctive mood in the activity: Work as subjunctive mood: I told the students that we were really behind in our work and that we would have to work hard and be rigorous in our approach to these boats. I stressed that it was incumbent upon us to learn terms like resistance, surface area, momentum, and force and apply them into our hull designs. I was talking, but they were ignoring me, tuning me out. When I asked them what they were supposed to do, many of them did not know, and many of them expressed that they did not care.

To test this I introduced the activity where Play was the subjunctive mood: I told the class that we had a fun activity where we were going to be building boats and that we were going to have four kinds of races: speed, weight bearing, stability, and general purpose. I told them that I was going to be showing them examples of boat hulls and that they should play with them a bit to decide what style of boat they were going to make for the races they were going to participate in. I found that kids had listened, knew what to do, and really wanted to start. All of the same principles and terms were still present in the unit, but they now had permission to be playful and perhaps fail. Play implies failure, recovery and experimentation. Many of the kids made crazy boats that would never work, but they were fairly successful in using the terms to justify their design for each race. It is not always what you do, or whom you do it with—it is how you do it, and that you do it at all.

**PRINCIPLE 2: DESIRABLE ACTIVITIES**

One of the key issues in creating sustained engagement and identified regulation is in creating activities that align with the goals and purposes of the learner, or exposing the learner to something they think is really cool and they want to do. Making boats was not what many teens would consider a “cool” activity, but it did hold attraction for them when I showed them the tools, the materials, and gave a brief overview of what they would have to do. Getting kids to engage may just be a matter of creating some fun, and showing that they can have early and instant success; that they can work with some autonomy in a space where there is wiggle room for them to be expressive; and that they can make adjustments if they make mistakes. There must be time allowed to go deeply into learning to allow for the student to commit to the expression of self into their work. This might mean going off task and making red sails even though it has nothing to do with learning the Bernoulli Effect, the competition, or the embedded learning outcomes.

The opportunity to make aesthetic and seemingly inconsequential changes allowed them investment in the activity through personal expression and to eventually invest in a cognitive theory of the activity, and also allow for a belief in their future success. Add to this the opportunity to work cooperatively and learn from the work of other class members—some call this copying, I call it modeling and apprenticeship—then they can make a start (often full of errors and mistakes) and adjust for excellence as they work with others and begin to better understand the project/activity. In this way we enable the spontaneous neutral experience that can be useful for beginning the learning process and also building relationships and belonging, and autonomy and competence through the activity.

The key to this principle is in embedding the learning in the activity so that learners can discover the learning principles in the process of the activity through performance and reflection, where they compare what they have done with the work of others, and the instructor can provide encouragement to scaffold further development—this is an apprenticeship model with roles, rules, and positive interdependence. Oddly, this is often also the process of inquiry,
discovery, and failure recovery, although time consuming, is often the process through which scientific principles were discovered before they were concentrated into abstractions in textbooks for memorization and testing--they were tripped over by the scientists and then operationalized into methodology. This can be done when we think of instruction as games and learning as structured forms of play. Some important elements for designing instruction as play are offered in this framework of play for instructional design modified from Dubbels’ (2008) Taxonomy of Play:

- **Cognitive theories of action:** We capture the imagination and build cognitive theories of action through imagery/visualization (mental modeling).
  - A key word for the instruction should be “IMAGINE”.

This first category in the taxonomy provides a basis for testing comprehension. It is important to be able to create mental model and theory of the action. The key attributes are visualization and imaginatively creating mental models and segmenting process and attributes for indexing in memory. If learners index and visualize well, they will likely have fine grain memory of the experience to draw upon for future use. Thus, creating these mental images is very important for creating the motivation to engage, belief in future success, and a cognitive theory of action.

- **Desirable groups:** provide roles and identities they can try on and play with and offer the ability to change roles and play with the identities.
  - A key word for instruction should be “TOGETHER”

Working with others: A great draw because it allows for interaction. Many students need to be able to copy other students until they are able to IMAGINE and create a cognitive theory of action. Some learners do not learn well from instructors. They need to watch another learner translate the experience. Through this, they not only learn how to start the assignment, but also how to create a cognitive theory of action on which they can improvise and express themselves through and commit to the activity. I cannot tell you how many times I have seen resistant learners get into a groove and not want to stop the project once they finally get started!

- **Roles:** In the case of the boat project, they became Naval Architects and Marine Engineers; just learning about what these folks do as a profession, and, that these professions exist opened a lot of student eyes and created schema for the semiotic domains of each role. They also had Learning and Functional roles (see Appendix B).

- **Structuring group work:** The creation of roles in cooperative learning as Johnson and Johnson suggest (1994) is very powerful and also what we see in early childhood play, as well as more advanced game experience for video games, teaching empathy, and modeling interaction for professional development. In structuring the work through roles, each group member has role specific tasks. One can play Return to Castle Wolfenstein or look at game-specific roles (character classes) in Appendix A and Appendix B, and imagine how these roles would culminate in teamwork for a mission. Each character class has several unique abilities and these come with different learning roles and functional roles.

  - **Identity/semiotic domains/epistemic frames:** Provide rules, roles, values, language, actions, and tools associated with the roles and identities (semiotic domains) that they can work with, and act on that which is inherent to the task, where the performance is the assessment. The role of the Naval Architect is to design a
marine vessel for specific activities. The elements that define this role are the tools, activities, language, values, and outcomes associated with the role, and ultimately, the boat floats or it doesn’t. This embodiment is informative assessment, where the action provides immediate feedback through complete or partial mastery, or failure and the role provides for measure of progress and schema development based on knowledge of the semiotic domains.

- **Create choices and branching decision network:** It is important here that the learners explain their cognitive theories of action and are asked to utilize and explain the identity tool box to support their choices and why they did what they did, and what might be next.

- **Contingency/probability:** This comes about when we consider the possible contingencies that might come from an action through prediction and hypothesis testing. Examples of this are resource management; awareness of likelihood of an action based on knowledge of the game and instructional environment, and attempted quantification and probability of failure or success.

This structure for instructional design comes from A Taxonomy for Play and is aligned with a scale for levels of cognitive theories of action in Dubbels (2008). This triarchical model, the third leg being reading comprehension, has been the basis for a number of successful curriculum units as well as digital games, allowing for direct linkage to learning and comprehension metrics and is also available at http://www.vgalt.com.

**PRINCIPLE 3: SPACES**

Spaces are where we can offer activity, autonomy, interaction, and relationships. By creating spaces where learners can self-govern to an extent, we make them desirable, especially if there are desirable tools and resources as affordances. What I did with the boat unit was to create a rite of passage to get from one learning space to another. The students were told that to use the tools and start on their hull designs, that they had to use the hull examples and sketch a hull design, and then explain why and how the hull would perform well in specific race conditions (speed, weight-bearing, stability, general purpose)—then they were to go and test their design and hypotheses.

I was able to create different work spaces by offering tools and independent construction of their boats with a number of hot-wire cutting tools (for the Styrofoam) if they were able to sketch and explain their design based upon the hull exemplars and key vocabulary I had poster around the classroom walls; this was also where I had placed the wading pool for the races, and where students could make test runs of their constructed boats.

In a sense, I had created a threshold or Liminality into my classroom space, much like a game allows one to level up, or passing a rank elevates a soldier. It was a rite of passage of one space to another. The new space allowing more autonomy and less controlled interaction through a verbal examination and demonstration of applied knowledge and competence—a knowledge act (Dubbels, 2008).

**PRINCIPAL 4: DESIRABLE GROUPS**

This was mentioned in the Desirable Activities, but this deserves its own principal. The role of Desirable Groups was primary for Ellen as a motivator for her to become a DDR expert. What makes it especially relevant is the role of socially desirable groups and the influence they hold in conferring identity, the entitlement, and
status that go with it. The role of groups cannot be underestimated for identity construction and the rituals that convey it. If Wenger (1998) is correct, and identity is central to human learning, and as Buckingham states, that identity is developed by the individual, but must be recognized and conferred through community through some type of performance or ritual, then the structuring of ritualized activities for status and competency construction may be immensely important for not only creating engaging activities, but to sustain them and make them life habits.

The studies operationalized in this analysis provide several key features, that when brought together provide a very powerful tool kit for instructional design:

- Communities of practice, which represent the established pathway into community, status, and entitlement. This model aids in our understanding of the distribution of knowledge through webs and networks of sharing, modeling, and instruction through status, identity, community ritual, and affiliation
- Affinity Groups, which explicate the importance of the activity in conveying group membership and status through evidence from the semiotic domains, which are signs, signals, and markings acquired and bestowed through experience in communities of practice and apprenticeship experiences.
- Self-Determination Theory provides the elements that lead to internalization of these activities, values, language, relations, and spaces for the actualization and internalized regulation of motivation and engagement into activities and habits that provide a source of satisfaction beyond the external, or extrinsic rewards that into activity that is self-satisfying and self-fulfilling for enjoyment and effectance, so that engagement is sustained and informs the individual’s identity and status.

- Social Interdependence and Cooperative Learning, which provide insights into how to structure learning contexts and positive interdependence for learning, relations, and alignment of identity with valued cultural norms through Instructional design.

These are all brought together with the awareness that play may be the foundation for the construction and development of these descriptions—a portal to work, where we learn that play is the initiation, as well as the rite—and through ritualized behavior, activity, and representation, with allowance for learning and failure recovery we grow, evolve, and make meaning through mental models and prediction-- and thus innovation and deep seated cognitive theories of action due to the inherent process of reflection and do-overs in play and games to heighten public performance and status.

Play seems to be the subjunctive mood that mediates entry into work and competence, and possibly to expertise. As play becomes more competitive through more complex cooperation and trust, play and learning deepens into effort, application, and work.

In addition, play is the foundation for ritual and representation, and central to creating the context and subjunctive mood for performance that supports apprenticeship, culture, and social learning. Play is fundamentally important for building life habits such as fitness, reading, and even simple things such as manners and cooperative behavior. In his treatise on play, Homo Ludens, Johan Huizinga (1938) posited that play was the basis of culture, and Lewis Mumford (1945) reasserted this in his treatise The Myth of the Machine—stating that it was it was imitation (mimesis), role play, the creation of miniature environments, and the symbolic fields of play where every function of life were modeled as a game to develop competency and advance what was known and yet to be known.
Dubbels (2008), in the spirit of Vygotsky, (1978), furthered this by stating that play and representation are the factory of our conceptual abilities, and if play involves the creation of abstractions and models of the world, then sharing play necessitates complex communication as well as a means for innovation and production, and perhaps the basis for cognitive theories of action, mental models, hypothesis creation, and ultimately comprehension.

With play central to our approach, we may find that motivation and engagement increase with little need for threat because of the inherent pleasure of learning without the dangers of repercussion or loss of status through failure. Failure is an inherent part of play, but a gentle entry with play and the promise of early and instant success (as in sail painting) can provide the portal to more profound success through failure recovery, modification, continuous improvement, and iterative design. In a game, there is often a loser, and in order to get better, we assume that we must fail to get better, as we must seek better players and more difficult conditions to improve, develop, and even transform.

Games are structured forms of play (Dubbels, 2008) that can provide the portal to complex social and cultural cognitive enhancement and progression. They represent new forms of ritual and safe contexts for contest and accomplishment through challenging apprenticeships in expert systems, where an expert might not have been available in the past. Games may be the new rite of passage and rituals, or as Vygotsky (1978) called toys “ pivots,” where a banana can become a phone in a child’s play, where play is a transitional stage that is the beginning of separating the meaning of an object from literal to figurative. Games may be an elaborate pivot for accomplishment, status, and entitlement through modern day social and cultural networks in virtual and real space, and these may be the elements that motivate and sustain engagement and provide real answers for designing learning contexts and sustaining engagement and creating the kinds of identities that engender habits of lifelong learning and activity.

REFERENCES


APPENDIX A. CHARACTER CLASSES

Typical character classes and game roles from a video game can be used as a model for designing classroom instruction for learning roles (see Appendix B also). In this case from the game Return to Castle Wolfenstein. Each character class has different skills and fit what Shaffer (2006) calls an Epistemic Frame: the ways of knowing, of deciding what is worth knowing, and of adding to the collective body of knowledge and understanding of a community of practice, where by playing the medic and learning the opportunities and constraints, one begins to create a cognitive framework, or schema for a content domain of identity, knowledge, competence, language, values, and activity. Roles like these can be structured into instruction, just as they are reinforced in communities of practice and the hegemony of social practice and institution.

From Wikipedia:

**Soldier**: The soldier is the only class that can use heavy weapons. They are: mortar, portable machine gun (MG42), flamethrower, and bazooka/Panzerfaust. On the No-Quarter mod the Venom machine-gun and the BAR (Allies) or StG44 (Axis) have been added as well. Leveling up gives the Soldier benefits such as the ability to run with heavy weapons (instead of being slowed down).

**Medic**: The medic has the unique ability to drop health packs, as well as revive fallen players with a syringe. They also regenerate health at a constant rate, and have a higher base health than any other class, which makes them the most common class for close-in combat. When a player has achieved skill level 4 in medic, they get Self Adrenaline, which enables them to sprint for, longer and take less damage for a certain amount of time. Some of the medics act as Rambo Medics. Their emphasis is on killing rather than healing or reviving.

**Engineer**: The engineer is the only class which comes equipped with pliers, which can be used to repair vehicles, to arm/defuse (dynamite or land mines), or to construct (command posts, machine-gun nests, and barriers). As most missions require some amount of construction and/or blowing up of the enemy’s construction to win the objective, and as defusing dynamite can be very useful, engineers are often invaluable, and one of the most commonly chosen classes. The engineer is also the only class capable of using rifle muzzle grenades.

**Field ops**: The field ops is a support class which has the ability to drop ammo packs for other players, as well as call air strikes (by throwing a colored smoke-grenade at the target) and artillery strikes (by looking through the binoculars and choosing where they want the artillery support fired). This class has low initial health, but makes up for having an unlimited supply of ammunition.

**Covert ops**: The covert ops is the only class which can use the scoped FG42 automatic rifle, the silenced Sten submachine gun (or MP-34 on some Mods), and a silenced, scoped rifle (M1 Garand for Allies, K43 Mauser for Axis). The covert ops has the ability to wear a fallen enemy soldier’s clothes to go about disguised, throw smoke-grenades to reduce visibility temporarily, and place and remotely detonate explosive satchels. By looking through a pair of binoculars, the covert ops can spot enemy landmines, bringing them up on their team-map. The covert ops also show enemy soldiers on the team-map. Medic, Engineer, This creates a fluid transition to the next category.
APPENDIX B. LEARNING AND FUNCTIONAL ROLES FOR DESIGNING STRUCTURED INTERACTION AND POSITIVE INTERDEPENDENCE

Functional Roles–Adopted from http://www.myread.org/organisation.htm

ENCOURAGER and COP

- Reads instructions and directs participation
- Read the instructions
- Call for speakers
- Organize turn-taking
- Call for votes
- Count votes
- State agreed position

ENCOURAGER and SPY

- Summarizes findings and trades ideas with other groups
- Check up on other groups
- Trade ideas with other groups

*Allowed to leave your place when directed by the teacher

ENCOURAGER and Scribe

- Writes and reports groups ideas; is not a gatekeeper.
- Record all ideas
- Don’t block
- Seek clarification

ENCOURAGER and STORE KEEPER

Locates, collects and distributes resources including informational resources like web pages and encyclopedia entries

- Get all the materials for the entire group
- Collect worksheets from the teacher
- Sharpen pencils
- Tidy up

*Allowed to leave your place without teacher permission

LEARNING ROLE for LITERACY

Freebody (1992) and Freebody and Luke (1990) identify the roles literate people take on that can be used in a classroom for activities that involve reading or the study of literacies that involves narratives and cultural phenomenon.
CODE BREAKER

How Do I Crack This Code?

- What words are interesting, difficult or tricky? How did you work them out?
- What words have unusual spelling?
- What words have the same sound or letter pattern or number of syllables?
- What words have the same base word or prefix or suffix?
- What words mean the same (synonyms)?
- What smaller word can you find in this word to help you work it out?
- What words are tricky to pronounce?
- How is this word used in this context?
- What different reading strategies did you use to decode this text?
- Are the pictures close ups, mid or long shots?
- Are the pictures high angle or low angle?
- Were there any word pictures, eg similes and metaphors? How did you work them out?

USER

What Do I Do With This Text?

- What sort of text is this? (Information, story/narrative) How do you know?
- Is it fact or opinion? How do you know?
- How can you find information in this text?
- How did the author start this text? Did it suit its purpose?
- Who would read a text like this? Why?
- If you wrote a text like this what words and phrases would you use?
- How is the language the same/ different from other similar texts you have read?
- Could the text help solve a real life problem?
- If you were going to put this text on a web page, how would it be different to the print version?
- What is the purpose of this text?
- Could you use these ideas in a poem, story, play, advertisement, report, brochure or poster?
- How would the language, structure and change?

PARTICIPANT (EXPERT)

What Does This Text Mean to Me?

- Does the text remind you of something that has happened to you or to someone else you know?
- What does the title/cover suggest that the text is about?
- What might happen next? What words or phrases give you this idea?
- What are the characters thinking and feeling? How do you know?
- What message is the author presenting?
- What are the main ideas presented?
- What do the pictures (graphs, diagrams, tables, captions, illustrations) tell us?
- Do they fit in with the text and do they provide more information?
What did you feel as you read this part?
Describe or draw a picture of a character, event or scene from the text.

ANALYST (INVESTIGATOR)

What Does This Text Do to Me?

- Is the text fair?
- What would the text be like if the main characters were girls rather than boys and vice versa?
- Consider different race and cultural backgrounds too.
- How would the text be different if told from another point of view?
- How would the text be different if told in another time or place, eg 1900 or 2100?
- Why do you think the author chose this title?
- Think about why the author chose particular words and phrases.
- Are there stereotypes in the text?
- Who does the text favor or represent?
- Who does the text reject or silence?
- How does this text claim authority? (Consider language, structure and content)
- Who is allowed to speak? Who is quoted?

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