ABSTRACT

Title of Thesis: ENGLISH TEACHER AS DUNGEON MASTER: GAME DESIGN THEORY MEETS COURSE DESIGN IN RHETORICAL EDUCATION

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Traditional pedagogical practices—lecturing, standardization, product-based quality grading—do not promote deep, critical learning. Addressing the deficiencies of traditional pedagogy, gaming pedagogy is a branch of critical pedagogy that identifies the effective design principles of games and then applies these principles to course design. In doing so, gaming pedagogy reproduces the experience-based, autotelic, intrinsically-motivating properties of games within the classroom, making education more fun and effective. In this document, I apply gaming pedagogy specifically to rhetorical education, which is uniquely advantaged to benefit from game design principles. In what follows, I present an objective definition of play and game, identify the overlapping design goals of games and education, identify the useful experiential qualities of games and explain how they apply to rhetorical education, summarize and analyze useful course design praxes from the perspective of gaming

pedagogy, and conclude with an application of gaming pedagogy to my own first-year writing classroom.

BREAK.

ENGLISH TEACHER AS DUNGEON MASTER: GAME DESIGN THEORY MEETS COURSE DESIGN IN RHETORICAL EDUCATION

by

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Introduction

Without any context, the notion of an English teacher acting as a "Dungeon Master" sounds antithetical to what any educator should strive to be. On one hand, the title of Dungeon Master might conjure up notions of a callous overseer straight out of a Gothic horror novel. On the other hand, if you have encountered secondhand depictions of Dungeons & Dragons in popular culture, then it is possible you have come to understand the Dungeon Master as the chief nerd among a coven of socially awkward outcasts playing some sort of fantasy-themed game.[1] However, neither of these depictions fairly represents the game of Dungeons & Dragons or the role of the Dungeon Master, so allow me to explain why I use this analogy.

Dungeons & Dragons (abbreviated D&D) is described as a "fantasy role-playing game" (Gygax 7). The game takes place in a *fantasy* setting, which has been created by the various writers and designers who represent the D&D franchise, most notably Gary Gygax and Dave Arneson, who together created the first *Dungeons & Dragons* game booklets in 1974. Gygax and Arneson's first edition of D&D has since been followed by hundreds of supplemental books released from 1974 to the present that describe the fantasy world of D&D, granting this world a level of detail that rivals Tolkien's Middle-earth. Within this fantasy world, real-life players *role-play* as fictional characters, assuming these characters' identities as they adventure through the game's fantasy setting. On behalf of their fantasy D&D characters, real-life role-players narrate their actions, receive live feedback, and experience the story's

[1] Perhaps by reading Junot Diaz's *The Brief Wondrous Life of Oscar Wao*, watching CBS's *The Big Bang Theory* or Netflix's *Stranger Things*, or listening to Weird Al's "White and Nerdy."

memorable moments firsthand. Through successful role-play, players experience the D&D story at a deeper, more personal level than if they were simply their real-life selves watching or reading about some other adventurers exploring a fantasy setting. To facilitate players' engagement with the fantasy world, Gygax and Arneson created a comprehensive system of rules that dictate how role-play is performed. These rules, when combined with the goal of completing the game's story, are what turn fantasy role-playing into a *game*. Generally speaking, players roll dice (which represents the element of variance or luck), and then use these values to calculate the success or failure of their actions as they play within the game's fantasy setting and strive to complete its goals. Once the D&D story is complete, the game is won.

This leads to the role of the Dungeon Master (DM), who manages the game by describing the world's setting and its inhabitants, facilitating participation among the many players in attendance, citing rules, making calculations, and providing feedback to the players based on their actions. In this sense, the DM is much less a "master" and more of a facilitator of gameplay. To this point, game designers Wyatt et al. identify many tasks for the Dungeon Master:

> Because the D&D game is as wide open as the imaginations of the players, the presence of a DM to act as a moderator, story designer, and narrator is essential. The players interact with each other and the imaginary environment through the actions of their characters, and the DM describes each scene, directs the action, and plays the roles of monsters, villains, and all the other people (the butcher, the baker, the innkeeper) that the characters meet on every adventure." (12)

Contrary to any empowerment that may be associated with the title of "Master," the DM (generically called a "Game Manager" in non-D&D gaming systems) is not above the players. Rather, the DM is tasked with being a "moderator" of game-play.

It is the DM's job to know the details of the story and the mechanical rules of the D&D game system as s/he facilitates gameplay among many players. To this point, Gygax writes that the success of a D&D game "is based upon the efforts of all participants. The Dungeon Master is pivotal, of course, but the players are just as important, for they are the primary actors and actresses in the fascinating drama which unfolds before them" (Gygax 2). In this sense, no one individual is above the rest: without the players, the game will not function; without the DM, the game will not function. All participants are equally necessary for a quality role-playing experience.

Perhaps it is becoming clear why I use the role of a DM as an analogy for good teaching: the image of a DM working together with many different players to participate in an activity comprised of rules, input, and feedback should seem reminiscent of a classroom informed by modern pedagogical theory, wherein an educator works together with many different students to participate in a knowledge-generating environment comprised of classroom rules, student participation, and instructor feedback. It is the DM's job to manage gameplay among many players, just as it is the instructor's job to manage a classroom of many students. In either case, participants work together as equals to generate enjoyable, engaging, and memorable experiences.

This may be a bit idealistic, however. While the notion of a classroom that combines the engagement of modern critical pedagogy with the fun of playing a game is certainly intriguing, it takes a lot of work to achieve. Even knowing the kind of classroom environment that I wanted to create, I found it difficult to maintain focus

on this goal during my first year teaching college English. While there were certainly good days where I inspired the kind of active engagement that I had hoped to create, there were other days where I became the kind of professor that I hoped never to become: a monotonous lecturer, a dispenser of knowledge, a grader of writing products—generally what I consider to be a traditional, outdated, and boring type of teacher.

I could say that I fell into bad habits, but I hadn't yet developed any habits because I was so inexperienced. What really happened is that I unconsciously began emulating the ineffective teaching practices that I had experienced as a student. In *The Schools Our Children Deserve: Moving Beyond Traditional Classrooms and "Tougher Standards,"* author Alfie Kohn describes a similar experience, admitting to perpetuating conventional teaching methods early in his career as a teacher. Kohn believes that this is because our personal experiences as students unconsciously shape our natural instincts as teachers. Kohn observes that "most of us have sat and listened to teachers lecture at us year after year, so we naturally think that's what teaching is all about" (62). Students do not think to question how they were educated in school, so when these students become teachers themselves, they continue to use the same old unhealthy teaching practices they had experienced as students because these practices have become normalized and accepted. Without critical self-evaluation, educators are prone to duplicating these unhealthy teaching practices without even realizing anything is wrong. Illustrating this point, Kohn recalls his experiences coming to the realization that lecture-based teaching methods were ineffective:

> When I was teaching, it never dawned on me to question this view. There was a stretch of seven years, for example, when I took great

> pleasure in teaching an intensive course on existentialism to high school students. In between terms, I fine-tuned the reading list and perfected the lectures, looking forward to the next year when I could teach it again. . . . It wasn't until years later that I began to realize just how little I understood of education. . . . I used to assume I was a good teacher because I knew what I was talking about, I enjoyed what I was talking about, and I was a good talker. The problem was that I thought teaching was about talking, so I did way too much of it. I wasn't familiar with the cognitive research demonstrating that "knowledge cannot be given directly to students." Precisely because I was successful in conventional terms, I had no reason to question them. (62-63)

While Kohn initially viewed himself as an effective teacher because he successfully duplicated what he calls the "Old School" lecture-based method of teaching, it took a critical evaluation of these Old School methods to realize that he was actually an ineffective teacher. This is because conventional teaching methods view knowledge as a thing to be transferred directly from teacher to student, which is an ineffective way of generating knowledge among students. Without analyzing these Old School teaching methods, educators are prone to go on repeating them without realizing the problems inherent in this teaching method.

The type of teaching that Kohn labels as Old School could be equated to the "banking" model of education condemned by Paulo Freire in *Pedagogy of the Oppressed*, in which Freire identifies the dehumanizing qualities of lecture-based teaching that make this pedagogical approach ineffective. Describing the conventional classroom setting, Freire observes it as being "fundamentally *narrative* [in] character," involving "a narrating Subject (the teacher) and patient, listening objects (the students)" (71). Of this classroom dynamic, Freire observes that

> Education thus becomes an act of depositing, in which the students are the depositories and the teacher is the depositor. Instead of communicating, the teacher issues communiqués and makes deposits

> which the students patiently receive, memorize, and repeat. This is the 'banking' concept of education, in which the scope of action allowed to the students extends only as far as receiving, filing, and storing the deposits. (72)

As Freire goes on to explain, there are several problems with the banking model that make it ineffective and dehumanizing. First, banking does not give students the opportunity to reflect on what they are being told. With the banking method, information is not contextualized, only memorized, so students do not develop the skills to think critically and apply information. Freire observes that "The more students work at storing the deposits entrusted to them, the less they develop the critical consciousness which would result from their intervention in the world as transformers of that world" (73). With the banking model, students adapt to the passive role assigned to them by the educator, accepting information and conforming to the world rather than developing the faculties to think critically, develop new knowledge, and change the world to fit their needs. This process turns the student into a mere "spectator" in the world instead of a "re-creator" with others in the world (75). This process is oppressive because it suppresses critical thought, which works against generating new ideas and effecting change through action. In addition, this process is dehumanizing because it treats students as devoid of knowledge and encourages self-deprecation. Illustrating this point, Freire observes that students "call themselves ignorant and say the 'professor' is the one who has knowledge and to whom they should listen. . . . Almost never do they realize that they, too, 'know things' they have learned in their relations with the world" (63). Treating students as devoid of knowledge and experience deprives them of their value as intellectuals. In the banking model of education, students exist only to be filled with knowledge; they

serve no other purpose in the classroom.

Returning to Kohn, those who eventually become educators may not think critically about the way they themselves learned in school because the banking model works against critical thought and promotes passive acceptance, thus perpetuating the banking model's own existence. This is why educators especially must analyze critically the problems fraught with Old School teaching methods lest they go on to perpetuate them. Those invested in education must not be merely "spectators" who accept the deficiencies of the old system; they must be "re-creators" who adapt education to fit their needs. It takes less thought and effort to simply lecture than it does to create innovative new activities for classroom engagement, which is why it is so easy to fall into a cycle of lecturing and banking.[2]

In addition to the ease of lecturing, a factor that works to promote the banking model is the prevalence of standardization. Standardization has long been a criticized practice in K-12, as many in the field of education have viewed this practice as antithetical to the learning process.[3] This is because standardization depends on tests that are very high-stakes for several reasons. For students, standardized tests render the complexities of their intelligence and aptitude into a set of numbers, which are then used to place them into different tiers, which impacts their quality of education, which ultimately impacts their ability to access quality secondary education. For educators, test scores are emphasized because they reflect the school/district/state's overall quality and effectiveness, which may impact funding. For this reason,

[2] Indeed, I found it easier to generate an extemporaneous lecture based on the assigned reading (especially on occasions where I was short on preparation time), rather than plan a classroom activity that engaged students critically. Innovating fun and useful classroom activities requires serious time and consideration.

[3] Kohn, Wurdinger, and Gee have criticized standardization, for example.

standardized tests become a high-stakes matter for students and teachers alike, each pressured to focus on raising test scores instead of focusing on learning. This pressure to raise test scores, in turn, feeds into the usefulness of the banking model, which is suited to helping students memorize facts that will be useful to know for the exam. This practice has been nicknamed "skill and drill," where educators focus on having students bank decontextualized knowledge, which is later followed by a test of memorization.[4] The problem with this practice, as Freire, Kohn, and Gee all point out, is that this knowledge is learned passively, is not rooted in personal experience, and is easily forgotten because students do not have actual practice using these skills critically. That is, without experience applying the skills that are covered in class, students' abilities to actually use these skills toward useful purposes will be left undeveloped. For example, students may learn of iambic pentameter through reading classroom examples, but without any consistent practice applying this skill, it is likely to be memorized only just long enough to pass the test before it is forgotten. For this reason, the emphasis on "skill and drill" for the sake of raising test scores is actually antithetical to learning because it does not contextualize information and make it useful.

In addition to K-12, college English education is not exempt from the practice of standardization. While the university itself may not issue standardized tests,[5] the practice of standardization can exist within certain writing classrooms if the professor takes a current-traditional approach to assessment, grading student writing as a product instead of a process. I, admittedly, may have taken an overly prescriptive way

[4] See Kohn and Gee.
[5] Although certain programs require graduate school exams like the GRE, GMAT, LSAT, or MCAT, just to name a few.

of introducing the academic essay during my first semester teaching First Year Writing. I overemphasized imitation of good student samples when demonstrating the qualities that I was looking for in the final product. Some lessons relied too heavily on me going through student samples with a fine-toothed comb, which allowed for very minimal student discussion. Later, as I read student essays, some students successfully reproduced the qualities that I had emphasized in class, but I have to wonder if those who submitted a good product really learned how to apply the things I was emphasizing. For example, if an "A" paper successfully exhibited the qualities of a strong introduction, was this because the student was learning strong writing skills, or was this because the student was adept at imitating the things I emphasized in the student sample? Alternately, if a student put forth effort in attempting to write an introduction based on the skills I was trying to teach but came up short in execution, is it right to penalize this student because his or her product did not quite match what I had in mind? I graded the submitted products, yet the effort that went into learning went woefully unrewarded in some instances. This was evident during one instance when a student submitted an essay that I valued at a "C-." As it turned out, she had put in hours of additional work outlining, writing drafts, meeting twice with the writing center, and revising her paper before submitting the product. She invested A-level effort. Unfortunately, I did not grade her effort because I had no idea how much work she had invested into her writing until she met with me *after* the grade had been issued. Instead, I only graded the product she submitted based on its ability to reproduce the qualities that I had emphasized in class, on the assignment sheet, and with annotated student samples. In this sense, if writing teachers are

teaching and grading by comparing student writing to an ideal, standardized product, then the act of imitating the effective qualities of the ideal product may work against critical thinking. While imitation can certainly be a useful approach to learning rhetoric,[6] imitation without sufficient analysis, discussion and understanding of why certain rhetorical choices are effective or ineffective may lead to the development of writing skills that are decontextualized—although students might know *of* effective writing practices, they might fail to recognize when, how, or why these practices should be used when occasions arise outside of class.

A complication of standardization is that it places too much pressure on grades and grading, which works against actual learning.[7] In Kohn's research, he cites multiple studies from multiple nations, which collectively indicate that "interest, like achievement, is usually lower when students are working for a grade" (42-43). This is because grading actually inhibits learning. Kohn concludes,

> In sum, researchers have found that traditional grades are likely to lead to three separate results: less impressive learning, less interest in learning, and less desire to do challenging learning. Moreover, a school's use of letter or number grades (just like its use of standardized tests) may encourage a fact-oriented curriculum since that sort of knowledge is easier to score (43).

Because grades are so important, students are disincentivized to challenge themselves. It is safer to avoid experimentation and stick to the beaten path because, once the final product is submitted, students are unlikely to have the opportunity to improve their grade for the submitted project. This is exacerbated by the fact that students will not have their efforts rewarded—even when their attempts take a lot of

[6] I actually believe imitation to be quite effective in learning how to write. Imitation is as old as rhetoric itself.

[7] This is especially true when grades are curved, as this practice pits students in competition against each other, thus encouraging students to root against their classmates' success.

time and energy—if the final product is off the mark. Therefore, the primary goal of school becomes attaining a high letter grade, while experimenting beyond the scope of what is easiest to achieve an "A" goes unrewarded. Likewise, if the teacher's goal is for their students is to meet certain standards, then lessons and assignments may end up discouraging experimentation if their criteria is overly rigid.

Because of the excessive importance of earning high grades, grading becomes one of the least-favorite aspects of teaching for many educators. To this point, Kohn observes that teachers "don't like what grades do to their relationships with students—namely, mak[ing] them adversaries instead of allies" (44). Kohn cites examples of educators distrusting students when they offer comments, suspecting them of buttering up their teacher to receive a higher grade; students asking if certain activities "count" toward their grade (which, ideally, should not matter); and teachers lamenting the bargaining, disagreeing, and argumentation that ensues after grades are submitted (ibid). Furthermore, as others observe, grading works against the effectiveness of written feedback for essays and projects, as students overlook written feedback, focusing solely on the grade instead (Danielewicz & Elbow 254). Because so much emotion can be invested in the value of grades, written feedback can go unread if the grade is disappointingly low. No one wants to read why their project was terrible; even the most considerate, non-hostile feedback will not be enough to prevent some students from feeling insulted, stupid, or worthless.

In sum, there are glaring deficiencies inherent in conventional teaching methods. Classrooms that overemphasize lecturing, banking, standardization, and grading harm students by creating decontextualized knowledge; passive engagement

with course content; an unwillingness to experiment or take risks; self-deprecation; anxiety; stress; and fear, distrust, or anger toward the teacher.

In response to these deficiencies of traditional pedagogy, many pedagogical theorists have proposed their own methods of making education more engaging and "critical." One specific branch of critical pedagogy that has become increasingly studied and practiced in recent years is gaming pedagogy or game-based pedagogy, which seeks to take the useful elements of game design and apply them to course design to make learning more engaging, effective, and fun for students. The motivation behind this movement comes from the observation that games somehow have the power to attract and maintain the player's attention for long, sustained periods of time. That is, playing a game is an *autotelic* experience, in which players play for the sake of play. If educators could somehow manage to duplicate even a fraction of that success with their coursework, then learning might become a more engaging and enjoyable experience in which students learn for the sake of learning. Moreover, each and every game possesses its own unique literacy that must be learned before the game can be played. Somehow, games entice users to actually *want* to learn how to play them. If educators can identify how games manage to be intrinsically motivating texts that fuel their own learning, then this, too, might make classroom learning more fun and effective than traditional teaching methods.

To do this, pedagogical theorists studying game-based pedagogy have made observations about what games do effectively—observations that often coincide with the goals of critical pedagogy. One such theorist is James Paul Gee, Professor of Literacy Studies at Arizona State University, who became one of the founders of

game-based pedagogy with the publishing of his book *What Video Games Have to Teach Us about Learning and Literacy*. With this work and others that followed, Gee influenced future educators to take games seriously as a framework for course design.[8] While there are many things that games do well,[9] there are seven overarching experiential qualities that I have identified as useful for creating a critical pedagogy based on games (and that all happen to conflict with the traditional teaching methods discussed earlier):

- *Interest:* Good games sell themselves, answering the question "Why would I want to play this game?" The answer to this question encourages the player to transition from a state of disinterest to a state of play.
- *Learning how to play:* Good games combine the process of learning how to play with the act of playing the game itself. There is little to no pre-learning before actually playing the game; players learn how to play the game as they play it.
- *Goals & Objectives:* Good games have clear goals and objectives, balancing long-term goals with short-term goals to avoid overwhelming players.
- *Conflict/Uncertainty:* Games possess an uncertain goal, which is a source of conflict. Good games allow players to mitigate this uncertainty through skill and effort, balancing the level of conflict at an enjoyable level.
- *Input & Feedback:* Good games accommodate different solutions (input) to a problem while providing unique and quantifiable feedback. In addition, good games focus on rewarding good choices and not punishing players for bad choices. Games provide a safe space for the feedback loop to operate.
- *Design Space:* Good games are customizable. As a design space, games encourage players to consider how they are designed and constructed, allowing players to customize the design space to fit their needs.
- *Role-Playing:* Good games serve as simulations or representations of other situations, allowing players to practice being other people and view the world from other perspectives.

While this is hardly a complete list of what games do effectively from the perspective

[8] You will often find Gee referenced in later works discussing game-based pedagogy.
[9] Gee identifies 36 "principles of learning" inherent in video games, for instance, while other theorists have made their own unique observations.

of critical pedagogy, most all games possess many of these qualities. The goal of gaming pedagogy is to create a classroom environment that promotes autotelic, experience-based learning, which is accomplished by providing students with a safe space to experiment, take risks, receive feedback, and fail safely. Through this process, learning becomes contextualized through personal experience, allowing learned skills to become more ingrained and useful in the minds of students.

While theory and praxis for gaming pedagogy has been written about before, I have yet to encounter a work that systematically transitions from identifying the elements of game design theory to actual praxis for course design based on these elements.[10] I have compiled the following research with this goal in mind. This project will first define the concepts of "play" and "game," identifying the characteristics that separate one from the other. Once these concepts have been defined, I will then compare the purpose of games with the purpose of education, revealing the overlapping goals between games and education. Once these goals have been identified, I will then transition toward analysis of the game design theory, analyzing how games are designed to achieve their goals, as well as how education can apply these same design structures to achieve the goals of rhetorical pedagogy. At the same time, I will analyze praxes that exhibit qualities of game design theory, demonstrating practical methods for applying game design theory to the structure of the rhetorical classroom. To conclude, I will propose my own vision of how an English course motivated by game design theory might be structured.

In addition to my desire to take a very systematic approach to establishing a theory of gaming pedagogy, I also am writing in response to a lack of game-based

[10] The works I have encountered usually do one or the other.

pedagogy written specifically for rhetorical education.[11] This is significant because rhetorical education is in a uniquely advantaged position to make use of gaming pedagogy, and there are a number of reasons for this. First, the all-encompassing subject matter of rhetoric allows for greater exploration among students—they can apply rhetorical theory to whichever subjects interest them as aspiring professionals in their field, as activists, and/or as civically-engaged individuals. This coincides with the exploratory nature of gaming pedagogy, which grants students the ability to learn about the things that interest them. In addition, gaming pedagogy can be implemented harmoniously while educators remain focused on other topics within the field of rhetoric—issues of language rights, civic engagement, activist rhetoric, feminist rhetoric, racial rhetoric, disability rhetoric, digital rhetoric, transfer theory, and any other topics intrinsic to the study of rhetoric. Gaming pedagogy is merely a way of designing course as game; it is not the topic or focus of the course, nor should it be. Another advantage that makes rhetorical education especially compatible with game-based course design is the existence of a whole genre of gaming that is built upon rhetorical action as the basis of its gameplay: role-playing games (RPGs). RPGs offer a convenient model upon which to design a rhetoric course as game. Conveniently, this genre of gaming is not exclusively digital; role-playing games can be written, oral, and/or multimodal, so there is no digital obstacle that requires rhetoric teachers to also be digital programmers in order to use gaming pedagogy effectively in the classroom. Finally, the history of rhetorical education is, in fact, rooted in play. Since the time of the presocratics, who began teaching rhetoric as peregrinating philosophers in the fifth century BCE, the teaching of rhetoric has been intrinsically

[11] Many texts discussing gaming pedagogy are generalized for all classrooms.

playful.[12] Although a modern dichotomy of play being antithetical to work (namely schoolwork) has occluded this relationship, learning can, in fact, be fun, especially when playing with rhetoric.

Before departing from this introduction, I want to clarify the scope of this paper. The goal of this paper is to analyze the theory of game design, identify the essential design elements of games, and then apply these elements to rhetorical education in order to form theory and praxes for designing more effective and engaging rhetorical classrooms. In addition, I mainly have a college composition classroom in mind as I compose this research, though I believe this theory could apply to English classrooms at the high school level as well. What is this project not about? This project is not strictly about computer games or RPGs—it is about all games. Not everyone plays computer games or RPGs, so it is important to discuss games that appeal to everyone. While I do believe that RPGs present a great model due to their rhetorically-based gameplay, the theory I propose is informed by all of game design. Furthermore, this paper is not about literally bringing computer games into the classroom. While I respect the research generated by other theorists in the field of gaming pedagogy, I am doubtful that requiring students to play computer games in the classroom is a move in the right direction. In addition, this paper is not about studying games as cultural artifacts for analysis/criticism. While games certainly provide rich material for critical analysis, that is not what this paper is about. And finally, this theory is not about a shallow "gamification" of rhetorical pedagogy. While some educators have attempted to merely shoe-horn playful activities into the classroom, or more generally entice students with cursory changes to traditional

[12] I do not mean to imply that Western rhetoric is the origin of all rhetoric.

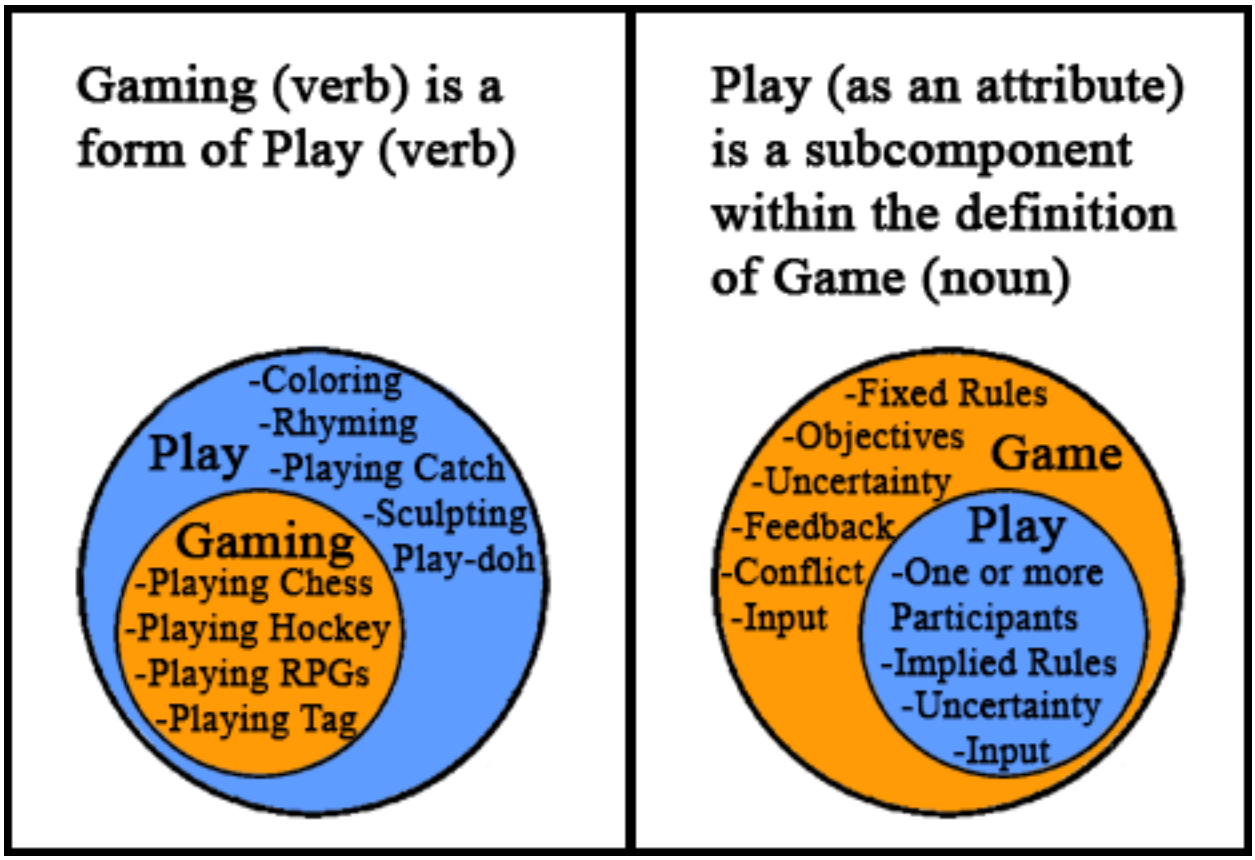
pedagogy (renaming percentage points "experience points" while keeping the traditional grading system; handing out "badges" for completing a required assignment; organizing students into "guilds" during group-work),[13] true gaming pedagogy seeks vast change from traditional pedagogy, not a simple relabeling of old practices.

[13] See Ian Bogost's "Exploitationware" for a definition and critical analysis of gamification.

Chapter 1: Defining Play and Game as Objects

To begin, I must explain the methodology behind defining *play* and *game*, which can be conceptualized in two different ways. From one approach, play (verb) and game (verb) can be thought of as distinctly different activities based on the experiences they create—experiences that can be characterized by the exercising of one's imagination, the generation of material profit, and/or the formation of social groupings, just to give some examples. From another approach, play (noun) and game (noun) can be thought of as definable objects made distinct from one another by the unique components that each object intrinsically possesses—components such as rules, objectives, and/or conflict. Because of the dual nature of *play* and *game* as activities that can be performed and experienced, and as objects with their own definable attributes, it is possible to conceptualize *game* as nested within *play* while simultaneously conceptualizing *play* as nested within *game*. On one hand, as an activity that is performed, game (verb) is but one form of play (verb). All games are played, but not all play is game. On the other hand, play (noun) is but one component of game (noun); *game* always contains all elements that define *play*, but *play* does not contain all elements that define *game*. For a visualization of this, see figure 1.

Figure 1: The Taxonomy of Play and Game



What this distinction means is that play and game can be perceived and conceptualized in two different ways. On the one hand, play and game can be thought of as definable objects separate from the experiences that they may grant players. On the other hand, play and game can be thought of as performative acts defined by the experiences of the players. However, experiences are inherently subjective, varying by opinion and perspective, while a standalone definition is not. For this reason, an objective definition of play and game that is isolated from the experiences they may provoke is preferable.

It is with this distinction in mind that I will proceed to analyze theorizations of play and game presented in Johan Huizinga's Homo Ludens, Roger Caillois's Man, Play, and Games, and Salen & Zimmerman's Rules of Play: Game Design Fundamentals. Each of these works provides useful conceptualizations of play and/or game, but we must separate the experiential qualities of these theorizations to first understand play and game as definable objects. For example, Salen & Zimmerman critique Huizinga's definition of play as being too "experiential" at times, writing of Huizinga's theory that it "wonderfully describes the sense of being at play … [but] it is not clear that these experiential qualities will help define a game: just because a poorly designed game fails to be absorbing doesn't mean that it is not a game" (Salen & Zimmerman 75). Experience-based definitions can be inconsistent when compared with other definitions—what is perceived as a game by one person may not be perceived as a game for another person based strictly on differing experiences. If our endeavor is to define play and game, then we must separate the subjective experiences elicited by playing games from the activities themselves: play and game must each stand alone as definable objects with their own distinct attributes. Later in this project, after these objects have been defined, I will proceed toward identifying the positive experiences created by games and analyze how to duplicate them in the classroom by drawing upon the components of effective game design. For this chapter, however, my goal is to first establish a definition of play and a definition of game that can be applied universally to identify activities as one and/or the other.

Survey and Analysis of Theories[14]

Before delving into the ideas suggested by Huizinga, Caillois, and the authors surveyed by Salen & Zimmerman, I will first contextualize the works composed by each. Beginning with Johan Huizinga, his work *Homo Ludens* (composed in 1938) was one of the first texts within the field of game studies to develop a comprehensive theory and definition of play, which provided the groundwork for further discussion by later theorists. Although Huizinga attempts to define play, he never intended to compose a definition of *game*. That said, Huizinga does cite elements of game in his analysis of play despite not differentiating between the two. Furthermore, Huizinga's *Homo Ludens* was never intended to focus *solely* on a definition of play. Rather, Huizinga's advent of a theory of play was necessary for his overarching argument, which is that all serious cultural institutions (such as education, government, and/or religion) are all rooted in play. Nevertheless, Huizinga does provide a foundation for theorizing play. In Huizinga's own succinct definition of play, he writes:

> Summing up the formal characteristics of play we might call it a free activity standing quite consciously outside "ordinary" life as being "not serious," but at the same time absorbing the player intensely and utterly. It is an activity connected with no material interest, and no profit can be gained by it. It proceeds within its own proper boundaries of time and space according to fixed rules and in an orderly manner. It promotes the formation of social groupings which tend to surround themselves with secrecy and to stress their difference from the common world by disguise or other means. (13)

[14] Before proceeding with this analysis, it is important to note that, although play and game are clearly different words with different meanings in the English language, such is not always the case in other languages. Citing David Partlett, Salen & Zimmerman remind their readers that play and game use the same root words in German and French (72). In the case of Johan Huizinga (German), the word play stands in to describe the concept of game for lack of a sufficient equivalent in the translation of his work Homo Ludens. Likewise, Roger Caillois's Man, Play, and Games (French) can become equally difficult to interpret, given that play sometimes is used instead of game in translation. Thus, defining play and game is a task that must be undertaken with caution, as context is especially important when determining meaning.

While this succinct definition of play is packed with meaning, it is not totally representative of his complete argument. Nevertheless, it is this excerpt that Caillois and Salen & Zimmerman cite when responding to his theory.

In 1958, Roger Caillois composed *Man, Play, and Games* in direct response to Huizinga, seeking to create not only a more focused definition of play but a definition of *game*. Caillois criticizes Huizinga for being unfocused in his definition of play, including too much information in some aspects while neglecting information in other aspects. Nevertheless, Caillois' definition shares several points with Huizinga's definition. As a compendious definition of play (not game), Caillois writes that play can be defined as an activity that is essentially:

- *Free*: in which playing is not obligatory; if it were, it would at once lose its attractive and joyous quality as diversion;
- *Separate*: circumscribed within limits of space and time, defined and fixed in advance;
- *Uncertain*: the course of which cannot be determined, nor the result attained beforehand, and some latitude for innovations being left to the player's initiative;
- *Unproductive*: creating neither goods, nor wealth, nor new elements of any kind; and, except for the exchange of property among the players, ending in a situation identical to that prevailing at the beginning of the game;
- *Governed by rules*: under conventions that suspend ordinary laws, and for the moment establish new legislation, which alone counts;
- *Make*-believe: accompanied by a special awareness of a second reality or of a free unreality, as against life. (9-10)

Comparing this list to Huizinga's summary of play, items one, two, four, and six transfer with little change to Caillois's definition. Point three, however, is new to Caillois's definition, while point five is similar, yet nuanced by Caillois's identification of *explicit* rules and *implied* rules (8-9). In addition, Caillois's theory omits the immersive element of play "absorbing the player intensely and utterly" as

well as the element of "social groupings," both of which Caillois dismisses as inaccurate.

As a final point of analysis, Katie Salen & Eric Zimmerman's *Rules of Play: Game Design Fundamentals* offers a definition of game that is based on separate works composed by many different and notable game historians, theorists, and designers.[15] Salen & Zimmerman analyze several different theories of play and game, generating a number of qualities that could potentially be considered when attempting to form a definition. The individual theories and theorists cited by Salen & Zimmerman approach this definition from different perspectives, with some defining play, some defining game, some failing to differentiate between the two consistently (Huizinga and Caillois), and some defining specifically computer games and not all games. Given this, a brief summary of concepts does not do each author's individual theories justice, as the nuances of their ideas will inevitably be lost in summary. Nevertheless, Salen & Zimmerman's research helps clean up any omissions left over from an analysis of Huizinga and Caillois, which will help in forming a master list of possible qualities that could potentially define play and/or game. In what follows, I will reference some potential elements of play and game from Salen & Zimmerman's text, analyze these elements, and then whittle down these potential elements, discarding subjective, experiential elements of play and game while keeping only those elements that help to build a definition that is objective and sound.

[15] Theorists cited by Salen & Zimmerman include: game historian David Partlett, gaming theorist Clark C. Abt, philosopher Bernard Suits, computer game designer Chris Crawford, game designer Greg Costikyan, game theorist and historian Brian Sutton-Smith, Johan Huizinga, and Roger Caillois. In addition, Salen & Zimmerman also propose their own definition of game (but not play).

Play Involves One or More Participants

Huizinga and Abt make statements on game as consisting of two or more participants. Play, we know, can be performed by one participant or more than one participant. Perhaps less obvious, however, is that game can be performed by as few as one participant, contrary to the theories proposed by Huizinga and Abt. Huizinga states that "Closely connected with play is the idea of winning. Winning, however, presupposes a partner or opponent; solitary play knows no winning, and the attainment of the desired objective here cannot be called by that name" (50). Furthering this assertion is Abt, who views game as "an activity among two or more decision-makers" (qtd. in Salen & Zimmerman 74). However, game most certainly can be performed by one participant. One could look to computer games as illustrative of this fact, as players endeavor to "win" (or more appropriately, complete objectives) within a digital environment. However, one could potentially argue that the computer's AI represents a second opponent, which opens an avenue for discussion that need not detain us here. Instead, the wooden game *Labyrinth* serves as an example of a single-player game, wherein one person guides a marble through a wooden maze pitted with holes, the objective being to guide successfully one or more marbles through the maze at one time. The game can be played by one person, and its objective can be completed or "won." Given this, it is fair to say that both play and game are activities that can be performed by one or more participants. Put another way, both play and game always possess at least one participant and can possess multiple participants.

Play Is a Voluntary and Free Activity

Huizinga, Caillois, Suits, and Avedon & Sutton-Smith each support the claim that playing play is optional. On this topic, Huizinga writes that play that is involuntary is, at best, a "forcible imitation" of play (7). Likewise, Caillois contends that "obligatory" play would "at once lose its attractive and joyous quality as diversion" (9). Avedon & Sutton-Smith define games as "voluntary control systems" (Salen & Zimmerman 78). As an example to this point, the ancient roman coliseum may have provided entertainment for spectators, but for enslaved gladiators it most certainly was not a playful occasion. However, this aspect of play is experiential and unreliable. As a counterexample, if a person is pressured by friends and family into playing charades because the group needs an even number of players, then is playing the game really a choice? Further, would the fact that one person is forced into participating make charades lose its playfulness or gameness? Charades is still a game that is played, even if one player is halfheartedly participating. While free participation is usually true of play and game, as an experiential quality, it is not necessarily always true of play or game, and so it cannot serve as an objective element within the definition of play or game.

Play Occurs Within Its Own Space

Huizinga, Caillois, and Crawford each make the observation that play lies outside of ordinary life, proceeding within its own proper boundaries of time and space. Huizinga spatializes play, granting play its own time and space outside of "ordinary" or "real" life. He writes, "[play] is rather a stepping out of the real life into a

temporary sphere of activity with a disposition all its own" (8). And later, "Play is distinct from 'ordinary' life both as to locality and duration. . . . It is 'played out' within certain limits of time and place" (9). Huizinga later uses the term "play sphere" to label this space (49). Caillois agrees with Huizinga, adding that the terms of this space are "defined and fixed in advance" (9). Nowhere is the spatialization of the play sphere more salient than at an elementary school, where the space for play, the playground, is clearly set apart from the classroom wherein "ordinary life" happens. It is within the play sphere that a game of kickball might take place, standing apart from ordinary classroom learning, and existing within its own space (the kickball field) and time (the duration for free-play).

Regardless of how concrete the play sphere may be in theory, neither Huizinga nor Caillois does enough to accurately define this concept. What is "ordinary life"? Where does the space for ordinary life begin and end? Where does the space for play begin and end? Can these spaces overlap? Can these spaces be engaged simultaneously? The answers to these questions are likely to be nebulous and subjective conceptualizations based on the experiences of the player(s). What one person interprets as the play sphere might be interpreted by another person as ordinary life. A group of kids having a game-night may see themselves as acting within a space designated for gaming, but when mom and dad say it's time for bed, the reality of life sets in: mom and dad do not recognize the sanctity of the play sphere. The conceptualization of play as existing within its own sphere may be an ideal setting, but it is not necessarily an intrinsic, universal quality of play, at least not as Huizinga describes it.

Crawford extends Huizinga and Caillois's spatialization of play, applying the concept of the play sphere directly to games, describing them as providing a safe space from which to artificially experience reality. He writes:

> Conflict implies danger; danger means risk of harm; harm is undesirable. Therefore, a game is an artifice for providing the psychological experiences of conflict and danger while excluding their physical realizations. In short, a game is a way to experience reality. More accurately, the results of a game are always less harsh than the situations the game models. (Salen & Zimmerman 77)

From this definition, one can probably guess that Crawford is approaching the definition of game from the perspective of either a board game designer or a computer game designer.[16] From this perspective, Crawford's definition would be quite true: a person playing *Halo* is far removed from the hazards of alien invasion. However, this definition certainly does not apply to the realm of sports, wherein players are constantly at risk for serious, even life-threatening injury. The concept of gaming providing a safe space may be an ideal outcome of effective *computer* game design, but it is not a universal trait that can be attained by all games. Even a person playing a computer or board game is at risk for mental or physical injuries, as unlikely as this may be. While the creation of a safe space may be an ideal outcome of gaming, it cannot exist as a trait of all games.[17]

[16] Crawford is notable for designing many popular computerized war-games in the 80s and 90s.
[17] However, creating a safe space to play is an extremely important and much-desired goal of game-based course design, so this endeavor should not be dismissed altogether, only separated from the basic components of game.

Play Is Not Serious

Huizinga makes the claim that play is not serious in the summary of his own theory. However, describing play as "not serious" is a puzzling deviation from the argument Huizinga makes throughout his analysis. Although Huizinga initially recognizes that "to our way of thinking, play is the direct opposite of seriousness," he later writes "for some play can be very serious indeed" (5). Huizinga cites Chess and football as examples of competition that are deeply serious between competitors. In addition, Huizinga's greater argument proposes that numerous sacred acts are rooted in play, thus categorizing religious ceremonies, governmental debate, and even war as forms of play, albeit serious play. Huizinga's own conception of play is anything but "not serious," and there are numerous examples to the contrary, including serious gaming competitions and professional sports. These points aside, even if Huizinga is accurate in his assertion, the seriousness of playing or gaming is a subjective quality tied directly to one's personal experiences, leaving this topic extrinsic to an objective definition of play or game.

Play Is Immersive

Huizinga expresses the opinion that play absorbs the player intensely and utterly in his summary, later using the term "seizure" to describe the sense of captivation that occurs during play. He writes, "we are dealing with a necessary mental process of transformation. The thrill, the 'being seized' by the phenomena of life and nature is condensed by reflex action, as it were, to poetic expression and art. It is difficult to describe the process of creative imagination in words that are more to the point,

though they can hardly be called a true ‘explanation’” (17). The concept Huizinga strives to understand and express in this instance could best be equated to the concept of “immersion,” in which the mind of a person at play is so engrossed in the play activity that reality becomes pushed to the periphery while the fantasy of play occupies the person’s attention. While immersion is an achievement of successful game design, this quality is intrinsic to neither play nor game. Salen & Zimmerman critique Huizinga for this observation, writing “just because a poorly designed game fails to be absorbing doesn’t mean that it is not a game” (75). Indeed, while immersion is an experience that many game designers hope to create for their players, this quality is not integral to all play or all games.

Play Is a Non-Productive Act

Huizinga and Caillois are the only theorists to make the suggestion that play is an activity connected with no material interest and that no profit can be gained by it. Huizinga approaches this aspect of play from a perspective of personal gain, namely in the form of money. Play that is performed for money has motivations and economic effects that extend beyond the play sphere, so these motivations cannot be part of play. Huizinga is especially critical of (and perhaps biased against) gambling in his criticism, which he views as incompatible with play. Caillois largely agrees with Huizinga on this topic, though he makes allowances for the material investment involved with purchasing gaming supplies and equipment, and he allows for gambling to fall under play in his definition, given that the wealth is not generated by participants; it merely changes hands. However, salaried play becomes work,

according to Caillois (10). Regardless, the concept of play as being removed from material interest is easily dismissed from a perspective of game as definable object. Does the fact that some people receive a salary for playing basketball make basketball no longer a game that is played? Of course not. Basketball is, by all accounts, a game. The mere fact that some people play basketball professionally does not invalidate it as a game for everyone else. Thus, the element of profit is not germane to a definition of play or game.

Play has Rules

Huizinga, Caillois, Partlett, Abt, Suits, Avedon & Sutton-Smith, and Salen & Zimmerman each identify the element of rules, though where Huizinga and Caillois apply rules to play, the other theorists apply rules strictly to game. Regarding Huizinga, this is where the difference between play and game can be difficult to interpret. While Huizinga does not differentiate between play and game, he does identify two distinct types of play: "The function of play in the higher forms which concern us here can largely be derived from the two basic aspects under which we meet it: as a contest for something or a representation of something" (13). As Huizinga clarifies, a "contest" relates to more structured, rule-based play while a "representation" relates to more freeform, imaginative play. A game of Chess is a *contest*—it is structured and orderly. A child playing house is a freeform *representation* of adult life—it is not structured. The former is a game that is played "according to fixed rules and in an orderly manner"; the latter is merely unstructured play. Given this distinction, it would make sense to view Huizinga as applying rules

to “contest” (game) and not necessarily to “representation” (play).

Caillois largely agrees with Huizinga, though he adds nuance to the element of rules. Where Huizinga only identified rules that were “fixed,” leading to “orderly” play, Caillois differentiates between two types of rules: explicit rules and implied rules (8-9). Explicit rules are the fixed and orderly rules characteristic of game described by Huizinga. Implicit rules, however, are unstated and tacitly accepted by those who play. For example, it is an implied rule that children playing cops and robbers not break character by acknowledging that they are merely *acting* as cops and robbers, just as it is an implied rule that a child coddling a baby not break immersion by acknowledging the baby is made of plastic. Players accept the “unreality” of play where imitation and mimicry are concerned: players are not supposed to break the fourth wall of reality (Caillois 8). Implied rules do not fall solely within the realm of play, however; games also possess implied rules in addition to their explicit rules. For example, it is an implied rule that the tic-tac-toe player make his/her mark within a few seconds and not over the course of an hour. Therefore, implied rules may belong to both play and game.

In contrast to play, game is bound by explicit rules, always, even if the players create these rules themselves. Where play allows for less constrained activity, game is a purposeful delimiting of play, wherein rules are established to make play “inefficient,” to quote Bernard Suits (qtd. in Salen & Zimmerman 76). That is, rules make a game’s objectives harder to achieve. While a game of bowling would certainly be easier to complete if players could simply march down the lane and topple the pins by foot, the explicit rules of the game dictate that players roll an 8.5

inch ball from 60 feet away. These rules make the objective of toppling all of the pins harder to achieve—it makes playing "inefficient." Contrary to what is most efficient for achieving a game's goal, constraints are accepted by all who elect to participate, a phenomenon that Suits identifies as the "lusory attitude" (Salen & Zimmerman 77). In sum, not all play has explicit rules, but absolutely all games have explicit rules. This is perhaps the most crucial element demarcating play from game.

Play has Goals or Objectives

Huizinga, Partlett, Abt, Suits, Costykian, and Avedon & Sutton-Smith all recognize the element of goals or objectives as part of game. Salen & Zimmerman do not interpret Huizinga as recognizing "objectives" as part of his theory, yet with the inclusion of something being "at stake" in one of Huizinga's later chapters, it is evident that goals are a part of Huizinga's theory, even if this element is absent from the succinct summary he provides of his own theory of play. Huizinga later adds that "'There is something *at stake*'—the essence of play is contained in that phrase. But this 'something' is not the material result of the play, not the mere fact that the ball is in the hole, but the ideal fact that the game is a success or has been successfully concluded" (49). Focusing on the latter part of this excerpt, we can see that what is at stake relates to the following: 1) "the ideal fact that the game is a success," and 2) that the game "has been successfully concluded." In some ways, these goals are one and the same: the conclusion of the game marks success in many instances. For example, a person playing a role-playing game achieves success by finishing the story; a person assembling a jigsaw puzzle achieves success by completing the puzzle; a person

pretending to have tea with dolls achieves success once the party is adjourned. Success is marked by completion of the play activity within the time and space for play. In this sense, Huizinga suggests that play (not just game) has something at stake—its completion within the time and space for play. However, this notion of play having a clear point of completion seems dubious—how does one accurately determine when free play is completed? The answer varies by situation. While Huizinga's application of something being "at stake" in the realm of play may have its merits, it is not wholly applicable to the freeform nature of play, which cannot be constrained by goals or objectives. Therefore, the element of "objectives" does not apply consistently to play.

However, it is possible Huizinga actually had *game* in mind when he proposed this concept, in which case Huizinga would be in agreement with his contemporaries who recognize game as consisting of objectives. Many of the theorists cited by Salen & Zimmerman define games as consisting of goals or objectives, the ultimate objective being to win, and the means of winning being defined by the game's rules. It seems obvious that the game sets objectives with its rules—this is the case with seemingly every game. This notion coincides with Partlett's theory, which describes games as consisting of "ends" (objectives) and "means" (rules). Of "ends," Partlett writes, "It is a contest to achieve an objective. . . . Only one of the contenders, be they individuals or teams, can achieve it, since achieving it ends the game. To achieve that object is to win. Hence a formal game, by definition, has a winner; and winning is the 'end' of the game in both senses of the word, as termination and as object" (qtd. in Salen & Zimmerman, 74). In Partlett's commonsense notion of game, he observes

that: 1) game is a contest to achieve an objective, 2) only one side of the competition can complete the objective, and 3) achieving the objective ends the game in victory for the winning team. While these observations are true of most games, there are exceptions to some of these points, which means that this definition is too specific to be a sound definition of game.

Regarding Partlett's first observation, it is universally sound to define game as consisting of one or more objectives. Without objectives, gaming becomes mere play: there is no discernable thing to complete or achieve, leaving play to go on endlessly without direction. For example, suppose undirected free play spontaneously turns into "the first one to touch the flagpole wins the race"—suddenly, unfocused play becomes imbued with direction by invention of an objective. As soon as someone reaches the flagpole, the objective is reached, the contest won, and the game completed until a new objective is invented. Thus, the addition of an objective turns mere play into a game. It can be said safely that all games possess objectives.

However, regarding Partlett's second observation, there are, in fact, games in which multiple players can achieve the same objective. The goal of D&D is for players to work together cooperatively to complete one or more quests—completing the game's story while roleplaying a character in the story is the main objective of the game. In addition, many computer games are played cooperatively, with player one, player two, and possibly more players working together to complete the game's story—completing the game's story is the main objective, and multiple players can achieve it. Thus, a conception of objectives as being attainable by only one player or team is insufficient for a definition of game.

Regarding Partlett's third observation, achieving a game's objective(s) does not necessarily end the game, nor does it necessarily end the game in a "win." To begin, games usually have many smaller, proximal objectives. In baseball, the first objective is to get on base, the second objective is to score runs, the third objective is to hold the lead defensively, the ultimate objective is to end the game having scored more runs than the other team—merely completing the first objective does not win the game. Furthermore, even if the sole objective of every game is simply *winning*, even this does not signal the end of the game in certain instances. In a "sandbox" RPG, in which players are free to roam a virtual world as a player-character, simply achieving an objective (such as completing the main quest's story) does not automatically end the game in a win. Rather, the player may continue to play the game, completing other objectives (side quests) and roaming the virtual world as they please despite having already "won" the game by completing its main objective. In this instance, how does one determine when a game is complete? Who or what determines the objectives of the game? When does "winning" happen?

This leads to Partlett's recognition of "means" (rules) as the second element of games, in which Partlett suggests that the game's rules set the conditions for a winning situation: "[Means] has an agreed set of equipment and of procedural 'rules' by which the equipment is manipulated to produce a winning situation" (qtd. in Salen & Zimmerman 74). However, this is a shaky proposition. While it is easy to say that the game's rules define the terms of a "winning situation," it must be considered who sets these rules. For example, a game of *Risk* played in Alaska should follow the same rules as a game of *Risk* played in Kamchatka because the game system itself is sold

with comprehensive, explicit, and seemingly universal rules that define how the game is won. However, this perception does not take into account the element of "house rules," which may redefine the terms of victory. Perhaps a group of *Risk* players who are pressed for time might abbreviate the game by agreeing that the first person to control an entire continent for an entire round wins the game (traditionally, the condition for a win is conquering the entire world). In the case of house rules, the players themselves have set the objective and redefined the conditions for victory. This property is even more evident in arcade games that define success by granting only high scores. For example, in a game of *Space Invaders*, is the objective to beat one's personal highest score? Is the objective to beat the highest score on one local machine? Is the objective to beat the highest score in the world? *Space Invaders* is a game that will inevitably end with the words "GAME OVER." In such a case, what is "winning" when success is marked not by completion but by how long the player was able to forestall the inevitable end of the game? The answer would be a subjective one, regardless. Completing a game's objective(s) does not end the game, nor does it necessarily mean the game is "won."

In conclusion, winning and completion can be subjective terms that do not apply to all games. It is the individual player who sets objectives and determines success based on the completion of these objectives. This distinction is in harmony with the definition of game proposed by Avedon & Sutton-Smith, which states that "Games are . . . confined by rules in order to produce a disequilibrial effect" (Salen & Zimmerman 78). In addition, this statement agrees with the notion put forth by Salen & Zimmerman, who observe that the objective of any game is to achieve "a goal-state

which is different than the starting state of the game" (ibid). Thus, all that can be said for certain is: 1) not all play has objectives; 2) all games have objectives; 3) objectives consist of changes to the original game-state; and 4) changes to the original game-state may involve winning and ending the game, but not always.

Play has Conflict

Huizinga, Partlett, Abt, Crawford, Avedon & Sutton-Smith, and Salen & Zimmerman each recognize the element of conflict specifically in the context of games, which seems an easy point to prove. After all, objectives and the constraints (rules) that make achieving these objectives difficult are inherently sources of conflict for players. Therefore, conflict is patently a part of game. The real challenge, then, would lie in illustrating that conflict is an element within the definition of play. If we account for even minimal conflict, I believe that all play can always be found to provide sources of conflict—perhaps not very much conflict, but some form of conflict. For example, a child playing at rhyming words is challenged by his/her own command of spoken language; a child playing pretend is challenged by reality to imagine that objects and events exist where they do not; a child playing with fingerpaints is challenged by his/her own motor skills to get the painting just right. In each of these examples, the play activity provides some sort of meaningful mental and/or physical challenge, some degree of resistance between the player and the activity. Without this resistance, play devolves into a tedious activity or task that is not play. Play challenges all individuals by exercising their mental and physical abilities, regardless of how advanced these abilities may be relative to the norm. In

this sense, it could be interpreted that all play, as well as all game, consists of meaningful resistance, more generally classified as conflict.

Play has Uncertainty

As a specific form of conflict, the element of uncertainty is unique to Caillois' theory, and is explained as follows:

> An outcome known in advance, with no possibility of error or surprise, clearly leading to an inescapable result, is incompatible with the nature of play. Constant and unpredictable definitions of the situation are necessary, such as are produced by each attack or counterattack in fencing or football, in each return of the tennis ball, or in Chess, each time one of the players moves a piece. (8)

Salen & Zimmerman dismiss this observation, asking "If a Chess master plays against a beginner, is the outcome of the game uncertain for the Chess master?" (76). However, this question only pertains to the absolute outcome of the game. Just how the game unfolds is still uncertain: is the beginner adept enough to at least take a few of his/her opponent's pieces? Or perhaps the beginner opens into a blundersome "Fools Mate," ending the game after a mere two moves. Either way, the exact unfolding of events that lead to the inevitable outcome is left uncertain. Again, to bring this back to the example involving *Space Invaders*, the player knows with certainty that the game will end with the words GAME OVER, but how long the game lasts before this inevitable outcome occurs is uncertain. While an outcome may be certain, the precise events leading to this outcome are uncertain—this is true of both play and game.

Play Involves Decision-Making or Input

Costykian, Abt, and Avedon & Sutton-Smith include the element of decision-making in their theories of game design.[18] Costykian, for example, sees decision-making as a major element of game-play, stating "A game is a form of art in which participants, termed players, make decisions in order to manage resources through game tokens in the pursuit of a goal" (qtd. in Salen & Zimmerman 78). Likewise, Abt sees gaming as being "an activity among two or more independent decision-makers" (qtd. in Salen & Zimmerman 74). Indeed, it seems clear that all games involve decision-making, regardless of whether they are decisions of physical technique or mental decisions of strategy. This element also could be extended to a definition play. While playing with crayons may not involve comprehensive strategy and technique, definite decision-making occurs regarding choice of color, where to color, how to color, and so on. Even a kitten batting a ball makes decisions concerning how hard and in which direction to bat the ball. These decisions, coupled with the actions involved in performing them, could be thought of as *input*. In this way, decision-making (input) is a part of both play and game.

Play Provides Feedback

Crawford and Salen & Zimmerman recognize the necessity of feedback in their respective definitions of game. Crawford offers the element of "interaction," explaining that games "allow the audience to explore its nooks and crannies, to let them generate causes and observe effects. Games provide this interactive element,

[18] Each of these authors focuses specifically on game, not play.

and it is a crucial factor in their appeal (qtd. in Salen & Zimmerman 77). This definition builds off of decision-making as a form of input, as only through decision-making and player action can a game provide feedback. At its simplest, games turn input into feedback—feedback that players can then interpret, evaluate, and use when making further interactions with the game.

Salen & Zimmerman further this concept, defining feedback as a "quantifiable outcome," stating that "Games have a quantifiable goal or outcome. At the conclusion of a game, a player has either won or lost or received some kind of numerical score. A quantifiable outcome is what usually distinguishes a game from less formal play activities" (80). In this sense, games provide not simply feedback but quantifiable feedback, feedback that can be interpreted as positive, negative, or neutral. While input can result in obvious feedback, this feedback must be quantifiable in some way. For example, if a game associates a blinking light with a particular action, this feedback must be capable of interpretation by the player—the player must know if the blinking light is a good thing, a bad thing, or a neutral thing. As Salen & Zimmerman correctly assert, this is a dividing factor between play and game. Where game provides quantifiable feedback, play does not always do so. Playing with crayons provides visual feedback, but this feedback is non-quantifiable; it remains unstated whether selecting one color over another or coloring outside the lines is a good thing or a bad thing. A "coloring game," in contrast, would provide some sort of quantifiable feedback indicating these choices as positive, negative, or neutral.

Game Is a System

Salen & Zimmerman present a unique observation by defining games as systems. Simply put, a game is composed of many individual components that work in harmony to operate as a complex *system*. Salen & Zimmerman identify four components of games as systems: 1) objects, 2) attributes, 3) internal relationships, and 4) environmental relationships (51). In addition, these four components operate at three different levels: as formal systems composed of mechanical parts and rules; as social systems composed of players and their experiences; and as cultural systems situated within a societal context (ibid). To illustrate the four components of a game system and the three levels at which they operate, Salen & Zimmerman dissect the game of Chess, illustrating the following categorizations.

As a *formal system*, Chess is composed of 1) objects (the Chess board and Chess pieces); 2) attributes (the rules governing game setup, the movement of the pieces, and the game's objective); 3) internal relationships (the relationship between pieces, such as one piece threatening another piece); and 4) environmental relationships (the spatial layout of the pieces on the game board) (51).

As a *social system*, Chess is composed of 1) objects (the players themselves); 2) attributes (the pieces controlled by the players—white or black); 3) internal relationships (the strategic, psychological, and emotional relationships between players); and 4) environmental relationships (the environment in which play takes place, coupled with the context surrounding the occasion for play. The play environment could be a quiet room, a public park, or an online Chess forum; the context for play could be a casual game among novice Chess players, a serious Chess

competition among veteran players, or a forced sparring between two students disinterested in Chess, just to offer some examples) (51).

As a *cultural system*, Chess is composed of 1) objects (the game of Chess itself); 2) attributes (historical information about the game, along with any relevant design elements of the game); 3) internal relationships (how the game is perceived by the culture surrounding it); and 4) environmental relationships (the game's existence within a culture—the Cold War setting provided an environmental relationship for the World Chess Championship of 1972 between Bobby Fisher and Boris Spassky) (52).

The focus of this chapter is on game as a mechanical *formal system* composed of rules, objectives, and feedback loops, which function to create a definable object *game*. Chapter three of this essay, which will look at the beneficial experiential effects of games, deals partially with games as *social* systems. Thus, it is necessary for a complete understanding of game to acknowledge the multifaceted nature of games as formal, social, and cultural constructs. Games are systems, and they function at three distinct levels. While play may possess such intricacies in certain situations, not all play forms a complex system.

Conclusion: A Definition of Play and Game

Having surveyed a list of possible elements of *play* and *game*, it is now time to construct a definition for each term. These definitions must exist apart from subjective human experiences if they are to stand as objects. Taking what was discussed above, we can form the following master list of observations regarding play and game. In the process, we can exscind any experiential qualities, as these qualities

vary by situation.

- Both play and game always possess at least one participant and may possess multiple participants.
- Both play and game may or may not be voluntary (experiential quality).
- Both play and game may or may not be perceived as existing within its own safe space apart from reality (experiential quality).
- Both play and game may or may not be serious (experiential quality).
- Both play and game may or may not be immersive (experiential quality).
- Both play and game may or may not have material interest (experiential quality).
- Play may have implied rules. Game always has implied rules.
- Play may have fixed rules. Game always has fixed rules.
- Play may have objectives. Game always has objectives. Winning and/or finishing the activity may or may not be an objective.
- Both play and game possess conflict.
- Both play and game possess uncertainty.
- Both play and game allow for player input.
- Play may or may not provide feedback. Game always provides feedback, and this feedback is always quantifiable.
- Play may or may not function as a system. Game always functions as a system.

Beginning with the concept of play, we can safely say that all play:

- Possesses at least one participant and may possess multiple participants
- Possesses conflict
- Possesses uncertainty
- Allows for player input

These are universal elements of play. Any activity that is exemplary of play possesses all of these elements, while any activity that lacks even one of these elements is *not* play. As a positive example, a kitten batting a ball 1) involves a lone participant; 2) involves conflict or resistance, as the kitten must exercise its own motor skills in batting around the ball; 3) involves uncertainty regarding where and how fast the ball will travel upon being batted; 4) allows for input from the kitten. To illustrate some

negative examples, a computer game program simulating several games of football between two teams is *not* play because it lacks a participant and possesses no conflict or resistance. Another negative example: watching a sporting event is *not* play because there is no allowance for viewer input. An activity must possess all four of these elements if it is to be considered play.

Regarding game, we can safely say that game always:

- Possesses at least one participant and may possess multiple participants
- Possesses both implied and explicit rules
- Possesses objectives
- Possesses conflict
- Possesses uncertainty
- Allows for player input
- Provides quantifiable feedback
- Operates as a system

Or, put another way: game = play + rules + objectives + feedback, which altogether operate harmoniously as a system. These are universal elements of game; any activity that is exemplary of game possesses all of these elements, while any activity that lacks even one of these elements is *not* game. As a positive example, *20 Questions* is a game because it 1) has one or more participants (an answerer and one or more questioners); 2) possesses both implied rules (the answerer must answer questions in a timely manner) and explicit rules (no lying); 3) possesses objectives (the questioner must discover the answerer's object); 4) possesses conflict (the questioner is challenged to discover a secret); 5) possesses uncertainty (can the answerer solve the mystery before 20 questions have been asked? Which questions will be asked? What is the answer?); 6) allows for player input (questions); 7) provides quantifiable feedback (answers); and 8) operates as a system (all of these components work

harmoniously to function mechanically as a game). To provide a negative example, playing with the *Paint* program on a computer is not a game because it lacks rules, objectives, and feedback. However, playing with *Paint* is still *play* because it possesses the attributes of play. Moreover, if the activity of playing with *Paint* were to be imbued with rules (players must start from scratch; no copy/pasting images from the internet; complete your drawing within a certain time-limit), objectives (draw an object as best as you can), and feedback (a voting or guessing system to determine the best drawing), then together this activity would evolve from mere play into a systemized game of *Draw My Thing*.

So, as I discuss *play* and *game*, these will be the concepts as I have defined them. Going forward, these concepts will be important to know, as only after establishing the components of play and game can game designers then move toward analyzing the positive gaming experiences that one wishes to create and negative experiences one endeavors to avoid. Designing game experiences is a calculated process that involves the deliberate manipulation of these established elements of game, which is why these elements must be established and known before attempting to manipulate them effectively. As designers, we must understand the components of game before manipulating them if we are to create positive effects for our players or students.

Chapter 2: The Overlapping Goals of Games and Education

Before delving into the experiential qualities of games that can be applied to education, it is necessary to first establish the general purpose of games and identify where this purpose overlaps with the purpose of education. Only after doing this can we then identify which experiential qualities of games are useful toward furthering the goals of education.

The Goals of Games

At the most general level, the ability of a game to be fun and entertaining is the single most important determinant of a game's success. This is because there is a Darwinian factor at work: games that are entertaining spread in popularity, while unpopular games do not spread in popularity. In the case of commercial games, this translates to profits, where profitable games make money and sell more copies, while unpopular games go unsold, potentially putting a game studio or software company out of business. Games are either entertaining, or they die quickly. [19]

Given the value of entertainment, game designers must take great measures to ensure that their games create pleasurable experiences for their consumers. Salen & Zimmerman remind their readers of the importance of pleasure in gaming, observing:

> Pleasure is, perhaps, the experience most intrinsic to games. . . . We often take it for granted that games are fun to play, that they provide

[19] This can lead to problems when applying game design to course design, as games sometimes favor one dominant interest or demographic over all others because that is what is most profitable. Such is the case when games appeal to male, heterosexual gamers with sexist depictions of women, or when games favor a white audience by whitewashing the game's cast of characters. Furthermore, some games incorporate in their design micro-transactions and "loot boxes," which take advantage of individuals with addiction and/or gambling problems.

> pleasure, that they embody enjoyable experience. . . . As the sculptor of the space of possible pleasure, the game designer faces a truly challenging set of problems. Managing the pleasure of a game's players means translating the formal intricacies of the rules into an engaging experience of play. (330)

Somehow, game designers must control the static components of game to create pleasurable experiences for their players. The main overarching goal of game design, then, is to create something entertaining—players play for the sake of pleasure, and it is the game's purpose to provide this pleasure.

In addition, the concept of pleasure is an inherently experiential one—what is fun for one may not be fun for another—which lies in stark contrast to the basic elements of game discussed in the previous chapter. Therefore, one could go a step further and say that the goal of game design is not only to provide entertainment, but to provide entertaining *experiences*, as Salen & Zimmerman stress in the quote above. This is evidenced by the way people remembers games: users may know generally that a game is fun, but when prompted to remember what is fun about a game, what comes to mind are the experiences they have had with that game that made it fun—they probably do not think of specific rules that make the game fun. The swish of a game-winning shot, the unlikely river card in a game of Texas Hold'em, or an impressive string of correct answers to win a game of *Trivial Pursuit* are all examples of pleasurable experiences that might represent one person's memory of a game. Thus, pleasurable experiences make a game fun, and it is the pursuit of these experiences that keep players playing.

This perpetual, cyclical purpose for playing is what is known as *autotelic* play: a game is played because it is fun, and people like to have fun, so they play

more of the game to have more fun. For this reason, psychologist Mihaly Csikszentmihalyi describes autotelic play as a "self-contained activity, one that is done not with the expectation of some future benefit, but simply because the doing itself is the reward" (qtd. in Salen & Zimmerman 332). While there are certainly exceptions to this observation (one could be halfheartedly playing a game due to peer-pressure, for instance), generally speaking, play that is most pleasurable is the play that occurs for the pursuit of pleasure, whereas play that occurs for utilitarian purposes tends to be ostensibly *not* fun. Therefore, games must be designed in a way that avoids tedious utilitarian needs (like reading a comprehensive instruction manual before playing), since this task becomes much more of a chore and much less playful. Thus, the goal of game design is not only to provide players with pleasurable experiences but to perpetuate the game's own existence by engaging players and *sustaining* their engagement with constant entertainment. In sum, game's purpose is to serve as a source of autotelic play, which results in the generation of pleasurable experiences for players.

Learning through Experience

I have established the general purpose of games, but what does this have to do with education? To this point, games might seem antithetical to education: there is no Darwinian factor working against ineffective teaching practices, teaching is not motivated by commercial success, and, most glaringly, the purpose of education is to generate knowledge, not pleasure. However, even though the driving purposes of game and education are distinctly different, education can benefit greatly by drawing

upon the experiential and autotelic qualities of games, and learning can still benefit from the playful qualities of games even if entertainment is not the main objective.

Like game, education is (or should be) rooted in experience. This perspective is not unique to game-based pedagogy, but it is certainly essential to the field as the basis for learning. Perhaps this is because the value of learning through personal experience was illustrated so effectively by Gee, whose works have influenced many others in the field of gaming pedagogy. To explain how knowledge is generated most effectively through experience, Gee introduces three concepts: "semiotic domains," which can be thought of as intellectual communities focused on a specific area of interest; "active learning," which entails learning through personal experience within a semiotic domain; and "critical learning," which takes active learning a step further to include the ability to contribute intellectually to a semiotic domain and alter its content. Gee uses these three concepts to describe how both gaming and learning are rooted in experience, an argument that I will attempt to summarize below.

First, learning often takes place when interacting with what Gee refers to as a "semiotic domain," which can more generally be thought of as any field of interest—examples being large-scale interests such as games or fine arts, or more narrow interests such as character optimization for *Dungeons & Dragons 5th Edition* or studies in 18th century Flemish pottery. A semiotic domain can be considered in two dimensions: internally by analyzing its intellectual content or externally by analyzing its "social practices and the ways in which people interact within the field" (Gee 28). Those who are engaged with the semiotic domain can "recognize certain ways of thinking, acting, interacting, valuing, and believing as more or less typical of people

who are into the semiotic domain" (27).[20] In addition, as learners interact with a domain, those within the semiotic domain "attempt through their content and social practices to recruit people to think act, interact, value, and feel in certain specific ways," thus recruiting outsiders to assimilate into the domain (36). By spending time engaging a semiotic domain, outsiders become initiated into the domain simply by acquiring the knowledge and values established by insiders within the domain. Gee refers to these values as "appreciative systems," explaining that new members "must form the sorts of goals, desires, feelings, and values that 'insiders' in that domain recognize as the sorts members of that domain typically have" (93). Of course, as Gee explains, members of a semiotic domain are still individuals; members merge their own unique experiences, values, and beliefs with those of the semiotic domain, which shapes their engagement with the domain (ibid). While an individual may recognize the values of a semiotic domain, it is left to the individual if they want to adopt to these values and to what degree.

It is through repeated engagement with a semiotic domain that experience is gained and knowledge is generated. This engagement—a process of observation, hypothesis, experimentation, and evaluation—is what Gee refers to as "reflective practice," which he defines as consisting of four parts:

1. The player must *probe* the virtual world (which involves looking around the current environment, clicking on something, or engaging in a certain action).
2. Based on reflection during and after probing, the player must form a *hypothesis* about what something (a text, object, artifact, event, or action) might mean in a usefully situated way.
3. The player *reprobes* the world with that hypothesis in mind, seeing

[20] For this reason, a semiotic domain could seem very similar to the concept of a "discourse community," or a group of individuals with a common goal or interest who share common values and practices when communicating.

what effect he or she gets.

4. The player treats this effect as feedback from the world and accepts or *rethinks* his or her original hypothesis. (88)

Through this process of trial and error, individuals engaging with a semiotic domain generate knowledge and meaning through their own experience. This process can be assisted by instruction from a textbook, user guide, mentor, coach, teacher, etc., but the knowledge itself should be grounded in the learner's own experience. For example, video games are often supported by strategy guides that can help users learn how to play, but even those who rely upon these guides still must perform reflective practice within the virtual space of the game; simply reading a strategy guide provides insufficient knowledge of how to play the game. Similarly, while a science teacher might give students a thorough lecture on Mendelian genetics, the reflective practice of hypothesizing and testing lab results should be performed by the students—breeding generations of fruit flies and observing the results of their breeding is more memorable and builds deeper understanding than simply hearing about genetic inheritance from the teacher.

Reflective practice results in the production of recognizable "patterns," or memories of past results that can be connected to one another to form greater, deeper understandings. Gee observes that the learner, "through action and reflection, becomes a 'self-teacher,' training his or her own mental networks of associations (the patterns the mind stores)" (89). This is because, as Gee asserts, "the human mind is a powerful *pattern recognizer*," capable of drawing upon past experiences with similar situations to predict outcomes of possible actions. Gee demonstrates this process:

> When people are faced with a new situation in the world, aspects of this situation remind them of aspects of experiences they have had in

> the past. They use these elements of past experience to think about the new situation. Sometimes they can just apply past experiences pretty much as-is to the new situation. Other times they have to adapt past experience, more or less, to apply it, in the process learning something new that can, in turn, be applied to future situations. In either case, past experiences serve as guides for how to proceed in new situations. (72)

Accumulating experience helps learners understand things at a deeper level, which, in turn, allows them to make more accurate predictions or hypotheses when confronted with new, unfamiliar situations. This conception of learning exists in contrast to the traditional banking model of education, which views knowledge as a set of facts that can be memorized, referenced, and applied when needed. Gee comments on this distinction:

> In the traditional view, concepts are like general definitions in the mind (like definitions for words in dictionaries). In the traditional view, the mind thinks through stored 'facts' and grand generalizations that are like statements in logic. . . . In this view I am developing here, the mind thinks and acts on the basis of something like stored images (simulations) of experience, images that are complexly interlinked with each other (thereby attaining some generality) but that are always adapted to new experiences in ways that keep them tied to the ground of embodied experience and action in the world." (91)

Knowledge is indeed stored within the mind, but this knowledge should not be banked from a textbook or lecture without context. Instead, the knowledge that is most useful is that which is stored in the mind as a set of patterns or mental "images" generated from past experiences. If learners' knowledge is limited to banked facts, then their ability to think critically and develop new patterns will go undeveloped, stunting their ability to apply their knowledge to new and unfamiliar situations.

After developing a store of "patterns" or mental "images," learners can then use this knowledge to make connections between similar yet unfamiliar situations.

Explaining these mental images, Gee writes

> Of course, what comes to mind is not actually a picture. Rather, systems of neural elements in your brain stand for concepts . . . These neural systems and, thus, the concepts they encode, are associated with each other through stronger or weaker links in terms of which each system . . . more or less strongly activates the others" (189).

This function of human understanding allows learners to perform two important actions. First, as Gee explains, pattern thinking "allows us to think and reason by using the experiences we have had in life. We form our mental images . . . from our experiences in the world (and virtual experiences from the media). . . . We don't usually think in terms of abstract generalizations untied to our embodied experiences in the world" (190). And second, "Pattern thinking also allows us to make guesses (predictions) about the world that go beyond our actual experiences" (ibid). Thus, when encountering an unfamiliar situation, the human mind will draw upon old patterns to make new connections. For example, someone encountering the Cyrillic alphabet for the first time may reason that certain letters are likely to have phonetic sounds similar to their counterpart in the Latin alphabet. Based on Gee's observations, "when two items are relatively strongly linked, thinking of one makes a person quite readily think of the other" (189), so a person who attempts to transfer the Latin "H" sound to the Cyrillic "H" letter will be drawing upon a strong similarity between the appearance of two letters to predict how the new situation functions. Alternately, "if two items are less strongly linked, then the one less readily brings to mind the other" (189), meaning that the Cyrillic "H" letter is less likely to remind the reader of a Latin "N" sound (which might be a better comparison from a phonetic standpoint) because these patterns are not as strongly associated. Once this person

discovers the true phonetic sound of the Cyrillic "H," a new experience is generated, a new pattern recognized, and a new mental image added for future reference.

An individual's pattern thinking is not influenced solely by their own firsthand experience, however; it is both influenced and normalized by semiotic domains. Gee brings his analysis full circle, asserting that

> If the human mind is a powerful pattern recognizer—and the evidence very much suggests it is—then what is most important about thinking is not that it is 'mental,' something happening in our heads, but rather that it is *social*, something attuned to and normed by social groups to which we belong or seek to belong. (192)

This is because information itself, what stands as a "fact," is influenced by group thought within the semiotic domain. Information that many within the semiotic domain hold to be true (information that is well-reasoned or has been grounded in the collective experiences of many) becomes normalized, while information that deviates from the norm becomes criticized and disregarded as untrue. Gee observes semiotic domains as "norming (yes, policing, if you like) its members' patterns and ways of filling them out. If a member deviates too far from the patterns and ways of filling them out in the field that the club, as a social group, considers normative, then the club 'punishes' the member in order to bring him or her back in line" (194). Thus, information that is widely believed to be true is more acceptable than unpopular information, which influences members within the semiotic domain to accept the "true" information or be criticized or even expelled from the domain if their beliefs are too radical. Although members of a semiotic domain forge their own mental patterns through personal experience, this experience is compared with the collective knowledge and experience of the semiotic domain. Through instruction,

experimentation, replication, dialogue, and debate, members of the domain can "inspect their practices, read their texts, and, yes, ask certain people what they think, probably the old-timers or 'insiders' and not the newcomers or marginal members" (194). Gee continues, "In the end, if thinking is a matter of pattern reorganization and filling our patterns, then thinking is at least as much social as it is mental and individual, since we want our patterns to work in the world. Actually, it is more social than mental and individual" (194-95). While mental patterns can be cultivated through personal experience, under most circumstances, knowledge is socially constructed within a semiotic domain.

Echoing arguments made by critical pedagogy theorists such as Freire, Gee identifies learning as rooted in experience, coining the term "active learning" to summarize the processes described above (engaging a semiotic domain, experimenting within the domain, recognizing patterns, storing mental images, and conferring with the domain to normalize knowledge). Active learning is rooted in experience, as we see in Gee's description of this concept:

> When we learn a new semiotic domain in a more active way, not as passive content, three things happen:
> 1. We learn to experience (see, feel, and operate on) the world in new ways.
> 2. Since semiotic domains usually are shared by groups of people who carry them on as distinctive social practices, we gain the potential to join this social group, to become affiliated with such kinds of people (even though we may never see all of them, or any of them, face to face).
> 3. We gain resources that prepare us for future learning and problem solving in the domain and in related domains.
>
> These three things, then, are involved in active learning: *experiencing* the world in new ways, forming new *affiliations*, and *preparation* for future learning. (24)

This summarizes the many smaller concepts described above. While active learning is

a complex process composed of many smaller processes, active learning is, in essence, learning through personal experience.

Once learners have developed enough knowledge, experience, and confidence with a semiotic domain, they can begin to innovate the domain by contributing to its pool of knowledge—a process Gee calls "critical learning." Gee illustrates this process in a Freirian comparison of games and conventional classroom settings:

> Good video games allow players to be not just passive consumers but also active producers who can customize their own learning experiences. The game designer is not an insider and the player an outsider, as in school in so many instances where the teacher is insider and the learners are outsiders who must take what they are given as mere consumers. Rather, game designers and game players are both insiders and producers—if players so choose—and there need be no outsiders." (208-09)

In this instance, Gee uses the semiotic domain of video games as an example to demonstrate his point: semiotic domains can be customized or changed to reflect one's learning experiences. Of course, it takes experience and accumulated knowledge to make these changes, but semiotic domains (such as that of a game) are open to input and change from its members. This final step of contributing to the domain is what Gee refers to as "critical learning," which encompasses active learning plus the ability to contribute to the semiotic domain. Gee defines critical learning:

> For learning to be critical as well as active, one additional feature is needed. The learner needs to learn not only how to understand and produce meanings in a particular semiotic domain but, in addition, needs to learn how to think about the domain at a "meta" level as a complex system of interrelated parts. The learner also needs to learn how to innovate in the domain—how to produce meanings that, while recognizable to experts in the domain, are seen as somehow novel or unpredictable. (25)

Making contributions or changes to the semiotic domain marks the pinnacle of learning for Gee: the culmination of learning is possessing enough knowledge and experience to be able to contribute to the semiotic domain and change it for the better.

To conclude this summary of Gee's theory, I will end with a pair of examples demonstrating how this process applies to both game design and education. In the case of game design, an illustrative example of active and critical learning takes place within the semiotic domain of Bethesda Softworks' immensely popular *The Elder Scrolls V: Skyrim* computer game. The game, as a general topic of interest, is a semiotic domain, yet this domain can be broken down into many smaller subdomains: playing the game (which can further be broken down into making optimized characters, finding the best items for your character, playing through quests, and strategizing combat, just to name a few topics), understanding the lore of the game (the writers for the *Elder Scrolls* series have created a very detailed world with geographical and historical details rivaling the detail of Tolkien's Middle earth), and modifying or "modding" the game's design (Bethesda's games are very welcoming of game modifications, which has allowed for the emergence of a very large and diverse modding community consisting of basic users, advanced programmers, and game designers).

Within any one of these subdomains, "reflective practice" is performed—I'll stick to a simple topic like playing the actual game to continue this example. When a user first starts playing *Skyrim*, he or she will probe the virtual world, eventually discovering a golden "dragon claw" artifact, which initially might not seem to serve any particular purpose other than being worth a few hundred gold to a local merchant.

However, as the player continues to explore the game world, the player will come to discover that there is a claw-shaped recess located within a nearby temple, leading to the realization that the dragon claw artifact is, in fact, a key that can open a sealed doorway. Following Gee's reflective practice, the player 1) probes the game world to discover dragon claw artifacts and claw-shaped recesses; 2) reflects on what he or she has discovered to form the hypothesis that the dragon claw might fit within the claw-shaped recess; 3) tests this hypothesis by placing the claw within the recess; and 4) gathers feedback (did the claw artifact open the door?) and either accepts or rethinks their actions based on this feedback.

Through reflective practice, "patterns" are generated within the mind of the user—that "claw artifacts open secret doors" is one such pattern. As the player encounters new yet similar situations, he or she will draw upon old experiences to make new predictions. The first artifact the player discovers, the golden claw, will open the first secret door in the game. However, when the player discovers a new secret door, he or she may attempt to re-use the golden claw, discovering that it fits within the recess but does not open the new door. In this instance, the player drew upon their pattern thinking (claws open doors) to perform reflective practice (by testing the gold claw with the new door). Using the feedback generated from reflective practice (the new door failed to open with the old claw artifact), the player learns a new pattern, perhaps further reasoning that there may be many different claw artifacts scattered throughout the game world that must be discovered in order to open new doorways. Thus, the player must re-probe the world in order to discover new keys to open new doors located throughout the game.

At this point, the player could try to remain completely reliant on personal experience to explore the game, but occasions will inevitably arise where the player does not know how to solve a problem—the player might have reached wit's end while trying to figure out where a missing claw artifact is located, for example. It is at this moment when the player is likely to refer to the greater knowledge of the semiotic domain for assistance. The player can do this by asking a friend who has already played the game for help, referencing a user guide, posing a question on a user forum, or browsing user forums to see if their question has already been asked and answered. In doing so, the player consults other members of the domain who have performed their own reflective practice, formed mental patterns, and acquired the knowledge and experience necessary to answer the player's question. Once the player has found a possible answer to their question, the player can then attempt to solve the puzzle themselves, thus performing their own reflective practice, forming their own mental patterns, and generating their own knowledge and experience.

Once the player has enough knowledge and experience of the game, they can then contribute intellectually to the semiotic domain, thus performing "critical learning." For example, suppose the player discovers that performing certain actions can trigger a glitch that removes the golden claw from the game. The player can then perform critical learning by informing other members of the semiotic domain of this glitch, perhaps by posting on a web forum. Once this is done, other members of the semiotic domain (the web forum) are free to test the player's findings through their own reflective practice. After the glitch has been tested by multiple members of the community, the veracity of the player's claim can be confirmed, denied, or left

inconclusive by the other members of the community, thus normalizing the player's claim as reliable or unreliable information. If the player's findings cannot be reproduced by the other members of the semiotic domain, then the information is either denied or left inconclusive, falling into obscurity in either case. If the glitch can be confirmed by the semiotic domain, then this information is added to the domain's pool of accepted knowledge, at which point further discussion can ensue discussing how to address this issue of a glitch in the game—a successful instance of critical learning in this case.

The example above demonstrates how Gee's concepts apply to games, but active and critical learning are just as applicable to education as well. Especially in rhetorical education, where the subject of rhetoric can be applied to any field of interest, the concept of semiotic domains is especially useful. In a FYW classroom that encourages students to pursue their own interests while developing rhetorical skills, students are able to delve into any number of semiotic domains—issues concerning Title IX, business ethics, crypto-currency, and the effects of neonicotinoids on bee population decline are all examples of semiotic domains that students have engaged within my FYW classrooms, although the most popular semiotic domain for engagement among students was, by far, the topic of climate change. The semiotic domain of climate change, as a very general topic of interest, was further broken down into various subdomains that affect or are affected by climate change: super-storms, electric cars, and renewable energy to name a few. One specific semiotic domain that was especially engaging for one student was researching the meat industry and its impact on climate change, so I will use this topic

as an example going forward.

While researching and writing on various topics, students simultaneously performed reflective practice on two levels: on one level as students honing their rhetorical skills and on another level as researchers within their field of interest. Sticking with the meat industry example, this student was able to perform reflective practice by 1) probing the semiotic domain of scholarly writing by observing other authors' rhetorical choices; 2) making hypotheses about how he can use these rhetorical choices in his own writing and estimating their effectiveness; 3) testing his hypotheses by performing academic writing himself; and 4) gathering feedback and making adjustments to his writing techniques. In addition, this student was able to begin engaging a semiotic domain that interested him by 1) probing the semiotic domains of the meat industry and climate science to make observations and gather information submitted by those in the field; 2) making hypotheses about how best to act on the issue of global warming; 3) practicing some of his recommended actions himself by changing his diet and urging others to do the same, and 4) evaluating the results of his actions as successful or unsuccessful.

By engaging semiotic domains through reflective practice, students develop patterns for what constitutes successful rhetorical engagement within these fields. In the case of the student writing about the meat industry, he drew upon his background in writing argumentative papers for his first assignment—an assignment that was supposed to be an unbiased, non-argumentative *inquiry* into his research topic. However, the mental patterns that he had developed in high school did not completely apply to this new situation. On the rhetorical level, the patterns he learned for

argumentation did not apply to an inquiry paper because the inquiry paper was meant to ask questions and present preliminary research, not argue a position. Through feedback from his peers and from his professor, he reevaluated his actions, hypothesized a new way to write his paper, and then reattempted the assignment at the end of the semester (for a revision assignment) and did quite well after developing new writing patterns consistent with strong inquiry. Similarly, while this student entered the semester already possessing many mental patterns developed from prior engagement with the meat industry, his conceptualization of the issue of the meat industry impacting specifically *climate change* was unfocused, cluttered with general environmental impacts that were off-topic. While this student was very knowledgeable of the effects of the meat industry, he needed to develop a deeper understanding of one specific part of his chosen semiotic domain and practice engaging only this one subdomain, which he did successfully after revising his paper. In both his first attempt and in the revision assignment, the student drew upon old patterns to complete the inquiry assignment. While some of these patterns were useful, some did not wholly apply, and so the student evaluated his experiences and developed new patterns through reflective practice.

Unlike computer games, through which the player can potentially practice playing the game without engaging an external semiotic domain, rhetorical education is incapable of proceeding without referencing at least one semiotic domain to help normalize information. The classroom itself is a semiotic domain, with students learning collaboratively how to communicate. Assigned readings, textbooks, discussions, classroom activities, and peer feedback are all elements of the semiotic

domain that can be referenced by students in the classroom. Especially in the case of peer-review, students collaborate with each other to not only analyze different writing practices but receive feedback on their own writing, thus normalizing what constitutes effective writing. Even in terms of content this was true, as students who studied similar topics (such as climate change) engaged similar semiotic domains and shared their collective knowledge of the domain during peer-review. However, this process of normalizing information also occurs on another level as students engage their fields of interest. In the case of the student studying the meat industry, his knowledge of the domain was informed and normalized by published academic research on the subject of the meat industry's impacts on climate change. While this student could theoretically have conducted his own climate research and come to the same conclusions as other scientists in the field, it is much more realistic and effective if students—especially inexperienced members in their field—reference reputable sources to help facilitate the development of pattern thinking. Newer members of a semiotic domain—especially a complex domain informed by extensive research—need guidance from experienced members of the field if they are to jumpstart development of their own mental patterns. Scholarly research provides this guidance.

Finally, while FYW may not yield widely disseminated or publishable material, students still practice "critical learning" that will give them simulated experience in contributing intellectually to their semiotic domains. The student writing on the meat industry never published his work, but the reflective practice he performed by writing academic essays prepared him for future writing in his major, and the knowledge he gained about the meat industry will be useful for his endeavors

as an activist and civically-engaged person. The experience gained in FYW is intended to give students the skills, knowledge, and confidence to influence a domain's pool of knowledge, preparing them for the critical learning that will come later in their academic and professional careers.

Autotelic Learning

An additional purpose of game design is evoking autotelic play. People play games because they are fun, and people like to have fun, so they play more games to have more fun—a process that is self-perpetuating and intrinsically motivating. Autotelic *learning* is just as desirable a goal for educators—wouldn't it be great if the mere act of learning motivated students to learn more all by themselves? However, reproducing this autotelic quality within the curriculum is made difficult by a number of motivational factors intrinsic and extrinsic to the curriculum itself.

Understanding the element of motivation is essential to promoting autotelic learning. Thomas Malone was one of the first to research this quality of games from a pedagogical perspective in his research essay "What Makes Things Fun to Learn? A Study of Intrinsically Motivating Computer Games." In Malone's research, he draws upon a vast pool of psychological theory and his own field studies to identify the concepts of "extrinsic" and "intrinsic motivation," which can inform our understanding of autotelic play and autotelic learning.[21] Describing these concepts, Malone observes that,

[21] It should be noted that Malone does not use the term "autotelic" consistently. Although Malone recognizes the autotelic principle in citing other authors, he equates this concept to intrinsic motivation, summarizing the autotelic principle by stating, "This principle is essentially just a requirement that learning be intrinsically motivated" (7).

> In general, an activity is said to be intrinsically motivated if there is no obvious external reward associated with the activity. Conversely, an activity is said to be extrinsically motivated if engaging the activity leads to some external rewards like food, money, or social reinforcement. Generally, an external reward is dispensed by a human or mechanical agent in a way that is not 'naturally' a part of the rewarded activity. (3)

To put it simply, intrinsic motivation entails factors inherent within the activity itself that compel a person to keep performing the activity, whereas extrinsic motivation entails factors generated from outside the activity itself that encourage a person to perform the activity. Complicating this definition is the fact that any activity can have distant and unknowable external rewards. For instance, a person's desire to learn how to build his or her own computer may be motivated by an intrinsic desire to play high-end computer games, yet this activity may eventually yield extrinsic rewards such as competency when diagnosing future computer hardware problems or useful experience when applying for a job. Because of this, judging an activity as intrinsically or extrinsically motivated can vary by perception. Addressing this subjective quality of motivation, Malone goes on to suggest that the perception of whether an activity is intrinsically or extrinsically motivated is ultimately decided by the person performing the activity. If the performer feels "a need for competence" or experiences "self-determination," then the activity is more likely to be intrinsically motivated (3). Furthermore, if the "locus of control" is balanced in favor of the performer, then the level of intrinsic motivation is likely higher than the level of external motivation (ibid). [22] These observations by Malone coincide with later game-based pedagogical theorists who argue that motivation improves when student agency

[22] "Locus of control" is understood as the degree to which actions and consequences are executed and generated by the performer him/herself as opposed to an outside force.

is increased.[23,24,25]

While an activity is likely to be both intrinsically and extrinsically motivating to some degree, Malone argues that intrinsic motivation is more valuable to education than external motivation. Demonstrating this point, Malone cites a study carried out by researchers in the field of cognitive science, which found that "when nursery school children who liked to play with marking pens received a promised reward for doing so, they later played with the marking pens less than a control group that received no reward" (Malone 2). A similar attitude was observed in Kohn's anecdotal example of the student who asks "does this count" before deciding whether or not to invest effort in completing an assignment, demonstrating that an external reward of points and grades can occlude the intrinsic reward of completing an assignment for its own educational benefits (Kohn 44). Observations such as these lead Malone and others working in the field of cognitive science to conclude that "externally administered reinforcement is not a motivational panacea for instructional designers.

[23] Notably, in *At Play in the Fields of Writing: A Serio-Ludic Rhetoric*, author Albert Rouzie recalls how gaining agency in his own writing afforded him greater pleasure and motivated his desire to write: "I emerged from these experiences with a different attitude, a will to pleasure, that co-existed with the will to succeed. The pleasure I felt was a sign of my intrinsic motivation. I had moments of composing that felt pleasurable, that I did for my own sake" (7). Similarly, when observing the work of one of his own students for a class assignment, Rouzie later observes that the student's "sense of ownership of his project [was] a precondition for expressing playfulness through it; his ability to play within the constraints may also contribute, if not lead to, this sense of ownership" (18).

[24] In "A Pedagogy of Play: Integrating Computer Games into the Writing Classroom," Rebekah Shultz Colby and Richard Colby express a desire to break down the traditional "work/play dichotomy" in the classroom by having students write about their own interests. To do this, they require that all students play the game *World of Warcraft*, writing material for the actual gaming community itself—material such as "design forums, blogs, websites, and various gamespace guides" (305). Their goal is to create "emergence," or a type of autotelic play in which the mind of the player is fully immersed within the game setting, focusing less on the classroom setting and its extrinsic motivators. In this sense, students write about what they find interesting when engaging the gaming community; they think less about writing for their classroom professor.

[25] In "Developing and Extending Gaming Pedagogy: Designing a Course as Game," author Justin Hodgson recalls giving his students a variety of options when completing course assignments, thereby "embracing pedagogical strategies grounded in student empowerment and self-ownership of learning" (51). Hodgson credits the inspiration for his teaching practices to earlier theorists in the field of gaming pedagogy, notably Gee and Janna Jackson.

. . . [E]xternal reinforcement destroys the intrinsic motivation a person has to engage in an activity and degrades the quality of certain kinds of task performance" (Malone 2). For this reason, Malone asserts that "If students are intrinsically motivated to learn something, they are likely to use it in the future. . . . [They] may learn 'better' in the sense that more fundamental cognitive structures are modified, including the development of such skills as 'learning how to learn'" (ibid). This, of course, harkens back to Gee's work demonstrating the merits of active and critical learning. Learning through personal experience and autotelic learning are intertwined—the "deep learning" that Gee theorizes is best achieved when students are encouraged to learn on their own and for their own benefit.

Chapter 3: Applying the Experiential Qualities of Games to Rhetorical Education

If the goal of course design is to induce autotelic learning, then instructors must learn to accentuate the elements of course design that motivate students to learn while diminishing factors that inhibit autotelic learning. To do this, course designers must learn to control or account for certain elements of game design that impact motivation—rules, objectives, conflict, uncertainty, input, and quantifiable feedback. Course designers must focus on regulating these elements to create the sorts of enjoyable experiences that propel students to learn on their own despite the existence of grades, credits, GPAs, tuition fees, and other extrinsic motivators.

Through my research and experiences with gaming and English education, I have identified several desirable experiential qualities of *good* games that I believe to be applicable to education, which I have briefly categorized and summarized below. Understanding these experiential qualities of successful games will help course designers understand how to achieve the experience-based and autotelic properties of gaming and learning described in the previous chapter. In short, these qualities are:

- *Interest*: Good games sell themselves to consumers, answering the question "Why would I want to play this game?" The answer to this question encourages the player to transition from a state of disinterest to a state of play.
- *Learning how to play*: Good games combine the process of learning how to play with the act of playing the game itself. There is little to no pre-learning before actually playing the game; players learn how to play the game as they play it, grounding overt instruction with experience.
- *Goals & Objectives*: Good games offer clear goals and objectives, balancing long-term goals with short-term goals to avoid overwhelming players with tasks and options.
- *Conflict &Uncertainty*: Games possess an uncertain goal, which is a

source of conflict. Good games allow players to mitigate this uncertainty through skill and effort, thus balancing the level of conflict at an enjoyable level.

- *Input & Feedback*: Good games accommodate different solutions (input) to a problem while providing unique and quantifiable feedback. In addition, good games focus on rewarding players for good choices and not punishing them for bad choices. Games provide a safe space for the feedback loop to operate.
- *Design Space*: Good games are customizable. As a design space, games encourage players to consider how they are designed and constructed, allowing players to customize the design space to fit their needs.
- *Role-Playing*: Some games serve as simulations or representations of other situations, allowing players to practice being other people and view the world from other perspectives.

While not every game is going to exhibit all of these experiential qualities, the best games tend to demonstrate most of them at least some of the time. In this chapter, I will explain the significance of these experiential qualities one by one, referencing examples from successful games before then explaining how these qualities apply to effective course design. Concluding each section, I will introduce and analyze praxes that demonstrate effective course design in each of these areas. Although I divide these qualities into sections, they are very much interconnected, as is the case with any gaming *system*. The element of goals cannot operate in isolation from the element of conflict, for example, and neither of these qualities exists within isolation from the feedback loop. A game-based pedagogy understands the interconnectedness of these various experiential qualities as intrinsic to the system.

As a final word of caution, I would like to address the concept of "gamification," which stands in contrast to gaming pedagogy. Gamification has emerged as a booming market for instructional books, manuals, and training seminars, becoming immensely popular not only in education but in the fields of

retail marketing, employee management, and employee training.[26] Long before the advent of gamification, professionals in all fields have sought motivational strategies to encourage consumers, employees, students, or themselves to perform tasks despite an initial disinterest in doing so—gamification is one of the latest, hottest trends in the market for motivational strategies. However, gamification is not to be confused with the practices of using games as texts, using games in the classroom, or designing course as game, as all of these subjects are distinctly different.

Gamification, to put it bluntly, is a shallow application of game design that relies upon the tropes of games (points, badges, levels, etc.) in order to make any activity *seem* like a game while deliberately avoiding the deep motivational structures of games as systems of interrelated parts. In his essay "Exploitationware," game designer and theorist Ian Bogost parses the meaning of gamification, which he identifies as "a recent marketing buzzword for making products and services more "gamelike" (139). To demonstrate this point, Bogost cites author Gabe Zichermann, author of three manuals and professional speaker on the topic of gamification, who describes his profession in his first book *Gamification by Design: Implementing Game Mechanics in Web and Mobile Apps*:

> Gamification can be thought of as using some elements of game systems in the cause of business objective. It's easiest to identify the trend with experiences (frequent flyer programs, Nike Running/Nike+ or Foursquare) that feel immediately game-like. The presence of key game mechanics, such as points, badges, levels, challenges, leader boards, rewards and onboarding, are signals that a game is taking place. (qtd. in Bogost 142)

Thus, Zichermann identifies the tropes of game design as indicative "that a game is

[26] A cursory search on Amazon and YouTube yields dozens of results applying gamification to many general and specific fields of interest.

taking place." If an activity possesses these tropes, then it is likely to feel like a game. However, Bogost wastes no time in scrutinizing Zichermann's concept of gamification:

> Note how deftly Zichermann makes his readers believe that points, badges, levels, leaderboards, and rewards are 'key game mechanics.' This is wrong, of course—key game mechanics are the operational parts of games that produce an *experience* of interest, enlightenment, terror, fascination, hope, or any number of other sensations. Points and levels and the like are mere gestures that provide structure and measure progress within such a system. (143, emphasis added)

As the research composed by those in the field of game theory demonstrates, games are not merely an assortment of familiar tropes like badges and levels. Games operate as systems, regulating goals, uncertainty, conflict, input, and feedback to produce autotelic play and pleasurable *experiences*.

Gamification seeks the outcome of games—the autotelic pursuit of pleasurable experiences—but it does so without any regard for the deep design structures that make games fun to play. Understanding game design theory takes time and effort—more than any "-ification" activity entails. But consumers of gamification likely already know this. They do not want to spend a great deal of time and effort learning about the field of game design theory—they just want results. For this reason, Bogost views Zichermann and gamification consumers as interested only in "facility—the easiest way possible to capture some of the fairy dust of games and spread it upon products and services" (143). Thus, gamification is more of a list of helpful tips or a marketing buzzword and less of a field of study. Gamification falls short of understanding the various experiential qualities that make up a gaming system, which is the goal of this chapter.

Good Games Sell Themselves

In the gaming industry, marketing is pivotal—a game could be truly remarkable, but if consumers know nothing of its existence or its gameplay experience, then they will not risk money purchasing the game, resulting in a failed product and a financial loss for the gaming studio. For this reason, games must answer for consumers the question "Why would I want to play this game?" If the answer to this question is insufficient, then consumers remain at a state of disinterest, never playing the game, and never initiating the process of autotelic play. If the answer to this question is enticing, then consumers will purchase the game and try to play it. Then, if the game itself is truly fun to play, consumers will enter into a state of autotelic play, develop memorable experiences, and tell other members of the gaming community about these experiences. Without answering this question, however, the game is much less a game and more an artifact or idea that is forgotten by consumers after little time.

As is all too often the case in education, the answer to the question "Why would I want to take this class/course?" either goes unanswered or relies too heavily on extrinsic motivators (grades, credits, core requirements, etc.). This is because education is not held to the same Darwinian state of survival as games: students are often obligated to attend class even if they do not want to, and students will trudge their way through a disinteresting course despite poor teaching practices and boring content because they are motivated by extrinsic motivators. For this reason, educators don't really *need* to sell their course because students are obligated to attend it regardless. However, this attitude starts everyone off on the wrong foot: the instructor is less of a game-manager and more of a taskmaster, while the students are less at

play and more at work. The motivation behind playing the game is less about student interest and more about coercion—a relationship that works directly against autotelic learning.

As demonstrated by Malone's research, learning should be interest-driven. Therefore, the instructor should try to "sell" their curriculum to students by answering the question "Why would I want to take this class/course?" To answer this question, the instructor should introduce the course to students by addressing the various experiential qualities listed just above: learning how to play (How will this course be structured?), setting goals/objectives (Are the goals/objectives set by the instructor, the students, or both? Are these goals worth pursuing?), working through resistance (How challenging will this course be? What happens if I struggle?), submitting input and receiving feedback (How will my effort be assessed and graded?), customizing the course (Will students have control over course content, assignment structure, due-dates, etc.?), and role-playing (Will this course simulate real rhetorical situations?). Hopefully, the description of these qualities appeals to students. However, it is more important to be honest about how the course is designed and allow it to stand on its own merits rather than simply sell the course based on what students want to hear. Selling the course is a jumpstart to autotelic learning, but if the course is, in actuality, poorly designed, then learning will lose its autotelic quality, same as a game that is well-advertised but poorly designed.

Good Games Allow Players to Learn How to Play while Playing the Game Itself

No one likes to be overwhelmed with rules and strategy when playing a game for the

first time; it's more fun and effective to simply learn the basics, play the game, and then learn the complexities of the game along the way. This is especially true of computer games, as Gee demonstrates in his analysis of *Tomb Raider*. To begin the game, protagonist Lara Croft is led through a beginner's dungeon, receiving instruction from one of the game's other characters. By proxy, the player simultaneously learns the basics of the game (through Lara), learning things such as how to operate the game's controls and overcome obstacles while simultaneously gathering game loot and learning about the story of the game (Gee 119). In a sense, the game breaks the fourth wall, providing the player with overt instruction of game controls (which breaks immersion), yet this instruction is still effective because it is couched within the enjoyable act of playing the actual game. Rather than initiate the player to the game with a decontextualized explanation of how to play the game, the game integrates instruction of how to play the game within the context of the game's story (ibid). This relates back to the active vs. passive learning dichotomy: by allowing users to play the game as they learn, instruction becomes grounded in experience rather than decontextualized through lecturing.[27] However, an additional advantage to doing this from an autotelic perspective is that it maintains focus on actually playing the game instead of just learning the rules *before* it can be played. In this way, new players get to make progress through the game's story while learning how to play it. By doing this, players are rewarded for their efforts—they feel more

[27] This idea is furthered by pedagogical theorist Kurt Squire, who builds upon the concept of "performance before mastery" introduced by Gee. In his book *Video Games and Learning: Teaching and Participatory Culture in the Digital Age*, Squire observes that "It's difficult to comprehend specialized texts until you've been immersed in situations where they are useful. First start playing the game. . . . then start reading. When you are in the middle of a game, [specialized texts] make total sense. But before you've ever played it, it's not worth trying to understand. Gee notes that a problem in secondary schools in that we give people the book before they are ever allowed to play the game" (155).

like they are *playing* the game and less like they are *learning* it. In contrast, compare this experience to the time one could spend reading a user manual before playing a game: while the user could potentially learn what they need to know to play the game, this information would be decontextualized from practical application, no in-game progress would be made, and the task itself would be rather boring.

However, this is not to suggest that studying the complexities of rules and strategy is a bad thing. Rather, complexity should increase as the game unfolds, allowing more intense training to come later in the game *after* the player has gained some experience with the basics of the game. The beginning of the game should be simple, with pleasurable gameplay experiences emerging out of simple rules. Then, as the game progresses and the players develop experience with the foundational rules and strategy of the game, the rules and strategy will become more complex and challenging. As an example, novice Chess players begin by learning the basic movements of each piece: pawns can move forward one space, two spaces if they have not yet moved, or diagonally one space if threatening an opponent's piece; rooks can move in any linear horizontal or vertical direction; bishops can move in any linear diagonal direction; knights can move in an "L" shape; queens can move in any linear direction; kings can move one square in any direction. This information is sufficient to play the game, and many enjoyable experiences can emerge by knowing these rules alone.

However, as novice players face more skilled opponents, they will find that their basic knowledge of the game is incomplete, which calls for more advanced training. For example, by observing their opponents, novice players may learn some

special moves: any pawn can be "promoted," becoming any other piece (likely a queen) once it has reached the opposite end of the board; the rook and king can "castle" (the king moves two spaces to the left or right while the rook jumps to the inside position of the king) if neither piece has moved out of their starting position; a pawn can perform an "en passant" (move diagonally into an empty space and take a pawn) if an opposing pawn double-jumps past a threatened square. These special moves increase in complexity, with promoting pawns being quite common and en passants being uncommon moves to make. Therefore, it is likely players will encounter these moves in the order of complexity, discovering common, basic moves like trading pawns before encountering a rare en passant. This level of knowledge *can* be attained simply by playing the game; however, if a player is truly self-motivated by autotelic play, then they might choose to research the game on a deeper level, studying the prolific amount of published strategy available within the semiotic domain of Chess and observing history's greatest games to gain advanced knowledge of Chess strategy. This advanced knowledge is necessary to know in order to defeat more skilled opponents. However, pursuit of deeper knowledge of the game—the sort of knowledge that requires reading, observation, instruction, and coaching—is most effective when players themselves are self-motivated to pursue the content on their own, and this knowledge can only be understood after gaining experience actually playing the game. In this instance, an introduction to gameplay, when enjoyable, sets the stage for autotelic learning. Learning becomes an autotelic activity, with the player studying the game for his or her own sake because they are motivated to get better at playing the game.

While games do often entail explicit instruction, good games find a way to balance instruction with the act of playing to make learning how to play the game both fun and effective. In fact, there is really nothing novel about this idea from a pedagogical perspective—games are essentially applying two concepts already home to pedagogical theory: scaffolding and transfer. Scaffolding can operate on two different levels, as demonstrated again with the game of Chess. From the player's perspective, scaffolding can be purely mental: a Chess player must learn how to move the knight before developing strategies for "forking" two pieces at once; thus, knowing how to move the knight is a scaffolded concept requisite for knowing how to fork other pieces. Yet, from a design perspective, scaffolding can be built into the game itself: in the Chess community, players are given numerical ratings indicative of their skill levels and are then grouped into tiers so that they may play against their approximate rivals, rising through the ranks as they get better. Scaffolding works similarly in rhetorical education, with mental knowledge being scaffolded from simple to complex: when learning how to cite sources, students are likely shown how to cite simple sources using recommended citation databases before learning how to cite more complex or unusual sources on their own. Likewise, the course itself can be designed with scaffolded assignments, with completion of introductory assignments being requisite before more complex assignments can be attempted. In both games and education, foundational knowledge leads to complex knowledge, and this increase in complexity is a result of both mental and design-based scaffolding. To clarify, the purpose of scaffolding is not merely to introduce easy situations before getting to the hard work. Rather, foundational scaffolding exists because it establishes

knowledge or introduces situations that are requisite for understanding what to do during more complex situations that occur at higher scaffolds.

In a game, as players work through scaffolding, it is expected that they will *transfer* what they have learned to new situations. Through this process, players become more self-sufficient, able to work through new, different, and more complex situations by drawing upon what they already learned from previous encounters, thus reducing the need for explicit instruction, which, in turn, allows players to focus more on playing the game and less on learning how to play.[28] In games, this process is often overt; players usually recognize it as they progress through the game. Especially in the case of computer games, strategies that become routinized early in the game are later challenged by unfamiliar situations—an example of this was illustrated in the previous chapter with the pattern "dragon claw artifacts open sealed doors" being *transferrable* to later dungeons (higher scaffolds) in the game *Skyrim*. However, transfer is a design structure used in nearly all computer games, especially games that incorporate puzzles. As an example, the acclaimed *Legend of Zelda* series of games incorporates transfer overtly. Hidden in various dungeons throughout the game, the player gradually discovers useful tool-like items that help the main character, Link, overcome unique obstacles and explore the game world. A reoccurring item in the series is the "Roc's Feather," which allows the player to jump high into the air. The dungeon in which this item is discovered will introduce the player to various hazards that must be cleared by using the Roc's Feather item—bottomless pits, traps that must be hurdled, flying enemies, jumpable enemies, etc. The entire dungeon is like a

[28] This harkens back to Gee's concept of "reflective practice," which generates patterns that promote active learning.

scaffolded lesson that introduces the player to these obstacles, allowing the player to learn through reflective practice how to use the Roc's Feather. After escaping the dungeon, the player will be able to use the Roc's Feather to explore new parts of the game world, discovering new dungeons and new items.

However, the game builds complexity by introducing new and unfamiliar situations in later stages of the game (higher design scaffolds). In later dungeons, the player will be introduced to more unique items and obstacles, another example item being the "Pegasus Boots," which allows the player to run very fast. While these items have unique uses (the Pegasus Boots by itself can be used to move quickly through traps, break through obstacles, and damage previously invulnerable enemies) these items are not meant to be used in isolation. Rather, future items should be combined with previous items in unique ways. For example, the Roc's Feather can be combined with the Pegasus Boots to allow the player to jump much farther than normal. As the player advances from one dungeon to the next (advancing through the design-based scaffolding), it is up to the player to *transfer* knowledge from past situations to new situations (mental scaffolding). Thus, when a new situation arises involving a very large pit, it would require the player to transfer prior knowledge (the Roc's Feather can be used to clear small pits) to this new situation involving the Pegasus Boots in order to advance through the level and complete the game. During gameplay, it is obvious to the player that old information should be applied to new situations (and if it is not obvious, strategy guides exist for reference). Figuring out when and how to transfer information is what makes the game fun.[29]

[29] The Legend of Zelda series is just one example of the use of scaffolds and transferrable knowledge, however. This is a common structure inherent in many computer games, notably the *Elder Scrolls*

Transfer is just as important in rhetorical education, but it is not so easily recognized by students, and evoking the feeling of transfer among learners can be an extremely challenging feat. In "Disciplinarity and Transfer: Students' Perceptions of Learning to Write" authors Linda S. Bergmann and Janet Zepernick conducted research to understand how students perceive the skills they learn in a literature-based FYW program. What they discovered was that their FYW program did not evoke a sense of transfer among students, with students reporting that the skills they learned in FYW did not apply to other disciplines. More specifically, students felt that the skills they learned were "personal and expressive rather than academic or professional," thus failing to initiate them into their discipline's professional discourse community (Bergman & Zepernick 129). In addition, students felt that the skills they learned consisted of "simple, concrete, and universal rules, beyond which everything else is a matter of personal preference and opinion, rather than informed judgment" (ibid). In other words, students felt that rhetorical education was less about teaching transferrable skills and more about "figuring out what the teacher wants" in order to get an "A" grade (134). Early assignments served as speculative "range finders," the purpose being to understand their teacher's idiosyncratic demands rather than develop transferrable writing skills (135). Ironically, students credited other disciplines for teaching them transferrable writing skills, explicitly excluding English classes from this role for seeming non-disciplinary and unprofessional (129). They did not view FYW skills as transferrable to other rhetorical situations.

In addition to the problems cited by Bergmann & Zepernick concerning

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series of games, *Portal*, *Pokémon*, *Final Fantasy*, and most any game that introduces puzzles of increasing complexity.

rhetorical writing programs themselves, in "Understanding 'Transfer' from FYC: Preliminary Results of a Longitudinal Study," author Elizabeth Wardle uncovers problems with other disciplines that inhibit the flow of transfer, citing issues with low expectations and an imbalance with the effort to reward ratio. In Wardle's research, students expressed that, while the skills they learned in FYW were useful, other lower-level college courses did not require such skills. These professors had low expectations, creating writing assignments that were overly short and simple, calling for students to show knowledge (regurgitate class notes) rather than perform the kinds of research, critical thinking, argumentation, and revising skills they had learned in FYW (Wardle 73-4). Similar to the idiosyncratic quality of professors described by the students cited in Bergmann & Zepernick's study, the student's goal in this case became meeting the professor's unique expectations, which inhibited the flow of transfer because the writing standards were too low. Students were not challenged to do their best, so they did not need to transfer the skills they learned in FYW to achieve success in other classes. Transfer is unlikely to take place if it is unnecessary to do so.

Alternately, when a lower-level course was *too* demanding—when "the effort exceeded what [students] determined to be the reward"—students struggled just the same (74). As Wardle explains, "If a non-major class required a lot of work for an A, students would not necessarily use their skills and strategies to achieve that A due to lack of time" (75). Rather, time that would have gone into completing a demanding assignment for a non-major class went into preparing for other courses and assignments that the student believed to be more important. The problem, then, is one

of motivation: students who do not feel challenged due to low expectations and/or insufficient rewards do not go through the effort of transferring FYW skills. Wardle summarizes this sentiment, reflecting that "students did not often [transfer] from FYC—but not because they are unable to or because they did not learn anything in FYC. Rather, students did not perceive a need to adopt or adapt most of the writing behaviors they used in FYC for other courses" (76). All of this relates back to the problem of motivation (autotelic play/learning) described in the previous chapter.

Both games and education incorporate the element of transfer, yet rhetorical education seems to be fraught with difficulties in evoking a sense of transfer while gaming is not. This is an instance where gaming pedagogy can help improve rhetorical education. In Wardle's research, she goes on to summarize her students' observations describing what an effective assignment looks like from the perspective of transfer theory:

- The assignment does not have one "right" answer but is a truly engaging rhetorical problem; the assignment "seems authentic" to the student (Joseph Petraglia calls this an "ill structured problem").
- The prompt for the writing assignment is thought-provoking so students think about the assignment outside of class and when not writing.
- The assignment is open to student ownership; students have some autonomy/freedom while being given the necessary structure to help them succeed.
- The assignment is not simple regurgitation or summary of facts, which feels like "busy work."
- The assignment relates in some way to students' interests/future; writing is easier and more meaningful when students have read deeply about the topic and are engaged in the conversation about it. This is easier when the course is in students' majors; when the assignment is in a general education course, the teacher who engages students helps involve them in a conversation so they know something about what is being said about the topic.
- The assignment is challenging, not easily within students' reach, and teachers maintain high expectations for the results.

- The assignment clearly relates to the rest of the course content.
- The assignment is intended to achieve a clear purpose, is "goal-oriented."
- The assignment is clear; students understand what is being asked of them and why. (77-78)

All of these descriptors could just as easily apply to the design structures of effective games. In fact, many of these issues will be addressed by the experiential qualities described in this chapter: games accept many different forms of input and provide unique feedback (addresses the first bullet point); games balance the locus of control in favor of the player (addresses the third bullet point); games promote autotelic, self-motivated, interest-driven play (addresses the second and fifth bullet points); games manage the flow of conflict/resistance (addresses the fourth and sixth bullet points); and games set clear goals and objectives, balancing long-term with short-term goals (addresses the final three bullet points).

There is no one solution that will make transfer more effective; rather, it is the whole of many different design features of game that make transfer effective.[30] To this point, Gee argues that transfer is effective in games because players are encouraged to understand the design structure of the game itself, whereas transfer can be ineffective in education because students are not encouraged to consider how the course is designed. Gee observes that

> Getting transfer to happen typically requires making the learner overtly aware of how two different problems or domains share certain properties at a deeper level. That is, it requires thinking at a design level, thinking about how two problems or domains are structured or 'designed' in similar ways, ways that may be obscured by the more superficial features of the problems of domains. (126)

[30] Keep in mind that, according to Salen & Zimmerman, games operate as *systems* with many components working together at once. No one component of the game functions alone without affecting or being affected by other components of the game.

To encourage "thinking at a design level," learners must take an active role in course design and setting their own goals—an observation backed by Wardle's findings. Furthermore, the instructor must grant students the agency to do this. While educators may emphasize transfer in the classroom, without addressing underlying issues involving content, goals, motivation, and student agency, these efforts will go unrewarded and transfer will not take place.

Course Design Praxes

Borrowing directly from RPG design, course designers Justin Hodgson and Janna Jackson present classroom praxes for promoting student awareness of scaffolding, transfer, and course design. In "Developing and Extending Gaming Pedagogy: Designing a Course as Game," Hodgson divided his curriculum into seven "quest lines," each of which were composed of four "quests" or scaffolded assignments that increased in difficulty and course weight (50). Quests three and four in the quest line were inaccessible until both quests one and two were completed (ibid). All seven quest lines carried equal course weight, and only the first quest line was mandatory; all others were optional (51). Similarly, in her essay "Game-Based Teaching: What Educators can Learn from Videogames," Jackson's course design exhibited a structure comparable to Hodgson's course, incorporating scaffolded assignments in which students "had to earn a certain number of points before moving on to the next assignment, replicating a common feature in videogames where the player has to earn a certain number of points before moving on to the next level, or 'leveling up' (295). However, where Hodgson's course had seven separate quest lines that could be

completed in almost any order, Jackson's course was linear, essentially having only one mandatory quest line. However, Jackson did integrate a variable difficulty system into her course design, setting tiered difficulty levels that rewarded different amounts of points for different amounts of work (296). In this sense, Jackson's course design contained multiple quest lines: easy, medium, and hard (or, as she calls it, "proficient, expert, and guru tier").[31]

Hodgson and Jackson's design praxes succeed in promoting an overt sense of transfer by concretizing scaffolding into very clearly demarcated levels. Completion of lower levels of the course was necessary to access higher levels of the course, while the skills learned in these lower levels transferred to higher levels of the course. Thus, students might have questioned why one course "level" must be completed before proceeding to another, hopefully finding the answer to this question by identifying transferrable skills that lead from one course assignment to the next. This encourages students to think at a design level, consider the course's design, strategize how to proceed from one assignment to the next, and take an active role in planning their own educations.

However, dividing a course into quests or levels is not a perfect solution to the problem of transfer; both Hodgson and Jackson's methods yielded various problems. For example, while Jackson's students generally liked her leveling-up system, "more than one student indicated on course feedback sheets that novice students needed more knowledge before being set loose" (298). This suggests that Jackson did not do

[31] Jackson's praxis for creating tiers of difficulty resembles contract grading, in which students sign contracts agreeing to perform a certain amount of work to receive a certain letter grade. However, Jackson's variable difficulty levels seem to exist within each assignment (proximal goals), whereas contract grading negotiates a grade for the entire course (a distal, macro-level goal). Contract grading will be discussed later in this chapter.

enough to accommodate students of all skill levels, as some students felt lost in the early parts of the course. This could be addressed by providing more basic scaffolding (or lower levels, to continue the metaphor). A different problem emerged in Hodgson's seven "quest lines." To Hodgson's surprise, he discovered that many students were recycling work between quest lines, using the work completed in one set of collaborative assignments as a springboard for separate individual assignments (56). Hodgson was also taken by surprise when students completed quest one of the essay-writing quest line (writing a paper proposal) without any intention of actually writing the final paper, thereby performing busywork for easy points while wasting Hodgson's time responding to a paper proposal that had no intention of yielding an actual paper (ibid). In Hodgson's case, these unanticipated results could probably be "patched" by revising the rules to account for these little exploits. However, an underlying issue could be that Hodgson's quest lines did not work together toward a clear goal. Incorporating quest lines simply for the sake of providing student agency could undermine the cohesiveness of the course's distal learning goals. The fact that Hodgson had six optional, equally-weighted quest lines that did not build directly off of one another as scaffolding leads me to question the focus of the course's learning goals.

Good Games Have Clear Goals and Objectives that are Worth Pursuing

Last chapter, I identified the goal of *play* as being the autotelic pursuit of pleasurable experiences. However, as defined in chapter one, *games* have goals of their own, and in some respects, this is the most important factor in a game's success. According to

Salen & Zimmerman, “A game’s goal is often the largest single element that drives the pleasure of a player. The goal is the ostensible reason for playing” (342). However, having one interesting long-term goal is not enough to ensure a game’s success; the game must break its fixed, distal goal into smaller proximal goals. In this way, games provide scaffolding for the player to reach the game’s ultimate goal. Thus, defining goals is paramount to a game’s success. Without clear goals worth pursuing, games are left on the shelf, ignored, and forgotten because no one wants to play them. The same is true of some college courses (the ones that don’t fill) and would be true of many other unappealing courses were it not for degree requirements.

While a game that appeals to all players does not exist, a mark of excellent game design is the ability to capture and sustain the attention of a wide audience. These truly wide-appealing games accomplish this in a number of ways, notably by providing balanced challenges and meaningful feedback—two qualities that will be discussed later in this chapter. However, speaking specifically of setting goals, games that appeal to a wide audience do so by accomplishing these three things: by accommodating players’ roles as co-writers of the game’s story while simultaneously upholding the inflexible, predesigned goals established by the game designer; by managing players’ focus on long-term goals while pursuing short-term goals; and by granting players agency in determining which goals to pursue and how to pursue them.

All games have set goals established by the game’s designers, but how these goals are achieved (or not) varies from player to player. In this sense, games possess what Michael Mateas and Andrew Stern call an “interactive story” or “interactive

narrative" in their essay "Interaction and Narrative" (643). All games possess goals, but how players progress towards the game's ultimate goal encompasses the "story" of the game. For example, a game of *Super Mario Bros.* ends with saving Princess Peach, but how does the game unfold before this ultimate goal is reached? How many points does the player score? How long does it take? How many times must the player retry a level? In this sense, players *co-write* the game as they play it. This element of interactivity and agency is what separates the story of a book or movie from that of a game.

Given the shared responsibility between game designer and player in "writing" a game's story, it is important for game designers to plan for and accommodate players' actions—even the unexpected. In the essay "The Design is the Game: Writing Games, Teaching Writing," author Alice J. Robinson analyzes how games are designed and planned with player agency in mind. In summarizing the relationship between designer and player as co-writers of the game's story, Robinson writes:

> Reduced to a set of design constraints, making a game involves creating a learning space that has a determined beginning and end. The goal is to move players from point A to point B while engaging them in increasingly difficult tasks and, at the same time, allow them to explore several spaces, problems, and puzzles as they do so. Video game designers and developers must give players enough agency to solve complex problems on their own but at the same time help players build upon their knowledge of the game and play space so that they can succeed with the goals presented and thereby achieve a 'win' state. (361)

Games consist of a beginning an end—this is defined by the game designers, who decide the beginning state of the game (like the opening layout of the Chess board),

as well as the terms for completion of the game.[32] However, everything that goes on between the beginning and concluding stages of the game, "from point A to point B," is decided by player action. Thus, as co-writers of the game's story, players are granted a satisfying degree of agency when playing the game (if a game grants little agency, then it becomes less an *interactive* narrative and more just a static narrative).[33] Therefore, to accommodate player agency, games pose players with complex goals that can be achieved in multiple ways while simultaneously preparing for unknowable player actions. In this sense, games are designed with a goal in mind, yet the means to achieving this goal is ultimately left to the players.

When it comes to setting long-distance goals—defining "point B"—some methods are more effective than others. In analyzing the work of Csikszentmihalyi, Malone identifies two kinds of goals: fixed goals and emergent goals (51). Malone defines fixed goals as "those that are predetermined by cultural convention"—winning the game or getting the highest score would be examples of fixed goals (ibid). Malone defines emergent goals are those that "arise out of the interaction between a person and the environment"—immediate in-game goals such as defeating an enemy in an RPG, avoiding space debris in *Asteroids*, or staying within the slipstream of a leading vehicle during a motor race would all count as emergent goals (ibid). As far as education is concerned, fixed goals would equate to high scores on

[32] Of course, keep in mind that players can modify the game in whatever ways they want. Chess 960, for example, has a totally different layout for the opening pieces. And, as discussed earlier, players can house-rule custom terms for victory (goals).

[33] Mateas and Stern make a cogent observation on player agency: "If, every time a player enters the dramatic world, roughly the same story events occur regardless of the actions taken by the player, the player's interaction would seem inconsequential; the player would actually have no real effect on the story." A game in which the player's actions do not really impact the story of how the goals are achieved would really be no game at all, hence why computer games with a linear storyline are often criticized for being boring.

assignments, high grades for courses, and gaining credits—goals emphasized by society. Emergent goals would consist of the more localized, short-term goals required to complete an assignment or project, such as finding a partner for in-class group work, gathering sources for a project, writing a section of text, or navigating an online course management system (such as Blackboard, Canvas, Moodle, etc.).

In Malone's research, data suggests that fixed goals are considerably more motivating than emergent goals. In a study of 65 elementary school children experimenting with an array of 25 different games, Malone concluded that "The most important feature determining game popularity . . . was whether or not the game had a goal" (16). In Malone's analysis, he observes that

> the top three games all had obvious goals (getting a high score in Petball, trapping the other person's snake in Snake 2, and destroying all the bricks in Breakout) while the lowest ranking games had no clear goals (conversing with a simulated psychiatrist in *Eliza* or filling in blanks in a story in *Gold*)" (ibid).

Indeed, reviewing Malone's ranked chart of game popularity would suggest that games with a weak or non-existent goal generally scored poorly among students (15). However, some issues arise with this as a conclusion. While it is true that games with fixed goals were generally preferred among students, the games that scored poorly relied solely on emergent goals while neglecting fixed goals altogether (such as free writing a story about Goldilocks, free writing/conversing with an AI program, or guessing numbers based on the amount of highlighted pixels on the screen).[34] The games that scored poorly likely did so because they completely lacked fixed goals, not because they relied heavily on emergent goals. In contrast, games that scored

[34] By chapter one's definition, these would not be games. If an activity lacks a clear, definable goal and quantifiable feedback, then it is not a game. If an activity relies solely on emergent goals, then it is more akin to free-play, which has emergent goals but no clear objective.

highly combined both fixed goals with emergent goals. The most popular game, *Breakout*, has the fixed goal of attaining a high score, but intrinsic to its gameplay experience are the emergent goals of fielding a bouncing ball with a movable bumper paddle (like *Pong*) and shattering bricks. Emergent goals are necessary to achieve in order to gain points, move on to higher levels, and attain the fixed goal of highest score. Therefore, while fixed goals might sustain motivation more effectively than emergent goals, it would be more accurate to conclude that successful games are ones that successfully balance fixed goals with emergent goals.

Further defining the role of emergent goals, both Malone and Squire advocate setting goals that make using a skill an emergent goal en route to a fixed goal. Fixed goals are often the strongest motivators for playing a game, so while achieving a high score may be the more overt fixed goal, developing and using skills should be the unstated emergent goal. To this point, Squire observes that "Good educational games employ academic knowledge as a tool for achieving goals. . . . In games, players employ knowledge and understandings as tools for action" (36). As an example, users playing the game *The Oregon Trail* may have pursued the fixed goal of attaining a high score, but the designers of the game intended for several emergent goals to be pursued en route to this fixed goal. Their desire was for students to develop a mental understanding of the hardships that existed when settlers traveled westward during the 19th century. Specifically, players would develop an understanding of how settlers planned for westward expansion, such as by strategizing what time of the year to embark on their journey; using maps to plan a route; purchasing supplies such as rations, ammunition, spare clothes, a wagon, spare parts for the wagon, and oxen to

drive the wagon; and by bartering with other settlers or general stores in towns along the way. Furthermore, players would learn to appreciate the danger inherent in a long, arduous trek westward by encountering many hazards of westward expansion, including death by snakebites, cholera, typhoid fever, measles, dysentery, broken bones, exhaustion, and drowning. These hazards were further complicated by the possibility of thieves stealing supplies (including cattle), losing supplies due to hazardous terrain (such as crossing a river), cattle dying from injuries or starvation, and the lengthening of the journey due to various hazards, which delays the journey into colder months and diminishes food supplies. Although *The Oregon Trail* was made appealing to players due to its fixed goals of surviving the journey and earning a high score, the game was simultaneously appealing to educators because its emergent goals required players/students to learn about westward expansion. Supporting this point, Malone views integrating emergent goals with the development of useful skills as a crucial technique when designing classroom activities, citing an example of a classroom game that tasked students with using the mapping skills they had learned in class in order to navigate fictional game characters out of a situation in which they were lost (51). While winning the game was the fixed goal, the emergent goal required students to use their knowledge of latitude and longitude to locate themselves and solve the puzzle (ibid). In such an exercise, winning the game is the student's goal, while using the skill is the educator's goal.

Similar to fixed and emergent goals, games manage long-term goals by breaking them into multiple, short-term goals.[35] Salen & Zimmerman observe that "A

[35] Several authors make this observation: (Jackson 292); (Squire 6-7); (Salen & Zimmerman 342-44); (Gee 81); (Malone 51).

game never simply provides a single long-term goal. Along the way, a player struggles toward short-term goals, each one providing a kind of pleasure that is less immediate than the instant gratification of the core mechanic, but more rapidly obtained than the long-delayed ultimate outcome of the game" (343). This is true of all games, even a simple game like Tic-Tac-Toe, as Salen & Zimmerman demonstrate: players balance the short-term goal of preventing the opponent from marking three boxes in a row while striving for the goal of marking three boxes in a row themselves (343). Balancing short-term with long-term goals is even more crucial in more complex games. A game such as *Monopoly* is full of short-term goals (landing on or avoiding certain spaces), and emergent goals present themselves as players land on vacant properties (to buy or not to buy; to build or not to build; to mortgage or not to mortgage; to trade or not to trade). All of these short-term goals break the long-term, fixed goal of controlling the entire board into many smaller steps that are more easily conceptualized and achieved.

Without short-term goals, a great task can become completely overwhelming. Consider any great writing project you have undertaken: at the beginning stages of the project—before constructing a detailed outline—the fixed goal of completion may have been difficult to comprehend. However, by breaking a long-term goal into intermediate and short-term goals, completing the project becomes easier to imagine—you are constructing your own scaffolding toward the apex of completion. Breaking a long-term goal into short-term goals also has motivational benefits. In Malone's research, he cites a study by Bandura & Schunk that demonstrates the effectiveness of "proximal" (short-term) goals when striving to complete "distal"

(long-term) goals within a mathematics curriculum (51). Students found that proximal goals were significantly more effective at "sustaining performance and interest in the task" than projects that consisted only of one long-term goal (ibid). Malone suggests that this not only is because short-term goals are easier to conceptualize, but because completing smaller tasks maintains motivation, instilling a sense of accomplishment among students, which encourages them to drive forward in pursuit of the long-term goal of completing the project (ibid).

However, neither the gaming nor learning process is composed of perfectly linear short-term goals that scaffold smoothly toward the long-term goal of winning or completion. Rather, gaming and learning are non-linear processes, full of tangents, dead-ends, and multiple goals presenting themselves all at once. Gee coins the "multiple-routes principle," which builds off of his concept of reflective practice to demonstrate that learning is not fast and efficient but slow and inefficient, full of exploration, trial, and error as players probe unfamiliar regions of the semiotic domain (79). In fact, as Gee demonstrates, games often punish players who choose a direct, simple solution to a problem while rewarding players for thoroughly exploring the game space before proceeding. In Gee's example from the *Metal Gear Solid* series of games, rushing directly from point A to point B will likely get the player killed, as enemy soldiers will have the advantage in attacking the player (173). Instead, players are encouraged to slowly and carefully explore the game space in a tangential fashion, uncovering hidden information that they would not otherwise discover, such as secret passages, hidden items, or private conversations (ibid). Players are then rewarded for their exploratory efforts, as finding hidden information

makes advancing toward the intermediate or long-term goal easier to do (ibid). Good games present many short-term goals and reward players for pursuing them, yet these short-term goals are optional, and players can still advance toward a fixed goal despite them, albeit with greater difficulty. This model goes against the norm for certain educational curriculums, however, as Gee reveals in a reflection of how *Metal Gear Solid* influenced his values as a learner:

> This and other games have brought home to me that I hold cultural models about learning like: "The final goal is important, defines the learning, and good learners move toward it without being distracted by other things" and "Good learners move quickly and efficiently toward their goal." I also hold other models: "There is one right way to get to the goal that the good learners discover (and the rest of us usually don't)" and "Learning is a matter of some people being better or worse than others, and this is important."
>
> These models all get entrenched in school repeatedly. They are linear models that stress movement ever forward toward greater skill until one has mastered one's goal. They are competitive models, as well, that stress better and worse and sorting people into categories along the lines of better and worse.
>
> Video games tend not to reward these models. They stress both non-linear movement—exploring all around without necessarily moving quickly forward toward one's ultimate goal and the mastery defined by that goal—as well as linear movement, which, of course, eventually happens, greatly deepened, sometimes transformed, by the nonlinear movement. (173-74)

In a course that is designed to move mechanically from module to module (scaffold to scaffold), students are discouraged from freely exploring the semiotic domain and gathering more information, as this effort would be unnecessary for completing the module and would place the learner behind everyone else in the race to quickly and efficiently complete the learning module. However, learning should not necessarily function in this way. Learning entails many short-term goals, some of which are immediately useful and some of which are not. A student writing an essay might read

a text that ultimately they do not reference in their work, but this does not mean that the emergent, short-term goal of reading that text was without benefit towards reaching their long-term goal of completing the essay—this task may have led to the discovery of other useful texts or supported the student's work in other indirect ways. In this instance, a linear progression model of education would have led the student to believe that their time and effort was wasted, which is false.

While games do sometimes promote "progression gaming," or a design structure that follows a linear model of progression,[36] many games allow for more "emergent gaming," or gaming that allows players to explore a gamespace, "creating challenges which constantly change within the context of play" (Shultz Colby & Colby 305). In their application of game design to the writing classroom, Shultz Colby & Colby clarify these contrasting models of gaming:

> In a classroom based on a pedagogy of progression, one assignment or reading leads to the next with little variety or exploration. Students have little ownership of the assignments they do, so there is little to keep them immersed. With an emergent pedagogy, teachers introduce writing principles and strategies in order to open up a studio-like space for students to work through those strategies on their own. (305)

Because increased player agency bolsters motivation, an emergent model of game design is generally more preferable than a progression-based model of game design. Therefore, emergent games allow for the pursuit of multiple, optional, short-term goals en route to completion of the long-term goal. The sum of these emergent short-term goals all work in some way to help the player accomplish the game's main objective. In this way, games allow players more control in setting their own goals

[36] And some games do this very successfully. Top-selling game franchises such as *Final Fantasy, God of War, Uncharted, Halo* and *Super Mario Bros* have all produced games that were criticized for being too linear despite immense success.

and constructing their own scaffolding to get from point A to point B. In games, there is always a clear long-term goal that allows players to see where they're going as they construct their own scaffolding to get to "point B."

Without getting too deep into praxes, there are two general methods games use to grant players agency concerning short-term goals while still providing structure to the overall game. One method is to pre-design all short-term goals, and then allow players the choice of completing these goals, perhaps requiring that a certain number (possibly none) of these goals be completed. Additionally, these pre-designed goals can be introduced directly to the player, or they could emerge later on as players explore the game space.[37] In either case, while these goals are pre-designed, agency is generated by providing players the ability to select which goals to complete. This method of introducing short-term goals is a safer option for less-experienced gamers, but it may bore experienced games who desire more agency. Alternately, another method of granting agency is to give players full control over setting proximal goals. In this instance, game designers give players only the most basic, essential instructions for completing the game, and then players are thrown into a game space in which they can explore, discover information, uncover emergent goals, and construct their own scaffolding toward completion of the game's fixed goal. The danger here, of course, is that if the long-term goal is poorly defined or too distal, then players will not know how to reach it—they will not even know where to begin

[37] Delivering goals in this way is common practice in what's called a "sandbox" setting—a variety of game (often American RPGs) in which players are thrown into the game's setting and allowed to explore at-will. Examples include the Dungeons & Dragons tabletop gaming system, which later influenced American computer game series such as the *Elder Scrolls*, *Fallout*, and *Grand Theft Auto* series of games, just to name a few. Japanese games, at least initially, did not follow the sandbox setting, perhaps because Dungeons & Dragons (which served as inspiration for the sandbox genre) was released in Japan after the genre of Japanese RPGs (JRPGs) became the norm.

constructing their scaffolding (especially true of less-experienced players). In these cases, it is best to provide some pre-designed short-term goals while still granting the agency to generate custom goals.

Regardless of how players are granted agency, there are dangers to granting too much agency. For one, too much agency—perhaps created by offering too many pre-designed short-term goals or by allowing players to become too unfocused in setting their own goals—can be overwhelming and confusing for players, especially if they do not know where to begin or where to direct their efforts when "point B" is unclear. As Mateas & Stern advise, an excessive amount of short-term goals (which they roughly equate to puzzles) can result in

> the feeling of having many things to do (places to go, objects to fiddle with) without having any sense of why any one action would be preferable to another. . . . This leaves the player in the position of randomly wandering about trying strange juxtapositions of objects. This detracts from the sense of agency—though the player can take action, this action is often not tied to a high-level player intention. Notice that adding more material opportunities for action would not help the matter. The problem is not a lack of options of things to do, the problem is having insufficient formal constraint to decide between actions. (654)

In the case of too much agency, players may not have the required experience or patience to survey a hundred options before picking the best course of action. Additionally, a lack of direction can lead to disempowerment and frustration—the player may have maximum agency, but without a clear fixed goal on which to focus, gameplay becomes a pointless endeavor (as Malone demonstrated in his study, games that relied solely on emergent goals were unanimously unpopular with students).

A further complication of too much agency can be a disruption in gameplay, especially when short-term goals do not work toward achieving the long-term goal.

Mateas & Stern again caution that

> Puzzles disrupt enactment, breaking immersion in the action and forcing reflection on the action as a problem to be solved. As the player thinks about the puzzle, action grinds to a halt. Solving a puzzle invariably involves trial-and-error problem solving. All the dead ends involved in solving a puzzle introduce incidents that expand time and reduce emotion, this disrupting intensification. (648)

Again, in this instance, agency is lessened because the player's efforts are not being directed toward a useful purpose. While tangential short-term goals may provide a brief sense of accomplishment when completed, the feeling is ultimately one of frustration once the player realizes their time was wasted and the greater task will now take longer to complete. This feeling inhibits autotelic learning and dampens student motivation (think back to the motivational issues stemming from an imbalanced effort to importance ratio cited by Wardle's students).

As a final caution, Mateas & Stern cite ludologist Gonzalo Frasca, who argues that there may be an inherent conflict between player agency and a sense of closure. If story is meant to follow a dramatic arc, then providing players with a myriad of options may work against closure if the game's story never comes to a clear ending (661).[38] While Mateas & Stern dispel this notion, arguing that player agency in setting goals allows for the dramatic arc to rise and fall as the player sees fit, Frasca is right in pointing out that too many emergent goals may leave players with a sense of dissatisfaction and incompleteness if the game consists mostly of side quests and does not end with a clear long-term fixed goal being completed.

[38] This issue was introduced in chapter one, as RPGs are not definitively concluded when the main quest is completed if many side-quests yet remain.

Course Design Praxes

While many games allow players to construct their own scaffolding, many English courses do not. This may be due to the instructor's concern that students will get lost or overwhelmed if they are given too much responsibility, due to a desire to keep students all on the same page (perhaps so they can work collaboratively more easily), or due to a desire to save time and effort when grading by reviewing only one specific project.[39] In any case, it should be noted that gamers and students alike are much better than one might think at setting short-term goals and constructing scaffolding toward a long-term goal (and if students struggle with setting goals for themselves, then they need more practice doing it). As established earlier, players are co-authors of the game's story—the same holds true for students as co-authors of their education. Part of this story is setting goals for how to get from point A to point B. While instructors could essentially write this part of the story for their students by establishing very rigid goals, students will be better motivated if they are permitted to write this part of their academic story themselves by setting their own emergent goals. The instructor should still provide guidance when necessary, but the instructor should remain mindful that there is a greater sense of accomplishment when students are able to achieve goals that they themselves have set. Being overly restrictive in course or assignment design deprives students of this agency and stifles the autotelic motivation to drive them forward. If the learning objectives are clear (as they should be), then students should be able to construct their own scaffolding toward the instructor's

[39] Furthermore, as I have encountered as a student, there are some instructors who simply do not feel it necessary to share their learning objectives with their students, as if the only motivation necessary to drive students forward is the belief that merely completing assignments will lead students toward meeting the instructor's secret learning objectives. This is wrong, of course. Learning objectives should always be emphasized and made clear to students.

fixed goals.

To demonstrate this point, I would like to tell a story of my experiences in two English classes: 9th grade English and 10th grade English. My 9th grade English teacher was a proponent of allowing students to select their own texts and create their own goals to fulfill her literature assignments. One particular project stands out: the teacher's learning goals consisted of 1) reading a work of realistic fiction, and 2) composing a mock-journal from the perspective of any character (or possibly even a personified object, if you wanted to get creative) from the story. Although the teacher established the fixed, distal learning goals for the project (she defined "point B"), by granting students the agency to set their own proximal goals in achieving a fixed distal goal, the students were able to construct their own scaffolding and co-write the story of their own education. Because of this, I was able to set goals that *I* wanted to achieve. I decided to read William Golding's *Lord of the Flies* because it interested me, and I chose to write the journal from the perspective of the protagonist, Ralph. Furthermore, because I could take great liberties with the journal-writing half of the assignment, I made my own decisions concerning how to portray Ralph's inner thinking, at what intervals to make journal entries, and even what the journal should look like aesthetically.[40] Thus, I was discovering my own emergent goals and constructing my own scaffolding to reach the teacher's learning objectives. Moreover, the teacher was happy because she had constructed a pedagogically successful assignment in which the emergent goals that students discovered required them to develop and use skills that the teacher wanted her students to learn: generally

[40] This was probably where I had the most fun. I included water-damaged, tea-stained pages for a rough, antiquated look; bindings that looked like vines to fit the jungle theme; and a slightly charred cover to reflect the ending of the novel).

developing one's reading and writing skills, but more specifically developing the ability to consider character perspectives and character motives while also developing journal-writing skills.

In contrast, my 10th grade teacher (a retired police officer) was very authoritative in setting goals for assignments. For all reading and writing projects, students would read the novel that *she* wanted us to read, and we would write our old-fashioned book reports with little room for creativity.[41] Thus, not only was the end goal defined by the teacher, but there was little room for students to decide how they wanted to reach these goals. Students were not co-writers of their own educational story; they could not take ownership of their own educations. Each project—each student's educational story—was more or less identical; the story began and ended the same way for everyone, meaning the student's decision-making did not really matter. Moreover, the class provided a burdensome level of homework: there were separate daily, weekly, and monthly assignments due at all times, and these assignments were not related to one another. Essentially, the course provided many different puzzles and an overwhelming number of tasks to complete, which hurt the flow of the classroom—how could students focus on completing the big, quarterly assignments if they had a vast number of daily and weekly assignments to complete first? As such, the classroom was poorly scaffolded. As a student who earned A's and B's all other years, 10th grade English was a year where I struggled for a "C" grade

[41] One such novel was Amy Tan's *The Joy Luck Club*, which did not appeal to the male teenagers in the classroom. Of course, educators should strive to introduce students to other perspectives—perhaps that was the teacher's goal—but she could have selected an alternative second text that might have been more appealing to other members of the classroom. Doing so would have granted students slightly greater agency and possibly allowed them to pursue a more interesting, more motivating goal while fulfilling the teacher's learning objectives.

because the class was so poorly attuned for facilitating student agency and motivation.

Granting students agency over how they would like to complete fixed assignments is one method of ensuring the emergent goals of a course are worth pursuing. However, in again reviewing Hodgson's use of "quest lines," we see how agency can be granted over entire assignments themselves. In this sense, Hodgson created a "sandbox" setting with many premade distal goals, which students could choose to pursue or avoid. By granting students agency over assignment selection, Hodgson's strategy gave students a choice in determining the distal goal(s) of the course as well as a choice in determining proximal goals. Thus, students not only possessed agency in constructing their own scaffolding to reach a distal goal (as was the case with my 9th grade teacher's assignment), but the distal goal itself could be changed to fit a student's individual interests. While Hodgson's praxis may not be an option for every course, it provides an example of goal-setting that promotes autotelic learning.

Good Games Manage and Direct the Flow of Conflict or Resistance

While goals may be "the ostensible reason for playing," the uncertainty of achieving goals is just as essential for the creation of pleasurable gaming experiences. Think about it: if the outcome of a game were to be known before even playing it, then it would not be worth playing—an absolute certainty of success or failure would eliminate the desire to even play. This is why Tic-Tac-Toe is pointless to play once both players know the strategy: it is a game that is impossible to lose with proper

strategy. As such, good games possess a "Goldilocks" level of uncertainty: neither too little nor too much. As will be revealed in this section, good games not only possess uncertainty, but they operate as systems, directing the flow of uncertainty in a way that ensures maximum pleasure for all players by avoiding the extremes of too much or too little conflict.

Uncertainty is of different types and degrees. Salen & Zimmerman identify three levels of uncertainty: absolute certainty, risk, and absolute uncertainty (175). Furthermore, these degrees of uncertainty exist at both the micro and macro levels of the game, affecting the likelihood of achieving both proximal and distal goals (ibid 174). As with the Tic-Tac-Toe example above, absolute certainty robs a game of its pleasure because the outcome is known, leading gameplay to become meaningless. However, at the other extreme, absolute uncertainty can be just as detrimental to player enjoyment. The game *Candy Land*, for example, depends solely on the luck of die rolls, making it disinteresting to play because there is no allowance for skill—the player him/herself has no agency in determining whether or not the goal is reached. Thus, a non-absolute amount of uncertainty is most desirable. While some degree of uncertainty is necessary for ensuring the goal is worth pursuing, accommodating the element of skill (player agency) is equally necessary. Player skill should serve to lessen the degree of uncertainty that imperils the achievement of a goal.

Related to uncertainty is the element of challenge or conflict. In a game where skill serves to mitigate uncertainty, the challenge of the game becomes overcoming uncertainty to achieve a goal, in which case, challenge could be considered the result of uncertainty. It is especially important to ensure that the challenge level is balanced

to ensure an enjoyable experience. The significance of a balanced challenge was evidenced by Malone's study (described in the previous section), in which he tested 25 different computer games among a pool of 65 elementary school students and recorded student feedback: 13% of positive feedback consisted of praise for games being challenging, while 43% of negative feedback consisted of criticism for games being either too difficult or too easy (16). Of course, one need only think back to a game that was too challenging or too easy to confirm the truth of this data: a sporting match that quickly becomes a total blowout demonstrates this extreme. Such a game is not worth watching because the outcome is essentially known.

Offering players a balanced challenge is essential for creating pleasurable experiences, so how do good games manage the level of conflict? Good games do this by directing and balancing the flow of conflict, operating as what Salen & Zimmerman call a "conflict system" (250). Conflict is of many varieties and can come from many sources simultaneously, and so it falls upon the game's rules to ensure that the different sources of conflict all balance out in some way. Salen & Zimmerman offer some examples of conflict, including the following:

- *Single player vs. single player*: as in Tennis or Chess
- *Group vs. group*: as in any team sport
- *One against many*: as in Tag
- *Every player for themselves or free-for-all*: as in Musical Chairs or a footrace
- *Single player vs. game system*: as in Solitaire or *Tetris*
- *Individual players competing against game system*: as in Blackjack
- *Group of players competing against a game system*: as in *World of Warcraft* (250)

Salen and Zimmerman offer a wide array of sources of conflict, although I would add to this list the conflict of *player vs. self*, in which a source of conflict may be the

player's own ability (or lack thereof) to perform up to a certain level, examples being the challenge of topping one's own personal high score in games such as *Tetris* or *Angry Birds*. Similarly, a player's struggle to perform normally despite an injury or disability would create self-conflict.

Furthermore, conflict can come from many of these sources simultaneously. For example, a multiplayer format of the card game *Magic the Gathering* could simultaneously have a "free-for-all" conflict (several players all vying for victory), a temporary "one against many" conflict (if one player is getting too powerful, the other players may tacitly agree to a truce while focusing on the dominant player), a temporary "single player vs. single player" conflict (when one player attacks another), and a "group vs. group" conflict if players are grouped in pairs as teammates.

In addition, while different sources of conflict can occur simultaneously, conflict can also be direct or indirect. Direct conflict would entail the player(s) conflicting with an opposing force directly, as in a Basketball match, while indirect conflict would take place in a basketball tournament, as teams that are not actively playing each other exist in indirect conflict while vying for the championship title. When formulating the rules to a game, game designers must consider all possible sources of conflict, structuring the rules in such a way that, ideally, makes the game playable for all participants. The limiting nature of rules serves to delimit conflict that is too challenging (such as a ban on performance-enhancing drugs, which would otherwise make drug-users too powerful compared to clean athletes), and to add conflict when achieving a goal would be too certain (such as requiring billiards

players to hit a cue ball instead of striking the numbered balls directly). Thus, games, through their rules, operate as "conflict systems" by managing many different sources of conflict to offer a balanced challenge.

At this point, from a pedagogical perspective, it may seem like the element of uncertainty does not relate to education. It is likely a failure on the instructor if students are uncertain of course content, class schedule, learning objectives, assignment descriptions, grading parameters, and especially grades themselves. Indeed, if uncertainty emerges out of any of these areas, it is a negative consequence of poor course design or substandard teaching. Therefore, it is worth considering where uncertainty and conflict emerge—both by design and by accident—in the classroom. Uncertainty is what lies between students and achieving their goals. This includes both intrinsic goals entailing learning objectives and the completion of assignments, as well as extrinsic goals entailing letter grades, credits, and GPAs. Uncertainty in achieving these goals may seem like an unwanted thing—most students would like it very much if they were guaranteed to learn something, or better yet, were guaranteed an "A" from the start, and they would just as much detest an absolute impossibility or absolute randomness of learning or passing the course. Yet, paradoxically, it is this uncertainty that drives students forward toward achieving their goals. This is because it takes effort and skill to mitigate the level of uncertainty between students and their goals, and skill and effort is exactly what educators seek to encourage among their students. Therefore, uncertainty, when focused in the right areas, can be a powerful motivator.[42] For this reason, courses must be designed as "conflict systems" capable of directing the flow of conflict where it is most

[42] Malone asserts that challenge itself is intrinsically motivating (4).

motivating and away from areas that cause distress and discouragement.

In order to properly direct the flow of conflict within the classroom, we must first recognize possible types and sources of conflict. The following list applies to both intrinsic goals (deep learning) and extrinsic goals (grades), as well as proximal goals (completing assignments) and distal goals (passing the class).

- *Student vs. self*: such as when the student's pursuit of learning goals conflicts against his or her own personal hindrances, such as a lack of knowledge or experience, distractions, personal hardship, or disability. Conversely, the student's own high level of knowledge and skill could make achieving learning goals too easy, in which case a greater challenge is necessary to increase uncertainty and maintain interest.
- *Student vs. student*: as when students antagonize or are antagonized by other students, or when students do not cooperate with group-mates during collaborative projects.
- *Group vs. group*: as with any form of competitive group work such as debate team, team trivia, or group work that is graded on a curve.
- *One student against many*: as in a curved grading scale or a class "leaderboard" of grades, which pit students against each other in competition for the highest grade.
- *Every student for themselves*: as with traditional individual learning and grading.
- *Single student vs. system*: students working individually to overcome challenges posed by the course or a specific assignment.
- *Group of students vs. system*: students working collaboratively to overcome challenges posed by the course or a specific assignment.
- *Student vs. teacher*: students endeavoring to achieve their learning goals despite the teacher.
- *Group of students vs. teacher*: students collaborating to achieve their learning goals despite the teacher.

Immediately, it can be recognized that some sources of conflict are more acceptable than others. What may not be immediately apparent, however, is that each and every negative source of conflict is extrinsic to the intrinsic goal of learning. For example, while "student vs. self" entails the intrinsic goal of gaining knowledge,[43] extrinsic

[43] Which is a goal that, by itself, is a source of positive conflict—learning takes effort, and students must be motivated to learn.

sources of conflict (distractions, hardships, disabilities, antagonism) can detract from the pursuit of this goal. The result of extrinsic conflict is that it makes the intrinsic goal of learning artificially difficult. Once conflict reaches a tipping point, learning goals become too difficult to reach, the uncertainty of success tilts to a certainty of failure, and the learner becomes discouraged from continuing the with class. Therefore, educators must do what they can to balance the sources of conflict in a way that promotes the intrinsic goal of learning. While not every source of conflict is within the instructor's control, what is within the instructor's control is course design. [44] Aside from a student's personal conflicts, nothing impacts the conflict that is intrinsic to the learning process more than course design. Therefore, it is here where instructors must pay the most attention to ensure that they are not adding undue conflict to the system. This means minimizing most forms of student vs. student and all forms of student vs. teacher conflict while emphasizing positive forms of conflict generated by student vs. self and student vs. system.

While not all conflict can be regulated by system design, the source of conflict that most impacts the pursuit of intrinsic goals is, in fact, system design. Therefore, it is through system design that game designers employ four general methods for increasing the difficulty of their games, which Malone has identified as: variable difficulty level, multiple level goals, hidden information, and random chance (50). The following is my conception of these four sources of uncertainty.

Variable difficulty level: The distal and proximal goals remains fixed, but the

[44] Just as a game designer cannot control a player's individual sources of conflict, an instructor cannot always know of or accommodate for student stress, though measures can certainly be taken to help, such as recommending counseling, directing students toward forms of assistance, and promoting a safe, respectful learning environment.

knowledge and skill required to achieve the goal can be increased or decreased. Altering the difficulty either increases or decreases the degree of uncertainty of achieving the goal, resulting in a greater or lesser reward for achieving the goal (this reward could be tangible or merely an abstract sense of accomplishment). As an example, many computer games have variable difficulty levels that affect the artificial intelligence (AI) that governs the actions of non-player controlled characters (NPCs). Increasing the difficulty of the AI makes NPCs tougher to defeat, while decreasing the difficulty of the AI makes NPCs easier to defeat. In many cases, beating the game (a fixed goal) yields a greater reward when accomplished at the highest difficulty level (rewards might include the unlocking of secret levels and characters, as in Nintendo's *Super Smash Brothers* line of games). Another common, easy to add goal for games is the addition of a time limit within which to complete a task. This is yet another way of making goals less certain to achieve without actually altering the goals themselves.

Multiple level goals: Distal and/or proximal goals adjust to accommodate the knowledge and skill possessed by the player. This can be of two types. In one type of multiple level goal adjustment, the distal goal remains fixed, but the proximal goals leading to the achievement of the distal goal are altered to accommodate the player's level of knowledge and skill. As an example, a player could endeavor to achieve the fixed, distal goal of finishing the computer game *Crash Bandicoot*, but the player could also add proximal goals by endeavoring to find all of the secret items hidden throughout the game (finding all of the items yields a better reward: a secret, alternate ending). In another type of multiple level goal adjustment, the proximal goals remain

fixed while the distal goal changes to accommodate for player skill. As an example, arcade games can have many different distal goals (set by the player), which may include beating one's own personal high score, cracking the top 10 on a local machine, earning the highest score on a local machine, or breaking the world record for highest score of all time. In this instance, the distal goal is what changes, while the proximal goals within the game remain the same. Games can perform both types of multi-level goal adjustment simultaneously (in which both distal and proximal goals change), and they can further include variable difficulty level adjustments.

Hidden information: Within a game, information is a commodity that impacts uncertainty and conflict. Withholding information increases uncertainty and poses an intellectual conflict, while granting information lessens uncertainty and decreases intellectual conflict. Malone, as well as Salen & Zimmerman, identifies two types of information within a gaming system: perfect and imperfect information (Malone 52). Perfect information is known to the game system and all players (ibid). Imperfect information is known to only a partial number of players, to only the system, or to no one at all (Salen & Zimmerman 204). The game *Clue* provides an example of all four of these distributions of information: 1) Perfect information (the board layout and the location of game pieces), 2) Information known only to players (the cards/clues in hand), 3) Information known only to the system (the confidential cards that "solve" the murder), and 4) Information known to no one (the random chance of die rolls). For each player, the game begins in a state of near complete disinformation, save for perfect information and the cards/clues in the player's own hand. As the game progresses, players acquire a commodity of information, gradually decreasing their

level of uncertainty until they feel confident enough to attempt to solve the mystery before anyone else. In addition to perfect and imperfect information, Malone cites "cognitive information" as yet another type of information (52). This entails the knowledge of strategy and patterns that lead to success in a game. However, this information is extrinsic to the game system itself. The game system cannot control players' levels of cognitive information; all it can do is accommodate players who possess different levels of skill and cognitive information.

Random chance: Many games incorporate the element of random chance into their conflict systems, as this is a very easy way to generate conflict. Coin flips, die rolls, randomly shuffled cards, and random number generators all serve as sources of uncertainty and conflict for players. In some cases, randomness can be increased or decreased, such as by rolling two six-sided dice as opposed to rolling one 12-sided die.[45] It must be noted that random chance works directly against talent and skill. This can be useful when balancing the conflict between two unevenly matched players, since random chance gives the less talented player a greater chance of success. However, too much randomness robs players of their agency in determining the outcome of the game, as their knowledge and skill will be undermined by forces beyond their control. For this reason, absolute uncertainty can be just as detrimental as absolute certainty to player enjoyment. A balance must be found—one that rewards players for their knowledge and skill while still allowing for a certain degree of uncertainty between the player and his/her goal.

[45] A 12-sided die always has a one in 12 chance of rolling a number, which favors the extremes of one and 12 when compared to rolling two six-sided dice, which cannot roll a one, and which has only a one in 36 chance of rolling a 12. The median total of 7 is favored when rolling two six-sided dice at a rate of one to six odds, which is more favorable than the one in 12 odds of a 12-sided die.

Each of these four general methods of creating uncertainty is applicable to rhetorical education, although the conflict that is generated from these four methods is not necessarily positive. Without immediately delving into praxes, I will now move toward analyzing these four sources of uncertainty and their applicability to rhetorical education.

Variable difficulty level is a product of student agency that is (or should be) granted by the instructor. Keep in mind that, with variable difficulty levels, the distal and proximal goals remain fixed while the knowledge and skill required to achieve these goals is increased or decreased. Therefore, if we take the fixed distal and proximal goals of rhetorical education as generally being 1) learning about rhetoric, 2) completing assignments, and 3) passing the class, then the source of variable difficulty would lie in the content of the course and the student's agency concerning the difficulty of coursework. For example, in a FYW classroom that allows students to research a topic of their choice while fulfilling learning objectives, students are given the agency to research topics that may be easier to research and write about (such as a well-covered topic like climate change) or more abstruse topics supported by less published material. Similarly, a Literature class may give students the option to select which novel they would like to read for a literary criticism project. Students can adjust the difficulty level by opting to read a relatively easy novel that is rich with published criticism or a more challenging novel with less published criticism behind it. In either case, the difficulty of researching and writing about the topic varies by the content of the course, which can be adjusted by the student, while the fixed goals established by the course's design remain the same. Furthermore, students may wish

to put greater effort into their written work, perhaps if they plan on publishing it in a university or online publication, in which case students may invest themselves in completing a more challenging project by finding more quality sources, writing a larger project, and revising the project much more thoroughly. In such a case, the student weighs the degree of uncertainty of reaching certain learning goals (namely completing the project and passing the class) with the possibility of success and the reward for success, finding their own desired difficulty level in the process. While even in a traditional classroom these decisions of variable difficulty are often made unconsciously by students as they decide how much effort to invest in completing an assignment or passing a class, these decisions can be further influenced by course design. Instructors could take measures to incentivize and reward students for investing extra time and effort in studying course material, performing research, composing a better project, and/or revising their work—rewards that would extend beyond simple letter grades. Such rewards would need to be outlined by the instructor in the syllabus. A more tangible reward system would allow students to better conceptualize the reward for increasing the difficulty of the class, increasing their motivation to try harder.

Multiple level goals also apply to rhetorical education, although not completely. Keeping in mind that, with multiple level goals, distal or proximal goals adjust to accommodate the knowledge and skill possessed by the player/student, it would only make sense that proximal goals (such as reading assignments and creative projects) be adjusted, as distal goals (generally learning rhetoric and passing the class) are not really capable of adjustment. Nevertheless, setting multiple level

proximal goals is certainly something that can be created during course design, although doing so requires the course designer to grant students agency over how they complete assignments. This builds off of last section, in which it was discussed that game designers have two methods of allowing students to set their own proximal goals (or, for course designers, two methods of allowing students to construct their own scaffolding). One method is pre-planning multiple assignments that fulfill the learning objectives and allowing students to choose which assignments they would like to complete, while another method is posing students with one or more learning objectives and then allowing students to generate their own projects that fulfill these goals. In either case, students are granted agency in planning their own multiple level goals. The result of this is that students themselves can adjust the difficulty of the course, raising or lowering their chance of success, while simultaneously balancing the reward for success with the level of effort required to achieve it. The grade for the course will be more directly tied to the student's choices concerning which projects they chose to complete and less directly tied to the instructor's evaluation of the product.

Hidden information is generally not a beneficial source of uncertainty in course design. Ideally, students are fully aware of class rules, the schedule, assignment descriptions, and grading standards from day one when the syllabus is handed out. Creating uncertainty in these areas creates undue conflict in an area that detracts from the intrinsic goal of learning. That said, there are certain times when hidden information can be used to great effect. For example, in a dissoi logoi exercise, students may benefit from not knowing the second half of the exercise when

they compose a counterargument to their initial argument. As another example, during classroom discussions and exercises that are intended to question a taken-for-granted thought, idea, or concept, nothing is more powerful than that moment when a previously unknown piece of knowledge is revealed, abruptly slipping the rug out from under a preconceived notion that students may have believed to be beyond question.[46] However, positive examples of hidden information adding beneficial uncertainty to the classroom are few in number and generally brief in duration. For the most part, information is not something to be hidden from students.[47]

Random chance is generally an unwanted source of uncertainty in education. Despite this, random chance is a seemingly intrinsic part of education, as values when grading can vary greatly from one instructor to the next. Extreme variance in grading is almost as old as letter-grading itself, as revealed in the study "A Century of Grading Research: Meaning and Value in the Most Common Educational Measure," in which Brookhart et al. compile numerous studies of grading effectiveness from over a century of grading research, demonstrating that grades for assignments and courses can vary from A to F depending on the values of the instructor. This can be further evidenced by grade-norming exercises among faculty, which are likely to reveal a surprisingly wide range of grades for a sample student work, demonstrating the variance that exists between instructors. From my own experience during one particular grade-norming exercise, I remember being flabbergasted by one

[46] An experience I remember fondly was learning about "Students' Right to Their Own Language," which made me question a lifetime of belief in Standard English within the span of a single classroom discussion.

[47] As clarification, hidden information does not relate to Malone's concept of "cognitive information," which in a classroom setting would entail the student's own knowledge of rhetoric. This is not an element of course design; this is something students bring into the classroom from outside the "game."

colleague's total evisceration of a student sample for its grammar, later being equally surprised at another colleague's "A" grade for the same paper. This point is not lost on students either. Students generally know the difference between "hard graders" and "easy graders," hence why the infamous "Rate My Professors" website gives every professor an average grade from one to five for overall level of difficulty as determined by student feedback.[48] This perception of easy/hard graders was evidenced earlier by Wardle, whose research cited student responses that evaluated instructor expectations as "generally low" in some cases and "demanding" in other cases (74-75). Thus, it seems evident that teachers and students alike recognize the randomness of grading, at least as it varies from instructor to instructor. Further, this added uncertainty can result in unexpected conflict for students, culminating in damaged motivation and failure to pass the course, as was the case for one of Wardle's students (75).

Thus, it seems logical that instructors should want to decrease the randomness of assessment through their course design. One way to do this is by minimizing the subjective element of education—grading—as this is a source of random chance within course design. As discussed by Kohn, students recognize four components that go into determining a grade: ability, effort, luck, and test or assignment difficulty (34). However, as Kohn points out, effort is the only aspect of the grade that students can truly control (ibid). Furthermore, effort is the only one of these components that can truly be measured concretely and objectively (by measuring pages written, sources cited, assignments completed, etc.). Therefore, it might make sense to adjust

[48] Indeed, looking back at some demanding professors I've had over the years, I would have to agree with some of these difficulty ratings. That said, RateMyProfessors.com is generally a specious aggregate, as is the case with many online review sites.

the randomness of success by turning grading into more of an objective, effort-based system of measurement. From a game design standpoint, if random chance undermines effort, knowledge, and skill to such a point that it degrades gameplay, then the game designer lowers the level of random chance to give the player more agency in determining the outcome with their skill. If we are to design courses the same way, then we must recognize that assessments of quality are subjective and random (even if we would like to believe otherwise) because they vary so much from instructor to instructor. Therefore, to give students greater agency in determining their own success, grading should focus less on assessing the quality of student products and more on assessing the effort of the student.

To briefly review, game designers use four different methods for regulating uncertainty: variable difficulty level, multiple level goals, hidden information, and randomness. They use these sources of uncertainty to generate conflict in useful areas—player vs. self and player vs. system—while attempting to decrease conflict in areas that would detract from a pleasurable gameplay experience. Game designers generate and regulate uncertainty because uncertainty of achieving goals creates motivation to pursue these goals. Being motivated to pursue goals is the essence of autotelic play.

Good games possess a perfectly functioning conflict system, but what is the goal of the conflict system? At what point is the conflict level determined to be *just right*? Yet a further challenge for game designers is creating a conflict system that not only balances conflict but one that does so for many different players of many different skill levels. Therefore, conflict systems must be dynamic, accommodating

the specific needs of players with many different skill levels. The goal of these conflict systems, argues Gee, is not only accommodating players of all skill levels but placing players of all skill levels at the edge of their "regime of competence," a concept that Gee clarifies, stating "By this, I mean the game often operates within, but at the outer edge of, the learner's resources, so that at many points the game is felt challenging but not 'undoable'" (67). [49] All players possess an inchoate limit to their knowledge and skill levels to play a game—their regime of competence—and this skill level varies greatly from the novice to the professional. Games allow players to work at the edge of their regime of competence, pushing this regime ever further, gaining greater competence at the game incrementally as they play. To accommodate players of different skill levels, Gee argues that "A good video game adapts to the level of the player, rewards different players differently (but still rewards them all), and often stays at the edge of the player's regime of competence" (122). This is somewhat true: games do offer different rewards for different skill levels, and games do encourage players to operate at the edge of their regime of competence. However, Gee misattributes the locus of control for this action. The game does not adapt to the player; games merely accommodate players of all skill levels, allowing them to play at a difficulty of their choosing.[50] Instead, players themselves seek the fringe of their own regime of competence because this is the point at which uncertainty, conflict, and motivation to achieve goals are at the player's preferred balance. It is the player who adjusts to the game's multiple difficulty levels, not the game that adjusts to the

[49] Gee's "regime of competence" could be compared with Vygotsky's "zone of proximal development," which applies the same concept to education, describing a level of learning that is "challenging but attainable" for students (qtd. in Jackson 292).
[50] Players could choose to take it easy and experience less failure, just as they could choose to play beyond their talents and fail much more frequently.

player. It is impossible for a game system to know a player's regime of competence;[51] all the game system can do is accommodate players of all skill levels while giving them the option to play at a level of difficulty that they themselves find enjoyable.

The reason players choose to push themselves to the edge of their regime of competence is due to their desire for conflict and uncertainty in achieving their goals, but the reason players do *not* choose to push themselves beyond this point (or enjoy playing games that force them beyond this point) is due to self-esteem. Malone summarizes the reasoning for this well, observing that

> Goals and challenges are captivating because they engage a person's self-esteem. Success in an instructional environment, like success in any challenging activity, can make people feel better about themselves. The opposite side of this principle is, of course, that failure in a challenging activity can lower a person's self-esteem and, if it is severe enough, decrease the person's interest in the instructional activity. . . . One simple implication of this relationship is that instructional activities should have a variable difficulty level so learners can work at an appropriate level for their ability. (56)

As anyone knows from experience, excessive failure is severely damaging to one's confidence, sapping any motivation to go forward with the activity—a death sentence for autotelic play. Therefore, players seek a challenge that carries only a certain chance of failure. Success earned at the edge of one's regime of competence is a motivating feeling, even if it is on a lesser difficulty level than someone else—there is still satisfaction in winning a game of trivia among friends even if Ken Jennings would put the competition to shame. Therefore, as Malone observes, "people try to pick a goal at a difficulty level that maximizes some function of the probability of success and the value of success," a point Malone supports by citing a study by

[51] This is excluding smart AI in modern computer games, which employ algorithms that can calculate player skill level and adjust the difficulty accordingly.

Bernard Weiner, which concluded that "people often pick goals for which their probability of success is near 0.5" (qtd. in Malone 54).

When the chance of success dips to an unacceptable level, players will replace the difficult task with a different task that yields a greater chance of success. To this point, Shultz Colby & Colby cite Vygotsky, who observes that players operate within a "feedback loop" of success and failure—too much of one or the other makes the game uninteresting, and so players choose to operate within a range that provides both to a certain degree (Shultz Colby & Colby 305). For the player, "Tasks that are too difficult are replaced with ones players can more easily master; tasks that are too easy are replaced with more challenging ones" (ibid). Thus, players tend to stay at the edge of their own regime of competence when playing a game. If the game cannot offer this function, then the player will replace the difficult task with an easier one (possibly a different game altogether). This is why it is paramount that games accommodate players of all skill levels by providing a dynamic level of difficulty: to promote autotelic play, games must perpetuate the feedback loop of success/failure lest they be replaced by another game that can.

Good games accommodate players of all skill levels by allowing them to operate at the edge of their own regime of competence. Players operate within this zone because the feedback loop of success/failure bolsters their self-esteem, making the task pleasurable or intrinsically motivating. In this sense, games are no different from education. Students prefer to operate at the edge of their regime of competence because the success experienced here provides a sense of satisfaction that bolsters self-esteem. Conversely, when students are pushed outside their regime of

competence to a point where they experience too much failure, the feedback loop of success/failure ceases to function, eliminating the potential for autotelic learning as students become discouraged to keep learning. If instructors do not accommodate students of all skill levels, then less advanced students may experience too much failure and become discouraged from learning while advanced students will grow bored and disinterested with the course's learning objectives.[52] Thus, it is the responsibility of effective course design to accommodate students of all levels by providing them with a variable challenge. Students will naturally seek to operate at the edge of their own regime of competence within a class that accommodates multiple skill levels, but this is only possible if course designers grant students the agency to determine their own difficulty level and operate within their comfort zone.

Course Design Praxes

As stated previously in this section, the source of conflict that most impacts the pursuit of intrinsic goals is system design. Thus, course design is the instructor's main tool for regulating various forms of conflict. Course design governs just about everything—classroom activities, assignment descriptions, assigned readings, and various codes of conduct outlined on the syllabus—but arguably the greatest source of conflict is, unsurprisingly, the grading system, as pursuing a high grade is often the student's main distal goal. Therefore, it is here where many instructors have spent

[52] I can speak from experience here. I once took a course on digital design, in which I spent much time and effort learning how to use Adobe Custom Cloud. Using Adobe's software to make multimodal digital texts was very enjoyable, but the steady stream of C's and D's left me feeling discouraged. Even though I was self-motivated to learn the software, I began to question my efforts pouring hours into a digital project every week, thinking to myself "why bother doing this if I'm just going to get a C?" I can only assume the professor was grading everyone at a level beyond their regime of competence, as I somehow wound up with an A-minus—the professor must have curved the grades to end the semester.

their time generating useful praxes for assessing and grading student work, attempting to harness this extrinsic source of motivation by using it to spur pursuit of proximal and intermediate learning goals.

First, in order to understand alternative grading systems, the traditional grading system must be defined. This is familiar enough: grades are based on quality assessment of a product. Each product carries a maximum point total, and the instructor awards each product a number of points out of this maximum point total. The instructor awards points based on their assessment of the product, which results in a percentage of points earned, which correlates with a certain letter grade. After all assignments have been graded, the result is a final grade based on the total percentage of points earned, which results in a letter grade ranging from A to F.

The issue with the conventional grading system is that the conflict system is inherently subjective and random—one instructor's assessment of quality may differ greatly from another's, generating an element of random chance that may undermine student effort and skill. Because of this, many educators have denounced conventional grading systems while proposing alternative grading systems that yield various motivational benefits. These benefits result from minimizing the sources of student vs. system and student vs. teacher conflict while placing more emphasis on sources of student vs. self conflict, which is more intrinsically motivating. In what follows, I will survey and analyze the following alternative grading systems: competitive grading, experience point grading, achievement grading, unilateral contract grading, and contract grading. These grading systems are not mutually exclusive; they can be combined to form unique and effective grading systems.

In an effort to refocus conflict away from student vs. teacher, some instructors use a competitive grading system that curves grades, pitting students in conflict against each other to achieve the highest grade. An example of this is illustrated in Hodgson's classroom with his creation of optional "quest lines," which allowed for a total of 7,000 points to be earned in the class. Hodgson was unsure where to set the bar for each letter grade using his 7,000 point scale, so he used the top score in the class as the mark for an A-grade and then used 10% increments from this point total to determine all other letter grades. Hodgson explains that it was this uncertainty of where to set the bar for various letter grades,

> coupled with my awareness of Jackson's use of a public "high-score" system as a motivational approach for getting students to "push themselves beyond [just] getting an A," that led me to adopt competition for determining course grades. While Jackson found this approach created some issues, which led her to stop using this practice, I felt that healthy competition was not only a potential motivation, but it could also make the course grade system more transparent: a daily update of the course's current "high score" would let students know exactly where they stood at any given moment. (53; brackets in original)

Thus, Hodgson argues in favor of student vs. student competition as a positive source of student conflict, viewing this conflict as motivating for students.

While Hodgson is not wrong for wanting to refocus the source of conflict in grading away from less "transparent" student vs. teacher quality assessment, his choice to emphasize agonistic student vs. student conflict is not as beneficial as he suggests, being outright damaging to student motivation at its worst. First, it must be pointed out that Hodgson doctored and misquoted Jackson's words to support his argument. In fact, Jackson is arguing *against* Hodgson's competitive grading system

in the excerpt from which Hodgson pulled this quote. It reads:

> I wanted to motivate students beyond getting an A – thus the Expert and Guru levels. I tried other "videogame" ways to motivate students to *push themselves beyond the A*. For example, I posted the name of the person with the highest number of total points weekly as an incentive for higher achievers to push themselves to excel further, hoping that this simulated the way posting the high scorer of videogames serves achievement needs (Turkle, 1984). Unfortunately, the same people dominated the "high score" and I worried that their high scores might discourage other students, which was confirmed by comments on evaluation forms and during focus groups. I have since stopped using this practice. (297; emphasis added)[53]

Jackson's quote, in context, tells a cautionary tale of how competitive grading stifles motivation among students who did not dominate the course. Competitive grading is motivating for those at the top, but for everyone else it can be demoralizing. In fact, Hodgson makes this point himself: "I should note that while competition like this works for motivating some students, it does not work for all. . . . And in some ways it tends to go against the major tenets of education—which is not supposed to be a competition between students, but rather individuals focused on learning" (53). Despite all of this, Hodgson ignored the red flags and proceeded to implement an adversarial grading strategy.

These concerns were later justified when some of Hodgson's students raised issue with the competitive grading system, which rewarded students who had already played the computer game *World of Warcraft* (*WoW*) by allowing them to easily earn 1,000 points—one seventh the total course grade (Hodgson 55). Yet, rather than validate these students' concerns, Hodgson takes a defensive stance, minimizing their concerns by replying that the *WoW* quest line "was only worth up to 1,000 points," as if this in any way addresses the problem with students having a competitive

[53] I italicized the section of Jackson's quote cited incorrectly by Hodgson.

advantage—in fact, it only affirms the problem (55). Hodgson continues, "Those 'gamers,' therefore, were no more advantaged than those with prior experience in Adobe Photoshop, Applie's iMovie, or writing research papers" (ibid). However, this retort completely disregards the time and effort saved in not having to learn anything to earn those 1,000 points, and it completely ignores the significantly increased likelihood that someone has played *WoW* compared to the likelihood someone has mastered Adobe *PS* or Applie *iMovie*.[54]

Rather than defend himself from student feedback, Hodgson would be better served by considering why his course design elicited such critical feedback from his students. From a pedagogical perspective, student vs. student competition is not a productive source of conflict. Students gain nothing by rooting for each other to fail, the victors are not benefitted intellectually by crushing their competition, and the losers are punished for having more to learn. Furthermore, if Hodgson is unwilling to consider student feedback as a valid critique of his system and make changes accordingly, then an additional student vs. teacher conflict emerges, in which students battle with the teacher for control over the classroom as a design space in an effort to make the class fit their pedagogical needs. By quashing student feedback regarding the design of the course, the instructor becomes the controller of the students' education and not the students themselves.

Hodgson's grading system raises further issues with the meaning of the letter grade. When grading is based on student vs. student competition, what does the letter grade really represent? Hodgson's grading system does not grade students for their

[54] In 2014, World of Warcraft's parent company Blizzard Entertainment claimed over 100 million people had played WoW (Whitbrook).

individual knowledge, effort, or quality of their own work. Rather, student grades are representative of how far behind they are relative to the student in first place. By having an adversarial student vs. student competition, students are punished for what they *can't* do relative to someone else. If you *can't* keep up with the best student, then you are punished with a lesser grade. Punishment-based reward systems do not fuel motivation—players play for rewards, not punishments. Furthermore, student vs. student grading does not accommodate different skill levels; it exacerbates difference. Rather than be representative of the things students learn and do *during the semester*, competitive grading represents the things students knew before the semester began. Students who enter the classroom with greater competency with course materials (like knowing how to play *WoW*) begin the race for an A-grade closer to the finish line than everyone else, punishing those who had more to learn before the course began. Hodgson is blind to difference in the classroom when he overlooks the advantages that students possess due to experience with gaming. Course design should accommodate difference, not exacerbate it with favoritism. For this reason, students' grades should be representative of what they accomplish during the semester and *not* what they accomplished or knew before the semester even began, nor what they know or have accomplished relative to someone else.

It is clear that student vs. teacher and student vs. student sources of conflict range from not wholly productive to outright discouraging in sustaining student motivation. Thus, most alternative grading and assessment systems strive to place more of the conflict on student vs. self. This is generally accomplished by granting students more agency over the selection of course assignments and the level of effort

that goes into completing them. By granting students agency in completing assignments, the level of difficulty of the course falls more within the students' locus of control, allowing them to adjust the difficulty of the course and operate at the edge of their own unique regime of competence. Thus, refocusing the source of conflict toward student vs. self is more intrinsically motivating, as students are encouraged to challenge themselves to invest more time and effort rather than challenge their instructor or their peers in how grades are decided.

One praxis that shifts conflict more toward student vs. self is experience point grading. The way experience point grading works is rather simple: students are awarded points instead of letter grades or percentages for their assignments. These points are totaled at the end of the semester and then compared to a set of thresholds that determine the letter grade. These thresholds can be fixed (like traditional grading) or variable (like curved grading), and these thresholds can be set exclusively by the teacher, collectively by the students, or negotiated between the teacher and the students individually or as a group. At the most basic level, awarding points is really no different than traditional grading, since traditional grading still issues points. Where point-based grading finds its uniqueness is when it is coupled with other grading praxes: effort-based grading, contract grading, and portfolio grading to name a few. In fact, all of these alternative grading systems could be combined to form unique hybrid grading systems that create different motivational and pedagogical effects.

Hodgson's praxes for assessment and grading, despite their flaws, offer an example of experience point grading, which can be beneficial when *not* combined

with a competitive grading system. In Hodgson's class, he created seven different branches of assignments, "quest lines," which were "worth up to 1,000 course points" each (51). Whenever a student completed an assignment, s/he earned an amount of points up to the assignment's max score—or less if quality was less than perfect. Similar to Hodgson, Jackson substitutes this subjective point system for an objective one by having concrete variable difficulty levels (easy, medium, and hard), which requires students to invest more time and effort within each project in order to earn more points (such as by requiring more sources, greater page length, etc.). In either case, students gradually accumulate points throughout the semester until the final day of class. At no point in the semester do students receive a percentage or letter grade for their progress. This became a problem in Hodgson's class because the benchmark for an A-grade was unknowable throughout the semester. However, if Hodgson had instead used fixed point totals to establish how many points were necessary for a particular letter grade, then students would have been able to chart their progress and know their academic standing just fine. In its simplest form, this is experience point grading: starting with zero points and earning points with every assignment to reach a threshold number of points for a course grade. This is really no different from traditional grading, however. Where experience point grading becomes distinctly different from standard grading can be seen in Hodgson's course, which contained so many options for coursework that fully completing all seven quest lines and earning the maximum 7,000 points was not really a possibility. For this reason, students could realistically never run out of work to do throughout the semester, allowing them to pursue an A-grade on sheer effort despite imperfect quality. Let us suppose that, in

lieu of competitive grading, Hodgson had instead set a threshold of 5,000 points for an A-grade. In this way, a student could perform five quest lines perfectly and get an A (probably taking advantage of Hodgson's revision policy along the way), while another student could perform all seven quest lines imperfectly and still get an A by making up the difference in quality by investing additional effort in attempting all seven assignments. By granting students agency in how they choose to complete assignments, they are able to adjust the difficulty of the course and operate at the edge of their regime of competence. Thus, the level of challenge is always balanced because it is set by the individual student.

Similar to Hodgson and Jackson's experience point grading systems, Stephen Adkison and Stephen Tchudi propose their own unique grading system, "achievement grading," which approaches assessment from the perspective of critical pedagogy. In their essay "Grading on Merit and Achievement: Where Quality Meets Quantity," Adkison & Tchudi describe their achievement grading system as "an approach that allows us *not* to put grades on individual papers," relying instead on a system that utilizes difficulty levels to reward points based on quality and effort, and a pass/fail system that either rewards students full points for their attempt or nothing at all if they fall short of the assignment's requirements (193-94). Adkison & Tchudi summarize their system:

- All work is "graded" credit/no credit (or pass/fail or successful/unsuccessful)
- The requirements for credit are stated in terms of *tasks* or *assignments* to be completed. The criteria for credit usually specify both the amount of work to be done (quantity) and the kind of thoroughness and polish required for acceptance (quality). The teacher may be the sole determiner of tasks and criteria, but usually students are involved in the negotiation of both.

- Students get points, grades, or other rewards on the basis of how much creditable work they do. (194-95)

This grading system is strikingly similar to Jackson's point-based system with variable difficulty levels. Where it diverges from Jackson's system is in defining only B and A-level work, as Adkison & Tchudi explain: "The system is based on specific requirements for both B grades and A grades; though some students do end up receiving C grades (mostly through failure just to do the work or to come to class), this emphasis on B's and A's helps focus students on higher rather than "acceptable" goals" (197). The course and its assignment descriptions define in clear terms what is needed for a B grade, while an A grade is explicitly negotiated as a contract between professor and student.

There are motivational benefits to achievement grading. Adkison & Tchudi assert that students who ordinarily find themselves pursuing C grades often end up working for B grades or higher, thus broadening their regime of competence (197). While forcing students to think beyond the bare minimum for a C grade may be a source of encouragement in and of itself, the clarity of grading may be an even stronger motivation. As Adkison & Tchudi explain,

> This list of tasks required to qualify for a specific grade forms the backbone of our approach to achievement grading. The tasks spell out, in concrete terms, what is expected of our students in the classroom. . . . We have found that, given a set of tasks that must be acceptably accomplished, students spend less time trying to determine what we, the teachers, prefer and more time working on the tasks before them. In short, students encounter less ambiguity surrounding teacher expectations and course requirements, and they find focusing on the course easier. (196)

By defining in concrete terms what students must do in order to get a B or an A, students are less concerned with their efforts being wasted. In a traditional grading

system, there is subjectivity in the instructor's grade, as the instructor is the judge of what is right or wrong, good or bad, effective or ineffective. This element of subjectivity or random chance can undermine student skill and effort, which inhibits motivation. Adkison & Tchudi's grading system reduces the level of random chance that comes with quality-based assessment, placing the outcome of one's efforts more within the locus of control of the student. As a result, students are rewarded more consistently for their efforts than they might be with a more random and subjective grading system. Conflict becomes more student vs. self, as students are encouraged to challenge themselves to invest greater effort to achieve an A-grade.

Adkison & Tchudi are not the only ones to suggest a hybrid grading system that is rooted in concrete, point-based grading and partial contracts for A-grades. In "A Unilateral Grading Contract to Improve Learning and Teaching," authors Jane Danielewicz and Peter Elbow present a partial contract grading approach that is almost identical to Adkison & Tchudi's achievement grading system.[55] Like Adkison & Tchudi, Danielewicz & Elbow establish concrete criteria for a B-grade (245-46). Danielewicz & Elbow summarize their system: "So we don't get rid of grading entirely, but our contract radically reduces it. Throughout the semester we use only three possible grades: not satisfactory for B, satisfactory for B, and better than B. We don't distinguish among grades higher than B until the end of the semester, when we have student portfolios in hand" (246). So, if students do all of what is asked of them

[55] Ironically, Danielewicz & Elbow mention the sourcebook *Alternatives to Grading Student Writing*—the text in which Adkison & Tchudi's essay can be found—and assert that "none of the essays focuses on contracts." However, if they were to read it more closely, they might be surprised to see that Adkison & Tchudi's "achievement grading" system is nearly identical to their contract grading system. While Adkison & Tchudi may not "focus on contracts," they most certainly incorporate contracts into their work.

in the grading contract (which is established solely by Danielewicz & Elbow), then they will get a B. In further mirroring achievement grading, Danielewicz & Elbow reserve room for subjective judgment when students fail to meet expectations. They stipulate, "We reserve the right to make individual judgments as to whether any particular dilatory student will get C, D, or F, depending on personal circumstances, not just on how much they've failed to do" (254). However, Danielewicz & Elbow caution that they do not take a hostile approach when making accusations of substandard work:

> We avoid arguments and hard feelings in two ways. First, we don't accuse someone of failing to meet one of these fuzzy criteria (such as "no effort") unless the violation is grossly flagrant (for example, drafts far short of the required length). And if we call something a violation and the student argues against us, we'll take the student's word for it. In this way, we're satisfied that we are calling attention to what we suspect is an effort problem, giving a fair warning, and providing incentive to work harder. (251)

Again, this is strikingly similar to Adkison & Tchudi, who do not stipulate grounds for failure with the same clarity as grounds for a B-grade, opting instead for a "fuzzy criteria" that dissuades students from probing the nadir between barely satisfactory and failure.

Further similarities emerge in Dainelewicz & Elbow's reservation for subjectivity and judgment over what constitutes an A-grade; however, this is where the similarities end. Where Adkison & Tchudi negotiate individual student contracts for an A-grade, Danielewicz & Elbow opt instead to keep an "aura of excellence for grades higher than B when the process of earning them is so special and emphasizes heightened vigilance about quality" (251). Rather than tell students directly what must be done to earn an A-grade, Danielewicz & Elbow let the students come to them

to ask the question "is this an A paper?" or "am I on course to get an A-grade?" (253). And, rather than give a straight answer, Danielewicz & Elbow offer only subtle critiques that guide students toward an A-grade. Danielewicz gives an example:

> If a student asks, "Is this an A paper?" Jane might say, "Well, you're working toward an A, but you're not there yet." Or, "You need to do some careful editing, but apart from sharpening your sentences, this is A-quality work." By directly addressing the students' concerns, Jane can either ratify or question their self-assessment—a process that she's eager to support anyway. (253)

In this way, Danielewicz & Elbow use fuzzy criteria to push those students "who *ache* for an A" ever further to try their best to reach their goal (253). In doing so, Danielewicz & Elbow add an element of random chance (subjective quality assessment), which impacts only A-grades. The idea here is that A-level students will be more motivated to overcome this element of random chance, investing more effort to attain an uncertain reward. This element of random chance may provide a positive source of conflict for A-students, whereas B or C-level students may become discouraged over such conflict and uncertainty. Of course, one could just as easily define in concrete terms the requirements for an A-grade when designing a course, eliminating most random chance altogether, thereby refocusing the source of conflict and producing a different motivational effect upon students.

Because grades provide the largest source of controllable conflict, this discussion of grading and its effects on conflict is lengthy but not exhaustive. However, outside of assessment, classroom activates themselves can provide conflict, and so I will conclude by advising caution against one particular group of classroom activities: playing games in the classroom.

Game-like activities have long been a part of education. Taking this a step

further, however, are Cheryl A. Bodnar & Renee M. Clark, who report their findings using games (not computer games) in their technical writing classroom and through their online learning management system in their research article "Can Game-Based Learning Enhance Engineering Communication Skills?." Bodnar & Clark divided their study into three degrees of reliance on game theory: a control group that used only traditional teaching methods; two "game-based instruction" classrooms that used games in class and online, but avoided in-class public speaking exercises; and one "games-plus" classroom that used games in class and online for both written and oral communication skills (30). In Bodnar & Clark's description:

> The game-based instruction included live physical games during class as well as a game-based homework portal where students had the opportunity to earn points and badges for completing activities of interest related to course content. The Games-Plus section had an additional three live physical games within the communications section of the course to enhance and reinforce elements critical to oral and written communication skills. (30)

To aid in this endeavor, Bodnar & Clark hired a game designer, Pete Vigeant, to help them design classroom games that met their learning objectives (ibid). In collaboration with Vigeant, Bodnar & Clark developed four classroom games:

> Categories provides each player with a card with a single word on it. Each player is then instructed that, similar to charades, he or she must act out the word on the card, with no speaking or drawing of pictures allowed. Students then self-assemble into groups based on common themes between words. For example, one theme could be animals, and the cards in the room could contain anything from a cat or dog to an iguana. Categories has three separate rounds. In the first round, players are told how many categories are present and the number of players that should be in each category. In round two, players are told only the number of categories in the room, and then finally in round three, players aren't given any information about the number of categories or number of players per category. However, they must nonetheless self-assemble based on their nonverbal communication skills.
>
> In ROYGBIV, each player receives a card covered in symbols.

> One of the symbols on each card is defined. Without showing the cards to one another, the players must decode the messages on their personal cards by describing their defined symbols to other players and seeking feedback on whether the symbols defined on the other individuals' cards match the information they are looking for. When they finish decoding their cards, each player changes the color of a particular box on the instructor's screen, which will allow the class to verify that they decoded the cards correctly after the game, as each card represents a single box on the screen.
>
> In Mystery Liquid, participants are split into groups, and then each member of the group is sent to a station with an unknown liquid. While at the station, the player is given a sheet of paper where he or she may write, without using pictures, a clear description of the liquid at that station. Each player is allowed to smell, touch, and look at the liquid to form the basis for the written description. Once the player thinks that he or she has written a clear description, he or she takes the description back to the group, where as a group, they need to guess what the mystery liquid is for each station based solely on the written descriptions. No discussion among team members is permitted. The team with the most correct liquid descriptions wins a prize.
>
> The last game developed was titled Professional Slides. In this game, the players are once again split into groups, and each group is provided with a written prompt from which it needs to develop a single PowerPoint slide that can convey the provided message to the desired audience. The twist with this game is that players are informed that professional engineers have also been provided with each prompt and that their slide will be added to the deck of slides. However, in reality, the slides developed by the professional engineers from industry are not added to the deck. During the next class period, the students are allowed to vote on which slide is the most professional for each prompt. This step leads the students to select a slide that one of their peer groups generated and to hold an enriching conversation about what made the slide appear professional. (31)

In addition to these classroom games, Bodnar & Clark incorporated conventional games including a hula hoop race, "3 6 9,"[56] and other undescribed games, all which do not seem to be directly related to exercising communication skills (30).

Whether or not these games benefitted Bodnar & Clark's students in achieving the course's rhetorically-based learning objectives is debatable. Mystery

[56] A tedious counting game in which players count to infinity, clapping instead of saying numbers with 3, 6, or 9. Players who accidentally say the number 3, 6, or 9 are disqualified from winning. The last player remaining wins.

Liquid and Professional Slides do, in fact, seem to promote the development and use of one's rhetorical skills, and they seem like fun and effective games. However, Bodnar & Clark's inclusion of a hula hoop race, while interesting, seems tangential to the goal of developing rhetorical skills, not unlike Hodgson's questionable incorporation of *WoW* into his course curriculum. Perhaps it is for this reason that Bodnar & Clark's students reported that, while they found the classroom activities memorable, they did not feel as if the activities provided them with any deep learning (37). Moreover, other students expressed the belief that "the games had little value and were not purposeful or helpful" (ibid).

Bodnar & Clark's strategy of using games and its debatable effectiveness might best be explained by comparing it to one strategy of game design described by Mateas & Stern, in which it is believed that including puzzles enhances gameplay by providing players with greater challenge and conflict (648). However, this practice can be counterproductive, as Mateas & Stern advise:

> Puzzles disrupt enactment, breaking immersion in the action and forcing reflection on the action as a problem to be solved. As the player thinks about the puzzle, action grinds to a halt. Solving puzzles invariably involves trial-and-error problem solving. All the dead ends involved in solving a puzzle introduce incidents that expand time and reduce emotion, thus disrupting intensification. Each puzzle can be thought of as having a "halo" consisting of all the failed attempts to solve the puzzle. These "halos" are extensive; they expand the experience rather than focus it. Puzzle-based experiences tend to be episodic; individual puzzles are loosely related by virtue of being in the same world, but they are not strongly related to a central action. Puzzles have an internal logic that makes them self sufficient and internally consistent, but disrupts unity of action across the entire experience." (648-49)

Bodnar & Clark's games seem to fit this description, being "episodic" in nature, possessing an "internal logic" but lacking "unity of action" with the rest of the course

and its learning objectives. Bodnar & Clark's student feedback seems to coincide with the frustration experienced by immersion-breaking puzzles, as students expressed doubt concerning the necessity of activities, clarity of goals, and clarity of feedback (36-37). These results are indicative of what happens when the game includes too many puzzles that are unrelated to the distal goal of the game/course. This is not to say that puzzles or games are inherently wrong—they are effective at raising the level of challenge—but they must be incorporated harmoniously with the rest of the game system. As it stands, Bodnar & Clark seem to be adding conflict for the sake of conflict, but this conflict is not intrinsic or necessary for achieving the distal goals of the course, and so it actually does nothing positive for sustaining student motivation.

A source of Bodnar & Clark's struggles with designing course as game stems from their reliance on gamification instead of game design theory. For example, in their literature review, Bodnar & Clark state "We identified literature that described the definition of games and gamification with a particular emphasis on their application within education. The search terms used for this component were 'games,' 'gamification,' and 'education'" (26). This yielded texts such as Karl Kapp's book on gamification, which indeed focuses on "game-based mechanics, aesthetics and game-thinking to engage people, motivate action, promote learning, and solve problems" (27).[57] As a result, Bodnar & Clark's games seem somewhat isolated from the overall function of the course. Some of their games seem to function primarily as

[57] In my initial research, before differentiating between game design theory and gamification, Kapp's *The Gamification of Learning and Instruction: Game-based Methods and Strategies for Training and Education* was one of the sources I read. While it identifies motivational goals of games and common tropes in gaming, the theory of game design was poorly represented in my estimation. It did not adequately explain how games produce the effects that Kapp desires.

a means of making a relatively boring activity (technical writing) more palatable by incorporating fun yet unrelated activities (hula hoop races). Moreover, I question the course's use of scaffolding: is it necessary to play "3 6 9" before doing the next activity? Is the lesson learned from "3 6 9" transferrable to the next activity? Do these smaller activities form a scaffolded network of proximal goals that bridge players/students to a fixed, distal goal? I have the same questions concerning the online portion of the course, which is not described adequately. A deep understanding of how games function as conflict and feedback systems is what gamification fails to teach when it overlooks game design theory. Bodnar & Clark's research is illustrative of what can happen when gamification is put into practice.

As a final caution, instructors must be especially mindful of universal design when planning classroom activities. I speak from experience as a wheelchair user when I say that games can be an alienating experience. Just looking at Bodnar & Clark's description of "Categories," I can tell you that playing charades in the classroom would be an embarrassing experience for me, as would participating in a hula hoop race. Furthermore, "Mystery Liquid" would likely involve navigating the classroom and interacting with exhibits, which would further test my mobility.[58] Similar embarrassment or alienation occurs whenever a person with a sensory or cognitive disability is tasked with doing something that conflicts with their abilities. Not all disabled students are diagnosed, are comfortable discussing their disabilities, or possess clearly visible disabilities. For this reason, it may be best to avoid certain activities in the classroom, including certain games, as these activities may amplify sources of conflict that inhibit motivation and learning.

[58] Navigating a cramped classroom in a wheelchair turns into a game of "excuse me."

Good Games Allow for Unique Input and Provide Unique Feedback

Allowing players to discover their own regime of competence, set their own goals, and operate within a difficulty level of their choosing promotes autotelic play, but how do players know how far their regime of competence extends or how difficult it is to achieve their goals? The answer lies in the exchange of input and feedback—the feedback loop—that takes place between player and game system. Feedback loops serve many purposes, making them a necessary component of learning. Without a feedback loop, generating hypotheses and performing experimentation (Gee's reflective practice) cannot take place. Also through feedback loops, games inform players whether or not they are advancing toward their goals. For these reasons, feedback loops are not only entwined with goals and conflict as part of the gaming system, but they are just as necessary for the game's success.

Feedback loops are necessary for performing reflective practice. Reflective practice consists of a person engaging a situation (giving input); interpreting the results of their actions (receiving feedback); making hypotheses from these observations; re-engaging the situation with a hypothesis in mind, observing the resulting feedback; and then either accepting the feedback or re-engaging the situation with a new hypothesis in mind (Gee 88). However, this process breaks down if the game does not allow for unique input or choices from the player or provide unique, quantifiable feedback to the player. How can players learn critically if they cannot provide input? How can players hypothesize the results of their actions if the feedback is unclear? They can't. Without a quality feedback loop, players interact

blindly with the game system, unsure whether their actions are leading them toward success, and unsure what to do differently if they are headed toward failure. Reflective practice occurs in education just as it does in games, so sustaining feedback loops is just as important in education for this reason.

Feedback loops are equally necessary for determining whether or not players are achieving their goals. As an example, suppose there was a pinball machine with a malfunctioning score panel. Hitting the ball around might be fun for awhile, as the lights and sounds reward the player for his or her actions. However, what if there was a hole right in the middle of the machine that made the player lose points every time the ball fell within it? The player would have no idea that falling within this hole takes the player further away from their goal of a high score because the score panel is malfunctioning. In this scenario, the feedback loop is broken because the player does not know if their actions are leading them closer to or further from their goal of a high score. To avoid this, games must provide clear, quantifiable feedback, which answers the question for the player: is what I am doing helping to achieve the goal or hindering my progress? Building off of this, if the game is providing too much negative feedback (failure), the player may lower the difficulty (such as by pursuing a different goal or lowering the difficulty) so that they receive more positive feedback (success) in pursuit of their goal. Thus, feedback loops are equally necessary for determining and adjusting the difficulty level of the game.

It is clear that feedback loops are necessary for performing reflective practice, pursuing goals, and regulating conflict, but how do players provide input? As Gee explains, games should accommodate multiple options for player input—the

"multiple routes principle." This was touched on earlier when discussing goals: "There are multiple ways to make progress or move ahead. This allows learners to make choices, rely on their own strengths and styles of learning and problem solving, while also exploring alternative styles" (Gee 105). Thus, we already know that making choices by setting goals is one form of input operating at the macro level. However, as Salen & Zimmerman explain, macro-level choices are actually composed of many smaller micro-level choices:

> In considering the way choices are embedded in game activity, we look at the design of choice on two levels: micro and macro. The *micro* level represents the small, moment-to-moment choices a player is confronted with during a game. The *macro* level of choice represents the way these micro-choices join together like a chain to form a larger trajectory of experience. (61)

Therefore, when a player makes a long-range choice like "I'm going to go climb that mountain" in *Skyrim*, this macro-level choice is actually composed of many micro-level choices concerning how specifically to get there, what route to take, how to clear a troublesome obstacle, whether or not to fight or flee from an enemy, and so on. In essence, macro- and micro-level choices are forms of input that relate directly to setting distal and proximal goals.

Not only do players make choices at the macro- and micro-levels, but these choices need to have outcomes that can be hypothesized. One's input or choices need to have a discernable and predictable impact on the outcome of the game. For example, it is one thing for a player to lose a game—this is a form of feedback. However, it is another thing for a player to lose a game *and* know why they lost: the player's input was meaningful because it produced a quantifiable effect that could be understood by the player. Upon losing, the player learns how their input affected the

outcome of the game, allowing them to hypothesize better choices that might lead to victory in the future. For this reason, Malone argues that games mix "performance feedback" with "constructive feedback" to give player choices meaning (33). That is, player choices result in performance feedback (such as losing the game) while providing constructive feedback (indicating why or how the player lost the game) in order to guide the player's future choices. Without this quantifiable feedback, players are left to make choices blindly without any way of evaluating their decisions and forming new hypotheses—players are unable to perform reflective practice.

Without feedback, player input is meaningless. Input is made meaningful through the generation of feedback. This feedback is unique to the player's specific input, has discernable meaning, and occurs immediately after input is received. Salen & Zimmerman emphasize the importance of "meaningful play," describing it as emerging from two types of feedback: "descriptive" and "evaluative" feedback. "Descriptive" meaningful play

> emerges from the relationship between player action and system outcome; it is the process by which a player takes action within the designed system of a game and the system responds with action. The meaning of an action in a game resides in the relationship between action and outcome. The key to meaningful play is that there is a unique response to the player's actions—this gives actions meaning. (34)

Thus, player input should not only be unique (ideally the game system allows for unique choices) but the feedback generated should be unique to the input as well. Consider a game in which, no matter what the player chose to do, the result was the same. Would the player really have agency in such a situation? The player could certainly make choices, but the choices themselves would be meaningless because

they yield the same outcome regardless. There would be no need for evaluating outcomes, hypothesizing different actions to take, and testing hypotheses—in short, no need for reflective practice. Therefore, good games not only allow for unique input but provide unique feedback in response.

In addition to descriptive feedback, Salen & Zimmerman identify "evaluative" meaningful play, which "occurs when the relationship between actions and outcomes in a game are both discernable and integrated into the larger context of the game" (34). By "discernable," Salen & Zimmerman mean that the feedback is "communicated to the player in a perceivable way" (ibid). That is, the feedback needs to be capable of being interpreted by the player as either good or bad; otherwise, the player cannot evaluate the success or failure of his or her actions. Without discernable feedback, the player cannot know if their actions are moving them closer to their goals. Thus, feedback must carry clear meaning. In addition to this, Salen & Zimmerman assert that feedback must be "integrated," meaning that "an action the player takes . . . has immediate significance in the game" (34). In other words, feedback should occur promptly after input is received. If feedback occurs too late, the player will not correlate their actions/input with the delayed feedback. Many users experience this when their computers are lagging: keystrokes seem to be unresponsive, while unexpected processes occur later on. In such a case, the computer's processor is overwhelmed, providing feedback long after input has been received, baffling and frustrating the user. For this reason, games (ideally) provide instant feedback. Instant feedback helps facilitate hypothesis testing, as Jackson pointed out in her experience with game design (292). Within a computer game,

feedback is instant—the player can perform reflective practice quickly, cycling through the steps of interaction, observation, hypothesizing, and re-interaction several times within the span of a few seconds (ibid).

However, education is not a game, and rhetorical education in specific does not and cannot have the smooth, instant efficiency of a game's feedback loop. Rather, responding to student writing is a slow process that can span across multiple days. Jackson makes a comparison between feedback loops in games and education, observing that

> When that paper is turned in, the student does not receive feedback instantaneously, and often not immediately, unlike videogames, because it requires time for the teacher to grade all the papers and write individual comments. When playing a videogame, though, feedback is on the spot and often 'just-in-time', i.e., 'when the learner can use it.' (292)

In rhetorical education, there is a time factor that simply cannot be overcome. It can be mitigated—educators should endeavor to provide students with feedback for one project before the next one is due—but there is no way to provide instant feedback in the way that an online multiple choice exam might be able to do. However, it is worth pointing out that this *deficiency* of feedback loops in rhetorical education is caused by a *proficiency* of rhetorical education to accept truly unique, infinite varieties of input for writing assignments. Likewise, the feedback students receive for their writing is truly unique to their input.[59] Thus, in rhetorical education, there is a necessary trade-off between uniqueness of input and feedback and the time taken to provide feedback.

[59] Or it should be. Simply slapping a letter grade on a student project and checking boxes on a grading rubric is inadequate feedback. Refer to Nancy Sommers' "Responding to Student Writing," Summer Smith's "The Genre of the End Comment: Conventions in Teacher Responses to Student Writing," and Dana Ferris' "Preparing Teachers to Respond to Student Writing" for both positive and negative examples of feedback and analyses of the consequences of such feedback.

While the time it takes to receive feedback slows the process of reflective practice, the varied input and feedback raises agency and motivation to perform this process.

A further issue in adapting the gaming feedback loop to rhetorical education is the sheer effort required to grade many student assignments. In his course based on game design, Hodgson observed an issue inherent when the instructor acts as the "game engine": while game engines are capable of performing many real-time calculations and processes within a fraction of a second, it takes a lot more effort for a human to perform such calculations. Hodgson reflects that

> To provide thoughtful and helpful feedback takes time, and to try to keep up with student/player demand in this regard is very difficult . . . Thus, the sheer volume of work students turned in, coupled with the frequency with which they turned work in and the need for quick feedback (all by the course's design), meant that I was regularly buried under grading." (58)

Especially in a course that emphasizes effort in lieu of quality grading, there is an "instructor-as-grading-machine problem" that Hodgson's experiences demonstrate. Responding to student work takes a great deal of consideration to perform effectively. Hodgson recognized the importance of providing quality feedback for his students (this is how they perform reflective practice), but his desire to provide quality feedback in a course with a heavy workload (operating within a condensed summer semester, no less) demanded more—perhaps too much—of Hodgson to operate as the course's "game engine." This issue manifested itself in the form of delayed feedback.

In trying to adapt the feedback loop to rhetorical education, further issues arise with how games allow students to repeat the process of reflective practice indefinitely. Games allow players to engage a situation, observe results, hypothesize, and then re-engage the situation over and over again, allowing players to learn the

best strategies and hone their skills in the process. This is why it's called a feedback *loop*—players can play situations over and over again, continuously exchanging input for feedback with the game system. Such is the case when Chess players test different approaches to specific end-game scenarios in a Chess simulator, resetting the simulation after each attempt. While this is how games tend to function, rhetorical education is not the same. In a traditional rhetoric classroom, writing assignments tend to follow less of a loop and more of a straight line that ends with a grade—the final verdict in the learning process. Students are not always afforded the luxury of reattempting written assignments due to the issues raised by Jackson and Hodgson concerning time and effort in responding to student work. In these situations, students are not given the chance to re-approach the assignment, in which case one wonders how much students really *reflect* on their writing practice. In my experience, graded term papers were often looked at once before being tossed aside. Only on rare occasions did I ever consider revising a term paper (for publishing). Reflective practice rarely occurred because I would never reflect on my rhetorical choices and then reattempt them. When I received a disappointing grade on a term paper (as I did as a freshman in English 101), there was no sense of "I'll do better next time" because there would be no next time, not for that paper or that class. The semester was over, and the grade was final—no retries, no reflection, no feedback loop. There was only one chance to get it right.

With the constraints of time and effort working against students and teachers alike, the stakes of success—*immediate* success—raise ever higher. Getting it right the first time is paramount to achieving extrinsic goals of good grades and high grade-

point averages. Of course, I do not mean to suggest that there is little students can do to "get it right the first time" when submitting a written project—they could meet with the professor, visit the writing center, and spend extra time revising their work, among other things. Nevertheless, this attitude is the complete antipode of reflective practice and stands in stark contrast to the attitude players possess when playing games. Explaining how gamers actually embrace failure as an intrinsic part of gaming, Gee identifies games as providing a safe space in which players can safely fail (175). When facing a tough boss battle, for example, players can repeatedly try and fail to beat the boss, which may be discouraging after a time, but the consequence of such failure means only that the player must reattempt the boss fight (ibid). During this loop of trying and failing, the player is performing reflective practice, gaining competence, and coming ever closer to beating the boss until, finally, the player achieves the goal. For this reason, Gee observes that failure is not a negative consequence of gaming; it's just part of the game: "In video games, losing is not losing, and the point is not winning easily or judging yourself a failure. In playing video games, hard is not bad and easy is not good" (Gee 175). This attitude of gaming is indicative of what psychologist Eric Erickson calls a "psychological moratorium," which Gee describes as "a learning space in which the learner can take risks where real-world consequences are lowered" (59). When players feel it safe to fail, the purpose of the activity becomes less about "getting it right the first time" and more about succeeding at the edge of one's regime of competence despite the threat of failure.

However, traditional classroom settings often fail to provide this

psychological moratorium, which results in students being afraid to take risks and challenge themselves. Jackson makes a comparison between computer games and education, observing that

> When feedback is received in the classroom, students often interpret it as a 'judgment' from the teacher, whereas videogames sometimes have humorous or engaging feedback, which can encourage players to make 'mistakes' on purpose to find out how the game responds. In the classroom, mistakes result in punishment—a lower grade. When playing videogames, risk-taking is encouraged due to decreased real-world consequences or 'psychological moratorium,' so mistakes are seen as learning opportunities. (292-93)

For this reason, both Jackson and Squire argue that games evoke positive qualities among those who play them, including an aptitude for risk-taking, comfort with failure, and a greater capacity for independent problem-solving (Jackson 293). When students are not given the opportunity to safely fail, these skills go undeveloped. In school, students are prudent for avoiding unnecessary risks because the stakes for failure are too great. For these reasons, Gee, Jackson, Hodgson, Shultz Colby & Colby, and Crawford each emphasize the importance of providing an environment in which players/students can safely fail.[60] To create this type of environment, both Jackson and Hodgson implemented endless revision or rewrite assignments in the classroom, which unsurprisingly caused both Jackson and Hodgson to experience issues with time and effort in providing feedback. However, allotting extra time for revision, limiting the number of resubmissions, and incorporating planned revision assignments may be viable solutions to this issue. These praxes will be discussed further in the next chapter.

To summarize what has been said thus far, games employ feedback loops for

[60] See: (Gee 59, 175); (Jackson 292-93); (Hodgson 47-48); (Shultz Colby & Colby 305); (Salen & Zimmerman 77).

three reasons: 1) feedback loops are necessary for performing reflective practice, 2) feedback loops allow players to determine if they are reaching their goals and assess their skill/difficulty level, and 3) feedback loops provide criticism that guides players toward improvement. The feedback loop functions by taking in unique input from players—input that is capable of leading to a hypothesized result. The game responds to this input by providing feedback that is unique, understandable, meaningful, and timely. While rhetorical education excels in some aspects of the feedback loop,[61] problems concerning time and effort in creating feedback cause issues in adapting a gaming feedback loop for educational purposes: the feedback loop is slow, retries can be difficult to accommodate, the stakes for failure are high, and the decision to take risks and challenge one's self is a choice that often goes unrewarded. In short, reflective practice is hindered by rhetorical education's unwieldy feedback system.

With all of the difficulty in adapting gaming feedback loops to education, it may seem like game design has little to offer in this aspect of education, but this is not the case. While feedback loops sustain reflective practice, they simultaneously help sustain player motivation by doling out *rewards* and *punishments*—two general types of feedback. Salen & Zimmerman cite Neal and Jana Hallford, who identify four different types of rewards that games have to offer: rewards of glory; rewards of sustenance; rewards of access; and rewards of facility (346). Hallford & Hallford describe these four types of rewards, which they discuss in the context of computer games, but which could be applied to all games in general:

- *Rewards of Glory*: Glory rewards are all the things you're going to give the player that have absolutely no impact on the game play itself but will be things they end up taking away from the experience. This

[61] Such as allowing for unique, predictable input and providing unique, critical feedback.

includes winning the game by getting all the way to the end, completing a particularly difficult side quest, or defeating the plots of evil monsters.

- *Rewards of Sustenance*: Rewards of this nature are given so the player can maintain their avatar's status quo and keep all the things they've gained in the game so far. This might include health packs that heal injuries, mana potions that increase a player's magical abilities, high-tech armor that shields a player from e-mag radiation, robots that remove curses or diseases, or even storage boxes or beasts of burden that allow a player's avatar to carry more resources along with them.
- *Rewards of Access*: Rewards of access have three critical features: they allow a player access to new locations or resources that were previously inaccessible, they are generally used only once, and they have no other value to the player once they've been used. Keys, picklocks, and passwords are typical examples of this kind of reward.
- *Rewards of Faculty*: Rewards of faculty enable a player's avatar to do things they couldn't do before or enhance abilities they already possess. When well handled, they should increase the number of strategies and options that player will have for playing the game. A good example of a facility reward might be a magic orb that lets an avatar walk through a stone wall or a cybernetic software up-grade that lets them shut down enemy gun turrets from a distance. (qtd. in Salen & Zimmerman 346)

These rewards apply just as much to non-computer games: a reward of glory in soccer would be being named most-valuable player or "MVP"; a reward of sustenance would be gaining points in a soccer tournament, which are necessary to keep advancing; a reward of access would be advancing to the next stage of the soccer tournament; a reward of faculty would be learning who your next opponent is going to be in the tournament. These rewards also apply to rhetorical education: a reward of glory would be praise from the instructor, either as written or in-class feedback; a reward of sustenance would be the elements of points and grades; a reward of access would be the completion of a prerequisite assignment leading to the unlocking of the next assignment—an example of design-based scaffolding; a reward of faculty would entail the learning of new rhetorical skills, which will help students write better

products and earn more points.[62] In addition, a simultaneous reward of access and faculty might simply be discovering how one performed on a writing project after receiving the instructor's feedback on a graded assignment.

The four types of feedback above are listed as "rewards," but they could just as easily be framed as punishments if the player's glory, sustenance, access, or faculty is curtailed in some way. A punishment of glory would be being labeled a cheater; a punishment of sustenance would be losing or failing to win any points; a punishment of access would be being blocked off from accessing the next assignment; a punishment of faculty would be denying the student knowledge that they would like to possess.

These are the four types of rewards, but how do games go about doling out these rewards? As a general rule, players play for rewards, not punishments. To support this assertion, Salen & Zimmerman cite studies in behavior theory by Ivan Pavlov and B. F. Skinner. Pavlov's famous experiment, in which a ringing bell was associated with mealtime for a group of dogs, demonstrates the reflex known as "classical conditioning," in which players develop ingrained reflexes in responses to certain stimuli (Salen & Zimmerman 345). In contrast to Pavlov, Skinner eschews the concept of reflex thinking, placing more agency upon the subject with his theory of "operant behavior," which suggests that "people learn to behave the way that they do because a certain kind of behavior has been rewarded in the past" (ibid). Relating directly to pattern thinking, learners make decisions (and do not necessarily respond reflexively) because previous experiences have taught them that certain actions tend to end more positively than others—they have received positive reinforcement.

[62] For example, discovering the em-dash is a very tangible reward of faculty for many writers.

Of course, operant behavior is just as easily influenced by negative experiences or negative reinforcement; however, players play games because they seek pleasurable experiences, so games focus on rewards rather than punishments when distributing player feedback. Hallford & Hallford remind readers of this fact, observing that

> It's surprising how many developers forget that it's the victories and treasures—not the obstacles—that make people interested in playing in the first place. If you stop giving out carrots that will keep players excited, or even worse, if you start punishing them for their curiosity, you're only going to drive away the very people who want to enjoy your game" (qtd. in Salen & Zimmerman 345)

No one plays a game because they want to be punished, just as no one takes a class because they want to fail. For this simple reason, games and classrooms alike should focus on rewarding players for good choices, saving punishing feedback exclusively for situations severe enough to deserve it. There is motivation in receiving an average reward for an acceptable choice when an excellent choice could have received a superior reward. Players naturally play for the best reward possible; there is usually no need to punish players for making a poor choice when a poor reward is punishment enough. Some instructors forget this when they take a disciplinarian approach to teaching, relying too heavily on negative reinforcement to punish students for poor decisions.[63] In most instances, once students are aware that they made a poor decision, they become disappointed in themselves for doing so.[64]

[63] Such as those who take a zero-tolerance stance on late work, absences, accidental patch-writing or plagiarism, and so on. However, intentional and/or repeated cheating or plagiarism might very well deserve severe punishment.

[64] In Danielewicz & Elbow's research on contract grading, they found that the criticism itself was enough to address student mistakes, whether deliberate or not: "if we call something a violation and the student argues against us, we'll take the student's word for it. In this way, we're satisfied that we are calling attention to what we suspect is an effort problem, giving a fair warning, and providing incentive to work harder" (251).

Exacerbating disappointment with punishment further shames the student for their mistake and damages the student's resolve to take risks and perform reflective practice in the future.[65] This is counterproductive to inducing students to perform reflective practice.

Whether positive or negative, games dole out feedback in two different ways: through "fixed" reinforcement schedules and "variable" reinforcement schedules (Salen & Zimmerman 346). As Salen & Zimmerman explain, "*fixed reinforcement* means that rewards or punishments are occurring at a steady, continuous rate. A *fixed ratio* means that the outcome occurs a set number of times that the behavior is performed . . . A *fixed interval* refers to a regular amount of time between reinforcements" (ibid). In contrast, "With *variable reinforcement*, the rewards and punishments are coming at irregular intervals. *Variable ratio* means that the outcome happens after an irregular number of intervals . . . With *variable interval*, the reward or punishment occurs at random time intervals" (ibid). Parker Brothers' *Monopoly* features examples of both fixed and variable rewards. A fixed reward of $200 is doled out whenever the player passes "Go," while a fixed punishment of $75 is incurred for landing on "Luxury Tax." Variable reinforcement occurs when players land on each other's spaces, earning or losing variable amounts of money at random intervals.

As far as conditioning operant behavior, Salen & Zimmerman observe that negative reinforcement is better doled out at a fixed interval (every time the player

[65] In Liesel K. O'Hagan's "It's Broken—Fix It," she observes that, once students identify themselves as a "failure," "the continuing experience with failure lowers motivation" (5). Furthermore, grades damage self-esteem by capping student expectations. Students identify themselves as "C" students rather than as learners capable of improving because these are the grades they've received (10). Rather than seeing themselves as capable of improving, students just accept themselves as having reached a low ceiling that cannot be passed.

does x, a specific bad thing happens), while positive reinforcement is better doled out at variable intervals (when player does y, a good thing *might* happen) (348). In my estimation, it is better to be consistent with punishments, as this dissuades the player from doing bad things all of the time. However, incorporating variance with positive reward schedules is more effective at conditioning operant behavior because players will come to perform actions without expecting a reward every time, leading them to do things not because a reward is expected but because the act itself is the preferred course of action. In any case, regardless of the type of reward, games in general should reward players at somewhat consistent intervals, as this keeps the player engaged and interested. A drought between rewards tests the player's level of interest, risking breakdown in autotelic play if the drought is too long.

Course Design Praxes

At this point, it is worth considering how educators can accommodate unique input and reward students with feedback in ways that keep them interested while simultaneously conditioning their behavior. Regarding input, praxes were already discussed in the previous sections: giving students agency (input) over which goals they would like to pursue, agency over the difficulty of the course, and agency over the topic of their research and writing. However, regarding feedback, one might wonder: what sorts of feedback do instructors have to offer besides points, grades, and critical feedback? Not much, really, but that's okay because there is a lot that can be accomplished with just points, grades, and feedback. English instructors have many choices available in how they assign points (if they choose to assign points—there is such a thing as gradeless assessment), assign grades, and craft responses to

student written work. These “rewards” may be extrinsic to learning itself (namely grades), but these rewards can nonetheless promote the pursuit of goals intrinsic to learning.

Grades, while intrinsic to the feedback system, are just as much a part of the feedback system, as grades can be viewed as either a reward or punishment depending on the grade’s value relative to a student’s individual goals. Therefore, discussion of grading praxes is tantamount to an analysis of the feedback system. Introduced last section was Adkison & Tchudi’s and Danielewicz & Elbow’s system of assigning C and B-grades based solely on effort. However, what these grading systems rely on is only a partial contract that reserves an element of subjectivity for what constitutes an A-grade. Taking objective grading to its furthest degree, many contract graders incorporate a fully objective grading system that awards grades based solely on effort and not on subjective estimations of quality for A-grades. While effort-based grading results in benefits to a course’s challenge system (discussed in the previous section), it also carries very clear benefits to the feedback system, allowing students to submit truly unique input with only a minimal risk of failure while also focusing attention away from grades (performance feedback) and toward more beneficial evaluative (constructive) feedback provided by marginal notes, end notes, and other forms of student feedback. The following section will focus on these benefits to the feedback loop by summarizing and analyzing effort-based contract grading.

At the heart of the issue for contract grading is the negotiation of power between teacher and students, which can be seen in the pedagogical works by various

authors on the subject. One of the first to popularize contract grading was Ira Shor, who describes his personal experiences and practices implementing contract grading in his book *When Students Have Power: Negotiating Authority in a Critical Pedagogy*. In Shor's implementation of contract grading, the criteria for letter grades are negotiated directly with students, which determines the standards for attendance, expectations for participation, and requirements for assignments. While Shor, as the instructor, still retains some authority in setting expectations for the course and in evaluating student work, he willingly shares this power with students, encouraging them to use their agency as students to influence learning objectives, take control of their own educations, and assess themselves as learners based upon their own criteria of success. This strategy can be seen in later iterations of contract grading, including Isabel Moreno-Lopez's "Sharing Power with Students: The Critical Language Classroom," William H. Thelin's "Understanding Problems in Critical Classrooms," and Asao Inoue's works "Community-Based Assessment Pedagogy" and *Antiracist Writing Assessment Ecologies: Teaching and Assessing Writing for a Socially Just Future*. In these works, contract grading tends to follow a common process: 1) the teacher introduces students to the concept of contract grading, explaining its necessity and how it works; 2) the teacher and students negotiate the standards for A, B, and C grades; 3) students sign-up early in the semester for a particular grade and then perform the work necessary for that grade; 4) teacher and students renegotiate the standards for letter grades; 5) teacher and students individually negotiate grades for the course, usually by analyzing the student's portfolio of work. Within this process, students may request to have their progress evaluated by the instructor, at which point

students may opt to sign a new contract for a different letter grade. While the works by Shor, Moreno-Lopez, Thelin, and Inoue most certainly possess their own unique features, I will focus on Inoue's work as an illustrative example of contract grading.

Inoue is explicit in explaining the cause for his critical pedagogy, which is rooted in preventing social inequalities such as race and class from influencing writing classrooms and writing assessment. As Inoue explains, "places may have important associations with particular groups of people who typically inhabit those places, identified by class, social standing, language use, religion, race, or other social dimensions. Work done in such places can be affected by these associations" ("Antiracist Writing" 78). The academy is one such place, which has become marked by whiteness due to a history of privileged access to higher education. Inoue explains the implication of this relationship:

> The issue that this observation brings up for an antiracist writing assessment ecology is one about the historical relationships between particular racial formations and institutions. White, middle and upper class people have been associated more closely to those who go to college because they have been the ones who have gone to college and who have controlled those institutions. Colleges and writing classrooms have been places of white settlement and communion. And this helps us understand why the dominant discourse of the classroom is a white discourse, and informed by a white racial *habitus*. ("Antiracist Writing" 79)

Because the academy has always been a place marked by whiteness, the criteria for learning and assessment have been shaped by and for a white racial habitus, which shows itself in covert ways, such as the privileging of Standard English over non-dominant dialects, the use of racially biased standardized tests to sort and discriminate students by comparing them to a white standard of education, and through racial blindness or a refusal to recognize race as a valid issue in education

("Antiracist Writing" 50). The potential for covert racism to influence learning goals and writing assessments in the rhetorical classroom is the heart of the issue for Inoue, which is why he argues that writing instructors should willingly share power with students to avoid perpetuating a white racial habitus.

Endeavoring toward an antiracist writing pedagogy, Inoue suggests his own form of contract grading, which is grounded in assessing labor instead of quality. Quality assessment is inherently subjective, prone to covert, unconscious influence by a white racial habitus that seeks to standardize quality in terms of a white racial standard. Writing instructors can become blind to this habitus, even when they seek to identify its influence in the classroom. Because of this, in writing classrooms where the quality of a writing product is the basis for assessment, students are susceptible to privilege or discrimination based on their own racial habitus, which is compared against the quality standards set by the instructor. To combat this issue, Inoue emphasizes instead the element of labor or effort, which can be assessed more objectively than the subjective assessment of quality. To this point, Inoue asserts that "one important aspect of an antiracist writing assessment ecology is an attention to labor, or more precisely, a valuing of labor over so-called quality, even though often our goals may be to help students become more fluent in the dominant discourses of the academy" ("Antiracist Writing" 80).

The contract grading system developed by Inoue (as well as those of Shor, Moreno-Lopez, and Thelin) takes measures to include students in defining criteria for assessment, which begins with the introduction of the course itself. In Inoue's course, the semester (or semest*ers*—Inoue's writing course can be spread across multiple

semesters) begins with the introduction of the writing contract and its negotiation. Inoue describes the process by recalling his experience with a particular course:

> The grading contract . . . was emailed to students a few weeks before the semester began, and it was discussed on the first day of class. After the first day's introduction to the contract, I asked students to go home, read carefully the contract again, and mark it with questions they had and things they would like to negotiate or change. We discussed and negotiated the contract again on the second day of class, a Wednesday (the course met Monday and Wednesday at 4:00 P.M. for 80 minutes each day). After Wednesday's discussion, I asked them to reflect upon the contract and our negotiations, since I knew many at this early stage would have a hard time questioning the contract—and they did—but might open up when writing to their colleagues and themselves (this was an in-class freewrite). ("Antiracist Writing" 186)

After some prompting, students considered their relationship with the classroom: What responsibilities do students have to each other? What responsibilities do students have to themselves? How should students conduct themselves in the course? ("Antiracist Writing" 187). As part of the contract, Inoue and his students negotiated a social contract between themselves and the course. This is in addition to setting guidelines for aspects of attendance, participation, and quality of work for the class. Inoue summarizes the results of the collaborative effort:

> So, the grading contract and our discussions in the first week of the course dictated that the writing, reading, and other work of the course was conceived of as labor, as activities, as processes, as doing things. We'd care most about the quantity of our labor, but increasingly about the nature of one's labor. . . . If a student met the contract's labor guidelines, she would earn a "B" course grade, no matter what. On the last page, the contract provides a table that sets out clearly the labor needed for each course grade and how we would tabulate that labor. ("Antiracist Writing" 187-88)

The result of these negotiations yielded a contract that emphasized the importance of labor over quality while stipulating that there would be no *grades* for assignments, though there would be writing *assessments*, which relied on collaborative feedback

from students and their colleagues, including the instructor ("Antiracist Writing" 332). The contract further established concrete rules for attendance, lateness, collaborative work, and late/missed assignments, while further establishing guidelines for completing assignments and the requirements for A and B grades ("Antiracist Writing" 333-334). While students could, in theory, know their grade at any time by simply referencing their standing on the rubric, they were encouraged to reach out to the instructor for an evaluation of academic standing in the event of accrued absences or inadequate work ("Antiracist Writing" 335). Inoue and his students, by simply remaining enrolled in the course, all agreed to the collectively bargained contract that they had generated after a week of negotiation ("Antiracist Writing" 336).

While Inoue's effort-based assessment system carries clear pedagogical benefits over traditional grading, from a game design perspective, this strategy serves a further purpose: it changes the reward system, promoting reflective practice and emphasizing constructive feedback such as marginal comments, end notes, and verbal feedback over performance feedback like points and grades. Inoue's effort-based grading system rewards all effort equally, even when that effort produces a product that is imperfect. Thus, students are not punished by a variable reward system that docks points and letter grades; they are instead motivated by a fixed reward system that promises a reward for simply trying to learn. A fixed reward system based on labor *conditions* students to expect a reward for their efforts, which forms a positive feedback loop that encourages students to keep investing effort in exchange for more rewards.

As Inoue, Adkison & Tchudi, Danielewicz & Elbow, and others working with

more labor-based grading systems have found, such a feedback loop lowers the stakes for failure, allowing for more experimentation from students. Thus, students can be more unique and risky with their writing projects (their writing input), since the punishment for failure is lowered or eliminated altogether. More varied and unique input promotes more effective reflective practice, as even failed experiments still yield useful information about what *not* to do while testing the limits of what is possible. Such experimentation is not really possible within a traditional classroom, as a failed experiment can be met with a variable punishment of a low grade.

Furthermore, given that the fixed reward is essentially known before projects are even completed, labor-based grading systems emphasize constructive feedback over performance feedback. Rather than work toward the extrinsic goal of a good grade, students work toward the intrinsic goal of investing effort and learning through reflective practice. As a result, the grade (a mark of performance feedback akin to winning or losing in a game) becomes deemphasized while the constructive feedback that comes from writing evaluation becomes emphasized. That is, students focus more on their peers' and instructor's written and verbal feedback when observing the results of their written work. Critical comments are less threatening when a failing grade is not attached, as Danielewicz & Elbow observed (254). This, again, promotes reflective practice, as observing the results of one's input is better understood by reading constructive criticism than by simply viewing a letter grade.

Besides making his grading system labor-based, Inoue further alters the feedback loop by taking a unique approach to assessment, which is the next topic Inoue's students address when defining the course's contract. In order for assessment

to be normalized, the classroom must generate rubrics that define the goals of projects and how achievement of these goals is to be measured. These rubrics can be defined by the instructor, or they can be defined in collaboration with the students. Not all contract grading systems grant students the agency to design project rubrics—Thelin does not seem to negotiate project rubrics, nor do Danielewicz & Elbow. Moreover, collaborating with students on building rubrics is not limited to contract grading; even an otherwise traditional classroom can include students in the rubric-building process.[66] In any case, Inoue included his students in the process of creating project rubrics. Because Inoue's assessment system is labor-based, the rubrics for assignments need to not only establish the rules and learning goals of the assignment but also establish a way of measuring or assessing one's labor. For this reason, Inoue explains that his classroom

> inductively created two rubrics, a project rubric, explaining the dimensions of writing we expected to practice, judge, and explore in project drafts, and a writer's rubric, which articulated the labor we expected from writers as they worked on drafts and engaged in the assessment activities that accompanied each draft. The writer's rubric would be the way we figured out how intense, engaged, and productive our labor was, while the project rubric would give us our textual goals for our labors. ("Antiracist Writing" 215)

To form the project rubric, Inoue asked his students to review examples of academic writing, take notice of the rhetorical qualities and characteristics that they found

[66] For example, Jean S. Ketter & Judith W. Hunter describe how to collaborate with students in building rubrics for assessment in their essay "Student Attitudes toward Grades and Evaluation on Writing" (117). In addition, in Charles McDonnell's "Total Quality: A Farewell to Grades," he introduces his "Total Quality" grading system, which calls upon students to "take an active role in determining the purpose and vision of the class," while taking on responsibility for "establishing quality standards" (212). And, in the realm of game-based pedagogy, Mark Mullen's "On Second Thought…" describes a classroom in which he "turned the evaluation of the document entirely over to [the students]. They created the evaluation criteria, divided them into categories, worked on writing short descriptive rubrics for each, established score weightings for each category, and determined how the scores . . . would be converted into grades (69-70).

useful, and then work together to compose a project rubric that outlined these rhetorical goals that students wished to achieve ("Antiracist Writing" 215-16). Thus, the project rubric would serve to direct student labor toward achieving these concrete learning objectives while simultaneously giving the assessor grounds for assessment. The writer's rubric, on the other hand, defined what sorts of labor should go into the writing project. This included defining various elements of the writing process: researching, drafting, revising, and exchanging feedback during peer-review ("Antiracist Writing" 221). By defining these stages of the writing process, students were able to understand the sorts of labor they were expected to invest in their writing, while assessors understood what to look for when evaluating student labor.

While collaborating with students on setting learning goals and grading criteria is not unique to Inoue's pedagogy, where his approach takes a truly unique turn is in writing assessment, a process that depends on students assessing each other's writing. This lies in contrast to conventional classrooms, in which the instructor serves as the all-knowing judge and dispenser of writing feedback. In such classrooms, students learn how to write, but they do not necessarily learn how to read texts critically or assess their quality. Thus, the importance of critical reading—falsely believed to be a basic skill—becomes forgotten in classrooms that focus solely on writing while leaving assessment to the instructor.[67] Inoue breaks away from this

[67] The division of reading and listening from the study of rhetoric serves partially as the impetus for Ratcliffe's "rhetorical listening." Ratcliffe notes "a lack of scholarly interest in listening within contemporary rhetoric and composition studies," and she offers three different reasons for this lack of interest (18). First, she recognizes a separation of listening from the study of Composition. This occurred when the larger field of Rhetoric was divided into the separate fields of Communications and Composition: "Custody of these arts was awarded to different disciplines, with reading and writing relegated to English studies and speaking and listening relegated to communication studies" (ibid). In addition, listening is often held as a basic skill that does not require mastery: "the dominant scholarly trend in rhetoric and composition studies has been to follow the lead of popular culture and naturalize

convention by emphasizing the importance of collaborative assessment within rhetorical education, explaining that

> Like any writing course, assessment of student writing—in this case, students' assessments of their colleagues' drafts—is the engine that regulates the learning and development on drafts and in writers. This idea was explicit in my course, since we began with the assumption that if students can practice and improve their reading and assessing of colleagues' drafts, then they were learning to be better writers by their own measures. ("Antiracist Writing" 237)

For this reason, Inoue relies heavily on student peer assessment in his writing course. It is true that an aim of rhetorical education is teaching students how to write, but this goal cannot be achieved by ignoring the role of assessment in the learning process. Students must be able to assess what is rhetorically effective if they are to understand and duplicate rhetorical effectiveness in their own texts.

To this end, Inoue requires his students to not only create their own rubrics for assessment but perform assessment on each other's texts. Inoue described how he guided his students to make "descriptive judgments" when assessing each other's work, asserting that "Assessment [of] documents began with observations that could be debated (e.g. 'this sentence is clear to me because,' 'I'm confused in paragraph 4 when you say,' 'the statement about Wilson feels judgmental by using the words,' etc.)" ("Antiracist Writing" 238). To this end, Inoue encourages students to 1) "provide a judgment or observation that states carefully the view of the reader about the document, page, or section of text in question," 2) "support those observations

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listening, that is, assume it to be something that everyone does but no one really needs to study. … Listening is rarely theorized or taught" (ibid). Lastly, speaking and listening have come to be gendered subjects, with speaking identified as masculine and listening identified as feminine (21). Given the traditional relationship between these two identifications, listening is seen as subordinate to speaking. Ratcliffe states: "Thus gendered, listening subordinates not only women to men but listening to speaking" (21).

about the text with quotes or references to the actual text of the writer," and 3) "reveal assumptions that allowed the reader to judge or see things in the above ways" ("Antiracist Writing" 238-39). By performing this type of observational assessment, writers can learn how their rhetorical choices impact their readers, while readers can learn to notice and assess effective and ineffective rhetorical choices and their effects. This assessment process, in turn, influences the assessor's rhetorical choices in their own future writing.

In "Community-Based Assessment Pedagogy," Inoue describes this assessment process with greater detail. Assessment is not a one-time activity; it is intrinsic to all major writing assignments in his classroom, which affirms his conviction that writing assessment is just as important as writing itself. He writes,

> Over about a month's time, each student will write a position paper, receive responses and assessments from the entire class (both on paper and through class discussions), post a revision of the position paper based on those discussions and input, get a more formal peer-assessment of the revision by a few colleagues, write an essay (often based on the position paper), and finally receive a formal peer-evaluation of the essay. Once we've done the essay evaluation, we start over again with position paper two. This repeated framework (done twice in a semester) allows the student to continually revisit, re-see, and revise her writing practices. ("Community-Based Assessment" 215)

Thus, writing assessment is not a one-time activity; it is a recursive process that occurs throughout the semester. In begins with the negotiation of the rubric, which establishes writing objectives and standards for labor; proceeds into the writing process, which is informed by the rubric; proceeds into the assessment process, which is compared against the rubric; proceeds into the revision process, which is an aspect of labor defined by the rubric; and loops back through this process again by possibly

renegotiating the rubric, re-writing, re-assessing, re-revising, and so on. No grades are involved in this process; it is merely a way of exchanging feedback while collaboratively learning strategies for rhetorical effectiveness. Reflective practice is a recursive process, making Inoue's assessment system more effective than a linear writing process that culminates in a writing project that will not be reviewed or revised.

While Inoue's collaborative assessment system carries clear pedagogical benefits, from a game design perspective, this strategy serves a further purpose: it addresses an issue raised by Hodgson, in which he described the difficulty of the teacher acting as the "game engine" (58). By dividing the task of providing feedback among many engines (the students), Inoue's feedback system is less strenuous than a conventional classroom that uses only one person (the instructor) to act as the feedback engine. Inoue's strategy might address Hodgson's sense of feeling "buried under grading" by sharing the onus of providing feedback among many individuals and by requiring zero grading (58). As a result, feedback will be more varied—rather than relying on only one person's assessment, feedback will generate from many unique perspectives (feedback will be unique to the input received). In addition, feedback could be generated with greater responsiveness. Having one feedback engine (the instructor) assess 20 essays is slower than having 20 feedback engines (the students) assess one or two essays. Ideally, the feedback loop is responsive and timely—Inoue's collaborative assessment strategy is an excellent solution to this problem.

Good Games Provide a Customizable Design Space

Considering the importance of player agency in determining goals and setting difficulty levels, it makes sense that games should also serve as design spaces that can be customized to fit the needs of the player. The same is true of education as well. However, in order for this customization to occur successfully, students must develop a certain degree of knowledge or "literacy" of course design, which exists as its own semiotic domain. Only after developing functional and critical literacy skills can students confidently become architects of their own learning space.

In order for players to successfully customize a game space, they must understand game design on multiple levels. In *Multiliteracies for a Digital Age*, author Stuart A. Selber conceptualizes three distinct levels of literacy: functional literacy, critical literacy, and rhetorical literacy. When using technology, users first develop *functional* literacy, which entails knowing how to use technology as a tool (Selber 25). An example would be a writer knowing how to use Microsoft Word to compose digital texts. Viewing technology as a tool to be mastered can be useful for demystifying a complex program (35). However, while current-traditional views on education treat literacy as a simple skill to be mastered, this is not the case, advises Selber (32). There are levels of literacy beyond functional competence with a program, and viewing technology from only the lens of functional literacy—as a tool to be used—can mask "the political dimensions of technology as well as the ways in which it helps to structure a wide range of human activities" (Selber 35). For this reason, Selber argues that technology must be thought of beyond the functional level, proposing *critical* and *rhetorical* literacy as requirements for analyzing and altering

technology. Critical literacy, explains Selber, is "about the ways students might be encouraged to recognize and question the politics of computers" (75). Critical literacy requires users to think of technology at a metacognitive level and consider the outside forces that influence its design—influences that may be latent with racist, sexist, and/or otherwise discriminatory and oppressive undertones. It is very possible that everyday technology is designed in ways that subtly influence or control users' decisions—Microsoft Word's spelling and grammar-check features, for example, oppresses the use of non-Standard English dialects. In such a case, it may become necessary to alter the technology to fit the needs of the user, which would entail *rhetorical* literacy. Rhetorical literacy is marked by the user's desire to persuade others to recognize a deficiency in the system, deliberate on how to address it, and take action (or develop praxis) to change the system (139). An example might be an online forum dedicated to users of a dialect discussing issues with Microsoft Word's spelling and grammar check feature before creating their own add-on to upgrade or replace the standard spell-check feature offered by Word. In this way, rhetorical literacy becomes a combination of critical literacy and functional literacy, where students use critical literacy to scrutinize design features and functional literacy to change them (Selber 144-45).

While Selber deals mainly with software design, information technology, and word processing from the perspective of a writing instructor, his concepts apply just as well to games and education. In fact, Selber's theory of critical and rhetorical literacy should seem reminiscent of Gee's theory of active and critical learning. Where Selber's *critical* and *rhetorical literacy* entail understanding a technology's

design and altering it, Gee's *active* and *critical learning* entail understanding a semiotic domain and contributing to (altering) the domain's pool of knowledge. In each case, both Selber and Gee view semiotic domains (in Selber's case, semiotic domains specific to digital technology) as things to be understood and altered at a design level and not as things to be used or understood passively.

However, in order for users to develop these skills, they must consider how a semiotic domain is designed, understanding its "design grammars." Gee explains this concept, stating

> Each domain has an internal and an external design grammar. By an internal design grammar, I mean the principles and patterns in terms of which one can recognize what is and what is not acceptable or typical *content* in a semiotic domain. By an external design grammar, I mean the principles and patterns in terms of which one can recognize what is and what is not an acceptable or typical *social practice* and identify in regard to affinity group associations with a semiotic domain. (28-29; emphasis added)

The key differentiation between internal and external design grammars is that internal design grammars consist of the *content* and knowledge indicative of the semiotic domain, while external design grammars consist of the *social practices* other members follow when communicating within the semiotic domain. As an example, a psychologist will possess a great deal of scientific knowledge of Psychology, being able to identify content as belonging or not belonging to the field of Psychology—this person can recognize Psychology's *internal* design grammars. Yet, this person will simultaneously possess knowledge of APA format, being able to identify written discourse as typical or atypical of writing within the field of Psychology—this person can recognize Psychology's *external* design grammars. In contrast, a newer member of Psychology's semiotic domain—a sophomore Psychology student—may possess

some sense of the domain's internal design grammars because they've read some Psychology journals, yet they might not know how to express themselves within the field because they haven't yet picked up on the typical communication practices—the external design grammars—within these journals. It takes specialized literacy skills to understand a domain's internal and external design grammars.

Simply by engaging a semiotic domain and performing reflective practice, users develop a sense of what constitutes good design and bad design. Gee refers to this sense as an "appreciative system," which he describes as the user's "set of goals, desires, feelings, and values in respect to the domain being engaged with. . . . That is, [users] must form the sorts of goals, desires, feelings, and values that 'insiders' in that domain recognize as the sorts members of that domain (the affinity group associated with that domain) typically have" (93). Developing an appreciative system requires the user to perform "conscious reflection and critique" in considering what they like and don't like about the game and in considering what the semiotic community likes or doesn't like about the game. In Gee's personal example of developing an appreciative system, he describes his experience learning how to play the computer game *Deus Ex*. First, Gee had to develop functional literacy with the game just to play it. However, once Gee had attained a certain level of functional literacy, he began to develop an appreciative system, reflecting not only on the game's story and design but on "the design of this and other related games" (95).

While Gee did play the game alone, thereby developing his own appreciative system in the process, he simultaneously reached out to the semiotic domain (consisting of gaming magazines and gaming forums) to socially construct his

appreciative system (95). Other members of the gaming community expressed their likes and dislikes of *Deus Ex*, among other games, which helped Gee develop his own appreciative system of what defines good and bad gameplay. With this appreciative system, Gee was capable of understanding the internal design grammars of the game and the external design grammars of the community outside the game. Once a user has developed an appreciative system for the design grammars of a game, individuals will develop critical literacy skills for critiquing the game's design features. Gee concludes this process by asserting:

> It is my contention that active, critical learning in any domain should lead to learners becoming, in a sense, *designers*. Some, like the players who build their own extensions to games, will actually design new things. Others, like me, will design in thought and talk and let it inform their play. But there is no design and designing, in the sense I am talking about, without forming an appreciative system for a given semiotic domain. (96; emphasis in original)

This relates directly to Selber's concept of rhetorical literacy. After the user develops an appreciative system for critiquing design grammars, the user can then contribute intellectually to the semiotic domain, becoming a "designer" of the game itself. Some players will modify the game themselves because they possess functional literacy with modifying computer games, while other contributors to the semiotic community can co-design by expressing their criticism of the game system, which indirectly sparks change by influencing others to modify the game. In this way, users develop Selber's rhetorical literacy skills to transform the game space, which is the defining aspect of Gee's critical literacy—contributing to the semiotic community.

Overlooked in the above example is that game users are members of many different semiotic communities at once, which influences their critical literacy skills.

This is what Selber is alluding to when he cites Gee's concept of "metadiscourse": critical literacy invites users to critique technology (or any semiotic domain) from the perspective of various outside semiotic domains such as racial, queer, and/or feminist theory (Selber 97-8). As an example, a gamer could simultaneously be 1) a player of the computer game *Tomb Raider*, 2) a woman, and 3) a feminist. At a purely functionally literate level, this user could competently play the game, passively taking in its content. However, more likely, this user is exercising her critical literacy skills as she plays the game, assessing its design grammars, and developing her own appreciative system of what she likes and doesn't like about *Tomb Raider*. Examples of such critical analysis are documented in Lynch et al.'s study "Sexy, Strong, and Secondary: A Content Analysis of Female Characters in Video Games across 31 Years," which found that:

> Experimental evidence indicates that sexualized portrayals of female characters in video games may discourage women from taking up gameplay. Hartmann and Klimmt (2006) found that female participants consistently chose games featuring a nonsexualized rather than a sexualized female protagonist and expressed more interest in playing as the nonsexualized character. Similarly, Reinecke, Trepte, and Behr (2007) found that women preferred female characters but disliked hypersexualized female avatars. (566)

As Lynch at al. demonstrate, many women take exception to the "objectifying gaze in which media emphasize women's bodies," preferring instead to play games that are not hypersexualized (567). These gamers/critics draw from their experiences as women and feminists to critically analyze *Tomb Raider* from a perspective that would otherwise be ignored by users who only consider the game from a functionally literate

perspective.[68] These feminist gamers perform critical analysis by drawing simultaneously from multiple semiotic domains of game design theory and feminist theory. Furthermore, if these feminist gamers are motivated to act on what troubles them, they may attempt to draw upon their rhetorical literacy skills to affect change in the game's design. One such user, apparently dissatisfied with the female armor in *Skyrim*, created a modification that "replaces a lot of female body armor with less sexual versions... the male versions" ("Less Sexual Female Armor").[69] This user exercised his or her rhetorical literacy skills to modify the game to fit not only his or her own needs but the needs of thousands of other users who felt similar dissatisfaction with the game's design.[70]

It should not be surprising that students, as members of the semiotic domain of education, gradually develop and exercise their functional, critical, and rhetorical literacy skills within the classroom, gaining a sense of education's design grammars and developing appreciative systems defining what they like and don't like about school. In the same way that Gee, despite being a user and not a game designer, developed an understanding of game design by simply playing and talking about computer games, so, too, do students develop an appreciation of what they do and do not like about course design. For this reason, some instructors invite students to

[68] Indeed, critical literacy is often met with hostility. Selber reflects on his experiences discussing the teaching of online technical writing, observing that "what we discovered was that silence, power moves related to ethos and professional rank, and other language-related mechanisms restricted topics that transgressed conventional boundaries. That is, in most instances, only those ides aligning with the dominant perspective were listened to, tolerated, or encouraged. Thus, in this particular asynchronous discussion space, it was acceptable to talk about software, grammar and usage, and collaboration, for example, yet threads on racism, sexism, affirmative action, drug testing, and other weighty matters were thwarted because they questioned fundamental worldviews" (Selber 85). This backlash from critical literacy is very much applicable to game studies, in which male gamers routinely lash out against feminist criticism, attempting to diminish their perspective as invalid or unimportant.

[69] https://www.nexusmods.com/skyrim/mods/3296/

[70] As of my writing this, there are 7,381 total downloads for this mod—several thousand gamers were interested enough to download this mod.

exercise their critical and rhetorical literacy skills when evaluating and customizing the design of the writing course. Proponents of this approach to critical pedagogy include Ira Shor, William H. Thelin, Isabel Moreno-Lopez, and Asao Inoue.[71] Each of these pedagogical theorists invites students to take a socially conscious approach to education, pushing students to exercise their critical literacy skills by evaluating how hegemonic forces of race and class influence writing instruction. Furthermore, these critical pedagogical theorists either encourage or require students to take an active role in the design of the classroom itself, pushing students to exercise their rhetorical literacy skills in setting their own learning goals.

While allowing students to customize their educations may seem wholly positive, too much responsibility in designing the course can be an overwhelming responsibility for students. This was discussed earlier in the section on goal-setting by Mateas & Stern, who described a situation in which too much agency in setting goals actually robs players of their agency when they do not have the knowledge or experience to know how to proceed with the game (654). Such is the case for students when the classroom as design-space asks too much of them. In their article "Can Game-Based Learning Enhance Engineering Communication Skills?," Cheryl A. Bodnar & Renee M. Clark analyzed their attempts to create a classroom motivated by game-based pedagogy. What they discovered is that too much agency in customizing the course and too few guidelines can make students uncomfortable. This was seen in the course's writing assignments, which were "purposefully created [using] vague

[71] See Ira Shor's *When Students Have Power: Negotiating Authority in a Critical Pedagogy*; Thelin's "Understanding Problems in Critical Classrooms"; Moreno-Lopez's "Sharing Power with Students: The Critical Language Classroom"; and Inoue's two works *Antiracist Writing Assessment Ecologies: Teaching and Assessing Writing for a Socially Just Future* and "Community-Based Assessment Pedagogy."

guidelines in this course to provide students with an opportunity to work in an environment that would more closely mirror that of professional practice" (36). The resulting feedback from students expressed that the "guidelines and requirements for written assignments were not always clear and that more detail was needed" (ibid). Bodnar & Clark conclude that "it is evident from the student feedback that perhaps at the sophomore level, students aren't yet comfortable with guidelines being relaxed and taking more ownership of their written work" (ibid). A similar sentiment can be seen in Jackson's reflections on her game-based course, as students described frustration over a lack of guidelines:

> Some of the feedback from students and analysis of the think-alouds has led me to believe that perhaps I took the gaming metaphor too far by giving students too little guidance in completing their projects. For example, more than one student indicated on course feedback sheets that novice students needed more knowledge before being set loose. (298)

Newer students do not have a strong grasp of classroom design grammars or possess a developed appreciative system for course design. Considering this, it is not surprising that leaving inexperienced students to set their own guidelines can be an alienating experience. These students are left wondering "what does the instructor want me to do?," which is not a useful source of uncertainty or conflict. Especially for less-experienced classrooms (such as FYW), there should be a careful balance between free customization and established guidelines.

As has been demonstrated to this point, games and classrooms alike can have customization by design; however, an unexpected source of customization—violating the game's rules—can play just as big a role in game or course design. Salen & Zimmerman make a distinction here, observing that games can have their rules

violated in two different ways: through sanctioned violations (such as a foul call) and unsanctioned violations (hacks, cheats, illegal mods, system exploits) (276-79). Sanctioned violations are violations of the game's rules that have been anticipated and allowed by the game system, such as how a professional basketball player may draw up to five fouls before being ejected. Many teachers incorporate sanctioned violations within the classroom as well, a personal example being when I once allowed students to submit an assignment late as long as they went to the writing center before turning in the assignment.[72] Similarly, teachers may set temporary "house rules" when an unplanned snow day or personal day causes the cancelation of a class, thereby violating the "official" rules defined in the syllabus. In contrast, where sanctioned violations are met with little scrutiny, unsanctioned violations carry a stigma about them—breaking the rules illegally goes against the spirit of sportsmanship. Cheating to gain a competitive advantage over other players is certainly wrong, as is hacking games in such a way that ruins the gaming experience for someone else (such as by stealing other uses' in-game possessions, which occurs when players of online games have their accounts hacked). Such is the case with education as well, with students who commit academic dishonesty being met with harsh punishment.

However, not all unsanctioned violations are necessarily bad. For example, a "white hat" hacker is an ethical type of hacker who exploits computer games in order to inform the developer and/or its users of a fault in the game (such as a possible security breach). In addition, certain hacks exist to make the game more enjoyable for

[72] The assignment was due the day after Thanksgiving break. Students who wanted to go to the writing center had no opportunity to go during break, so I broke the rules for them.

all users, examples being illegal third party servers that exist for online games. Blizzard Entertainment (owners of such popular titles as *World of Warcraft, Diablo III, and Starcraft III*) is strictly against third party servers hosting and/or altering their games. Nevertheless, alternative game servers with custom rules exist for these games, and interest among players is popular enough to sustain them.[73] In such cases, cheating or hacking the system might be seen as a positive thing. While the effrontery of violating the rules may come as a shock to game designers, the motivation for these violations is the same as planned customization—in both cases, players see the game as a design space that can be improved to fit their needs or the needs of a community.

From the perspective of critical pedagogy, customization is a welcomed thing. Therefore, instructors might encourage students to get creative with course rules (as long as they negotiate these ideas with the professor and/or their peers first). Gee notices a parallel between game design and course design for this reason:

> Good video games allow players to be not just passive consumers but also active producers who can customize their own learning experiences. The game designer is not an insider and the player an outsider, as in school in so many instances where the teacher is the insider and the learners are outsiders who must take what they are given as mere consumers. (208)

For this reason, many computer games willingly give players the support and software editing tools to hack the game themselves.[74] Game developers do this

[73] As an example, the game *Diablo II* has many unique third party servers, many of which alter the game's rules and mechanics to make combat more difficult, challenging, and interesting.
[74] Gee cites an example of *Tony Hawk's Pro Skater* and *Half-Life* as examples of games that provide players with the tools to hack or modify the manufacturer's own game (209-10). Squire cites the *Civilization* series of games as an example of a game that provided players with the tools to hack or modify the game (23). In addition to these titles, contemporary games such as Bethesda Softworks' *Fallout* and *Elder Scrolls* series of games are relatively easy to modify because the developer provides users with support tools to mod the games themselves.

because they recognize that the modding community possesses great creativity—much more creativity than a single studio design team possesses. In addition, communities of hackers can accomplish much more than a single design studio because the work hours spent creating modifications is spread out among many thousands of modders. For this reason, game developers actually depend on the modding community to create new content and keep their games alive and interesting. Similarly, students have doubtlessly witnessed creativity from other teachers and possess a certain degree of creativity themselves. Instructors should welcome this creativity, as creativity propels innovation. Veteran instructors are not likely to attend each other's classes and gain new ideas through experience, so it makes sense to consider the opinions of those who have—the students.

With customization comes the risk of exploitation—a point that is not lost on game designers. Salen & Zimmerman define such weaknesses in game design as "exploits," or ways of "playing the game that ensures victory every time" (241). Exploits undermine the purpose of the game to provide goals worth pursuing and a motivating challenge to overcome. For this reason, game designers spend a great deal of time playtesting their own games, testing for exploits in the system and fixing these exploits once discovered. For this reason, game designers attempt to "break" their own games and preemptively discover exploits that ambitious and creative players are likely to find after the game is released. Nevertheless, even classic games reveal new exploits over time. In the NBA, for example, league owners are wrestling with a relatively new, controversial trend in which coaches have their players intentionally foul the other team's players when it seems likely the fouled player will

miss their ensuing free-throw shots. The strategy favors the fouling team because it essentially nullifies the opposing team's offense and takes the other team out of their rhythm. However, this makes the game very boring for spectators, who do not want to watch players shoot foul shots for minutes on end. This exploit is not against the rules as-written, but it could be considered a violation of the spirit of the game. Likewise, course design is not exempt from such exploits, as Hodgson discovered in teaching his game-based classroom. Hodgson found that some clever students bilked his system of incorporating "quest lines," or optional, scaffolded lines of assignments that culminated in a larger project. Students exploited his rules by completing the early, smaller, easier assignments without any intention of completing the long-range assignment goal, receiving easy points in the process—a "quantity over quality" exploit that Hodgson did not anticipate (56). For this reason, course designers and game designers alike must attempt to identify exploits in the system before students can find them.

Course Design Praxes

As demonstrated in this section and in previous sections, all of the various systems of game/course design are interconnected and overlapping. This is especially true of classrooms as customizable design spaces, as allowing for student input and customization of the course ties in directly with scaffolding and transfer, goal-setting, managing conflict, and the feedback loop. Rhetorical education should allow students some self-direction in how they choose to learn course material, granting students a design space in which they can construct their own scaffolding to reach the course's learning goals. In the case of goal-setting, giving students a choice of which goals to

pursue bolsters motivation. This was accomplished by Hodgson and Jackson's system of quests and levels, which gave students clearly defined choices over which goals to pursue and how to complete the course. In the case of managing conflict, providing students a choice over the level of challenge allows students to place themselves at the edge of their regime of competence, ensuring that the course is neither too hard nor too easy. And in the case of feedback loops, allowing for unique input ensures the effectiveness of reflective practice. Requiring student input in designing a course's labor contract is a very overt example of "classroom as customizable design space." As demonstrated in Inoue's classroom, it was requisite that students understood the design grammars of effective writing products and good effort in the composition process before composing separate "project rubrics" and "writing rubrics." Thus, Inoue transitioned his students from being functionally literate English students to being rhetorically literate critics and designers of classroom projects. Thus, it is clear that many classroom praxes exist for offering writing students a customizable design space, and that these praxes overlap with adjusting all of the various elements of game/course design.

(Some) Good Games Offer a Role-Playing Simulation

Role play is the act of representing a person's thinking, decisions, and actions. This person can be real, realistic, or complete fantasy. Not every game allows for role-play (RP), but those that do exhibit certain qualities that make them successful as role-playing games (RPGs). The reason I include (and conclude) this chapter with an experiential quality that is not applicable to all games is because the aspect of RP is

especially applicable to rhetorical education. Games allow players to RP as someone else within a world that is "immersive" or convincing enough to the imagination to temporarily push reality to the periphery of the consciousness. During RP, players are removed from harmful consequences, as it is the fictional character who receives the brunt of the feedback and consequences and *not* the player him/herself. Because of this, RP allows the player to simulate experiences that would be impossible or unsafe to experience in real life. As for RP's application to rhetorical education, what is the classroom but a simulation of real life? Students learn and practice rhetoric in the classroom as budding academics, professionals, and civically-engaged individuals. The classroom (ideally) provides a safe space in which students are able to RP as the confident writers they hope to be someday. For this reason, RP is very much applicable to rhetorical education.

All RPGs and many non-RPGs are simulations of something else. Salen & Zimmerman cite Eddington, Addinall, and Percival, who offer the following definition of simulation:

> A *simulation* can be defined as "an operating representation of central features of reality." This definition again identifies two central features that must exist before an exercise can reasonable be described as a simulation. First, it must represent an *actual situation* of some sort—either a situation drawn directly from real life, or an imaginary situation that conceivably could be drawn from real life (invasion by extraterrestrial beings, for example). Second, it must be *operational*, i.e., must constitute an *on-going process*—a criterion that effectively excludes from the class of simulations static analogues such as photographs, maps, graphs, and circuit diagrams, but includes working models of all types. (423)

In short, all simulations consist of a situation that is live and ongoing. For example, the computer game *Gran Turismo* uses the tagline "the real driving simulator"

because it is a very lifelike simulation of automobile racing—it represents the situation and process of racing. The wargame *Kriegsspiel* (perhaps comparable to today's *Risk* or *Warhammer 40k)* was immensely popular in Prussia and Germany in the nineteenth century because it was credited with developing skill in military strategy through large-scale combat simulation—the situation is war and the process is commanding the movements of troops, cavalry, and artillery. In an RPG, the player acts a role in a simulation—a racecar driver and a military general in the two examples above.

Role-play is the acting-out of a role within a simulation, but this act cannot easily be performed without adopting a "cognitive frame" that grants the simulation a certain degree of reality within the mind of the role-player. Salen & Zimmerman define a cognitive frame as "a way of organizing how we look at the world. Cognitive frames create contexts for interpretation and affect how we make sense of things" (370). RPGs, as simulations, are framed within a fantasy context that gives player actions specific meaning within the simulation. While a *Gran Turismo* player is essentially just mashing buttons outside the cognitive frame, within the cognitive frame, the player imagines him or herself as carefully applying throttle, shifting gears, steering, braking, and plotting the course within the game's setting. When the simulation is convincing to the mind of the player—when the player performs actions and interprets feedback within a cognitive frame—this is what is known as "immersion."

Achieving immersion is the pinnacle of success for RPGs, as immersion is intrinsic to both autotelic play and pleasurable experiences. In chapter one, I

presented my own conception of immersion, which occurs when the mind of a person at play is so engrossed in the play activity that reality becomes pushed to the periphery while the fantasy of play occupies the person's attention. This definition of immersion is equivalent to Gary Allen Fine's description of immersion (which he calls "engrossment"), which he describes as "voluntarily cutting oneself off from other realms of experience . . . (or the paramount reality) that individuals 'naturally' inhabit" (580). Ideally, a game's simulation becomes so compelling to the mind of the player that they cut themselves off from the reality occurring outside the game. However, immersion is only really possible as long as each player in the simulation actively represents the simulation with their actions. Fine makes this point, stating "the significance of gaming resides in the shared nature of the engrossment and in the supportive recognition that others are equally engrossed . . . By playing fantasy games, participants implicitly agree to 'bracket' the world outside the game" (580). When multiple players play a RPG, there is shared responsibility to accurately portray one's role. Each person's cognitive frame of immersion depends on the simulation being compelling and real—having a player fail to act their part causes the simulation to sputter, breaking everyone else's sense of immersion. For this reason, role-players enter a social contract when they play together, tacitly agreeing to uphold the game's reality by performing actions that make sense within the context of the game. In essence, fantasies are socially-constructed.

While each player in a simulation may wish to contribute to the fantasy by playing their role accurately, there is challenge in role-playing when one must juggle a real-world identity with a representational identity. Gee makes this observation,

identifying three distinct identities that the role-player brings to the game: a real-world identity (that of the player), a virtual identity (that of the character), and projective identity (the identity the player projects onto the virtual character) (49-50). Players must juggle these various identities, which inevitably conflict at certain points. For example, I would enter a game of *Gran Turismo* possessing certain physical attributes (paralysis limits my hand function for pressing buttons), intellectual attributes (I associate myself with various semiotic domains, among them automotive mechanics), and emotional attributes (I'm generally an even-keeled person). As such, my real-world identity influences everything I do in the game, giving me aptitude in certain areas (I understand everything that occurs in the game from a mechanical perspective; I don't get upset when I lose) and disadvantages in other areas (not all of my fingers have full range and they fatigue easily, so I can't press certain buttons easily or consistently). My real-world identity is going to conflict with the virtual identity of the game's racecar driver, who possesses keen reflexes and expert knowledge of how to drive professionally. The result of this compromise is a projective identity, which I represent through role-play: a racecar driver who is physically and strategically limited.

Even despite conflicting real-world, virtual, and projected identities, players still feel a sense of responsibility to play their roles as accurately as possible. This sense of responsibility is elicited not only from the social contract that exists between players but from the personal investment that goes into playing a character. In Gee's example, he cites his experiences playing a good-natured adventurer in the fantasy computer-based RPG *Arcanum*. The game, as a semiotic domain, informed Gee that

his virtual adventurer avatar possessed certain values. Gee felt a sense of personal responsibility to his virtual adventurer to represent her values as accurately as possible because that's what the virtual character would want (53). When Gee intentionally killed an innocent chicken at one point in the game, he felt like he had failed his in-game character on a personal level—Gee had forced the good-natured adventurer to do something she would not want to do (ibid). Gee felt bad: the other characters in the game castigated the adventurer for doing evil things, indirectly castigating Gee in the process for misrepresenting the virtual character's actions (ibid). In this way, Gee argues that role-players feel a responsibility to their avatar to represent his/her virtual identity as accurately as possible, asserting "Players are projecting an identity onto their virtual character based both on their own values and on what the game has taught them about what such a character should or might be and become" (ibid). In her essay "Who are You Here? The Avatar and the Other in Video Game Avatars," Katherine Warren backs Gee's concept of personal investment in accurate RP, observing that "avatars become thoroughly idealized as vessels of a solitary player's personal expression and will, leading to a deep investment in the final avatar interaction" (34). Accurate portrayal of another identity is not only a responsibility to the virtual character but a reflection of the player's real-world identity—does the real-life player value accurate representation? Refusal to accurately represent a virtual identity demonstrates the personal values of the player out of game, drawing negative feedback from fellow role-players who value accurate representation.

In attempting to represent a character accurately—to see the world from the

character's perspective and act in their interests—further difficulty arises in the potential conflict between the perspective of the real-world player versus the perspective of the virtual identity. A democrat, for example, views certain things differently from a republican—these two groups possess different perspectives. The sum of these perspectives is what Gee refers to as a "cultural model":

> Cultural models are images, story lines, principles, or metaphors that capture what a particular group finds "normal" or "typical" in regard to a given phenomenon. By "group" here I mean to single out anything ranging from small groups to the whole of the human race, with everything in between. Cultural models are not true or false. Rather, they capture, and are meant to capture, only a partial view of reality, one that helps groups (and humans in general) go about their daily work without a great deal of preplanning and conscious thought.

Games reflect in their design the cultural models of society. On the surface, values such as winning and scoring highly are representative of such models. However, the models that Gee references with his examples are deep cultural models that are composed of certain moral values, understandings, misunderstandings, and biases. In an example offered by Gee, a player might possess a cultural model that war is heroic and glorious, in which case a raunchy combat game like *Wolfenstein* would support this cultural model (145). On the other hand, a game like *Medal of Honor* would counter this cultural model by placing the user within a context reminiscent of the D-Day scene from *Saving Private Ryan*, which depicts war as a truly terrifying and horrible thing (ibid). When such an event occurs in an RPG, the game presents a cultural model that might conflict with the cultural model possessed by the player. The player is forced to consider another perspective, which might be starkly different from the one the player possessed before entering the game. When this happens, the game shakes at the foundation of the user's pre-held cultural model, forcing them to

reevaluate the information, moral values, and understandings that they may have unconsciously accepted as fact (Gee 150). When this conflict emerges during role-play, the challenge for the player is in setting aside their own cultural models to see things from their character's conflicting virtual perspective and act as the character would act. Good RPGs excel at getting users to suspend their own beliefs and consider things from the virtual character's perspective, which they accomplish through immersion.

To this point, I have talked only about RP within the context of games, analyzing how RP works and what games do to induce immersion. To summarize, all RPGs present a live and ongoing *simulation* of a situation in which players role-play. In order for the simulation to take meaning, player actions must occur within a *cognitive frame*, which gives ordinary actions special meaning within the context of the simulation. When this mindset is achieved, the result is *immersion*, or a state of consciousness in which reality becomes pushed to the periphery while the fantasy of play occupies the player's attention. For immersion to occur, not only must the player him/herself agree to RP as consistently as possible, but the other players in the game must agree to do so as well. This is because the fantasy of RP is co-produced and maintained by all players of the game. If one player fails to RP accurately, then everyone else's sense of immersion begins to sputter. While players may endeavor to RP accurately and consistently, the player's real-world identity may conflict with the virtual identity of the game, resulting in a projected identity that may or may not match up with the ideal virtual identity intended by the game system. Such inconsistencies can stem from physical, intellectual, or emotional qualities of the

player that impact the player's ability to RP. A key source of such conflict emerges when the cultural models of the virtual character contrasts with the cultural models of the real-world player. Good RPGs encourage players to consider other perspectives and appreciate different world views during RP to overcome this issue, which occurs through immersion. Having summarized this, I will now transition to discussing rhetorical education, explaining how rhetorical education is in unique position to take advantage of the RP strategies established by game design theory and apply them to to course design.

All rhetorical classrooms encourage students to RP to some degree, even if this influence is not overt or intentional. This is because rhetorical education has, among its many goals, the goal of teaching students how to become effective writers and speakers in whatever academic, professional, and civic occasions they may come to encounter. Therefore, to give students experience and confidence as communicators, rhetorical education serves as a simulation in which students practice role-playing as academics, professionals, and civically-engaged while completing course projects.

RP is necessary in the rhetorical classroom because, if students do not practice their rhetoric and achieve some level of success with it, then they will finish the course without the confidence to communicate. If students cannot gain confidence with their rhetoric within a low-stakes setting, then how can they be expected to continue learning and use their rhetoric when it really counts? The autotelic process will be broken, damaging the student's motivation to continue learning. When this is the case, Gee argues that these damaged learners

> will not envisage themselves in the new identity that success in school requires—that is, as the "kind of person" who learns, values and uses such school-based literacy and gets valued and respected for doing so. Without such an identity commitment, no deep learning can occur. The students will not invest the time, effort, and committed engagement that active, critical learning requires. (55)

What this suggests is that, at the most basic level, students need to practice being confident learners—or confident communicators in a rhetorical setting. Students need to RP as the confident communicators that they hope to be someday. It is the role of good teaching to convince students to imagine and accept these roles in the classroom. Through RP, the instructor can rehabilitate a damaged real-world identity by having the student adopt the virtual identity of a confident writer. By successfully taking on a virtual identity as a confident learner, Gee argues that "The learner comes to know that he or she has the capacity, at some level, to take on the virtual identity as a real-world identity" (Gee 63).

In order for this confidence-building RP to take place, however, the classroom must be seen as a low-stakes *simulation* of the rhetorical situations that students will one day encounter—a high-stakes classroom environment detracts from the low-stakes nature of a simulation. In the essay "Techne as Play: Three Interstices," author James Schirmer argues that practicing rhetoric (techne) is intrinsically playful. Because of this, the FYW classroom itself should be more open to play as a method of practicing rhetoric. He writes "The first-year composition course can become a kind of real-world simulation designed with [techne] in mind. . . . students need greater awareness of this potential, understanding composition as based in play, not just argument" (157). Albert Rouzie makes a similar suggestion in his book *At Play in the Fields of Writing*, arguing in favor of more ludic writing activities and less

stringent writing guidelines in the university writing classroom.[75] By making the classroom more playful and less high-stakes, the student will feel freer and more comfortable in role-playing as a confident writer. In a game, the forgiving nature of the game-space allows players to RP with greater comfort, knowing that they are able to make mistakes without final judgment. Instructors must provide students with this sense of security, otherwise the rhetorical classroom will cease to be a simulation of future rhetorical situations and become itself a high-stakes rhetorical situation. When this becomes the case, the *cognitive frame* that gives real-world actions symbolic meaning within the simulation breaks down. Students no longer see themselves as role-playing within a simulation; they see themselves *as* themselves suffering very real consequences.

In order for immersion to occur, the simulation must be convincing. This means that not only must individual students feel compelled to play their role but everyone else in the classroom—the student's classmates and the instructor—should do their parts to maintain the simulation. To help with this, students should consider detailing the rhetorical situation that they are simulating before writing their projects or performing any in-class speaking. Establishing the exigency of the text, the audience being invoked, and even the attributes of the writer or speaker being role-played by the student might help the student frame things in a more concrete way so

[75] Rouzie asserts that not only should writing instructors be more welcoming of playful writing, but society as a whole should consider the merits of "serio-ludic rhetoric" as a form of writing that should be taken more seriously in professional and academic settings. He writes: "We must actively open the door to serio-ludic expression in the way we design courses and assignments while also becoming astute in critically evaluating our experiments. If we do this, not only could serio-ludic play help us resist the tyrannies of rigid textual forms, but we could demonstrate to ourselves and others that our experiments have value. To become astute critics of serio-ludic rhetoric, we must inevitably investigate the significance of play for what is considered serious or we run the risk of isolating or dismissing it as mere play" (19).

that they are not simply writing to a nebulous "general audience" in the context of "this assignment is due on Monday." Walter Ong's "The Writer's Audience is Always Fiction" plays well with creating a convincing simulation. Ong suggests that audience is always an invented, fictionalized product of the author's imagination. Rather than writing to a concrete audience, writers invent an audience and then write to them; it then becomes the duty of the audience to adapt to the role assigned by the author (60). Ong explains how his theory works:

> What do we mean by saying the audience is a fiction? Two things at least. First, that the writer must construct in his imagination, clearly or vaguely, an audience cast in some sort of role. . . . Second, we mean that the audience must correspondingly fictionalize itself. A reader has to play the role in which the author has cast him, which seldom coincides with his role in the rest of his actual life. (Ong 60)

Because the audience, even one the writer knows quite well, is going to possess unknowable knowledge and feelings, the author cannot really write specifically to that group or person. Instead, the writer writes to their imagined interpretation of this group or person, and then the reader reads the text within the role of audience, adapting as much or as little as is necessary.[76] So, when students imagine an audience for their work, it is the role of the instructor and the student's classmates to "play the role in which the author has cast him." This means that the instructor should provide feedback from the perspective of the intended audience, and students should try to do so as well (perhaps during peer-review or when listening to an oral project). Given that the fantasy of RP is co-produced and maintained by all players of the game, it is

[76] Lisa Ede and Andrea Lundsford offer a more balanced interpretation of the roles of writers and readers in their essay "Audience Addressed/Audience Invoked: The Role of Audience in Composition Theory and Pedagogy." It is probably more accurate to that that the audience can be generally knowable and addressed specifically, but the minute details of the audience cannot be known specifically and must be invoked. The effort of successful communication falls upon both writer and reader to some degree.

everyone's responsibility to play their roles accordingly as writer and/or audience.

Of course, difficulties arise in RP when the real-world identity conflicts with that of an imagined role. If the writer is role-playing a certain type of author, then they may have trouble imagining *being* that type of writer. For instance, I once role-played as a writer/speaker at an academic conference, presenting a paper I had written for the class as if I were presenting it at a conference. My experience attending academic conferences was limited (I had only presented a paper once before). Nevertheless, the instructor did her best to prepare everyone for the mock-conference by presenting a paper of her own as an example and by giving everyone advice on common do's and don'ts when presenting at an academic conference. Moreover, she gave everyone advice on how to *listen* during an academic conference. This not only prepared students to take notes and ask questions at a real conference but made the audience more convincing for the student who was presenting their paper. Everyone was role-playing their part accordingly, even though several students lacked experience in playing their role. Of course, this was a graduate seminar; FYW students face additional real-world obstacles when role-playing as experienced writers given that the content of their writing is not going to be as complex and in-depth as the professionals they might be role-playing. In this case, it should be emphasized that practicing rhetoric is the goal of RP in the rhetorical classroom—rhetoric can still be practiced even despite a nascent understanding of content.

The writer is not the only person subject to the challenge of real-world identities conflicting with the virtual identity of the simulation—students and teachers also experience such conflict when they assume the role of reader or listener. For

example, it may be difficult to serve as audience to a speech or text when one does not respect the author. This could be for any number of reasons: the reader disagrees with the author; the reader cannot take the author seriously because of the author's dialect or grammar; or the reader cannot understand or relate to the issue. In such cases, it takes additional effort for the audience to overcome markers of difference and listen to what a speaker or text has to say. This is why Krista Ratcliffe proposes a greater emphasis on "rhetorical listening" as a way for readers to overcome markers of difference when listening to a text (even a written text can be listened to). Ratcliffe explains the need for rhetorical listening:

> Just as all texts can be read, so, too, can they be listened to. . . . [W]e do not read simply for what we can agree with or challenge, as is the habit of academic reading (in its multiple guises). Instead, we choose to listen also for the exiled excess and contemplate its relation to our culture and our selves. Such listening does not presume naïve relativistic empathy, such as "I'm OK, you're OK" but rather an ethical responsibility to argue for what we deem fair and just while questioning that which we deem fair and just. Such listening, I argue, may help people invent, interpret, and ultimately judge differently in that perhaps we can hear things we cannot see." (24)

Ratcliffe's theory proposes that readers maintain a stance of openness when reading texts marked by difference. In order to maintain this stance of openness, Ratcliffe instructs listeners to 1) look for markers of difference between themselves and the text; 2) recognize how the identifications of these differences shape our opinions of the text and its author(s); and 3) question whether these opinions are just or unjust. To relate this back to Gee's theory, Ratcliffe is suggesting that students question their own *cultural models* in the act of playing the role of listener. If we are to follow Ong and Ede & Lundsford's theories, which place responsibility upon both the reader and the audience in communicating, then listening is just as important as writing.

Therefore, rhetorical education should teach students how to listen by having students RP as listeners. This will serve two purposes: it will help students RP their assigned roles as listeners in the classroom, maintaining immersion in the rhetorical simulation, and it will help students remain open to listening during future encounters marked by signs of difference. If one of the goals of rhetorical education is to encourage students to consider other perspectives and question their own cultural models, then writing instructors should consider using RP in the classroom as a tool for achieving this goal.

Course Design Praxes

Role-play has long been a part of rhetorical education as evidenced by the ancient progymnasmata, which, despite its age, still serves as a useful example of course design praxis. The progymnasmata is an ancient rhetorical curriculum first created by the ancient Greeks during the Hellenistic period, seeing popular use through the Roman Empire, the medieval period, and so on through the renaissance (Kennedy ix). After completing a curriculum on grammar, students would advance into the progymnasmata curriculum, which consisted of a scaffolded array of rhetorical exercises that culminated in declamation—an exercise in argumentation in which the rhetor argues both sides of an issue. The purpose of the progymnasmata was to prepare students for written and oral communication in the public sphere, although lessons in philosophy, cultural values, and the literary forms were included in the curriculum as well (Kennedy ix). In his collection of progymnasmatic texts *Progymnasmata: Greek Textbooks of Prose Composition and Rhetoric*, translator and

rhetoric historian George Kennedy gives a brief synopsis of the progymnasmata and the declamation:

> 'Pro-gymnasmata' means 'preliminary exercises,' preliminary that is to the practice of declamation in the schools of rhetoric, which boys usually began between the age of twelve and fifteen. The progymnasmata were assigned by Greek grammarians to students after they had learned to read and write as preparation for declamation and were continued in rhetorical schools as written exercises even after declamation had begun. . . . Although Quintilian favored the continuation of written exercises as part of the curriculum in rhetoric, most Roman rhetoricians seem to have given attention exclusively to declamation. The exercises were completed in written form and then often read aloud to the teacher or class; even in the rhetorical schools students usually wrote out their speeches before delivering them. (x)

Thus, we see that the declamation was at the apogee of the scaffolded exercises practiced in the progymnasmata.

The reason I include something so ancient in a section on praxes for game-based pedagogy is because, quite simply, the progymnasmata and its capstone declamation exercise perfectly represent game-based course design principles. Perhaps it is ironic that one of the oldest traditions in rhetorical education is most applicable to the relatively new field of game-based pedagogy, yet it is not all that surprising—the progymnasmata is rooted in play, and declamation exercises have seen a bit of a revival in recent pedagogical scholarship. To conclude this chapter, I will summarize important elements of the progymnasmata and declamation exercise, demonstrating its usefulness in a modern game-based rhetorical classroom.

In his translations of Theon, Hermogenes, Aphthonius, and Nicolaus, Kennedy offers an array of treatises portraying the progymnasmata. These treatises vary somewhat in dividing and ordering their progymnasmatic exercises, though the

following exercises can roughly be identified as common among all texts in some capacity (presented in rough order from preliminary exercises to advanced exercises): Fable, Narrative, Chreia, Maxim, Refutation, Confirmation, Topics/Commonplaces, Encomium, Invective, Comparison, Ethopoeia, Ekphrasis, Law, and Thesis (Kennedy xiii). Early exercises like the fable, chreia, and maxim helped students develop a sense of societal values. This transitioned into more argument-based rhetorical training in refutation and confirmation. Topics or commonplace arguments represent very general arguments that can be made on any number of topics: arguments of organization, categorization, praise/blame, guilt/innocence, certainty/doubt, or morality/immorality. Encomium, invective, and comparison exercises apply students' moral training to argumentation, giving students practice with analyzing issues and composing ceremonial speeches. Ethopoeia and ekphrasis exercises further developed students' rhetorical skills by having them practice making descriptions and imitating authors. Near the end of the progymnasmata, in preparation for declamation, students would practice defending a law as just or refuting a law as unjust. In addition, students would compose "theses" and "hypotheses," which were especially foundational for declamation, since each involved the development of themes for declamation on judicial or deliberative subjects (Kennedy xiv). As Kennedy explains, these exercises

> identified specific laws and circumstances or historical individuals and contexts on which rhetoricians and their students composed and delivered complete speeches. *Hypothesis* differ from *thesis* in that a *thesis,* which is one of the progymnasmatic forms, deals with a proposition without specifying persons and circumstances and was not required to have all the conventional parts of a hypothesis. (Kennedy xiv)

Building upon previous lessons, thesis served as preliminary exercise that developed non-specific subject matter, which would then be developed into a more specific hypothesis; the hypothesis would then be developed into an argument on behalf of one or both sides—a declamation.

The declamation is an exercise that is still useful in modern rhetorical education as evidenced by the recent popularization of the progymnasmata among rhetoric scholars. In his article "Good People Declaiming Well: Quintilian and the Ethics of Ethical Flexibility," Cleve Wiese presents a close analysis of Quintilian's conception of the declamation exercise. As Wiese explains, declamations consisted of general topics or scenarios (a thesis, usually chosen by the teacher), which were then imbued with specific details by the students themselves, creating unique and specific situations (hypotheses) upon which to declaim (153). Consistent with earlier progymnasmatic exercises such as the refutation/confirmation or the encomium/invective, in which students would argue both sides of an issue, declamation involved issues that were to be analyzed from both sides, calling for students to "color or 'spin' [an issue] by casting it in either a positive or negative light" (Wiese 145). The addition of details to the general theses for argumentation produced unique and realistic topics for declamation, which was, in Quintilian's opinion, the students' best form of training for real-life argumentation in government and law because it provided "the closest image of reality" in the rhetorical training curriculum (Wiese 146). For this reason, Quintilian stressed the importance of selecting realistic and controversial subjects for declamation as a means of preparing students for the topics they would address in their professional careers.

In addition to selecting realistic theses for argumentation, Wiese gives special attention to the students' invention of details to form unique cases for declamation. Wiese describes imbuing a situation with specific details as a method of reality-building:

> Declamation [can] improve an orator's real-world speaking skills by providing the opportunity to practice defining 'reality' through rhetoric with much greater latitude than actual law cases would allow. Indeed, the rules of the game allowed a declaimer significant range to manipulate the parameters and tone—what ancients called the color—of his artificial rhetorical situation by augmenting it with additional facts or unmentioned events, freewheeling characterizations or entirely new characters, context and backstory, details and anecdotes, etc. The game was not so much to write a speech for a particularly challenging situation as to take a few facts and build them into a rhetorical situation and speech suited, to the greatest possible degree, to each other. (148)

For a student declaimer destined to perform real courtroom argument as a professional, the invention, manipulation, and coloring of facts would be especially useful skills to learn. Although real court cases obviously came to judgment with their own circumstances already laid out, the process of inventing circumstances for the declamation exercise itself was still useful in preparing for real courtroom argumentation. This is because one's argument would ideally 'spin' the facts of a case in a certain way so as to present one's perspective in the most favorable light possible. The purpose of inventing details for declamation was not to make the presentation of a hypothetical case easy or challenging but instead to give students practice with analyzing and interpreting rhetorical situations and manipulating the details of the situation to present a compelling argument.

The most significant component of Wiese's analysis is his identification of role-play as a major process in Quintilian's pedagogical theory, whereby students

were encouraged to assume the identity of the plaintiff or defendant in a dispute, adopting an imagined person's ethos, presenting their logical arguments, effusing their pathetic appeals, and even feeling their emotions. The process is described as a deeply emotional, histrionic performance by Quintilian:

> Again, when we desire to awaken pity, we must actually believe that the ills of which we complain have befallen our own selves, and must persuade our minds that this is really the case. We must identify ourselves with the persons of whom we complain that they have suffered grievous, unmerited and bitter misfortune, and must plead their case and for a brief space feel their suffering as though it were our own, while our words must be such as we should use if we stood in their shoes. … Even in the schools it is desirable that the student should be moved by his theme, and should imagine it to be true; indeed, it is all the more desirable then, since, as a rule in scholastic declamations, the speaker more often appears as the actual litigant than as his advocate. Suppose we are impersonating an orphan, a shipwrecked man, or one in grave peril. What profit is there in assuming such a role unless we also assume the emotions which it involves? I have thought it necessary not to conceal these considerations from my reader, since they have contributed to the acquisition of such reputation for talent as I possess or once possessed. I have frequently been so much moved while speaking, that I have not merely been wrought upon to tears, but have turned pale and shown all the symptoms of genuine grief. (6.2.36)

As Wiese observes, this histrionic process was an "exercise in empathy," in which "students had to deeply experience the plights of other (imagined) people, including people in much less privileged social situations" (149). Given that Quintilian's students would have been affluent, upper-class members of society, role-play could be thought of as a method of understanding and empathizing with disenfranchised groups. However, it is specious to believe that this idealized process of connecting with marginalized Others actually worked effectively in Quintilian's time. It is likely that any attempt to understand and represent the perspectives of disenfranchised

groups was done so at a shallow level that did not force the affluent white male members of Quintilian's classroom to venture far from their elitist perception that viewed women, children, and slaves as noncitizens (Wiese 149). Nevertheless, this concept of role-play opened up the *potential* to connect with and understand the plight of the Other, even if this process rarely actually occurred in earnest. As Wiese observes, role-play "did create a discursive space for possible social critique, even if the effect was not always subversive" (149).

Wiese concludes his analysis by arguing that role-play encouraged students to temporarily suspend their own beliefs when inhabiting the perspectives of others, which helped them in listening to and understanding opposing arguments. In this sense, declamation can be seen as a sort of "ethical training" that encourages students to (ideally) overcome their own biases and consider issues from other perspectives when deliberating—an important skill for future lawyers and statesmen to possess. In addition to practicing the conventional aspects of argument—invention, arrangement, style, memory, delivery—Wiese ends his analysis by observing that declamation also "gave students the opportunity to sincerely and wholeheartedly make ethical decisions and engage in role-playing; [and] at the same time, it took place within an explicitly artificial system, the limits of which were never far from view. The game gave players a sincere and immersive experience, while the game's obvious limits fostered a critical awareness that prevented the performance from seeming to be grounded in any inflexible persona or ethos" (Wiese 151-52).

While the declamation exercise accomplishes many goals from a pedagogical perspective, it also is exemplary of the goals of game-based pedagogy. First, as Wiese

demonstrated, the declamation exercise required creativity, calling upon students to create rhetorical situations and manufacture details for the situation. From a game design standpoint, this represents input. The options for student input are essentially limitless when it comes to generating situations for declamation—the student can declaim on any topic.[77] In addition, due to the emphasis on oration in Quintilian's classroom, the student would have had a concrete, addressable audience for declamation: the other members of the classroom. Thus, the classroom was a very convincing role-playing simulation: while the student declaimed on a subject as a politician, lawyer, or other such authority figure, the students and teachers played their parts in the simulation as well. Ideally, during declamation, all students felt immersed in the experience, feeling the histrionic effects of the speech in the way that Quintilian described. However, especially for the declaimer him/herself, becoming immersed in the role of confident speaker was especially important. The student had to role-play not only as a specific person (details that would have been fleshed out during the ethopoeia exercise) but as a confident public speaker, hopefully seeing that it *is* possible to speak eloquently, and retaining some semblance of this role even after the declamation is over. Of course, even if the student failed in their attempt to declaim, they could rest assured that they were doing so in a safe space. Given the sophistic playfulness of declamation and education itself, the only harm in failure was mild embarrassment—there would be no grades until about 1800 years after Quintilian.

[77] Of course, Quintilian suggests realistic situations for declamation because these situations represent the ones they will come to face later as professionals in their field. However, Quintilian makes allowances for declaiming on silly topics for recreation and entertainment (2.10.13). Likewise, today's students are best served in writing about useful topics for modern rhetorical education, as this would prepare them for professional and civic communication.

Thus, with its allowance for creative input, role-playing, and safe failure, the declamation exercise—at least within the context of the ancient classroom—is a great example of gaming pedagogy at work within rhetorical education. If classrooms can foster a similar environment by lowering the stakes and emphasizing the classroom as a place of simulated experience, then declamation can be just as useful in modern rhetorical classrooms as it was some two millennia ago.

Conclusion: An Application of Gaming Pedagogy in My FYW Classroom

To conclude, I would like to offer my own proposal for how to design a rhetoric course from the perspective of game-based pedagogy. I will explain my reasoning for selecting certain praxes and avoiding others based on what we know from game design theory. In the end, it will be shown how a course can operate as a game system.

The Course's Design

The first question that must be answered before designing this course is: what constraints are being imposed by the department or the institution? Institutions and English departments carry their own unique learning goals and requirements, which partially define how instructors can design their courses. I am designing this course for a FYW classroom, specifically for the community college curriculum where I will be teaching. The only design constraint imposed upon me by the English department is that I must assign four 3-4 page writing assignments, which must include both a "compare/contrast" essay and a "summary/response" essay (plus two other essays), as well as a fifth "research" essay, which must be 5-7 pages in length. Everything else is left to my discretion: learning objectives, assignment descriptions, grading criteria, course readings, and so on.

Next, I must define the learning objectives for this course—the distal goals that students will be pursuing for the course. I have set the following learning

objectives for this course:

- *Development of critical reading skills*: Students will learn how to identify the rhetorical situation of a text, identify the perspective of the author, identify the intended audience for a text, identify how the writer is intending to influence the audience, identify both stated and unstated assumptions of a text, identify fallacies, identify biases, identify how and why texts are organized and delivered in a certain way, and assess the credibility of a text.
- *Development of research skills*: Students will learn how to compose an effective research question, use library and online resources to find credible texts, assess texts for credibility, and take effective notes.
- *Development of rhetorical skills*: Students will learn how to consider the rhetorical situation and its allowances and constraints; use stasis theory to understand and enter a conversation; create a focused thesis statement; consider audience; generate effective rhetorical appeals germane to the scope of one's argument, the audience, and the rhetorical situation; develop one's voice; incorporate other voices; create a compelling and informative introduction; organize texts; and write a conclusion.
- *Development of revision skills*: Students will understand the difference between editing and revising; provide courteous, useful, and constructive feedback for other writers; evaluate the effectiveness of one's own texts; and understand revision as a recursive process.
- *Development of a writing process*: Students will understand writing as a process, one that will change and grow over time. Students will learn how to assess their own critical reading, researching, writing, and revision processes.

These goals are too general to be pursued without guidance, especially for first-year writers. Thus, to avoid confusion and frustration, students should have some scaffolding in the form of proximal goals to help them achieve these distal goals.

Serving as proximal goals, I have created the following projects, assignments, and requirements, which lead students toward completing distal learning objectives while fulfilling the department's requirements. Assignments are scaffolded to build off of reading homework, in-class discussions, and previous writing projects. Early writing projects start simple and build toward complexity at the end of the course.

Rhetorical Analysis: For the first major writing assignment, students will

choose a written or oral text. They will then compose an analysis explaining why the text was rhetorically effective or ineffective. This writing project will build off of the semester's early lessons on rhetoric. The goal of this assignment is to test students' critical reading skills. It also will give students a simple introduction to composing their own academic essays—simple in that it eschews emphasis on finding and citing sources, focusing instead on rhetorical effectiveness (how to write an introduction, compose a thesis sentence, organize an argument, form a conclusion, incorporate quotes and paraphrases, etc.). In addition, the text that the student chooses to analyze may be an introduction to their semester-long research topic, though this is not a requirement.

Summary/Response: For the next major writing assignment, students will use their research skills to find a scholarly text. They will then compose a response to this text in which they summarize the author's words and then agree, disagree, or elaborate on what the author has to say. This project will allow students to continue applying the critical reading and rhetoric lessons learned in class while also gaining experience with citing, quoting, and responding to other texts. The text that the student chooses to analyze should relate to their semester research topic, which should be taking shape by this point in the semester.

Compare/Contrast: Next, students will use their research skills to find two *new* scholarly texts. These texts should discuss a particular stasis question pertaining to the student's semester topic. Students will then place these two authors in conversation with one another by comparing their arguments. This will give students continued practice with critical reading, researching, and writing.

Declamation Part 1: By this point in the semester, students should have read several scholarly sources discussing their semester topic, making them knowledgeable of their research topic. In addition, students should be growing familiar with rhetoric and academic writing. Thus, this project will be the first to allow students to apply what they have learned about their topic and about rhetoric with minimal constraints. Students will be tasked with taking up a position concerning any stasis question(s) related to their topic. Students will select one side of their issue and compose an argument from this position. Students should consider not only their audience and the rhetorical situation for this argument but their ethos as well. This is because students will be role-playing as an experienced writer, so they must take time to define this person and draw upon their ethos. In addition, the student will be inventing a rhetorical situation, so they must define the context and exigency for this argument and consider the situation's allowances and constraints. Doing so will allow students to draw upon the three rhetorical appeals more easily than if they were simply writing a paper to their professor. This project will fulfill the "research paper" requirement set by the institution.

Declamation Part 2: As above, but the student will be presenting a different argument on this issue. The second argument does not need to be directly opposed to the first, but it must present a truly unique position. No self-plagiarism allowed. Sources may overlap. Because the department only requires one "research" paper, only one of the declamation essays needs to be 5-7 pages; the other one can be 3-4 pages in length. Students can make their own decision in choosing which paper will be longer.

Review Workshops: Peer review will be optional to attend but necessary to achieve a high grade. There will be a total of four peer-review sessions (for all but the rhetorical analysis), and these sessions will be held online.[78] During these sessions, students will receive a peer-review prompt, which will help guide their feedback. Strategies for peer-review also will be discussed in class. Students will receive two papers to review, diversifying the feedback one receives. Students will lose points if they sign up for peer review and then do not provide feedback.

Writing Forum: I will pose questions and/or assign small tasks to students through the course's online discussion board. These questions and tasks are informal; only participation is graded. These questions and tasks will be used to jumpstart classroom discussions, encourage a sense of transfer, and encourage self-analysis of one's own reading, researching, writing, and/or reviewing processes. Sample questions: What did you find challenging about [major essay]? What strategies do you find useful when taking notes? What strategies have you found useful/unhelpful in finding academic sources? What sorts of feedback do you find useful/unhelpful? Minor tasks might include: looking for fallacies or rhetorical strategies outside the classroom, such as in the news, on social media, on online forums, talking with friends, etc., and explaining why the example is effective/ineffective; or using a rhetorical move in one's own writing outside the classroom, like on social media, on a forum, with friends, in another class, etc., explaining why this rhetorical choice was successful or unsuccessful.

Revision Project: Revision will be optional but necessary to achieve a high

[78] I do not like in-class peer review because students often feel rushed. I think online peer review offers greater comfort, especially for slower readers and writers. For this reason, I usually require students to offer feedback by the end of the day, giving them several hours to perform their peer reviews.

grade. To complete the revision project, the student must complete a revision plan worksheet (includes a revision prompt with questions), which will respond to the feedback they have received on their essay. Students must explain how they plan to revise the document, as well as why these revisions will make the essay more effective. Students will be encouraged to meet with me and/or the writing center to discuss their revision plan. Only after completing a revision plan will revised essays be accepted. In addition, all revised essays must be submitted as a merged document with track changes evident between the original essay and the revised version. There are only four opportunities for revision; there will be no time to revise the fifth and final essay.

Writing Artifacts: Small amounts of points will be rewarded for what I call "writing artifacts"—things like note sheets, sources that have been read and marked with highlights and/or distilled into notes, outlines, and writing center rough drafts, just to give some examples. Writing artifacts will be collected within a portfolio (which can be digital, physical, or both), and will be reviewed at the end of the semester during individual conferences.

Attendance & Meetings: Students will be allotted a certain number of unexcused absences based on how often class is held. After students exceed this allotment, they will begin to lose points. There will be a mandatory individual meeting to discuss each student's semester research topic—this counts as attendance. In addition, arriving late or leaving early will count as half an absence unless excused.

My intention with these assignments is to give students a certain degree of agency while still guiding them toward completing *my* learning objectives. I retain

agency over setting learning objectives for two reasons: one, because it saves time in negotiating and creating writing contracts and grading criteria, allowing students to focus more on learning and practicing rhetoric; two, because students may not feel confident or qualified in possessing full agency over setting distal or proximal learning goals. Thus, students have some agency in being able to choose a semiotic domain to research (ideally a professional or civic interest), as well as agency in deciding how they choose to analyze or argue this issue. My goal with the design of these projects is to leave students with as much agency as possible while providing basic scaffolding to reach the course's distal learning goals.

Additional agency is granted via the assessment and grading systems, which allow students to aim for a desired grade by knowing beforehand the point totals required for each grade and the projects that must be completed to earn these points. Regarding assessment, I have adopted an effort-based system similar to Inoue, Adkison & Tchudi, or Danielewicz & Elbow. I will not grade anything; instead, major assignments will only receive written feedback (marginal comments and end notes). This gives value to student effort despite imperfect quality while simultaneously drawing focus away from extrinsic goals (grades) and toward intrinsic goals (accepting feedback, performing reflective practice, and improving one's writing). However, if the quality of an essay falls short of my expectations, then I will require it to be revised before it can be accepted. In this sense, I adopt Inoue, Adkison & Tchudi, and Danielewicz & Elbow's "fuzzy criteria" to dissuade students from testing the limits of what constitutes acceptable work. In general, avoiding plagiarism, meeting the page minimum, and incorporating the minimum number of academic

sources will suffice.

Regarding grading, I have partially adopted elements from Hodgson, Jackson, and Adkison & Tchudi's grading systems. All assignments will carry a certain point value, and completing the assignment will earn the specified amount of points. This is an application Adkison & Tchudi's point-based system, which rewards points based on effort, and differs from Hodgson and Jackson because grading is not based on quality. In addition, I have tried to implement some of the agency granted by Hodgson's "quest lines" and Jackson's variable difficulty systems. While I could not justify fully optional quest lines to the degree that Hodgson did in his system, I do make assignments optional (except for the five major essays, which are required by the department). This allows students to choose which assignments they would like to complete while understanding fully how many points will *not* be earned by *not* completing an assignment. For example, students may find themselves without a rough draft for the peer-review workshop, in which case they may choose to skip the workshop and focus instead on completing their draft (which works to the benefit of everyone else who came prepared for the workshop). In addition, while there are no "infinite revisions" (which does not matter as much because assignments are credit/no credit and not quality-based), there are planned revision assignments incorporated into the course. These revision assignments must be completed within a certain period of time after the project has been returned to the student, which helps alleviate stress on the instructor as game engine.

As far as setting values for assignments and thresholds for grades, I have tried to quantify things in a way that I feel is balanced. I will be using fixed, concrete

benchmarks for grades and not a variable system like Hodgson (this is where play-testing would really be beneficial for avoiding glitches and exploits in the system). These are the point values of assignments and benchmarks for grades as I have defined them (see tables 1 and 2).

Table 1: Course Assignment Point Values

Assignment Type	**Point Total (points each)**
Major Essays	350 (70 ea.)
Writing Forum	20 (equal fraction of total ea.)
Writing Artifacts	20 (1 ea.)
Review Workshop	64 (16 ea.)
Revision Project	64 (16 ea.)
Attendance	(10 deduction ea.)

Table 2: Letter Grade Point Thresholds

Letter Grade	**Point Requirement**
C-	350
C	371
C+	393
B-	414
B	436
B+	457
A-	480
A	500
Max Possible	518

On the surface, this grading system may not seem too different from a standard grading system: the point totals for grades follow a pretty standard array with a C- being equal to about 67% of the total points for the course and an A being worth 96% of the total points for the course. However, this is a specious coincidence. Given that every student is required to complete all five essays, I could have assigned them a value of zero points instead of 70 each and changed the benchmarks for grades to

reflect this (see in table 3). [79]

Table 3: Alternate Letter Grade Point Thresholds (Major Essays Worth Zero Points)

Letter Grade	**Point Requirement**
C-	0
C	21
C+	43
B-	64
B	86
B+	107
A-	130
A	150
Max Possible	168

Thus, we see that this grading scale is, in fact, anything but standard. It is designed on the principle that doing the bare minimum (completing the five essays) should earn a bare minimum passing grade (C-). I then organize letter grades by dividing the max point total of 168 by the 8 possible letter grades, creating a standard array of grades that ascend by about 21.5 points per threshold. This grading system is quite similar to Adkison & Tchudi's effort-based "achievement grading" system, in that I award points based on effort (assignments completed), and students gradually ascend their way from a base grade to an A. However, this scale differs in that I do not incorporate any subjective quality assessment at the A-level, and I do not use a "B" grade as the baseline for point totals. There are drawbacks with this decision. While I like the thought of every student aiming for a "B" or "A" grade from a motivational perspective, I also value the simplicity and clarity of this grading scale.

[79] I give the five major essays a hefty point total because it seems misrepresentative to award such effort with zero points. In any case, I would probably include both visualizations of the grading scale on the syllabus.

Theory Behind the Course's Design

This course is effective because it is, by definition, a game: it possesses multiple participants; it possess both implied and explicit rules (assignment descriptions, grading criteria, classroom decorum); possesses objectives/goals; possesses conflict; possesses uncertainty; allows for player input; provides quantifiable feedback; and operates harmoniously as a system. This is in contrast to a conventional lecture-based classroom that does not allow for student input. Furthermore, from the perspective of game design, this course accomplishes all of the positive experiential qualities defined in chapter three to some degree. I will summarize these aspects below.

Good games sell themselves to consumers, answering the question "Why would I want to play this game?" The answer to this question encourages the player to transition from a state of disinterest to a state of play. The institutional purpose of this course is to prepare students for academic writing. That is not a particularly alluring sales pitch—students are unlikely to celebrate the opportunity to write academic essays. Thus, I add my own learning goals to this departmental goal, which is to teach students rhetoric, which is useful in all moments of life that call for critical reading or listening and effective communication. So, in answer to the question "Why would I want to take this course?," I would respond with the questions: "Do you want to be able to find reputable sources of information? Do you want to be able to discern legitimate information from biased information and misinformation? Do you want to be an effective communicator? Do you want your texts to be logical and easy to read? Do you want to be more persuasive? If the answer to these questions is yes, then you will want to take this course.

Furthermore, the level of agency that students possess in my course serves as an additional selling point. To the students frustrated by fuzzy criteria, biased professors, and poor confidence as communicators, I would respond that the grade for this course is the direct result of the student's effort and not a product of my opinion of the student's writing or the student as a person. The locus of control in determining the grade lies with the student. Furthermore, students have the agency to study whichever topic interests them *while* they develop their rhetorical skills. Rhetoric pairs with anything. Therefore, students can pursue their own learning interests—something professional, something entertaining, something about which they are passionate—while they complete this required course.

Good games combine the process of learning how to play with the act of playing the game itself. There is little to no pre-learning before actually playing the game; players learn how to play the game as they play it, having fun right away. This course attempts to throw students right into the "action" by having them perform the rhetorical analysis to start the course, which exercises skills students already possess to some degree. That is, students already have information sources that they read, watch, or listen to on a regular basis (and if not, I suggest a TED talk). And students already possess innate abilities to know when something *feels* rhetorically effective or ineffective. Thus, students possess some degree of knowledge of rhetoric that is already grounded in experience. This course attempts to build off of what students already know by offering scaffolded lessons and assignments that build in complexity from a simple rhetorical analysis to more complex assignments and lessons that gradually address more and more elements of rhetoric and academic writing. In

addition, class-time will be used to give students some collaborative experience using and discussing what they have learned about rhetoric and writing. Within the semiotic domain of the classroom, students will normalize their knowledge and experience with rhetoric and writing.

Finally, it is my hope that students will transfer what they have learned when completing the course's writing projects. Since rhetoric applies to all communication, learning content should also transfer to rhetorical situations outside the academy—a point that I try to emphasize with course texts, in-class discussions, writing forum prompts, and with the assignments themselves, which requires students to apply/transfer rhetoric to a semiotic domain outside the classroom. By completing course assignments, students will develop mental patterns and habits that make up their writing process. Students will consciously or unconsciously transfer this process to other occasions for rhetoric outside the classroom.

Good games have clear goals and objectives, balancing long-term goals with short-term goals to avoid overwhelming players. Of course, the institution has its own goals for FYW (teach students to perform academic writing; write five essays), and I have my own goals for FYW (teach students useful rhetorical skills), but the course-as-game system allows students to discover emergent goals and set their own proximal goals while fulfilling these overarching learning goals. Put another way, while the institution and I require students to complete five specific essay assignments, students set their own proximal goals to complete these assignments: students select a research topic, select sources to read and cite, decide how to structure their arguments, decide which optional assignments to complete, and decide

how to balance the difficulty of the class with a desired reward while considering the time and effort required to achieve this reward. Thus, students become co-writers of their own academic story: while I define the terms of "point A" and "point B," students decide how to get to "point B" with their individual actions and choice of goals.

In addition, the pursuit of goals occurs within a safe space where honest mistakes are unpunished and all effort is rewarded. If students make a poor choice with setting a goal (such as missing the mark with their rhetoric or reading a source that turns out *not* to be useful) then this choice will not be punished. Instead, the effort-based grading system rewards all students for their effort regardless of outcome, acknowledging that failure is an intrinsic part of the learning process—part of reflective practice. Furthermore, this course acknowledges the messy, non-linear process of writing by rewarding the often unrecognized effort that goes into the researching, reading, writing, and revision process. Academic writing is inevitably filled with tasks that do not pay off directly by appearing in the final product. This is why I grant points for "writing artifacts," which might include those highlighted, annotated scholarly sources that just didn't make the cut for the final essay (but which may have led to other useful sources), or the first draft that was mostly scrapped after a visit to the writing center. While the time and effort that goes into producing these artifacts may not show in the final product, this effort still benefits the writer indirectly and should be recognized by the grading system as part of the learning and writing process. Each of these writing artifacts represents an emergent goal that the writer spent time and effort in pursuing—an effort-based grading system would be

remiss by not recognizing this effort.

Games possess an uncertain goal, which is a source of conflict. Good games allow players to mitigate this uncertainty through skill and effort, thus balancing the level of conflict at an enjoyable level. This course's concrete, effort-based grading system attempts to direct the flow of conflict toward useful ends (intrinsic goals) while diminishing unhelpful sources of conflict (extrinsic goals). Because grading is effort-based, there is a healthy uncertainty with achieving the extrinsic goals of the course—the student is encouraged to put in lots of effort to achieve the high-end goals ("A" grades) of the course. Thus, the source of conflict becomes mainly student vs. self as the student challenges him or herself to put in lots of effort and earn the system's highest rewards.

Meanwhile, unhealthy student vs. teacher conflict is diminished due to the simplicity of the grading system. The subjectivity of quality-based grading is essentially nonexistent, limited only to assessing labor as "credit/no credit." Because subjectivity is diminished, the element of random chance is greatly decreased. As a result, grades are more directly affected by factors the student can control (labor) and less affected by subjectivity and random chance, which might undermine student effort.[80] In addition, due to the agency the student possesses over setting goals, the student can control the difficulty of the course, operating at the edge of their regime of competence. Students who do not feel comfortable investing A-level effort can aim for a "B" grade instead. In this way, the course-as-game system accommodates multiple levels of skill and effort by allowing students to adjust the course's difficulty

[80] However, elements of conflict that the student cannot control such as distractions, work-related issues, family obligations, financial issues, and disability concerns may still cause conflict that might inhibit the student's ability to invest effort.

to their needs, balancing chance of success with value of reward.

Good games accommodate different solutions (input) to a problem while providing unique and quantifiable feedback. In addition, good games focus on rewarding good choices and not punishing players for bad choices. Games provide a safe space for the feedback loop to operate. Rhetoric, by its very nature, allows students to provide unique input. This input applies not only to the rhetorical input that occurs in written assignments, however, but also to the input that goes into setting proximal goals. Thus, students receive unique feedback not only from their writing assignments (marginal comments and end comments from peers and teacher) but from the goals they achieve (points awarded). In this way, feedback and rewards are doled out at regular intervals. Students are constantly receiving rewards throughout the course, which helps keep them motivated to continue investing more effort for more points. Punishments are rare, applying only to failing work and excessive absences, which helps maintain focus on rewards—withholding a reward becomes the punishment. In addition, because I do not have to grade, the feedback system becomes easier and timelier—the instructor as game engine is under less stress. I feel less inclined to justify a grade and freer to give honest yet considerate feedback without as much concern for damaging the student's confidence and stifling their motivation. In addition, students are freer to focus more on intrinsic learning (feedback from their teacher and their peers) and less inclined to focus on grades. All of this makes reflective practice more effective because student input is truly unique, feedback is unique and timely, and the sanctity of the safe space keeps the stakes low and the opportunity for risk-taking high.

Good games are customizable. As a design space, games encourage players to consider how they are designed and constructed, allowing players to customize the design space to fit their needs. Unfortunately, this is where the design of my course is weakest. I keep the course as a design space limited, retaining agency over learning objectives and assignment descriptions. Due to negative feedback expressed by Thelin and Moreno-Lopez's students, I question if students really want agency over learning objectives and assignment descriptions—too much agency can be an overwhelming thing, especially for newer learners who lack a developed appreciative system capable of understanding effective design grammars of a rhetorical classroom. Furthermore, there is little room for multimodality in this course because the institution mandates five written essays. While I can allow for some multimodal creativity with these essays and with smaller assignments, truly digital projects would most likely violate this requirement. That said, I grant students agency in other areas—research topics, goal-setting, difficulty levels. I try to avoid hegemonic influence by granting students agency in what they want to study. Furthermore, I take it upon myself to listen for signs of difference and learn about areas of covert discrimination, and I try to consciously avoid committing discrimination with my comments and grades. I avoid quality-based grading for this reason, which is where discrimination tends to manifest itself (especially in the case of discriminating against non-Standard dialects).

Good games serve as simulations or representations of other situations, allowing players to practice being other people and view the world from other perspectives. The declamation assignment is a simulation. Its goal is to have students

consider multiple perspectives on an issue—a skill that students must learn in order to open up the space for understanding on controversial issues. In addition, declamation encourages students to question their cultural models and belief systems, which may include not only their own beliefs about their research topic but their beliefs about themselves as writers. I want each student to role-play as a confident writer with a strong ethos, which I hope will disabuse diffident writers of the belief that their voice is too weak—I want students to retain some of the confidence of the writers whom they role-play in order to bolster their real-world ethos. In addition, I want students to consider the implications of audience and rhetorical situation as they invent and address a more tangible audience and a more tangible rhetorical situation. These are elements that must always be considered in writing outside the classroom, and I want students to consider the audience and the rhetorical situation as part of the writing process. Admittedly, I would be more satisfied if students could play a bigger role in role-playing as the audience (they only do this during peer-review). That is something more easily incorporated into a Communications classroom than a writing classroom, unfortunately. Peer-review feedback plus my feedback will have to suffice as an audience simulation until I can come up with a better solution.

Arguments Against the Course's Design

To close this section, I want to address some common concerns might arise with my proposed course design.

Aren't you concerned that you might be giving out "A" grades for low-quality work? This is essentially a "quality vs. quantity" argument, which has been addressed

by Inoue, Adkison & Tchudi, Hodgson, and others working with an effort-based grading system. My take: ultimately, all that matters is the final grade; individual assignment grades do not matter for this course. Thus, if a student has put in all of the effort necessary to achieve an "A" grade for the semester (and I feel this takes a lot of effort), then they likely have gained so much experience with reading, researching, writing, and revision that their end of semester writing products are likely close to "A" quality and deserve such a reward.

Aren't you concerned about grade inflation? I don't think grade inflation will occur as much as one might think—it takes *a lot* of effort to achieve an "A" grade. Therefore, I ask: would it be such a bad thing if this system encouraged students to put in *so much* effort that they earned an A-grade? An A-grade requires copious amounts of additional work outside of just writing the essays: collecting writing artifacts, creating timely drafts, performing peer-review, revising one's assignments, and reflecting on one's own writing process. If a lot of students earn A's under this system, then I would view it as a positive result of the course's strong motivational properties and not a negative of grade inflation.[81]

Aren't you concerned that some students will underachieve by aiming for a C-minus grade? In this system, the student is the agent of his or her own grade. It is my hope that, seeing the concreteness of the grading system, underachieving students will realize just how safe and easy it is to aim a little higher and earn a B-grade, but ultimately it's not my decision to force students to aim higher. Even in Adkison & Tchudi and Danielewicz & Elbow's grading systems with a baseline of "B," students

[81] Plus, if grade inflation does become a problem, I can always raise the threshold for success by adding more assignments or raising the benchmarks for grades.

would aim low and receive "C" grades. While every educator can and should take measures to bolster student confidence and success, at the end of the day, I cannot force students to feel confident and successful, especially if they do not put in the effort necessary to be successful.

This course does not go far enough to promote an anti-hegemonic, anti-discriminatory learning environment; it is still subject to covert influences of race and class. It is true that this course pales in comparison to the critical pedagogy suggested by Inoue and others working with contract grading systems. Unfortunately, teaching at a community college setting where many students are commuters with part- or full-time jobs, I question how much time and effort students have to invest in learning how to design a course, creating their own learning objectives, and negotiating a grading contract. I want students to spend the bulk of their time focusing on researching their topics and practicing rhetoric; my control over course readings, learning objectives, and grading criteria allows students to maintain focus on rhetoric and not on course design or the background processes that make the course function. As a compromise, I grade based on effort to avoid bias in grading quality. Furthermore, I try to maintain a critical consciousness of my own biases in the classroom. I know from my experience as a student how frustrating and disempowering a biased teacher can be—I do not want to inflict this injustice upon my students.[82] While Inoue's course design is an enticing alternative grading system, I do not yet have the confidence to attempt it in my FYW classroom.

[82] An American History teacher I once had as an undergrad routinely began her class with Tea-Party propaganda videos to inculcate students to vote for her political party. I was vehemently against this—I was not paying thousands in tuition dollars to watch political propaganda. However, my grade was in her hands; I felt that there was nothing I could say or do until the semester had finished.

In addition, I question how accommodating this course is toward students with learning disabilities. While this course grades labor, it is important to remember that not all labor is performed equally. An amount of labor that takes one student an hour to accomplish may take another student two or three hours to accomplish due to a disability. In such cases, I might have to consider adjusting the difficulty of the course to accommodate disabled individuals. I do not want to harbor a learning environment that places disabled students at a disadvantage, so I try to design my course with universal design I mind. However, I feel that designing my course to be universally accessible has its limits—course design cannot reasonably anticipate and accommodate every student. I will have to make adjustments as necessary.

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