Q1. Give your initial thoughts about learning in video games based on your personal experiences with video games, going from level to level in Mario Brothers, and particularly collaborating with other players in MMORPGs.

   My own personal experience with video games is very limited. My parents were of the belief that video games “warped the mind”. I was 8 years old when we inherited an Atari system from my cousins. At the time, we only had two games; one was a mountaineering games (climb the mountains of the world), the other was Digger (a game of avoidance and point scoring, similar to PacMan). The next system came when I was about 12, again a hand-me-down (the Sega Genesis) with one game, NHL Hockey. That system didn’t last long either.

   I can remember watching my peers play video games, however, I don’t remember being given the chance, or asking for the chance to get involved. I never really had the interest to play video games. I was much happier with outside activities and genuine social interaction. In 1990, that perception changed slightly with the purchase of my parent’s first computer, a Gateway 2000. I remember sitting in front of the computer (and fighting for that time with my sisters) for hours, playing NumberMunchers, SuperMunchers, Wheel of Fortune, etc. That blossomed into other one-on-one games. Yet, I still did not pursue the video game consoles, nor did I take a real interest in entertainment-value games. My time in front of the computer rapidly shifted from games to schoolwork and the interest in how the computer worked. I had a brand new PS2 in my apartment (belonging to my roommate) and still did not play video games on that unit. I have yet to participate in any multi-person online games. I still prefer to be an observer. My one vice in the world of video games has always been driving simulations such as Cruisin’ USA, Need for Speed, etc.

   Looking back, however, I can identify the learning that occurred at its simplest level by participating in the games. I am of the opinion that learning occurred during the observation as
well. By playing the mountaineering game on the Atari, I learned about some of the largest mountains in the world, including the geography (location in the word), and their supposed topography, based on the obstacle I faced. Playing NumberMunchers, etc. exposed me to the skills of addition, subtraction…as well as grammar and language skills. By observing my peers playing games, especially later in life, I learned some of the behaviors that can result from becoming engrossed in the game.

The driving simulations were the most challenging for me. I found myself telling my parents and myself I would be an excellent driver because I had done so well with the simulation. I feel that I can’t speak for the majority of games in the industry. What I can do, however, is hypothesize, based on my knowledge of games, learning theory, and the human nature to strive to succeed. I would assume that the success of video games lies in the ability to 1) engage the participant, 2) create a feeling of success, and 3) offer some ultimate form of recognition. The Mario Brothers Games involved saving the Princess Toadstool, collecting more points, more powers, etc. The levels are structured in such a way that the shortest challenges occur first, and then build to the more difficult challenges.

The learning occurs naturally in those games that really pull the participant into the scenarios. A perfect example is a flight simulator, which is a game essentially, used for pilot training. This game engages the pilot in challenging activities, in a scenario in which the participant wishes to partake. The degrees of difficulty and potential challenges can be varied and the room for success or failure exists. Driving is another example, as I mentioned previously. Today, NASCAR, SCCOA, and CART use driving simulations for the various tracks in the circuit. As I have personally seen, many of the drivers can be found either in their own trailer, or congregated in someone else’s trailer, playing a video game that simulates the
layout of the track. What way is more perfect way to learn the turns and ways to handle a car built with certain specifications without the cost of fuel, potential mechanical failure, and man-hours.

My ultimate point is that I still agree with my parents, that too much time playing video games is not necessarily beneficial. However, games do have their purpose and appropriate use in the context of learning. I also believe that it is overall a great way to engage the participant in learning, as it attends to their personal interests in a challenging, exciting, and potentially rewarding manner.
Q2. Give your learning-theory-based analysis of Prensky's ideas about "digital natives," games and gamers. Are they truly different or do they learn in the same ways as described by the learning theories you've read about in EPSY 335? What principles of learning are exemplified in the engaged activities of online "gamers?"

Based on what I have learned in this course relating to learning theories, I would assert that “digital natives”, myself included, learn in a different manner than “digital immigrants”. Differences lie in the stimuli and the medium for communication as well. Digital natives learn at a more rapid pace, by different sources simultaneously and interactively. These differences can still be explained by the prime theories already used to explain learning, however. According to Prensky, a change in technology has forced a change in thinking, also resulting in changed behavior and social changes. Prensky also states that digital natives not only process information and think differently, but also at a much faster rate and in smaller increments. Prensky also asserts that the medium for learning has shifted from print and spoken materials to electronic materials (video, email, IM).

Prensky’s assertions that learning has changed is supported by the behaviorist approach to learning that states that learning is a change in the rate or frequency of behavior/response based on some change in the environment. (Shunk: 19) The environment has changed (introduction of technology) causing a shift in behavior. The rate of learning has also changed. Because there has been a change in one of these areas, the result (learning) also changes.

Cognitive theory can also be used to support Prensky’s assertions. It also can be used to refute the claim that learning occurs in games. Although, I never heard Prensky say that all games resulted in learning. More so, I heard Prensky stating that digital natives require engagement in order to learn, and games were a perfect medium for that engagement. As the textbook points out, “One can be motivated but not learn; one can learn without being motivated
Not all games engage the learner. Many cognitive processes result in motivation of students.

Motivation is typically used as a reason for learning, and learning resulting from playing games is certainly caused by a motivation to win or achieve a goal. Motivation itself is defined as a “process of instigating and sustaining goal-directed behavior.” (Shunk: 329) There are really two types of goals, however, learning goals and performance goals. Motivation applied to learning goals results in achievement. Motivation when applied to performance goals results in an assessment of ability. (Shunk: 365) This is similar to the simulation vs. game didactic, as Prensky pointed out in his presentation. A simulation is meant to focus on a thing or process, while a game focuses on the experience. Essentially, most games are performance-goal oriented. Prensky’s argument is that there is the opportunity to merge these two goal orientations to meet the needs of the digital natives. Not only can games be a learning tool but they can be entertaining as well. A successful game does both.

Gamers exhibit some of the key principles of the learning process. Games cause a person to be goal-oriented (as described above). “The strategic nature of learning requires students to be goal directed. To construct useful representations of knowledge and to acquire the thinking and learning strategies necessary for continued learning success across the life span, students must generate and pursue personally relevant goals.” (APA: 1997) Games set short, medium, and long term goals. The participant must achieve each goal in order to pass to the next level. Along, the way the participant acquires new “powers”, knowledge, and skills leading to further achievement in the future levels.

Games also provide a social element to learning. “Learning can be enhanced when the learner has an opportunity to interact and to collaborate with others on instructional tasks.”
Learning settings that allow for social interactions, and that respect diversity, encourage flexible thinking and social competence.” Multiplayer games embrace this theory of interpersonal relationships in order to reach achievement or to complete a task. “In interactive and collaborative instructional contexts, individuals have an opportunity for perspective taking and reflective thinking that may lead to higher levels of cognitive, social, and moral development, as well as self-esteem.” (APA: 1997)

In short, online gamers, games, and the digital natives learning can be explained by the same basic learning principles as any other person. Each learning theorist can make a case for their own theory. However, the medium, stimuli, and communication of information have changed drastically in the past 20 years. These changes, therefore, have changed the learning process.

References
