TRANSFERABLE LEARNING SKILLS OF AN MMORPG:
A WORLD OF WARCRAFT QUEST

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by

Evren Koptur

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Dissertation written by

Evren Koptur

B.Sc., University of Bahcesehir, Turkey, 2003

M.S., Kent State University, 2005

Ph.D., Kent State University, 2016

Approved by

____________________________, Director, Doctoral Dissertation Committee
Drew Tiene

____________________________, Co-director, Doctoral Dissertation Committee
Chia-Ling Kuo

____________________________, Member Doctoral Dissertation Committee
Jason Schenker

Accepted by

____________________________, Director, School of Lifespan Development
Mary M. Dellmann-Jenkins and Educational Sciences

____________________________, Interim Dean, College of Education, Health
Mark A. Kretovics and Human Services
Traditional paradigms of learning and education are being challenged by the new types of learners of the 21st century and their needs. Since today’s learners are accustomed to multiple stimuli competing for their attention, utilizing video games in education comes as an inherent part of motivating and engaging these learners. Given the fact that these learners are already immersed and well-versed in video game platforms, their voluntary investment can and should be utilized for their own learning.

Massively Multiplayer Role Playing Online games are one of the many genres of video games that players are drawn to and play regularly. The most popular and played MMORPG is World of Warcraft. This study investigated the potential of transferable learning skills gained or improved by playing WoW to real life. It attempted to research on the possibility of transferring four different learning categories: experiential learning, collaborative learning, leadership, and autonomous learning respectively through playing WoW.

This study included 258 online survey participants. At the end of each category, the participants were asked to elaborate on a comment question associated with its category. Along with the survey data, two interviews were conducted. Overall and individual results of the survey and interview were analyzed. This data was used to discuss what skills can be learned through playing MMORPGs and to what extend these
skills are transferred to real life. The results indicated that the mentioned categories of learning occur in the game and are perceived to be transferable to real life in varying degrees.
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My sincere thanks,

Evren Koptur
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CHAPTER I

INTRODUCTION

In the past 20 years, educational learning environments have changed dramatically. The invention of personal computers and the worldwide use of the Internet created new tools, technologies, and environments for educators. Computer games have and continue to attract the attention of instructional designers and educators as educational tools that can have positive effects on learners’ academic achievement, cognitive skills, motor skills, visual skills, problem-solving skills, exploratory learning skills, and computer skills. Massively Multi-player Online Role-playing Games (MMORPGs) are among these computer games that present educational opportunities along with the added bonus of continual motivation and entertainment. Unfortunately, ‘fun’ can be absent in education and curriculum and thus have a negative effect on learners’ desires to be creative and imaginative. Therefore, learners may not be motivated to learn because they do not encounter any sort of uplifting instance that can showcase why and how learned information will be useful. MMORPGs can and do create fun learning environments for their players who are also learners within these highly social and interactive learning/entertaining environments.

Although there is interest in the educational potential of MMORPGs as interactive learning environments, there is still little evidence to explain what and how people learn from these environments. With the ever-rising popularity and use of MMORPGs, we need to go beyond trying to assess their potential and start looking into how they affect
their players’ learning and how much of what is learned within the game is transferable to real life. After all, knowledge is useful when it is put to use.

MMORPGs are known to be very motivating and engaging, both of which are elements that educators try to capture in their instruction to keep their students interested and focused. With MMORPGs already supplying the engaging and motivational aspects, we can start building on this foundation and find out what the players are learning, how we can utilize this type of learning, and how much of this learning is reflected in players’ real lives.

In this research study, I focused on a particular MMORPG named “World of Warcraft” as it is currently the best-selling MMORPG of all time with the most number of subscribers worldwide. World of Warcraft, commonly referred to as WoW, is a MMORPG that was released by Blizzard Entertainment in November 2004. Within the first 24 hours of its release, it reached 240,000 subscribers making it the most popular computer game in history. After four installments (WoW: Burning Crusade, WoW: Wrath of the Lich King, WoW: Cataclysm, WoW: Mists of Pandaria, WoW: Warlords of Draenor) and 11 years, WoW has reached an astonishing 13 million subscribers (Blizzard, 2011). WoW takes place in the online world of Azeroth, which resembles the “Middle Earth” concept developed by J. R. R. Tolkien in his fiction. Azeroth is made up of several continents that are meticulously designed and virtually rendered 3-D environments where two main factions, namely “Horde” and “Alliance” clash against one another (Player vs. Player—PvP) and against their environment (Player vs. Environment—PvE). WoW players choose from the 12 available races where each race
has up to 10 classes. Once the players have selected their race and class, they can modify their appearance from a wide selection of options to create their avatars and enter the world.

World of Warcraft’s appeal comes from its intriguing storyline, its meticulously detailed and sophisticated 3D environment, its ability to trigger a sense of gathering information for better game-play, and its ability to create social and collaborative communities.

**Problem Statement**

Educators are in constant need of ways to make learning appealing and engaging for learners. They continually aim to satisfy this unavoidable yet very reasonable need by employing computer games that are motivating and engaging by nature with the added benefit of inherently possessing a learning process; one that entails learning the game itself. Therefore, computer games’ potential as motivating and engaging environments has been repeatedly showcased (Oblinger, 2004; Squire, 2008a). Especially with today’s digitally competent and constant-stimuli-searching learners, educators are even more compelled to find new tools and techniques to engage their audience with high technological demands (Annetta, Murray, Gull Laird, Bohr, & Park, 2008; Prensky, 2001).

With computer games’ educational potential as a recognized value, it is only natural that researchers have repeatedly looked into this area of research in terms of educational outcomes, learning skills, and motivational aspects (Annetta et al., 2008; Gee, 2007; Lacasa, Méndez, & Martinez, 2008; Lim, 2008; Papastergiou, 2008; Rice,
However, despite the wide range of studies regarding computer games and learning, Massively Multiplayer Online Role Playing Games (MMORPGs), which are a recent genre of computer games, have not been investigated as potential educational platforms. Motivating and engaging by design, MMORPGs create socially driven and collaborative learning opportunities that educators constantly strive to achieve with their instruction (Steinkuehler, 2005, 2008; Steinkuehler & Williams, 2006). Unfortunately, few studies have explored this potential.

World of Warcraft (WoW), currently the world’s most played MMORPG, presents considerably important learning opportunities for its players. Naturally, with the few number of studies concentrating on MMORPGs’ educational potential, it does not come as a surprise that even fewer studies have ventured to look into WoW as an effective learning environment. Originally not intended for educational purposes, WoW proficiently provides the desired environment for learning along with its ability to attract massive numbers of diverse players from all backgrounds. Therefore, educators cannot afford to overlook this highly popular MMORPGs’ potential as an educational platform. Educators should move beyond trying to assess whether WoW is a suitable tool and start embracing, utilizing, and benefiting from this game’s learning opportunities. This research study explored WoW’s potential as a learning environment that can lead its players to transfer what they learn by playing the game to their everyday lives.

**Significance of the Study**

This research study is of significance due to its exploratory nature of venturing into a scarcely researched game genre in terms of educational potential and learning
outcomes and transferability. MMORPGs, with their recognized motivational aspects, are still not researched as often and in as much depth as they should be in terms of providing immersive environments that present educational opportunities.

I based this study on the premise that education should not be reduced to solely teaching learning skills; it should promote these skills’ realization in individuals’ real lives. In other words, education’s aim should be to raise individuals who can effectively function in the real world by applying what they learn to their present and future endeavors and encounters. Computer games in general and MMORPGs in particular can promote learning and do so in motivating and engaging ways. Therefore, it is crucial to determine the nature and context of learning that occurs within these highly appealing 3D environments.

I attempted to move one step beyond MMORPGs’ established motivational and engaging aspects and strive to reveal their real life applications of the learning opportunities they provide by focusing on WoW. This study contributed to a better realization of WoW’s educational potential and allowed educators to consider WoW and MMORPGs in general as one solution to their motivation and engagement related issues with instruction and to make informed decisions about how WoW and MMORPGs promote learning skills that today’s digitally active and competent learners need to internalize and apply to their real lives.

**Purpose of the Study**

In this study I explored World of Warcraft’s educational potential as perceived by its players, its motivational aspects, and the transferability of the learning skills it
promotes to players’ real lives. The purpose is to attract attention to MMORPGs in
general and WoW in particular as interactive and effective learning environments for
today’s educational needs and demands.

**Research Questions**

This study attempted to answer the following questions:

1. Does playing WoW promote experiential learning?
2. Does playing WoW promote collaborative learning?
3. Does playing WoW promote leadership training?
4. Does playing WoW promote autonomous learning/researching?
5. What are the perceptions of World of Warcraft players regarding the
   transferability of their learning and learning skills they have acquired from the
   game to real life?
CHAPTER II
REVIEW OF LITERATURE

Experiential Learning

Dewey (1916, 1998) believed that learning experiences should resemble those that are present in the real world and should not be isolated, unrelated instances that fail to promote critical thinking and problem solving skills. His idea of experiential learning included reflective thinking and reflective experience mediated by knowledge, intelligence, and active meaning construction. He also believed that authentic learning experiences should be purposeful and take place in safe environments where the learners can practice new knowledge and skills before applying them to real life situations.

Experiential learning entails learning by doing and relational thinking, personal growth through facing and overcoming tasks and challenges, and feedback that leads to internalization of concepts through understanding what works in which circumstance. Therefore, experiential learning has a crucial role in the construction of knowledge and meaning as well as the building of skills for life-long learning. Computer games, simulations, virtual worlds, and MMORPGs in particular are among technologies that can promote experiential learning opportunities.

Several fields have taken an interest in the ability and capacity of computer games, simulations, virtual worlds, and MMORPGs to provide experiential learning environments that create authentic ways of knowledge and skill building in safe settings. One of these fields is social studies and the computer game most frequently associated with social studies is Sid Meier’s Civilization, a turn-based strategy game that allows its
players to manage civilizations from history spanning over 6,000 years. Players of Civilization lead their civilizations through history by making purposeful choices about managing natural resources, infrastructure, economy, military, and diplomacy (Squire, 2003). Therefore, players of Civilization are engaged in critical thinking and problem-solving as well as relational thinking that arises from controlling the delicate balances between different yet interconnected systems.

Muñoz-Rosario and Widmeyer (2009) argued for constructivist gaming learning environments and suggest that one of the principles of creating effective learning environments within MMORPGs is to provide opportunities for practice. They indicated that learners should be able to spend as much time as they need to practice their knowledge and skills in an interesting and safe environment before applying them to the main task. They also asserted that learners obtain more knowledge and skills as they complete tasks along with supplementary experiences that equip them with real-life insights while raising their competency. In addition, game tutorials aid players in learning the game and in exploring and interacting with the environment creating scaffolding opportunities. All these aspects that the researchers mentioned are also components of experiential learning.

Myers (2007) referred to virtual worlds’ problem-solving enabling contexts and draws attention to the process children go through all the way from learning how to solve in-world issues of navigation, communication, and personalization to solving problems about being in the virtual world and solving everyday problems in the real world. He indicated that virtual worlds offer real learning opportunities through problem solving by
promoting needs identification, source selection, determining of credibility and relevance, making decisions, and drawing conclusions.

Wiklund and Ekenberg (2009) set out to determine whether computer games that are not intended for educational purposes can be used as teaching tools. They interviewed 21 non-Native English speaking participants who were already in a game-based education trial program that featured WoW as the main game. These 21 Swedish students (95.24%) stated that their knowledge of English increased by being in the program because they were able to practice their skills in authentic ways.

Smith (2009), in his depiction of the history of games in military training, referred to ‘America’s Army,’ a military themed game for recruiting soldiers, and ‘Full Spectrum Warrior,’ an X-box military training system/game. These games, referred to as “serious games” (Zyda, 2005) represent conditions that simulate real life and resemble situations in which the soldiers can actually find themselves. Therefore, games create learning opportunities through experience and practice.

Research in the integration of online games and MMORPGs in language education has shown that language skills are improved through using these as educational tools (Backer, 1999; Falsetti, 1995; Kelm, 1992; Schneider & Zheng, 2007; Waters, 2007). Rankin, Gold, and Gooch (2006) suggested that MMORPGs play an important role in helping learners to improve their English skills communicatively and even reinforce language acquisition.

They based their study on the premise that Korean students learning English as a foreign language have limited experiences of authentic language use as their real lives do not always require using the language communicatively. However, the virtual reality component of MMORPGs enables the experiential learning of language to be realistic. They found that elementary school students who studied English through MMORPGs had higher scores in listening, writing, and reading than their peers who studied through traditional, face-to-face instruction.

Ranalli (2008) set out to determine whether “The Sims,” a highly popular computer-based simulation game, can improve second language skills. He based his argument on the premise that simulations provide engaging real-life substitutes for human experiences in virtual worlds with rich opportunities for learning. He concluded that the game helped English as a second language (ESL) learners to improve their vocabulary acquisition and that simulations are popular platforms amongst ESL learners because they provide authentic learning experiences. Similarly, Gastao-Salies (2002) suggested that simulations provide authentic language-use situations and experiences for language learners and allowed them to set communicative goals for themselves and control their own learning.

Ellaway, Kneebone, Lachapelle, and Topps (2009) talked about the importance of simulations in the medical field in terms of creating experiential learning opportunities and indicated that medical education simulations can range from full-body mannequins to full-immersion simulated operating theatres, which allow students to practice their skills and knowledge. Similarly, Lane, Slavin, and Ziv (2001) supported the integration of
simulations in the medical education field as opposed to traditional hands-on methods as they believed that simulations are training tools essential for teaching complicated skills to students in terms of using complex and advanced medical equipment and experiencing the latest surgery technicalities and forms before attempting for the real life application.

Moffit, Stull, and McKinney (2010) emphasized the benefits of experiential learning and used Dewey’s (1916) activity-based learning as the basis for employing stock market simulation game software in three different business and finance classes at the college level. They found that the simulation game proved to be an effective pedagogical tool that helped students gain significant knowledge of financial markets without lectures and/or assigned readings on related topics. Similarly, King and Jennings (2004) found that student learning increased when instruction integrated trading simulation as an experiential learning component as opposed to traditional-teaching-method-only instruction.

Collaborative Learning

Vygotsky (1978) believed that human beings are active agents in their quest for knowledge, that our cognitive development is heavily influenced by our environment and culture from the very beginning of knowledge acquisition, and that our intellectual development is the product of an interaction between our innate abilities and our social experiences. Similarly, Dewey (1916, 1998) believed that all human experience is social and takes place in collaborative settings. In addition, Vygotsky’s (1978) concept of the Zone of Proximal Development (ZPD) which refers to learners being able to perform tasks that are more sophisticated than their current level by the help of a more
experienced, competent other also suggests the collaborative and social side of learning. These beliefs come to life in several scholars’ conceptual understanding of the social and collaborative aspects of computer games in general and MMORPGs in particular (Gee, 2003b, 2004, 2005; Prensky, 2001, 2006; Steinkuehler, 2004; Williamson & Facer, 2004; Winograd, 2005).

Dickey (2007) recognized the collaborative environment of MMORPGs and asserted that the small quest structure of MMORPGs fosters collaboration among players who need to work together to achieve a goal or complete a task in the form of a quest.

Bessière, Seay, and Kiesler (2007) stated that, in MMORPGs, players depend on their fellow players for gathering information and resources, training, forming groups, and intergroup collaboration. They suggested that players’ reliance on other players create robust communities that allow players to build and transact their relationships in the game and through digital social interaction.

Williams, Ducheneaut, Xiong, Zhang, and Yee (2006), through an interview study they conducted to map out the social dynamics of guilds within World of Warcraft, suggested that guilds resemble real world groupings and teams in several aspects and that playing WoW is as social as a team sport with its own set of rules. Therefore, it can be induced that playing WoW may have similar social skill building effects to the ones that emerge from real life social groupings.

Another study that set out to determine the social dynamics of MMORPGs was conducted by Cole and Griffiths (2007). They asserted that even though previous research had made assumptions that gamers are socially inactive, their results indicated
otherwise. They found that 76.2% of male and 74.7% of female players had made good friends within the game and that MMORPGs are highly socially interactive.

Ducheneaut, Moore, and Nickell (2004) looked into the appeal of WoW as a successful MMORPG that has and continues to attract players from diverse backgrounds and found that even though players advance through the game alone until they face more advanced challenges, needing increased coordination, they start to have more frequent social contacts with other players. Therefore, the context and game-play characteristics of WoW call for a naturally occurring social collaboration.

Chen (2010) looked into the issues of communication, coordination, and camaraderie in WoW and through an ethnographical study, worked with a group of WoW players to learn more about their group dynamics. He suggested that learning for this group of players occurred through iterative attempts to perform in-game tasks together as a group and even when the group failed to complete a task. It is referred to as progress as long as they are given enough time to reflect on strategies and form new strategies. Therefore, it can be concluded that failure is part of the learning process and all members of the guild benefit from playing together and strategizing together to avoid repeating the same mistakes.

Curry (2010) suggested that teachers should take MMORPGs as models for creating social and collaborative learning environments within the classroom. She indicated that the guilds in MMORPGs resemble real life groupings on many levels. She asserted that because guilds consist of different races, classes, and professions, they are able to bring together individuals with different abilities and skills who can work together
toward a common goal by combining their unique and individual talents and knowledge. In addition, she indicated that part of the purpose of a guild is to encourage informal mentorships between lower- and higher-level players, which coincides with Vygotsky’s (1978) concept of ZPD. She also suggested that guilds are very social and interactive environments allowing players to exchange ideas, and teachers may want to mirror this aspect of guilds through social activities that resemble the ones in guilds. Lastly, she indicated that the quests for which guilds and groups strategize and work together can be used as a model for effective group work that aligns with the social and collaborative aspect of learning as suggested by Dewey (1916, 1998) and Vygotsky (1978).

Golub (2010) inquired into the concepts of raiding, realism, and knowledge production in MMORPGs in general and WoW in particular. He conducted an ethnographic study with a successful WoW guild (a high ranking guild among all WoW guilds) and examined their raid processes. He referred to raids as high-pressure, emotionally intense, ritualistic activities in which players learn to repeatedly perform the same actions in a coordinated manner to kill a boss. He suggested that raiding is a collective accomplishment that creates social solidarity and a sense of personal and collective achievement. Therefore, we can conclude that raids require collaborative efforts towards a common goal, which is achieved through repeated and learned action.

Steinkuehler and Duncan (2008) inquired into informal learning as a result of being and functioning in virtual worlds and MMORPGs and specifically examined forum posts of WoW to determine the type of social interaction that takes place. They found that 86% of the forum discussions of WoW were engaged in social knowledge
construction rather than typical social interactions. They asserted that their findings suggested a collective development of understanding often through joint problem solving and augmentation and that participants solved problems through discussion, knowledge sharing, and debate through forum post threads.

Oliver and Carr (2009) inquired into what and how people learn from virtual worlds and MMORPGs and explored the experiences of couples that play WoW together. They interviewed five couples in the virtual world of WoW at locations of the couples’ choosing. They described the players’ learning in three broad areas, namely: ludic, social, and material. They suggested that the ludic elements (that pertain to play) they found coincide with previous research, yet still needed to be aligned with school curriculum objectives. They related the social and material elements to distance learning characteristics. They suggested that, as in distance learning contexts, players are more likely to keep playing when they have social and collaborative interaction and learning opportunities.

**Leadership Skill Building**

Commercial computer games, simulations, virtual worlds, and MMORPGs may foster leadership skills through the tasks players need to complete and responsibilities they need to assume in order to reach a certain goal. Therefore, the fostering of leadership skills is not necessarily intentional, but emergent in commercially aimed platforms of games and simulations. For instance, according to Yee (2006), MMORPGs provide many opportunities for both short- and long-term leadership experiences, thus
providing an environment when playing may be able to acquire these skills. He indicated that:

In emergent groups within the MMORPG environment, leaders deal with both administrative as well as higher-level strategy issues, most of which arise and have to be dealt with spontaneously. Administrative tasks include: role assignment, task delegation, crisis management, logistical planning, and how rewards are to be shared among group members. Higher-level strategy tasks include: motivating group members, dealing with negative attitudes, dealing with group conflicts, as well as encouraging group loyalty and cohesion. These issues are even more salient in long-term social groups, such as guilds, which have formalized membership and rank assignments. (Yee, 2006, p. 22)

Williams et al. (2006), similar to Yee’s (2006) explanation of MMORPGs requiring critical leadership roles and decisions, inquired into the social dynamics of World of Warcraft and talked about the concept of leadership in the game. They suggested that guild masters who are the leaders of their guilds have crucial roles and responsibilities ranging from enforcing a code of ethics and coordinating schedules to handling disputes and coordinating relationships with other guilds. Therefore, playing WoW as a guild master demands possessing the qualities of a strong and consistent leader. Even players who do not have roles as guild masters still need to possess leadership qualities for dungeons and quests that are less intensive in comparison to raids.

Brown and Thomas (2006) talked about the leadership roles of guild masters and suggested that becoming a WoW guild master can be compared to a total-immersion
leadership course. They indicated that even though learning leadership skills in WoW may be accidental, it still leads to intentional training. According to their concept of leadership in WoW, guild masters should possess many skills such as recruiting and evaluating new members, creating programs that promote apprenticeship, coordinating strategies, and resolving disputes.

According to Lisk, Kaplancali, and Riggio (2012), who looked into the leadership concept in Massively Multiplayer Online Environments, real life distributed teams (teams whose members are not in the same environment physically) in businesses should take into consideration the transformational leadership skills that MMOEs promote in order to help these team members learn how to cope with the effects of technological change, globalization, and highly competitive work environments. The researchers believed that distributed teams should take the concept of teams and leadership in MMOs as a model to effectively manage their own dynamics.

In accordance with the concept of games allowing their players to acquire leadership skills even though they are not commercially designed to do so, Squire (2003, 2006) referred to the leadership component of effectively playing and succeeding in Civ3 (the turn-based strategy game mentioned above) and mentioned the leadership skills that are required in order to manage and lead a civilization spanning over 6,000 years. By playing Civ3 (and other versions of Civilization), players gain a sense of managing change, making important decisions that can have critical effects, and leading nations by taking responsibility for each action.
Cole and Griffiths (2007) suggested that due to the age range, background, and life experiences of the wide spectrum of players in MMORPGs, it is easy for younger players to obtain valuable life advice from people who possess more life experience, provided the advice given is worthy and considerate. Therefore, players can assume the role of a leader or a mentor for other players.

Some simulations have direct leadership skill building and decision making intended outcomes. Stewart, Courtright, and Manz (2011) set out to determine the impact of two different leadership development training programs, one of which is Virtual Leader (a game-based computer simulation), on students’ ability to acquire, share, and apply knowledge for organizational decision making. Virtual Leader is grounded in an experiential (or situated) learning paradigm. In comparison to the other training program that was a case-based application based on a technical teaching paradigm, Virtual Leader was associated with helping players become better decision makers and be able to better apply what was learned. In other words, the game-based computer simulation helped learners to acquire better leadership skills than the more traditional training program.

Gurley and Wilson (2010) studied the effects of the same business simulation program, Virtual Leader, and looked into a specific leadership style and how that style improved from playing the simulation scenarios. They defined the simulation as a tool to help students learn leadership skills that also balanced financial, customer, and employee goals. They suggested that the simulation provided a safe environment where students were able to practice the scenarios several times. They found that the students benefited from playing the simulation game and suggested that the simulation provided feedback in
terms of the scores the students received on the various dimensions as well as additional feedback screens that followed the flow of the scenario. They believed that feedback is necessary for learning new leadership skills through behavioral change.

Dean (2007) took on a case study of the National College of School Leadership and talked about the Virtual School component that the college created. Virtual School is a game-based computer simulation designed to provide future school leaders with a safe environment to practice leadership skills. It takes the players through a school year with a variety of scenarios, decision points, and options. The players can navigate the virtual school, interact with in-game characters, and see how their decisions affect the school environment and the school community. Dean suggested that the National College effectively recognized and appreciated technology’s impact on education in general and the training of educational leaders in particular, leading them to incorporate a technological tool to help leaders build leadership skills through virtual experience.

Nelson and Shook (2008) talked about the scenario- and decision point-based simulation that is used in the master’s degree curriculum in the Applied Leadership program that Vangent and the US Air Force have developed. The simulation puts the learners in realistic leadership situations they will have to deal with on their real jobs. The learners can search for information and consult others with more expertise before they make their decisions and they receive feedback depending on their decisions and leadership skills.
Autonomous Learning/Researching

Bruner (1962, 1996) and Dewey (1916, 1998) believed that educators should be able to motivate their students to ask questions and make discoveries relating to the world and their realities. In other words, they suggested that learners should be curious and have life long learning skills they can use to constantly engage in discovering new knowledge. Similarly, Papert (1993) asserted that learners should be in charge of their own learning and educators should engage learners about strategies for learning so that learning becomes autonomous.

Bruner (1971, 1996) referred to discovery as an intrinsic motivator. Computer games and simulations are known to provide intrinsic motivation through a process of exploration and discovery (Gee, 2003c, 2005; Prensky, 2001, 2003; Shaffer, 2004).

Gee (2005) talked about the discovery process players go through in games and simulations. He indicated that:

The player discovers or forms goals within the simulation, goals that the player attributes to his or her surrogate in the world. In order to reach these goals, the player must recognize problems and solve them from within the inside of the simulated world. This essentially means that the player must figure out the rule system (patterns) that constitutes the simulation (the rules that the simulation follows thanks to how it is designed). The player must discover what is possible and impossible (and in what ways) within the simulation in order to solve problems and carry out goals. Achieving these goals constitutes the win state for the player. (Gee, 2005, p. 2)
This statement contributes to the discovery aspect of learning as the players find themselves engaged in a state of analysis of the in-game encounters to develop a sense of what the game entails.

Steinkuehler and Duncan (2008) talked about the processes players engage in within MMOs in order to seek and develop effective solutions to any problems they might face in terms of game-play. They suggested that players are expected to research tactics and game strategies by consulting online and offline manuals, databases, and discussion forums so that they can utilize their acquired knowledge for in-game action. For instance, this statement can refer to a holy priest in World of Warcraft who should know which database to search, which forums to consult, and which add-ons he or she should use and who should be able to look for specific information regarding his or her role, class specifications, talents, and previous strategies that have been used.

Chen (2009) talked about the ways labor is divided up into specialized roles in WoW and asserted that each individual with his or her own role can contribute to the shared experience. We can then think of this aspect of WoW in terms of individual learner needs. For instance, an undead rogue with a lock picking profession tends to look for information that will feed into increasing his or her professional skills. Certainly, he or she can later utilize these lock picking skills to open locked chests and doors either for his or her own game-play or for a collective experience with his or her in-game friends and fellow players.

Nardi and Harris (2006) referred to WoW players’ utilization of resources and suggested that MMORPG players are known to consult several websites and forums. In
their study where they analyzed collaborative play in WoW, they found that the participants used sites such as Thotbot, Allakhazam, Wowhead the Blizzard website and forums, online guides to playing specific classes, and a variety of frequently asked questions (FAQs). They suggested that individual players in WoW have the initiative to coordinate diverse resources and have agency in choosing and deploying learning resources. They asserted that learning occurs in accordance with the learner’s wishes and needs with no outside agent controlling it. Therefore, it needs to be stated another way that learning in WoW is learner-centered and autonomous because it takes place when the learner wants it, is dependent on learner needs, and requires autonomy on the learner’s part when consulting outside resources relevant to the learner’s needs.

Dickey (2007) suggested that the narrative design of a MMORPG fosters exploration and that players engage in exploration to find quest givers, objects, and specific characters in order to complete a small quest. Since there is not a single correct way of completing a small quest, players need to take the initiative of how they will coordinate their characters’ skills according to the strategy that is needed to complete the quest. Dickey also suggested that the players need to critically decide whether the rewards are worth their time and effort when completing a quest. She asserted that small quests can foster a type of metacognition by making players familiar with information and resources which they can then use in other quests that require more sophisticated skills and knowledge.

We can infer that Dickey’s explanation of metacognition rendered through using previously encountered resources coincides with scaffolding and discovery learning as
suggested by Bruner (1962, 1996) as Bruner believed that educators should provide
information and initial resources that the learners can induce general ideas from by
experimenting and problem-solving.
CHAPTER III

METHODOLOGY

Participants

This study involved 258 survey participants from a variety of diverse backgrounds, cultures, and age groups. Even though 1,149 people started taking the survey, majority of them did not complete the survey and dropped out at various points. Only those who completed the survey in its entirety were deemed eligible from whom to collect data. Participants were also asked to volunteer to be interviewed. Seven participants agreed to be interviewed. Out of those who volunteered, interviewees were selected based on extensiveness and depth of their comments in the surveys regarding their learning and experience in World of Warcraft and the value they assign to learning within World of Warcraft deduced from their survey data. For instance, if a participant’s survey data showed a high regard towards his or her learning within WoW and his or her comments display informed perceptions of learning along with rich descriptions and explanations, he or she was considered a candidate for being interviewed. Based on the rendered survey data results that were deemed adequate, I decided to approach four people to be interviewed instead of conducting seven interviews. However, two of these participants changed their minds and decided not to be interviewed. Therefore, only two survey participants with the above mentioned criteria regarding their comments were interviewed. Since I came to the decision that the qualitative data gathered from the open-ended comment sections was saturated enough for the scope of this research study, I did not go beyond the two interviews I had conducted. The statements that were made
during the interviews were used as quotes similar to the open-ended comment analyzing process. The interviewees had been selected out of the volunteers based on their extensive and detailed comments they had provided in the survey. Therefore, the information the interviewees provided was deemed adequate and valuable for the scope of this study. In addition, I bought some in-game items that were rewarded to the participants by carrying out a lottery. The winners received these in-game WoW items. This attracted the participants to be more engaged and motivated for the survey and interview questions as these particular in-game items are only available with purchase that players are apprehensive about since they are already paying a monthly fee for the game to play it.

Originally, the intention was to survey active players who were part of a WoW guild. The reason for this criterion was the assumption that active players would be more motivated to answer survey and interview questions in more depth and detail. In addition, active participation in WoW would ensure being aware of constant updates, guild dynamics, and quick recalling of experiences whereas a long-term break from the game may cause the players to lag behind in terms of what is happening in the world. However, the 258 participants included a small number of people who had played WoW for a while but were not active anymore. I came to this conclusion based on the comments they wrote. Since these participants supplied valuable information based on experience, they were not disregarded; they became part of the data. All participants belonged to a “WoW guild” at the time of the study or formerly when they were active players. They self-identified as WoW players which was a pre-requisite for participation
so that they would have the necessary experience, knowledge, and skills associated with the game in order to give informed answers to all questions. All participants were users of voice over IP (VoIP) software such as Ventrilo, TeamSpeak or Skype, as this was a pre-requisite for the study to ensure that the participants were verbally communicating.

Participants were recruited through in-game, Internet forums, offline communication and contact. All participants confirmed to be over the age of 18; therefore, there was no need for parental consent. All of the participants were fully informed of the content, goal, format, and procedures of this study. No procedures were used that might threaten the well-being of the participants. None of the participants were employees of Blizzard Entertainment to ensure authentic and objective results as well as maintaining rigor and trustworthiness.

Data Sources and Collection

I employed both quantitative and qualitative data gathering procedures in order to effectively address the research questions (Black, 1999; Creswell, 2003, 2009; Maxwell, 2005; Thomas, 2003).

Quantitative Data

Quantitative data were collected from the digitally conducted surveys aimed at determining participants’ perceptions of the transferability of their learning skills to real life.

The survey was divided into four major themes, namely Experiential Learning/Personal Growth/Continuous Feedback, Collaborative Learning/Social Skills, Leadership Training/Tutoring, and Autonomous Learning/Researching. These themes

According to Dewey (1916), education should be a constructive and active process that promotes learning by doing, as opposed to a passive process where learners absorb isolated information. In other words, learning should be experiential. The first theme (experiential learning/personal growth/continuous feedback) in the survey was derived from the concept of experience in learning. Dewey also believed that learners should be allowed to create their own ways of solutions to problems or tasks so that they become autonomous learners in charge of their learning. The fourth theme (autonomous learning/researching/information gathering) in the survey was based on the idea of taking initiative and knowing where and how to find information.

In addition, Vygotsky (1986) believed that meaning is socially negotiated and constructed and learning should take place through social relationships and collaboration with others. The second theme (collaborative learning/social skills) in the survey was based on the idea of learning socially through collaboration, cooperation, and negotiation. Moreover, Vygotsky (1978) introduced the concept of the Zone of Proximal Development (ZPD), which suggests that children can learn new knowledge that is beyond their current skills with the help of a more competent other. The third theme (leadership training/tutoring) in the survey was based on the idea of being able to direct others in their quest of knowledge and doing so effectively by taking the lead.
Qualitative Data

A part of the qualitative data was collected from in-depth, semi-structured interviews (see Appendix B) with open-ended questions that were supported with follow-up questions depending on the interviewees’ responses. The interview questions aligned with the survey questions in terms of themes, namely Experiential Learning/Personal Growth/Continuous Feedback, Collaborative Learning/Social Skills, Leadership Training/Tutoring, and Autonomous Learning/Researching. A total of two interviews were conducted. The length of the interview depended on the interviewees’ responses, attitudes, and willingness to elaborate, but it was not longer than two hours in order not to overwhelm the participants. In addition, the interview ended when I felt that I had gathered adequate information.

In addition, the survey included comment sections that asked the participants to elaborate further on survey questions. I had intended to use this data as supplemental information for quotes and statements as well as for determining criteria for interviewee selection, but this became the major part of the qualitative data since the comment sections provided valuable insight and reflection on players’ experiences.

Data Analysis

I employed descriptive statistical data analysis (Hinkle, Wiersma, & Jurs, 2003; Howell, 2007; Muijs, 2004) and qualitative analysis of interviews and comments (Creswell, 2007; Hesse-Biber & Leavy, 2006; Rubin & Rubin, 2005; Schram, 2006).
Descriptive Statistical Data Analysis

According to Howell (2007), descriptive statistics are used when researchers wish to graph their data, calculate averages (means) along with other desired measures, and look for extreme scores as well as oddly represented distribution of scores. Similarly, Hinkle et al. (2003) indicated that descriptive statistics are used in research for the classification and summarizing of numerical data; that is to describe data. Therefore, descriptive statistical data analysis was used in this research study to describe the survey data and analyze it numerically.

I used a digitally conducted survey that entailed research-topic-specific questions. The questions regarding the research topic were clustered into categories of which the participants were not made aware. The survey of 31 questions was made available via “Qualtrics” server between the dates February 11, 2013, and July 15, 2013. When the participants completed the surveys through Qualtrics, I received the responses. The data from the surveys were stored in and calculated by Qualtrics. The surveys were based on a Likert scale. The survey collected 258 total responses with 1,149 hits: a 23% response rate. The majority of the questions (27 out of 31) were based on a Likert scale.

Qualitative Analysis of Comments and Interviews

In an effort to probe deeper than what the survey questions would provide, open-ended questions were included to increase possibilities of responses. According to Creswell (2012), open-ended questions in a survey can help the researcher explore further into participants’ responses by removing usual constraints and by allowing them to create responses within their own cultural and social experiences.
According to Hesse-Biber and Leavy (2006), in-depth interviews use individuals as their point of departure in terms of the research process and are based on the assumption that these individuals have important and unique information and knowledge about the topic/subject they can assert through verbal communication. They also indicated that researchers who conduct these interviews are in search of patterns, themes, and concepts that will emerge from the interviewees’ thick descriptions of social encounters they had or are still experiencing. This method is especially useful and effective when the researcher has a specific topic as his or her focal point and he or she wants to gain information regarding this topic from individuals that he or she believes possess such information.

Similarly, Rubin and Rubin (2005) referred to the in-depth understanding brought on by responsive interviewing and suggested that interviews are conducted in order to obtain interviewees’ perceptions and interpretations of the world they live in. Additionally, they indicated that interview questions should be broad enough to ensure the interviewees’ unlimited responses and that interviewers should be flexible and able to modify and adapt their questions depending on the interviewees’ responses without imposing their own views and without pressuring those being interviewed.

Therefore, qualitative analysis of open-ended question responses and interviews suited the design of this research study in terms of questioning expert individuals, looking for emerging patterns, and gaining as much insight as possible without overwhelming the participants. The expert individuals were the World of Warcraft players who were believed to have unique and important information regarding the game, the WoW
game-play, learning outcomes from the game, and the transferability of the learning skills to real life. In addition, I found emerging patterns, themes, and concepts from the open-ended question responses and interviews regarding learning skills gained from playing WoW and the transferability of these learning skills to real life that reinforced and emphasized the quantitative data gathered from the surveys.

The responses from the open-ended questions were categorized into themes that matched the predetermined four survey categories. In addition, the two in-depth interviews were recorded and listened to closely. I determined which statements corresponded to the four sections specified in the survey, thereby looking for patterns that emerged in accordance with the survey themes namely, Experiential Learning/Personal Growth/Continuous Feedback, Collaborative Learning/Social Skills, Leadership Training/Tutoring, and Autonomous Learning/Researching. Then, I picked quotes and statements regarding what was learned and whether it was transferable to real life from the comments and interviews as supplements to the survey sections and presented these in the results section.

**Validity, Reliability, and Trustworthiness**

Since I employed both quantitative and qualitative data analysis, the study adhered to issues of validity and reliability from quantitative methods as well as trustworthiness from qualitative methods.

In terms of complying with external validity, the quantitative results of this research study can be generalized to other WoW playing populations or other MMORPG playing populations who engage in similar contexts and function under similar conditions.
and who have similar characteristics to the participants in this study such as belonging to a guild and having been playing the game for at least one year. As far as external reliability is concerned, other researchers on similar platforms and similar settings can replicate this research study.

As far as qualitative data are concerned, I adhered to the trustworthiness concept as developed by Lincoln and Guba (1985) on four specific criteria, namely: credibility, transferability, dependability, and confirmability. I tried to ensure credibility through representing multiple voices and perspectives of the survey participants and the two interviewees. In order to ensure transferability, I provided rich details and descriptions of the participants, context, and methodology. Even though the results from the open-ended questions and interview data cannot be generalized to all WoW players due to the varying histories and contexts of these players, the experiences and perceptions of the two WoW players who were interviewed can be used as a framework for further inquiries.

Dependability was achieved through my dissertation committee’s close monitoring of my methods and findings. Lastly, in order to ensure confirmability, I engaged in self-reflection and constant comparison of the statements to the emerging themes in accordance with the survey themes.

In accordance with Denzin’s (1978) concept of triangulation, I adhered to the interview instrument as a way to achieve triangulation along with the survey and open-ended comment questions so that I had more than one source of data to determine whether there was consistency of findings. I conducted two interviews based on the content that was provided by two particular participants in the open-ended questions
section because their accounts of learning in WoW were more comprehensive and detailed in comparison to the rest of the open-ended comments. The two participants consented to being interviewed and audio recorded. Only certain parts of the interviews were transcribed based on their relation to the rest of the data. Some quotes from the interviews were used in conjunction with the rest of the comments of open-ended questions. A digital audio file of these interviews is available to any readers interested in listening to it.

**Ethics**

I did not reveal any personal information of the participants. The participants were guaranteed of the protection of their privacy. I used an informed consent form that includes all information that participants may wish to know before embarking on the interview process. There were no potential risks to this research study; therefore, I ensured all participants that the study took place in a comfortable, friendly environment that presented no threats or intimidations. I also told all participants that I appreciated their efforts.

**Pilot Study**

I conducted a small scale pilot study to explore how well the participants would understand the online survey questions on the transferable learning skills in World of Warcraft (WoW) and whether they would make suggestions toward any changes or clarifications. Four participants took the survey and provided some comments regarding the questions. There were 31 questions in the survey. Out of the 31 questions in the survey, 27 made up the Likert scale while 4 made up the comment questions. The online
survey link was sent out to a WoW guild in Europe and four WoW players that volunteered completed the survey.

The survey is based upon a Likert scale. Numerical values and their corresponding answers are as follows:

1. “1” corresponds to “Strongly Disagree”
2. “2” corresponds to “Disagree”
3. “3” corresponds to “Neutral”
4. “4” corresponds to “Agree”
5. “5” corresponds to “Strongly Agree”

The x-axis on the charts represents the question numbers on the survey; the y-axis represents the Likert scale values and the blue columns are the average results to those questions (See Figures 1–4). The survey has a comment question for each category, as well. Below, you will find the results of the survey along with some answers to each category.

**Experiential Learning**

Experiential learning survey questions include the following:

1. I have changed in terms of personality/skills/knowledge/thinking since I have started playing WoW.
2. WoW has taught me something about myself.
3. I learned something in WoW that I could apply to my real life.
4. I find myself altering my manners/actions/decisions based on the feedback that I receive in WoW.
5. My experiences in WoW resemble real life experiences.

6. I find repeated raids/actions/fights/interaction effective in terms of perfecting game play and player skill.

7. Playing WoW improved my problem-solving skills.

Figure 1. Overall Experiential Learning Pilot Study Survey Responses Chart

In terms of experiential learning experiences within WoW, one of the participants felt strongly about the transferability of experiential learning skills to real life and mentioned that

Although the game itself is virtual, especially in a MMO people are real, and everyone apart from the general rules requires a personal approach. Show respect for the ideas, benefit from the experience, to help people, and thus increase the overall strength of the team, and where they should stand in the stream force and
to learn the correct ways, apart ways where we cannot resolve the negative reputation separate and protect, as well as in real life, “team play.” All games are important and wide learning communities, providing much faster than they are playing games."

He further commented, “I now evaluate things, occurrences, persons, individuals, reasons and results better. Observation, learning and finding the answers are also in-game not only in real life.”

**Collaborative Learning**

Collaborate learning survey questions include the following:

1. I believe that WoW guilds and/or communities resemble Collaborative Learning environment/settings in real life.
2. I think PvE raids/dungeons help me to develop socially.
3. Interaction with other players helps me with/accelerates the learning process.
4. I think the negotiations made during game play in WoW are transferable to real life in terms of success.
5. Multiple perspectives of fellow players create critical thinking opportunities for me.
6. I think my heightened awareness to socially simulated settings and social dynamics in WoW transfer to real life.
7. I find myself applying the social skills that I developed in WoW to real life situations.
In the sense of collaborative learning within WoW, one of the participants felt strongly about gaining some social skill while she played the game and mentioned that I definitely think I have gained social skill from playing in a WoW guild. In order to run things smoothly, you need to gain the perspective of all different personalities in your guild and empathy with them. The occurrences in the guild—whatever the reason is—makes you enhance your human relationship and political skills. These skills are also applied to our real life. Because even the personalities may be different, human personality in virtual world is more or less the same with real life.

**Leadership Skill Building**

Leadership skill building survey questions include the following:

1. I have learned leadership skills in WoW.
2. I think playing WoW has taught me to make important decisions for other people.

3. I think playing WoW has taught me to effectively control/manage/direct small or large groups of people in real life.

4. I think teaching new knowledge/skills to less competent players improves/enhances my own learning.

5. I think the training strategies that I learned and applied in WoW are transferable to real life.

In terms of leadership within WoW, one of the participants commented on the importance of leading the players during the game and he mentioned that discipline is so important to achieve a certain goal in the game.

The first thing that WoW thought me is that you need discipline while dealing with different people trying to achieve a common goal. Since every individual is different on another scale gathering them in a common ground is crucial. This is where discipline comes into play. These properties are all applicable to my everyday life.
Autonomous Learning/Researching

Autonomous learning/researching survey questions include the following:

1. I take initiative in reading/doing research about WoW.

2. In real life, I engage in a similar research process as the research process that I conduct for any part of WoW.

3. I think I know how and where to get information regarding WoW related content.

4. I use multiple resources to gain information about a task/problem/strategy.

5. I read/watch tutorials about WoW related content.

6. I think research enhanced my play quality and player ability.

7. I think I have successfully mastered practical skills in acquiring information needed to play WoW.
8. I do research independently and for self-directed purposes.

![Likert Scale Survey Response Chart](chart.png)

*Figure 4* Overall Researching Pilot Study Survey Responses Chart

As far as autonomous learning concerns, one of the participants felt strongly about the importance of researching in the game. He mentioned that

To solve a problem, you have to define the problem, make research, brainstorming about the problem, develop a plan, implement the plan, evaluate the results and repeat those steps until the result suits your needs. This, for me, goes same for both in real life and WoW.

**Feedback**

The pilot study showed that there was some confusion on two of the survey questions. Two of the participants did not clearly understand question number four in experiential learning category and question number six in collaborative learning. In
addition, one of the participants reported that one of the questions should be in another category; he also commented that “the survey was a little bit lengthy but I didn’t mind it that much.” This provided me with a better understanding of the perspective of the participants towards the online survey questions. Based on the feedback that the volunteering participants provided me, I made the following changes:

The question number four in experiential learning was originally as follows: “I find myself altering my manners/actions/decisions based on the feedback that I receive in WoW.” The two participants who indicated that they did not clearly understand the question were confused about the wording and needed further explanation. Therefore, I changed the question to: “I find myself making changes in my decisions/manners/actions based on the feedback that I receive in WoW and this manifests itself in real life.”

Another question that was not clear for the participants was question number six under collaborative learning. The initial question was, “I think my heightened awareness to socially simulated settings and social dynamics in WoW transfer to real life.” Due to the wording confusion in the statement I changed the question to: “I think the social dynamics of WoW transfer to real life.”

Finally, one of the participants said that the question number three in leadership does not suit to this category. The question is: “3. I think playing WoW has taught me to effectively control/manage/direct small or large groups of people in real life.” He mentioned that this topic is related to collaborative learning or teamwork since it all comes down to the social interaction. Personally, I feel that this question should stay in
leadership category rather than collaborative learning since the question is about controlling/managing a group of people.

The results of the pilot study were not included in the overall results of the research study as changes were made to the study design based on the feedback that was received from the pilot study.
CHAPTER IV

RESULTS

Overview

The purpose of this study was to explore World of Warcraft’s (WoW) educational potential as perceived by its players, and the transferability of the learning skills it promotes to players’ real lives. In this chapter, the study data, which were collected through surveys and interviews, is reported (July 15, 2013; Feb 11, 2013).

The survey of 31 questions was made available via “Qualtrics” server between the dates February 11, 2013, and July 15, 2013, and was widely advertised via flyers on the most frequently visited MMO websites such as battle.net, mmorpg.com, thottbot.com, various guild websites, and university bulletin boards. As described in Chapter 3, all participants were over the age of 18 and current WoW players. The survey collected 258 total responses with 1,149 hits, a 23% response rate. The majority of the questions (27 out of 31) were based on a Likert scale. In addition, the survey included comment sections that asked the participants to elaborate further on survey questions. I used this data as supplemental information for quotes and statements as well as for determining criteria for interviewee selection.

The survey also included demographic data questions to collect information regarding age, gender, and race/ethnicity. However, I chose not to include the demographic data in the analysis, as the results would have provided information that would have gone beyond the scope of this research study. It needs to be mentioned that the demographic data alone can provide valuable insight that can be further investigated.
Following are what emerged from the demographic data: There were 229 (88.76%) male and 29 (11.24%) female participants. Out of 258 participants, 138 (53.49%) of them were between the ages of 18–24, 82 (31.78%) of them were between the ages of 25–34, and 38 (14.73%) of them were at the age of 35 and above. One hundred sixty eight (65.12%) participants identified as White, 44 (17.05%) as Black, 38 (14.72%) as Hispanic, and 8 (3.1%) as Asian.

The survey is divided into four major themes, namely Experiential Learning/Personal Growth/Continuous Feedback, Collaborative Learning/Social Skills, Leadership Training/Tutoring, and Autonomous Learning/Researching. These themes have been derived and inspired mainly from Vygotsky’s (1962, 1978, 1986) social-constructivism theory and Dewey’s (1915, 1916, 1998) experiential learning and progressive education theories. Tables 1, 2, 3, and 4 provide the descriptive analysis of each learning category in the form of a Likert scale. Numerical values and their corresponding answers are as follows: “1” corresponds to *Strongly Disagree*, “2” corresponds to *Disagree*, “3” corresponds to *Neutral*, “4” corresponds to *Agree*, and “5” corresponds to *Strongly Agree*.

Following each section of the survey, there is a table with the summary of the descriptive statistics of that specific learning category along with an overall learning chart, followed by the sample survey comments and the interview comments that were made in that section. Survey comments and interview comments were analyzed and later, within each section, comments (See Appendices E, F, G, and H) that were centered on a common theme were grouped together. Each theme was given a specific name in
reference to the shared idea. For instance, under the Experiential Learning section, some comments were about learning and mastering the English language. Therefore, these comments were grouped under the theme of language learning which is a transferable skill gained and/or improved by playing WoW. The same procedure was repeated for all survey and interview comments. Altogether there were 292 comments made on the open-ended sections of the survey. The frequency of the comments were as follows; Experiential learning included 84 comments, collaborative learning included 81 comments, leadership included 66 comments, and researching included 61 comments respectively.

Inappropriate comments such as those containing vulgar language have been censored accordingly without losing the actual meaning and context of the comment. Similarly, comments that have no reference or relation to the topic or the survey have been omitted.

**Experiential Learning Survey Questions’ Results**

Q1. I have changed in terms of personality/skills/knowledge/thinking since I have started playing WoW.

Q2. WoW has taught me something about myself.

Q3. I learned something in WoW that I applied to my real life.

Q4. I find myself making changes in my decisions/manners/actions based on the feedback that I receive in WoW and this manifests itself in real life.

Q5. My experiences in WoW resemble real life experiences.
Q6. I find repeated raids/actions/fights/interaction effective in terms of perfecting game play and player skill.

Q7. Playing WoW improved my problem-solving skills.

Results of the overall descriptive analysis of all seven Experiential Learning questions revealed that, as an average, more than half of the participants (3.37) indicated that they learned from their experiences in WoW. The responses to Q1 revealed that participants agreed (40%) that they have changed in terms of knowledge/skill since they have started playing WoW. Similarly, with respect to Q2, they agreed (37%) that WoW has taught them something about themselves. Accordingly, the majority of the participants agreed in Q3 and Q4 (34% and 35%, respectively) that they learned something in WoW that they applied to their life and they find themselves making changes in their decisions based on the feedback that they receive in WoW and this manifests itself in real life. Furthermore, Q5 showed that more than one-quarter (26%) of the participants agreed whereas a few (9%) strongly agreed that their experiences in WoW resemble real life experiences. In response to Q6, almost three-quarters (41% agreed and 31% strongly agreed) of the participants agreed that repeated actions are effective in terms of perfecting game play and player skill. Lastly, responses for Q7 indicated that more than half of the participants agreed (33% agreed and 23% strongly agreed) that playing WoW improved their problem-solving skills (see Table 1 and Figure 5).
Table 1

Descriptive Statistics of Experiential Learning

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Experiential Learning Average 3.37
Figure 5. Descriptive Statistics of Experiential Learning Chart

Experiential Learning Survey Comments and Interviews

The open-ended comment question at the end of the Experiential Learning section and interview questions asked participants to elaborate on their experiential learning experiences in WoW. The main themes discovered in the comments and interviews were related to the five skills in Experiential Learning: Language learning, Problem solving, Personal growth, Decision making, and Time management. The analyses of these comments have shown WoW creates an environment for gaining some potential experiential skills.
**Language learning.** Several survey participants mentioned some of their impressions on the importance of knowing and learning the English language and how WoW played a big role on their language learning process.

WoW helped me to learn English. I did not know any English but now, because of playing WoW, and English lessons I can speak English.

Some of the participants pointed out that being in a WoW community helped to improve their linguistic skills.

I improved my linguistic skills while interacting [with] fellow players from all over the world, and it was an altogether different experience to know them and chat about anything be it inside or outside game. Playing WOW helped me to interact with foreign colleagues in my multinational company more easily and this helped me in my job greatly.

I am not English or American, however my English grades have always been top notch, I am certain that I have to thank WOW for that.

Best of all, my language skills (especially English) improving with WoW.

The participants also mentioned that the quests and the storyline in the game were highly engaging. The excitement of the storyline gave them the motivation to take the time to read the text-based quests.

First of all, to be able to play WoW functionally, I needed to know English to read quests and . . .
Quests of this game were awesome, I was wondering about whole story of Warcraft. I tried to read all quests as much as I can. In this way, I improved my English.

One of the interviewees mentioned that WoW improved his English speaking skills since he had to talk in English during the encounters with monsters.

I started playing WoW at a very young age. As you know, practice makes perfection and I was practicing my English speaking almost every night when we raid and . . .

One of the participants mentioned that he never learned English in his life, but by playing WoW, he learned to write and speak English.

Well I’m from Slovenia and most Slovenian people have problems with learning English: P World of Warcraft helped me with my English, I have playing this game since 4 years and teach me things a lot :) I took never English lesson in my life.

**Problem solving.** The survey participants and all of the interviewees made a number of positive comments about the process of problem solving in WoW, and they saw similarities with their real life problem solving process.

Several participants claimed that playing WoW creates a lot of problem solving instances due to the tactics and strategies they have to follow.

After being able to play WoW properly, focusing on new tactics of raids . . . and analyzing enemy players’ skills improved my problem resolving ability and faster reaction time.
I find myself using the same techniques when I have to deal with a problem in my life. I think it’s the same process with the same steps. It’s actually fun to see the outcomes in real life because you’re doing the same things you do in the game.

It’s almost funny how I just repeat the same words when I have a conflict. Whatever I say in the game that works seems to work in real life, too. It’s like being at one of those retreats where they teach you how to solve problems.

Coming up with radical solutions and ideas and surprising the people around me. It helped me to become unpredictable in a good way. Things don’t always go your way. You need to be creative sometimes.

One of the interviewees mentioned that the role of each group member, in relation to a task, seems to be also directed by the skills and potential of their character, the number of members participating in the task, and the composition of the group. She believes that these issues require greater levels of problem solving.

When I join to a raid group with my guild, I can play as a support healer, tank healer or a group healer since I am a priest but depending on the composition of the group I might have to join with another character of mine, which has a damage dealing role. Each encounter’s strategy is totally different and you have to solve this problem, how can I defeat this boss? I spent more time on problem solving to create strategies then playing the game itself.
One of the comments the participants often mentioned was that they felt the need to think and observe others to be successful in the game and this transferred to their real life.

In raids or PvP you just need to understand each other and think & empathy at the same time. So after the game, it affected my work life in such a good way. Also learning to observe others and environment and thinking out of box, in any condition, you can get more answers to any question. Also it depends on my engineering education too.

When you fail or close to fail, I’ve learned that if you change items, in real life it means change the perspective and use different tools, it clearly effects your problem solving capacity and you make less mistakes.

Some of the participants mentioned that the nature of the raid, dungeons, and player versus player content of the game helped them to improve their problem solving skills.

Discovering the source of problems and solving them, especially in multi-player scenes like dungeons and raids have really increased my problem solving and learning curves using social interactions.

One of the participants mentioned that he gained higher levels of thinking due to the problem solving process that goes into raids or encounters with monsters.

WoW is fantastic. I’ve learnt about my capabilities to interact normally despite my then agoraphobia. As a guild leader, I’ve learnt how to interact with people
and have also learnt and practiced perfecting my ability to make abstract mental models during raids.

**Personal growth.** Another theme that emerged through the comments of the participants was personal growth. A majority of the participants admitted that they learned something new about themselves by playing WoW.

Some of these participants also learned some kind of a skill that is transferred to their life both positively and negatively.

I learned to work with people to achieve things even if I don’t like all of them.

When you kill a boss, it drops valuable items randomly and you don’t get to kill it every time. Sometime you wait for couple of months to get a specific drop from a boss. Waiting in the raid/dungeon lines, keep trying to drop the item I wanted so bad made me a more patient man.

I used to be late for meetings, but now I find it disrespectful to be late and I make sure I show up on time. I have to thank WoW for that!

Some of the participants mentioned that playing WoW taught them to keep trying again and again even if they fail most of the time and this skill transferred to their real life.

I’ve learned about “competitive” mindset and honing skills through experience, which in turn gives courage and confidence to do stuff that I thought I couldn’t before. For example, I am bad at PvP... but I know I can get back on track if I
put effort in it. This is same in real life situations. WoW has taught me to always try again when there is failure and give your best to what you do.

Even if I had fallen in the face of events, re-taught me to stand up and fight me, taught me to fight all the time to achieve the final result.

Some of the participants mentioned that they use the skills that they learned in WoW in their daily lives.

It made me more careful. And started to do my job a bit more seriously.

I learnt to be punctual and gained the ability to take positive criticism.

I must admit that WoW improved my focus in real life.

Another outcome as claimed by some participants was that playing WoW made an impact on their personalities.

I’ve been playing MMOs for over 10 years now and starting from Ultima Online to WoW, MMOs have been effecting my life style and actions. So I can probably say, not only WoW but all sorts of games can be a reason of change in your personality. Some gamers, such as me, can be effected positively, without losing their sociality in real life and learning a lot about people in spite of the fact that WoW and any other MMO can be harmful and dangerous as it may be addictive to some people.
I compare my current work life to my previous work life and I see that I’m more professional because now I realize how every detail is important and I should take advantage of the critique to make myself better.

One of the interviewees claimed that playing WoW helped her in her career in terms of building the necessary workplace skills.

I have been playing WoW for a long time. I strongly agree that the concept of team work, timing, perfection in details and repetition to some point develops an individual especially in career.

Some of the participants commented on their negative experiences, life lessons, and observations during the time they played WoW.

Actually WoW taught me about people. How they can be hypocrite. How can they try con you.

WoW made me an even more cynical person, now I know that everyone deserves to be treated bad, except for few people.

Everything in a game world has a solution; however in real life there may be events that you may not solve such as losing a loved one, an illness which cannot cured, disabilities, etc. Players believe that they can overcome anything if they worked hard enough. But in real life this is not the case. Several players suffer from this reality/virtual reality conflict.

Some people just aren’t worth your time. I believe it more now because WoW has shown me people will do unnecessary evil just to benefit themselves.
One of the participants mentioned that due to the nature of the WoW game mechanics, he had to do many mathematical calculations and it improved his math skills.

I have been playing WoW for a long time . . . I am a walking calculator now.

**Decision making.** The fourth theme that emerged from the interviews and comments is decision making. Some of the participants clearly stated that decision making is a big part of playing MMORPG games and especially WoW.

I have been playing WoW for 6 years now . . . During the game, you learn that if you run into a problem you cannot easily solve, you need to evaluate the problem and yourself, and then make a decision on what to do. Sometimes a change is needed in order to succeed. (Change specialization in-game in order to defeat an elite enemy on your own.)

Sometimes you gotta make sacrifices and take one for the team. I don’t particularly enjoy it, but I do it because I have to be the bigger person and think of my fellow raiders.

One of the participants mentioned that he or she gained better decision making skills by playing WoW.

World of Warcraft isn’t just a game. It’s a virtual world with honor, friendship. I’ve been playing long time this game and see people reactions. Some people are angry, some people are very kind, just like real life. I can make better decisions with playing MMO games.
The comments of the interviewees reflected the same pattern of decision making in WoW. One participant pointed out the importance of how to decide on something in the game and how it can be transferred to real life.

In controllable virtual environment, players can learn about decisions and how to decide about something.

Furthermore, some of the survey participants mentioned that the decision making in WoW helped them in their careers.

I’m studying econometrics . . . WoW (I was playing hardcore) makes me best thinker in life. I have to make decisions speedily in real life. I learned that from WoW.

Some of the participants mentioned that WoW includes opportunities to create tactics and strategies. They claim that playing games like WoW helps them to improve their decision making process.

Either deciding on tactics of how to get the boss kill while you are racing for the server first or deciding on the sampling strategies of a sampling campaign for calculating the best suitable model for a pollution distribution for a field.

Collaboration and cooperating are key for both situations.

I’m studying econometrics . . . WoW (I was playing hardcore) makes me best thinker in life . . . I have to make decisions speedily in real life. I learn that from WoW.
In controllable virtual environment, players can learn about decisions and how to decide about something.

For one you learn that to achieve something truly great you might have to be part of a team . . . You learn that if you run into a problem you cannot easily solve, you need to evaluate the problem and yourself, then make a decision on what to do. Sometimes a change is needed in order to succeed.

**Time management.** The last theme that emerged from the analysis of the Experiential Learning comments of the participants is time management. Some of the participants mentioned that playing WoW somehow helped them improve their time management skills.

Actually, playing WoW taught me how to handle my every 24 hrs.

I can clearly say that playing WoW changed me a lot on my real life. To be more clear, before I was a guy that was hanging out with friends all the time, and didn’t even care about the times that I came home. Sometimes 1am, sometimes 6am. After I started playing WoW, because of the fact that I love playing WoW, when I get off the work, I look forward to play the game and rush home instead of staying out late.

Every minute counts. I don’t want to waste my time or anybody else’s time. I am more punctual now.
Summary—Experiential Learning

Overall, the results for the Experiential Learning section were generally positive with the occasional comment suggesting that playing WoW has had no apparent impact or a benefit.

Actually, I don’t find anything useful about playing WoW for years that has effect on my real life. And also I think that if I use the time that I spent on playing WoW or other computer games, I could be Oppenheimer of my era.

Collaborative Learning Survey Questions’ Results

Q1. I believe that WoW guilds and/or communities resemble Collaborative Learning environment/settings in real life.

Q2. I think PvE raids/dungeons help me to develop socially.

Q3. Interaction with other players helps me with/accelerates the learning process.

Q4. I think the negotiations made during game play in WoW are transferable to real life in terms of success.

Q5. Multiple perspectives of fellow players create critical thinking opportunities for me.

Q6. I think the social dynamics of WoW transfer to real life.

Q7. I find myself applying the social skills that I developed in WoW to real life situations.

Results of the overall descriptive analysis of Collaborative Learning questions revealed that a majority of the participants (3.53) indicated that WoW is a collaborative learning environment. They agreed (48% agreed and 19% strongly agreed) that WoW
guilds/communities resemble collaborative learning settings in real life. They also agreed (39% agreed and 20% strongly agreed) that PvE raids/dungeons helped them to develop socially. Accordingly, majority of the participants agreed (48% and 29%, respectively) that interactions with other players helped them with the learning process.

Furthermore, more than half of the participants (36% and 15%, respectively) agreed that the negotiations that were made during game play are transferable to real life in terms of success. Around two-thirds (44% agreed and 23% strongly agreed) of the participants agreed that multiple perspectives of their fellow players create critical thinking opportunities for them. Additionally, almost half of the participants agreed (34% agreed and 14% strongly agreed) that the social dynamics of WoW transfer to real life. They also agreed (30% agreed and 12% strongly agreed) that they find themselves applying the social skills that they developed in WoW to real life situations (see Table 2 and Figure 6).

**Collaborative Learning Survey Comments and Interviews**

The open-ended comment question at the end of the Collaborative Learning section and interview questions asked participants to elaborate on their collaborative and cooperative experiences in WoW and how much of them applied to their lives. The main themes discovered in the comments and interviews were related to the four skills in Collaborative Learning: Teamwork, Being Social, Personal Growth, and Social Challenges. The analyses of these comments have shown that collaboration plays a huge part in playing WoW.
## Table 2

**Descriptive Statistics of Collaborative Learning**

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Collaborative Learning Average 3.53

![Collaborative Learning Overall Data](image_url)

*Figure 6. Descriptive Statistics of Collaborative Learning Chart*
**Teamwork.** Several survey participants mentioned some of their impressions on the importance of teamwork in WoW and how it played a big role on their collaboration and cooperative skills. Some of the participants mentioned that playing WoW helped them to be a team player.

I have gained the ability to be a team player.

WoW teaches you how to become a trusted team player, unintentionally. It is like you have to be a team player to succeed in the game.

I don’t think about myself separately from my guild. We are a team. I never want to let them down.

I learned how to be part of a team. I bring value and I expect the other players to bring value. It’s a real team effort.

Additionally, some of the participants mentioned that playing WoW is a good example of the importance of teamwork in digital and real life.

It’s the teamwork success. When people just play it without social interaction, it’s not fun and not much different than any other solo-playing experience despite the game’s quality. But when people talk about tactics, work together, warn each other, it’s very fulfilling. These efforts and successes count as a proof for the real life situations.

As for collaborative and cooperative skills, I think I applied similar skills from everyday life into the avatars I maneuver in WoW. In order to complete group
projects or, I know I use a level of interpersonal sensitivity that involves listening to others ideas, trying those ideas out, learning from those ideas, and moving forward with that knowledge onto other tasks.

It’s such a different experience when you are part of a team. Every success feels more satisfying and you want to share moments like that with your friends in the game.

One of the participants mentioned that playing with the same people all the time gives him the opportunity to get to know them.

Getting used to certain personality types in a lower stakes environment (online) can help me learn how to work better with them so that I am more prepared in real life for those types of people.

I learned to work with people to achieve things even if I don’t like all of them. Wow somehow taught me act and work professionally to achieve an objective with a team.

There are some people in my guild that are friends with the guildmaster. Our personalities clash, but WoW has taught me that I don’t have to like them; I just have to work with them for a common goal without getting on each other’s nerves.

**Being social.** Another theme that emerged through the comments of the participants was being social. Some of the participants claimed that they met with new people around world by playing WoW and they became real life friends in the process.
I have friends that I’ve met in real life all over Europe.

I know people from many places around the world and I have met some of them and I still keeping touch. Which I find very nice. I have these friends with social skills that I already have but WoW made it possible to have these friends, it was only a tool.

I feel like I know them so well, some even better than my high school or college friends. We spend so much time together and sometimes we even talk about our personal issues.

Furthermore, some of the participants mentioned that playing WoW led to being more social and eventually, this social environment transferred to their real life friendships.

First of all you are playing with millions of people from different cultures. It makes you learn new things every time . . . you learn how to interact socially with people.

It’s not just about WoW but I’ve spent lots of time on online games and mostly WoW. I’ve met with lots of good friends since then and we are still talking almost everyday even if we are not playing WoW anymore.

I made many friends in WoW and im still in touch many of them in fact i met them like 5 years ago and thanks to WoW when i met someone who plays WoW i can easily socialize with them.
Playing WOW helped me to interact foreign colleagues in my multinational company more easily and this helped me in my job greatly.

Some of the participants mentioned that being socially connected helps those to be successful in the game where they need to play as a group and feedback is an important part of it.

Generally I play with a healer class so party success is depending on me most times so we have to play coordinated with the group. With positive (and of course negative) feedbacks I try harder and harder to achieve that.

It’s the teamwork success. When people just play it without social interaction, it’s not fun and not much different than any other solo-playing experience despite the game’s quality. But when people talk about tactics, work together, warn each other, it’s very fulfilling.

Well, at first, with playing and meeting strangers in-game, you experience the, as some-say, weird social condition in game. Which also helps you to understand strangers and get connected with them in the correct way? This fact also makes you able to contact with people in work/school much easier.

One of the participants claimed that playing WoW gave him the social environment that he wants to be in since a considerable number of people are playing this game and they all have a common topic to talk about which is WoW itself.

Even they think about MMOs makes people distant from social life. I dont believe it, if 20M people around whole world play this game, then all of us has a
small common side, a topic we can talk and chat all day/week/month/year/decade long.

Finally, some of the participants mentioned that WoW simulates real life issues and problems in teamwork and group projects.

Personality and team relations are very important in real life. WoW communities are like a simulated version of a project based company’s office environment.

It’s not always easy to play with people because sometimes they have some idea or opinion that’s really opposite of what you want or maybe it’s something you don’t want to do but they are so pushy or keep saying they are right.

**Personal growth.** Another theme that emerged through the comments of the participants was personal growth. Majority of the participants admitted that they learned something new about themselves by playing WoW collaboratively.

My school life is like an MMO, to beat the boss (exams) I join some parties, and study tactics (subjects). Now everything is better. I am more tolerant than before thanks to random people in the WoW raids.

I learned better communication with peoples. I’m playing WoW for 8 years and I guess it’s improved my second language and communicate with other nations.

Understanding the needs of team members helps to improve person’s coordination skills.
Whenever I get agitated, I just say this to myself: If they can stand me, I can stand them; if they can be patient, I can be patient.

One of the participants claimed that he became better at creating solutions for problems and a patient person by playing WoW.

Been better at seeing solutions on problems I may encounter. Became more patient.

Some of the participants mentioned that their social behaviors improved by playing WoW and started to communicate much more effectively.

I find that the negotiations/deliberations teach me how to communicate more effectively with people in real life. WoW teaches you more about human thinking and social behavior.

After a while, you get used to negotiating and discussing everything. This is a multiplayer game; you have to at least try to understand the other players; you can’t ignore their needs, just like you can’t ignore your coworkers at work.

It made me more respectable to the people around me and I come to understand strongly that being in a guild, brotherhood, clan or whatever should surround you and other with the security that helps is always there. It doesn’t matter how the guild is strong but how that strength is operated to someone in need.

**Social challenges.** The last theme that emerged from the analysis of the collaborative learning comments of the participants is social challenges. Some of the
participants claimed that playing WoW helped them to understand and look over multiple perspectives.

I personally became much more patient about real life problems and crisis situations; I interact much easier with crowds and listen more carefully about other people’s opinions.

One can never avoid conflict, but can control his reaction to it. WoW is the perfect place to practice such skills. Instead of saying “If it were me . . .” you actually get to do it and see how you react to conflict in real time.

. . . conflict management

I have become knowledgeable about social situations, along with how to get along with people.

I’ve learned about resolving the dispute between players, especially between my friends.

Just because you are online, it doesn’t mean you can step out of line. If somebody goes against the common rules and courtesy, it’s good to know what to do about it and how to control the situation.

One of the participants mentioned that the social issues that he faces during playing WoW simulate real life social challenges. He further claimed that an online game creates an alter-ego, but the players face the same problems like in their real life.
In a “real” social life, there are people and there are situations, good or bad. It holds true for games too. It’s true that internet provides some sort of anonymity but even if you would have created an alter-ego online, it is also another character and you still face the same issues. So it is of course like real life. In fact, it IS real life.

Summary—Collaborative Learning

Overall, the results for the collaborative learning section were generally positive with the occasional comment suggesting that playing WoW has had no apparent impact or a benefit.

In my opinion online games shouldn’t be compared to real life. You have to socialize in order to gain social skills in real life, but in my opinion computer games makes one more anti-social. According to me if you want to be social you must go out and communicate with people instead of sitting on your chair in front of a computer for 10 hours a day.

It can harm your real social life if you can’t handle your playing instinct :). A player should see the balance between MMO Social and Real Life Social.

It depends the time you spend in wow. If you are hardcore player I’m sure you can communicate some good people and they can help maybe to gain some social skills. But its also how much isolate yourself from real life. This kind of skills should be learn in family or your natural childhood environment.
I became anti-social. I’m always at home just playing and doing nothing else.

Talking to people online is not the same as talking to a friend at a café.

**Leadership Training Survey Questions’ Results**

Q1. I have learned leadership skills in WoW.

Q2. I think playing WoW has taught me to make important decisions for other people.

Q3. I think playing WoW has taught me to effectively control/manage/direct small or large groups of people in real life.

Q4. I think teaching new knowledge/skills to less competent players improves/enhances my own learning.

Q5. I think the training strategies that I learned and applied in WoW are transferable to real life.

Results of the overall descriptive analysis of Leadership Training questions revealed that a majority of the participants (3.55) indicated that playing WoW improved their leadership skills. They agreed (36% agreed and 26% strongly agreed) that they learned leadership skills in WoW. They also agreed (38% agreed and 22% strongly agreed) that playing WoW has taught them to make important decisions for other people. Accordingly, majority of the participants agreed (36% and 26% respectively) that playing WoW has taught them to effectively manage small or large groups of people in real life.

Furthermore, more than 60% (43% and 21% respectively) of the participants agreed that teaching new skills to less competent players improved their own learning. Additionally, almost half of the participants agreed (32% agreed and 18% strongly
agreed) that the training strategies that they learned and applied in WoW are transferable to real life situations (see Table 3 and Figure 7).

Table 3

Descriptive Statistics of Leadership

<table>
<thead>
<tr>
<th>Q</th>
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<th>Disagree (2)</th>
<th>Neutral (3)</th>
<th>Agree (4)</th>
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</tr>
</tbody>
</table>

Collaborative Learning Average 3.55
Figure 7. Descriptive Statistics of Leadership

Leadership Survey Comments and Interviews

The open-ended comment question at the end of the leadership section and interview questions ask participants to elaborate on their leadership experiences in WoW. The main themes discovered in the comments and interviews were related to two skills in leadership training: Managing different personalities, and Acquired leadership skills. The analyses of these comments have shown WoW creates an environment for gaining some potential leadership skills.

Managing different personalities. Several survey participants mentioned some of their impressions on the importance of managing different personalities in WoW in order to become a good leader and a tutor.
I ran a small guild in WoW, and had interacted very different kind of players in and outside our guild very often. Sometimes that was very challenging as some people seemed to be very different from your normal life friends and you had to somehow try to understand them and helped them. Now I ran a small engineering company with one of my both real life and wow friend and we got to understand and interact with lots of different characters in and outside of our company.

You can’t treat everybody on your team the same way! People are different. If you don’t pay attention to different personalities, people will start fighting. You should know how to manage and control.

Get to know people so you can foresee a possible outcome just like in the game.

I’ve learnt more about how to manage certain types of aggressive personalities.

Additionally, some of the participants elaborated on the social aspect of player management in WoW and how it affected them in their real life.

I think directing people in the right way with the correct manner and deciding on the right move is important while playing any MMO, which also important in real life if the person is a head of chair or something. It actually goes both ways, from real life to the game or from the game to the real life; the skills are transferable and applicable.

I learned how to work with people more carefully after I played this game.
People react more positively to empathy and understanding. Harsh treatment does not last. If you’re rude to people, they will play with you, but they won’t be your friend.

Some of the participants mentioned that player management in WoW guilds is similar to real life situations in any type of work environment.

It requires a lot of effort to keep such a guild together, you exactly need to know how to deal with different people. I’m pretty sure all this time I spent for this guild taught me a lot as a leader and I’m confident that I can now easily manage small/medium sized communities in real life too.

I honestly would NOT want to deal with some of the people in my guild, but I see it as a challenge and I think it has helped me develop some important skills. I don’t just tolerate them. I manage them.

I can honestly say that my experience from playing WoW has had a pretty huge effect on how to lead people in real life.

A clear example in this case is that I had to evaluate every member of the team, and put the people in the positions they would be best suited for the benefit of the team. Isn’t it what you do in real life . . . ?

Everyone has different skills. I learned to assign jobs according to people’s skills because not everyone can do everything. It saves time and energy, too!
**Acquired leadership skills.** Another sub-theme that emerged through the comments of the participants was personal growth. Majority of the participants admitted that playing WoW gives a chance to practice their leadership skills.

While managing a raid or even a party group, I learnt to be a better leader.

Controlling the party members or raid members is teaching you to control a small group in real life.

WoW experience teaches you to be able to solve problems in a polite and social way, while taking control of problematic situations.

Additionally, some of the participants mentioned that playing WoW enhanced their leadership skills and they learned something new about themselves regarding being a good leader.

I learned how to work with people more carefully after I played this game.

Playing and leading in WoW teaches you responsibility and the importance of making decisions and standing by them.

While managing a raid or even a party group, I learnt to be a better leader.

If you are too soft, you cannot reach everybody and there is always someone who will not respect your leadership. If you are too hard then it affects players’ morale. So you need to find a point that you can reach everyone. I strongly believe this also improves our skills about communication and leadership.
One time our guild master made a huge mistake and people started complaining and he was like “I know my mistake but when I made up my mind, I believed it was the best idea or something like that.” It made me respect him more and I didn’t say anything about his mistake.

If your leader is not fair, it takes away all the enthusiasm and the joy.

When you know everyone is getting an equal chance, you start to trust your guild leader and become more productive.

Furthermore, some of the participants mentioned that playing WoW simulates a real life leadership role; therefore they were able to apply these skills to their everyday life.

Before WoW, I was a nervous man when it came to making big decisions. I didn’t like it. It was easier to let others do it for me. I know it sounds bad. WoW gave me important skills. I’m not intimidated. I make a decision fast.

In real life I don’t have to lead people into anything, but in WoW you are often facing struggle that needs team effort to solve, so when your turn comes to lead people, you become more confident after some battles fought, this strongly applies to real life situations if I need to lead, I am definitely more cool headed and calm against almost any situation. I know I never was before.”

Summary—Leadership Training

Overall, the results for the leadership section were generally positive with the occasional comment suggesting that playing WoW has had no apparent impact or a
benefit. Finally, one of the participants mentioned that “leaders must remember that everybody in the guild contributes and everybody should be praised for their efforts” whereas another participant suggested that “I don’t want a guild master that’s too nice or too hard. If he can’t keep that balance, the guild will fall apart.”

**Researching Survey Questions’ Results**

Q1. I take initiative in reading/doing research about WoW.

Q2. In real life, I engage in a similar research process as the research process that I conduct for any part of WoW.

Q3. I think I know how and where to get information regarding WoW related content.

Q4. I use multiple resources to gain information about a task/problem/strategy.

Q5. I read/watch tutorials about WoW related content.

Q6. I think research enhanced my play quality and player ability.

Q7. I think I have successfully mastered practical skills in acquiring information needed to play WoW.

Q8. I do research independently and for self-directed purposes.

Results of the overall descriptive analysis of researching questions revealed that a majority of the participants (3.97) indicated that they do research for WoW. They agreed (49% agreed and 26% strongly agreed) that they took initiative in reading/doing research about WoW. They also agreed (38% agreed and 40% strongly agreed) that in real life, they engage in research processes similar to the research process that they conduct for any part of WoW. Accordingly, majority of the participants agreed (41% and 44%
respectively) that they knew how and where to get information regarding WoW related content.

Furthermore, more than 75% (37% and 41% respectively) of the participants agreed that they used multiple resources to gain information about a task/problem/strategy. Additionally, almost 85% of the participants agreed (34% agreed and 51% strongly agreed) that they watched/read tutorials about WoW related content. Participants also agreed (41% agreed and 32% strongly agreed) that doing research enhanced their play quality and player ability.

Moreover, majority of the participants agreed (41% agreed and 33% strongly agreed) that they have successfully mastered practical skills in acquiring information that they needed to play WoW. Lastly, more than half of the participants agreed (33% agreed and 20% strongly agreed) that they did research independently and for self-directed purposes (see Table 4 and Figure 8).

**Researching Survey Comments and Interviews**

The open-ended comment question at the end of the researching section and interview questions ask participants to elaborate on their researching experiences in WoW. The main themes discovered in the comments and interviews were related to two categories in research: Research for playing WoW and Research for other purposes prompted by WoW. The analyses of these comments have shown WoW creates an environment for gaining some potential researching skills.
Table 4

Descriptive Statistics of Researching

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Collaborative Learning Average 3.97
Figure 8. Descriptive Statistics of Researching Chart

**Research for playing WoW.** Several participants referred to engaging in research for practical and sometimes immediate use within the game for raids and quests. In addition, they indicated specific ways of gathering information and retrieving necessary sources for purposes related to WoW gameplay.

I don’t play WoW anymore but for the 5 years that I did, a significant time that I spared for the game was for the research on the quests, bosses, areas, weapons and armours. At one point I started doing not a single purchase without checking it on the web related to usefulness, actual value, future value etc.
I constantly do investigation into the best ways to play wow, including role play, and boss guides. I then examine the material from each site, choosing which is best.

Raid knowledge. Class knowledge. How to execute rotations better.

Researching became a habit as I continue playing WoW and MMOs. While WoW is pretty complicated to the new players, I started researching for Wikis and guides of the game.

If I didn’t search and videos about WoW pyps probably I can’t go 2k rating at arena.

I researched WoW information and tutorials a lot. The first thing I did is researching about my issue. If I cannot solve my problem from internet, I ask other players. I am the best Rogue Class of my server and I learned this from YouTube Tutorials.

For most of MMO you have to take research for toon builds, dungeons, tactics and etc. If you want to get better. Players generally build theirs toons with current game meta, but when a new patch changes game meta players tend to find new ways/builds to get better.

**Research for other purposes prompted by WoW.** There were participants who went beyond the practical knowledge gathering aspect for WoW gameplay and engaged in research that was prompted by WoW that they believed applied to real life situations.
Oh definitely, both in wow and rl I tend to read up on things, especially if it’s something new or something I’m really interested in. Like for example wow-related, I read up on rogues a lot because that’s my main and I love them, and then when I start a new class I tend to read up on them as well. And even if someone asks me something relatively simple that I’m not sure of I tend to go look it up and provide them with a couple of links. Likewise in real life whether it’s buying a new coffee-machine, re-painting the walls or drawing up a marketing strategy I always start with getting as much info on the subject as I can, and like in wow tend to have certain website I go to first.

I do and even on internet I use search methods parallel to my WoW researching. I use careful catch phrases in Google, more advanced forum, image and video researching about various subjects, even in hobby related stuff.

I have quite a lot of hobbies other than playing WoW. One of those hobbies is paper crafting. Before I start any new project I do lot of research, from suitable paper types to tools I need to use, from tutorial videos to pictures of completed projects. It’s not much different than getting prepared for a new boss, reading and researching tactics, and watching kill videos.

I’m searching more and more to improve myself.

I think the expectations from the player of a specific class while tackling a raid boss is quite the same when an individual tries to solve a problem. Player should
be proficient with his or her set of skills and be able to react to certain conditions that the raid boss creates. If not, then the player should prepare him/herself regarding those conditions. From a computer engineer’s perspective this approach is similar in my professional life. While I have the required programming and algorithm skills, a problem that I have never encountered would have me delve into the web and try to figure out other people’s approach to the same problem in order to gather an insight from their experiences.

A bit tricky to answer this one. I do look up stuff frequently when playing WoW. I do research before going into raids in order to know my role well. (online and talking to friends). I started playing WoW when I was 14-15 years old. It is a long time ago which makes it hard to remember, but I think I can be pretty sure this habit of doing research before getting into something important has made me apply this approach in real life. Especially for situations where other people depend on you.

After I played WoW I had some research skills from this game and when I search something in real life to solve my problem I do a lot research and ask everyone for this.

I am not sure whether it would be farfetched or not, but WoW does give you an ability to conduct a research - especially googling skills.
My dissertation thesis. I learn how to research academically from WoW, researching best talent trees and cycles for DPS. Just like researching Wind Turbines in Smart Grid Systems . . . Once you got it, you can use it everywhere on every topic.

I started researching for Wikis and guides of the game which also made me do the same for all the other subjects in real-life.

Again, this holds for any given situation. I’ve learned many classes (computer engineering major) from online research, same goes for WoW. Be it raids or pvp or some drop rate or builds . . . or operation systems, logic gates and object oriented design.

I feel one of the primary parallels between how I research in everyday life and WoW is using the internet as a starting point for finding information. Take for example, if I wanted to find out how to bake an apple pie or if I wanted to learn how to create a certain character build like a DPS warlock, I would begin by searching online, reading written and video materials, and refining and applying the ideas to my situation. If the end result was unsatisfactory to me, I would start the process again based on what I learned prior. I guess if one wants to paint with a broad brush, I suppose there are similarities between my WoW research approach and other forms of research I do. They all involve some question/concern/problem that sparks a need to know more. This need is
followed up my reading materials either online or on paper, asking others questions, reflecting on the materials, and applying ideas to see what happens.

**Summary—Researching**

Overall, the results for the researching section were generally positive with the occasional comment suggesting that playing WoW has had no apparent impact or a benefit. There is general consensus on the fact that playing WoW improves players’ skills, knowledge, and learning in terms of the four categories mentioned. Additionally, it has been revealed that new skills and knowledge gained through playing WoW is indeed transferable to real life situations.
CHAPTER V
DISCUSSION

In this final chapter, the findings of this study are reviewed and reflected on. In addition, limitations of the study, implications for learning environments, and recommendations for future research are considered.

This study explored the potential transferability of learning skills to everyday life acquired by playing the Massively Multiplayer Online Role Playing Game, World of Warcraft. The findings from the study were centered on answering the following research questions:

1. Does playing World of Warcraft promote experiential learning?
2. Does playing World of Warcraft promote collaborative learning?
3. Does playing World of Warcraft promote leadership training?
4. Does playing World of Warcraft promote researching?
5. What are the perceptions of World of Warcraft players regarding the transferability of their learning and learning skills they have acquired from the game to real life?

The results of this study indicated that all learning skills that were being investigated were perceived by the participants to be transferable to everyday life.

The study is divided into four major themes, namely Experiential Learning, Collaborative Learning, Leadership Training, and Researching. These themes have been derived and inspired mainly from Vygotsky’s (1962, 1978, 1986) social-constructivism theory and Dewey’s (1915, 1916, 1998) experiential learning and progressive education.
theories. Each major theme also has sub-themes that emerged upon the analysis of quantitative and qualitative data. The quantitative data were collected through the online survey questions whereas the qualitative data came from open-ended questions of the survey and the two qualitative interviews. In the following section, these themes and sub-themes are discussed and further analyzed.

**Research Findings**

**Experiential Learning Survey Data**

Results of the overall descriptive analysis of all seven Experiential Learning questions from the survey revealed that participants indicated that they learned from their experiences in WoW (3.37). Below, the rendered results for each survey question are explained.

Q1. I have changed in terms of personality/skills/knowledge/thinking since I have started playing WoW. The responses to Q1 revealed that participants agreed (3.46 rating on survey) that they have changed in terms of knowledge/skill since they have started playing WoW. Inasmuch as WoW requires repetitive actions and long gameplay time, players naturally gain overall experience that involves improving their skills, elevating their knowledge, modifying their thinking, and adjusting to a variety of situations. Therefore, this positive result could be due to the fact that as the participants kept playing and gained experience, they started to see a general improvement in their gameplay and reactions to situations and other players. This result also implied that participants saw a positive change in themselves in terms of self-image and self-perception because they became aware of the way their personalities and ways of thinking were affected by this
experience. This notion was supported by survey comments where the participants mentioned gaining positive personal traits such as becoming more responsible, patient, punctual, and confident as well as gaining and improving skills through experience that they applied to their professional lives.

Q2. WoW has taught me something about myself. Similarly, with respect to Q2, participants agreed (3.34 rating on survey) that WoW has taught them something about themselves. This positive opinion could be based on the premise that reacting to a variety of situations in which players might not have found themselves previously could have revealed parts of their personality of which they were not yet aware. It could also be that they got a chance to see how they interact with others and react to different opinions and problems that would otherwise be hypothetically stated as, “What would you do if . . .?” Therefore, participants might have experienced personal traits that surfaced as a result of engaging in long term WoW gaming. Similarly, as the survey comments showed, participants found that they possessed empathy, that they could be competitive when needed, and that they could act professionally in situations that required cooperating with different personalities.

Q3. I learned something in WoW that I applied to my real life. Many participants agreed (3.31 rating on survey) that they learned something in WoW that they applied to their real life. As suggested by the survey comments as well, even though WoW is a virtual environment, players found themselves becoming more observant, flexible, and persistent which they applied to their professional lives when they needed to assess a situation with multiple parties and personal lives when they needed to improve their state
or relationships with their circles. In addition, participants mentioned improving their language skills, which they applied to their real lives at work and in personal interactions where they felt that they were getting ahead in some manner. Therefore, it is only natural that the product of socializing with fellow players and working towards a common goal manifests itself in an applicable manner to real life. As with all human experience, what is learned manages to find a destination where it can be utilized in terms of theory or practice.

Q4. I find myself making changes in my decisions/manners/actions based on the feedback that I receive in WoW and this manifests itself in real life. Participants were close to neutral (3.19 rating on survey) in terms of making changes in their decisions, manners, and actions based on feedback. Within WoW, players unavoidably receive and accept feedback since they are required to improve their gameplay in order to reach a common goal determined collectively by the guild. In addition, for personal advancement and high levels of achievements (leveling up, earning rewards such as gear and currency, and completing quests) within the game, players are in need of feedback in order to modify their performance where necessary. However, in real life, people are not as welcoming to feedback as they might be within a game because the consequences do not have the same implications or ramifications. For instance, taking advice from a co-worker after a presentation and applying it could lead to a negative outcome depending on the co-worker’s intentions. However, within WoW, which provides a more lighthearted environment than the work place, a guild member would not want to sabotage a fellow member because the ultimate goal is to have fun and win together. In
addition, real life decisions could be viewed as more personal and based on personal choice. Therefore, accepting a stranger’s feedback and changing an action in a game is not taken as seriously as it would be in real life. Additionally, the instant feedback aspect of WoW does not necessarily apply to real life where the turnaround rate is not always guaranteed in terms of receiving and reacting to feedback and the consequences are more immediate and obvious in comparison to real life.

Q5. My experiences in WoW resemble real life experiences. The overall response to this statement was neutral (3.00 rating on survey). Since some of the reasons why people choose to play fantasy role play games are that they are looking for an escape from the stress of everyday life, they are searching for adventures they cannot find in real life, and they are looking to experience worlds where they can display an alternative and perhaps a superior identity, players might not be perceiving their in-game experiences as similar to their real life experiences. Participants might be thinking about the in-game actions such as slaying dragons, collecting various loots, and killing other players as experiences that are clearly not replicable in real life. However, it is important to note that the participants’ responses were neutral rather than negative which also indicates that they were somewhat able to transfer their experiences to real life situations. In the survey comments, it was revealed that some players saw similarities between their real life jobs, responsibilities, and tasks and their WoW experiences. For example, a participant who was captain of his chess team felt that his role in WoW resembled the responsibilities he felt towards his team. In addition, some participants stated that “you reap what you sow”
in terms of making an effort for a goal and treating people a certain way which they believed were similar to real life circumstances.

Q6. I find repeated raids/actions/fights/interaction effective in terms of perfecting game play and player skill. Out of seven Likert based experiential learning survey questions, this statement received the highest agreement score (3.79 rating on survey). According to Ormrod (2004), reviewing and practicing information and procedures periodically can improve retention and performance in terms of learning while promoting automaticity. Therefore, engaging in repeated actions, raids, fights, and interactions could have contributed to players’ improved gaming skills. Survey comments reinforced this notion in the sense that participants indicated repeating the same process even in the face of failure and doing so in real life as a result of witnessing how repeated actions eventually lead to success and learning. They also stated that they learned how to concentrate and pay attention to detail as they were involved in repeated patterns which they believed helped them to become more organized, strive for perfection, and get ahead in their careers.

Q7. Playing WoW improved my problem-solving skills. Lastly, responses for Q7 indicated that majority of the participants agreed (3.47 rating on survey) that playing WoW improved their problem-solving skills. Considering the various tasks, challenges, and problems to which players are frequently exposed, due to the nature of MMORPGs in general and WoW in particular, players naturally practice and improve their problem solving skills. As the game is designed with a scaffolding principle where the level of challenges increases as the player advances in the game, different strategies need to be
adopted for different types of problems which requires the player to adapt and progress. Therefore, improved problem solving skills is a natural outcome of playing WoW due to its design principles and experience based advancement requirements. As the survey comments supported this notion, participants mentioned learning new tactics and strategies, analyzing the opponent, assessing the situation, changing the perspective, and communicating effectively during a task, which were all part of improved problem solving skills.

**Experiential Learning Survey Comments’ Data**

The comment sections of the survey data concerning experiential learning revealed five sub-themes namely: (a) Language learning, (b) Problem Solving, (c) Personal Growth, (d) Decision Making, and (e) Time Management.

**Language learning.** Participants’ accounts with English learning skills were aligned with the concept of necessity that is one of the most important motivations for learning a language. Similar to English as a second language (ESL) learners who are constantly exposed to the target language and need to use it for survival, participants had to use English in order to function effectively within the game. Therefore, their experience with acquiring English skills resembled that of ESL learners who improve their language out of necessity and for personal benefits. For instance, one participant commented that “to be able to play WoW functionally, I needed to know English to read quests,” meaning he or she knew that it was necessary to learn English for that specific context, just like an ESL environment, and to do well in the game by using the shared language of the context.
Additionally, demonstrations of experiential learning of a language were revealed through participants’ recollections of how they had to use the language on a regular basis. For instance, one participant commented that “practice makes perfection and I was practicing my English speaking almost every night when we raid” suggesting the impact of the repeated experiential exposure led to the advancement of this particular skill.

Lastly, in terms of establishing whether participants improved their language skills or not, immediate feedback and constant circulation of communication revealed a positive direction of progress. In other words, participants’ perception of their own language skill advancement was reflected through their successful interactions with other players and in-game text. For example, one participant mentioned that “I improved my linguistic skills while interacting with fellow players from all over the world . . . Playing WoW helped me to interact with foreign colleagues in my multinational company.” This suggests that the player received immediate feedback by interacting with other players successfully, which allowed him to see his own English improvement. Similarly, his comment about interacting with foreign colleagues in his company is a direct instance of the transferability of language learning skills acquired through playing WoW to a player’s everyday life and its practical usage.

**Problem solving.** Participants associated the problem solving skills and techniques gained and utilized within the game with ones needed in real life and pointed out the distinct similarities. Their recollections of the instances where they were engaged in problem solving resembled time spent practicing a certain skill where the individual is involved in a process that includes many choices and repeated practical use. In other
words, when participants referred to the methods and techniques they used along with other factors that affected raid and player dynamics, they immediately mentioned the positive outcomes such as “problem resolving ability and faster reaction time” and “advanced levels of problem solving resulting from complicated tasks within the game.” They interpreted the process as one with directly usable results. The tactics and strategies used within the game were considered to be directly transferable to real life situations and conflicts. For instance, one participant stated,

I find myself using the same techniques when I have to deal with a problem in my life. I think it’s the same process with the same steps. It’s actually fun to see the outcomes in real life because you’re doing the same things you do in the game.

Similarly, another participant mentioned

It’s almost funny how I just repeat the same words when I have a conflict.

Whatever I say in the game that works seems to work in real life, too. It’s like being at one of those retreats where they teach you how to solve problems.

Both accounts were indicative of the similarity of the effective problem solving process between the one in the game and the one in real life where the participants could observe the individual steps as well as the positive results.

In addition, participants acknowledged the importance and relevance of preparation time and strategy development. Some were aware that they “spent more time on problem solving to create strategies than playing the game itself” which makes up most of the time in real life task completion and conflict resolution. Another realization that participants came to was the idea that different tasks required varying levels of
problem solving ranging from basic to highly advanced depending on the number and complexity of the components involved in the task. For instance, one participant stated

“My experiential learning is WoW was more about learning of certain patterns, such as combinations of spells/moves to kills enemies. Of course, every task is different in terms of difficulty. You need to adapt according to the level that is required.

Through observation and getting to know the environment, participants felt that their problem solving abilities matured and became more flexible in terms of adapting to different situations. Especially, in terms of work life, participants referred to the direct positive effect of being able to transfer skills related to “thinking outside the box” gained from playing WoW and engaging in raids where people with different needs and attitudes were involved. One participant indicated how he had been “coming up with radical solutions and ideas and surprising the people around me. It helped me to become unpredictable in a good way. Things don’t always go your way. You need to be creative sometimes.” This account represented the importance of finding unique solutions to a variety of problems or issues with different characteristics and dynamics since one size does not necessarily fit all across situations under different circumstances.

Finally, participants saw an improvement in their abstract thinking and modeling as a result of interacting with other players in a social setting where problem solving involved managing the fluctuating dynamics of a group. Even those who admitted to having challenges with social interactions during problem solving stated they observed a learning curve and a skill build-up in terms of creating solutions. For example, a
participant mentioned, “I’ve learnt about my capabilities to interact normally despite my
then agoraphobia. As a guild leader, I’ve learnt how to interact with people. And have
also learnt and practiced perfecting my ability to make abstract mental models during
raids.”

**Personal growth.** Participants referred to gaining mostly positive personal traits
as a result of the tasks and situations in which they were engaged within the game. They
specifically mentioned patience, resilience, courage, confidence, determination,
punctuality, attention to detail, concentration, and diligence as important elements they
developed or improved on since they had started playing the game. For instance, one
participant expressed that “I used to be late for meetings, but now I find it disrespectful to
be late and I make sure I show up on time. I have to thank WoW for that!” while another
stated that “I don’t give up easily anymore and I think I became more determined to
succeed since I started playing WoW. It’s not about being stubborn. It’s about
resilience.” Both accounts demonstrated participants’ observation of gaining positive
personal traits stemming from the requirements of the game for higher achievement and
better social etiquette. Additionally, participants believed that the design of the game as
well as the interactions with fellow players and even strangers added value to the
experience and what they got out of it in terms of growing as individuals.

Moreover, they were able to observe the direct transfer of these personal traits to
real life situations which, in turn, helped them to feel more in control and resolute. For
instance, participants who had to wait to own certain items in raids stated that they
became more patient and they applied the technique of “waiting for their turn” to real life
situations where they would have otherwise acted impatiently. Additionally, those who were in a competitive mindset within the game observed themselves to develop confidence and resilience because they realized the importance of trying again when there is lack of initial and immediate success. Lastly, many participants recognized that their work life had started to positively change because they became more serious about the projects and the tasks they were given, they were able to take criticism and focus on the areas that needed improvement, and they paid close attention to detail and carefully examined all aspects before proceeding. For example, one participant pointed out that “I compare my current work life to my previous work life and I see that I’m more professional because now I realize how every detail is important and I should take advantage of the critique to make myself better.”

On the other hand, there were some participants who experienced negative accounts of interaction with other players and formed general opinions about how people are and what they are capable of even within a game. Participants that came across players who lied to them or tried to “con” them in the game were concerned about hypocrisy and not trusting people. For some, these instances simply confirmed what they had always experienced with people in real life and they were not overtly upset about being lied to and taken advantage of because they already expected that behavior. However, for others, they became even more “cynical” and lost the motivation to even try to give people a chance to prove themselves; these participants completely shut themselves down and rejected the idea that people are inherently good. They started believing that “everyone deserves to be treated bad, except for few people” and that
“some people just aren’t worth your time. I believe it more now because WoW has shown me people will do unnecessary evil just to benefit themselves.”

The contradicting opinions that emerged are simply natural and expected because not all human experience is completely positive or completely negative. Nevertheless, it is intriguing to discover that participants who believed that they gained positive personal traits they could apply to real life attributed it mostly to the game whereas those who formed deeper negative opinions about other people attributed it to the people, not the game. To explain, participants viewed other players’ negative behaviors as inherent human characteristics that surface in social situations because the comments were in the form of “people being people” and “simply engaging in the same negative behavioral patterns regardless of the social platform.”

**Decision making.** Participants referred to decision making as an important part of WoW as it was required frequently to be successful in the game. According to one participant, “In controllable virtual environment, players can learn about decision and how to decide about something.” Especially those who took part in raids and sometimes led them recognized the multiple dimensions of the decisions they were expected to make in order to direct their guilds to the target outcome. They believed that the multi-faceted process of making effective decisions required problem-evaluation, situation-evaluation, and self-evaluation. It was important to make a clear analysis of the given problem and the surrounding circumstances before taking further steps to come to a decision that would affect multiple people. Naturally, multiple outcomes had to be considered for each
potential path that was to be taken. In addition, self-evaluation and self-analysis were needed before proceeding with the final decision.

Participants felt that they got to know themselves better based on their own thought process and the types of decisions they came to. For instance, a decision that benefits several players but upsets others had to be made based on varying factors and the analysis of this particular decision making process spoke to the decision maker as to what she or he values in terms of desired outcomes. Even though a few players did not find this situation ideal, they agreed with it because “sometimes you gotta make sacrifices and take one for the team. I don’t particularly enjoy it, but I do it because I have to be the bigger person and think of my fellow raiders.”

Additionally, participants referred to the virtually controllable game environment as a convenient platform to practice decision making. They recognized decision making as a skill that could be improved and saw the game as an opportunity to advance in this particular skill. Therefore, it was evident that some participants were initially aware of the skills they were going to gain and improve on and were consciously engaged in the process.

Lastly, a faster reaction time in terms of decision making proved to be a crucial skill participants commented on. For example, it was indicated by a participant that “I’m studying econometrics. Wow (I was playing hardcore) makes me best thinker in life. I have to make decisions speedily in real life. I learn that from wow.” They stated that prior to playing the game it took them longer to make major decisions with consequences they had to endure after the fact. Therefore, they were apprehensive in terms of decision
making that involved outcomes with unpredictable or potentially unwanted results. However, after playing the game and constantly facing situations, in other words practicing the particular skills where they were responsible for making important decisions, participants started to feel that they became better decision makers who were more confident and comfortable with the consequences. They stated that it directly applied to their professional lives and that they could see immediate positive results in situations at work that required critical analysis and informed decision making. They indicated that they saw an improvement in their performance at work because they were able to make effective decisions without apprehension or over-thinking.

**Time management.** Even though, in general, time management might be seen as a skill that is commonly believed to diminish as a result of playing video games, some participants referred to it as a skill they gained by playing WoW. They stated that in order to reach certain goals within the game, they realized that they had to engage in better time planning. They recognized the importance of managing the time they needed and were given based on all guild members’ schedule and strived to plan ahead and not waste idle time. For instance, it was mentioned that “every minute counts. I don’t want to waste my time or anybody else’s time. I am more punctual now.” In addition, participants felt that they became more organized in order to use their time well. They started to pay attention to the rest of their day in order to accommodate the game, which, in turn, resulted in a positive change in terms of better time management in all areas of their lives. As far as the negative views are concerned, they can be attributed to the fact that playing video games and MMORPGs in a dedicated manner requires time that could
otherwise be used for other social activities. For instance, it was stated by a participant that “I think that if I use the time that I spent on playing WoW or other computer games, I could be Oppenheimer of my era” suggesting an alternative and more beneficial use of game play time.

**Negative comments of experiential learning.** There were some participants who experienced negative accounts of interaction with other players and formed general opinions about how people are and what they are capable of even within a game. Participants that came across players who lied to them or tried to "con" them in the game were concerned about hypocrisy and not trusting people. For some, these instances simply confirmed what they had always experienced with people in real life and they were not overtly upset about being lied to and taken advantage of because they already expected that behavior. However, for others, they became even more "cynical" and lost the motivation to even try to give people a chance to prove themselves. These participants became discouraged and they started believing that "everyone deserves to be treated bad, except for few people" and that “some people just aren’t worth your time. I believe it more now because WoW has shown me people will do unnecessary evil just to benefit themselves”.

There were also some negative comments regarding time management and gaming addiction in general, they can be attributed to the fact that playing video games and MMORPGs in a dedicated manner requires time that could otherwise be used for other social activities. For instance, it was stated by a participant that “…I think that if I use the
time that I spent on playing WoW or other computer games, I could be Oppenheimer of my era” suggesting an alternative and more beneficial use of game play time. The contradicting opinions that emerged are simply natural and expected because not all human experience is completely positive or completely negative. Nevertheless, it is intriguing to discover that participants who believed that they gained positive personal skills they could apply to real life attributed it mostly to the game whereas those who formed deeper negative opinions about other people attributed it to the people, not the game. To explain, participants viewed other players’ negative behaviors as inherent human characteristics that surface in social situations because the comments were in the form of ‘people being people’ and ‘simply engaging in the same negative behavioral patterns regardless of the social platform’. It could also be that players’ competitiveness might have contributed to the negative outlook on other players’ behaviors since the will to surpass others in a game can create friction when the desired results are not achieved.

**Collaborative Learning Survey Data**

Results of the overall descriptive analysis of Collaborative Learning questions revealed that many participants (3.53) believed WoW to be a collaborative learning environment. Below, the rendered results for each survey question are explained.

Q1. I believe that WoW guilds and/or communities resemble Collaborative Learning environment/settings in real life. Many participants agreed (3.65 rating on survey) that WoW guilds/communities resemble collaborative learning settings in real life. This opinion could have been based on the notion that the binding principle of a guild stems from a collaborative framework where each individual has a certain
responsibility and value for the team. In other words, similar to a collaborative learning environment, each player in WoW provides a certain skill set, knowledge, and specific contributions that allows all members to benefit from the cooperation. For instance, just as in the work environment where a group has to complete a project, each member of the guild has to bring value depending on their specific responsibilities for the goals in the game such as killing powerful enemies, gathering materials, crafting items, and completing achievements. This concept was supported by the survey comments where the participants stated that depending on fellow players to complete a task in the game was similar to relying on a coworker to perform his or her duty and learning from other guild members resembled learning from more experienced or more knowledgeable others in real life.

Q2. I think PvE raids/dungeons help me to develop socially. The participants agreed to a degree (3.49 rating on survey) that PvE raids and dungeons helped them to develop socially. Since social interactions during a raid are simply a requirement for a successful fight due to the design of these encounters, this positive result could be attributed to the social exchange to which dedicated players are exposed on a regular basis both in text and speech format. Especially for those who are not naturally sociable and extroverted, WoW’s virtual environment provides a somewhat safe and anonymous medium where they get to practice social skills without making themselves as vulnerable as they might have to in real life situations. The survey comments of the participants supported this opinion in the sense that some participants started valuing the idea of being
part of a team and being depended on as well as gaining skills to interact with a variety of personalities while maintaining poise and mutual respect.

Q3. Interaction with other players helps me with/accelerates the learning process. Out of seven Likert based collaborative learning survey questions, this statement received the highest agreement score (3.91 rating on survey). The participants agreed that interaction with other players helped them to accelerate their learning process. As engaging in interactions with guild members or other random players involves an idea and knowledge exchange, it is natural that the participants might have felt the presence of an accelerated learning process where the brainstorming and information gathering times are reduced since they are not carried out by a single person. Participants backed up this opinion in their survey comments where they stated that it is highly challenging and sometimes impossible to complete a task on one’s own due to the game’s design and interacting with and learning from other players saves time, energy, and effort.

Q4. I think the negotiations made during game play in WoW are transferable to real life in terms of success. Many participants believed (3.40 rating on survey) that the negotiations that are made in the game are transferable to real life in terms of success. In WoW, negotiating is a natural part of the decision making process during a raid or a boss encounter. Players need to state their ideas and arrive at a feasible solution or a practical plan through negotiation within their guilds. Therefore, since the participants learn or practice negotiation skills regularly as part of their gameplay routine, it is possible that they observed this particular skill’s transfer to real life situations in which they need to engage in discussion, debate, mediation, and arbitration. For instance, as supported by
the survey comments, participants applied their negotiation tactics and strategies to real life situations such as salary negotiation, picking a venue for a meetup, and even a discussion with a significant other that is saved from turning into an argument and stated that their communication skills were improved and fine-tuned.

Q5. Multiple perspectives of fellow players create critical thinking opportunities for me. Majority of the participants agreed (3.76 rating on survey) that multiple perspectives of the players create critical thinking opportunities in the game. This positive result could be due to the fact that WoW players are constantly exposed to multiple perspectives due to the teamwork, negotiation, and collaboration aspects of the game as well as the need to adjust to the changing difficulty levels of challenges. For instance, guilds can invent or propose different ways of approaching a task, which are products of multiple perspectives and viewpoints such as deciding whether to use a known strategy to kill a dragon or to create a brand new one. In addition, engaging in critical thinking is an expected reaction when one’s traditional ways of thinking are challenged and when others’ opinions have an equal weight in terms of making a collective decision. Therefore, participants could have observed the value in evaluating and considering multiple perspectives in terms of thinking critically which might require combining, improving, and eliminating ideas to achieve superior results. Similarly, in the survey comments, participants mentioned the satisfaction they get from working with other players toward a common goal and expressing their opinions to reach a consensus through careful consideration and effective analysis.
Q6. I think the social dynamics of WoW transfer to real life. The responses to
the Q6 revealed that participants somewhat agreed (3.28 rating on survey) to the
transferability of social dynamics of WoW to real life. Even though WoW provides a
virtual environment where some social dynamics are simulated through interactions and
behaviors that are highly dependent on environmental factors, there are many instances
where these behaviors are fundamentally influenced by real, emotional feedback spilling
over from real life and personal attributes. In other words, the social dynamics resemble
real life occurrences such as making deep connections, feeling offended by a certain
behavior and acting on it, and shaping reactions around the actual or implied presence of
individuals who might have influence on a situation. Therefore, participants might be
experiencing the transfer of WoW’s social dynamics to real life because the game creates
a social simulation that has lingering and somewhat impactful effects on the players. As
the survey comments suggested, participants made friends in WoW that they started
socializing with in real life because they believed that they all “spoke the same
language.” In contrast, they found themselves in vulnerable situations where they felt
that the other players were not being fair and they carried that negative feeling to real life
situations. In such situations, they made comparisons between what was happening
within the game and what was taking place in real life. By observing the similarities of
social dynamics of WoW resulting in negative implications, they tried to protect their
emotions by not putting themselves in the same situation again.

Q7. I find myself applying the social skills that I developed in WoW to real life
situations. Finally, the participants were close to neutral (3.19 rating on survey) in terms
of applying the social skills that they developed in WoW to their real life which showed a low level of agreement. As stated previously, WoW is a highly social game due to its design and environment where there is constant interaction, negotiation, feedback, and collaboration. Therefore, gaining or improving social skills is a crucial part of the game process for those who are actively involved in a guild or some sort of a party. Effective communication is a necessary skill that the players need in order to navigate the nuanced social dynamics of the “realms.” For instance, players get to practice public speaking, persuasion, and argumentation without the presence of an actual audience in front of them; they get to practice social rules, leadership, and active listening as well as mediation and empathetic delegation. Therefore, the social skills they gain, practice, and improve in a relatively safe environment can be applied to real life situations with less apprehension and more confidence. As the survey comments showed, participants learned to be more patient and tolerant in situations that would otherwise make them irritable and agitated, to speak effectively with consideration of others’ opinions and feelings, and to handle difficult situations calmly and rationally. Based on the low level of agreement on this statement, it is possible that the participants’ perceptions of WoW’s social environment are different from their perceptions of social dynamics in real life. In other words, they could be thinking that the social interactions in a virtual world will differ from social interactions in the real world solely based on the environment in which they are immersed.
Collaborative Learning Survey Comments’ Data

The four sub-themes that emerged from the data regarding collaborative learning were (a) Teamwork, (b) Being Social, (c) Personal Growth, and (d) Social Challenges.

**Teamwork.** As being part of a team is one of the main attributes of playing WoW, it was only natural that teamwork was frequently mentioned by participants as both a part of the game and a positive platform of interaction. Many participants stated that WoW taught them to be part of a team and become a real team player; not just a player on a team. They mentioned the importance of being trustworthy in terms of all team members depending on each other and not letting others down. For instance, one participant stated that “I don’t think about myself separately from my guild. We are a team. I never want to let them down” and another participant mentioned that “I learned how to be part of a team. I bring value and I expect the other players to bring value. It’s a real team effort.” Moreover, they were aware of their responsibility towards their team members and were motivated to work harder because they were part of a joint effort with more at stake than a single player gameplay outcome.

Additionally, participants referred to teamwork and being part of a team as a fulfilling shared experience that exceeded the satisfaction of playing alone despite the quality of the game and the rewards gained from playing as a single player. They appreciated the human factor and helping fellow players to reach a common goal. The fulfillment of playing and learning collaboratively came from understanding other players’ emotions, thoughts, and sensitivities, which, in turn, made participants aware of their own interpersonal consciousness and ability to empathize and provide.
Consequently, the more understanding occurred among players, the more satisfied they felt in terms of working collaboratively and cooperating with other individuals. For instance, one participant recalled, “it’s such a different experience when you are part of a team. Every success feels more satisfying and you want to share moments like that with your friends in the game.”

Furthermore, participants indicated that through being part of a team, they became familiar with different personality types and developed strategies to work collaboratively with people possessing different characteristics than they did. They believed that the online environment provided a safe and convenient place to practice interactions with and get ready for personality types they might encounter in real life. Some participants even mentioned that WoW taught them how to act and work professionally with people they were not necessarily fond of which is a naturally occurring dynamic in real life teamwork. Even though one does not always wish to work with certain people, he or she has to think and behave in a professional manner in order not to upset team dynamics and to achieve the desired objective. To demonstrate, one participant indicated

There are some people in my guild that are friends with the guildmaster. Our personalities clash, but WoW has taught me that I don’t have to like them; I just have to work with them for a common goal without getting on each other’s nerves.

Lastly, participants acknowledged the important role collaboration and cooperation played in decision making within a team. They realized that strategizing and creating tactics was a smoother process when done collaboratively rather than
individually. Making a final decision after evaluating a problem and looking for a solution with fellow team members often proved to be less stressful and more successful as part of a team. Participants learned that in order “to achieve something truly great” they needed to be a part of a team and work towards a common goal to be able to celebrate as a collaboratively acquired positive outcome. For example, one participant pointed out that

WoW is very multiplayer oriented. You have to create tactics and strategies to kill your enemies as a group. Sometimes, some strategy does not work and you have to come up with a new one during these encounters. It is less stressful to make a decision when you collaborate with others.

**Being social.** Participants stated that WoW gave them a chance to meet new people from all over the world and make new “real” friends with whom they constantly keep in touch. Since virtual environments are not regarded highly as platforms to form new and lasting friendships or meaningful, real bonds with people, it was intriguing to see how participants gave meaning to the connections they had made and how much these meant to them. For instance, one participant wrote about the importance of his “game buddies” and stated, “I feel like I know them so well, some even better than my high school or college friends. We spend so much time together and sometimes we even talk about our personal issues.”

Additionally, they enjoyed interacting with other players socially and learning about new cultures with which they might not otherwise have direct contact. The game provided a social environment where gameplay was not the only entity on which players
focused; it was also a means to engage in social interaction and interpersonal and cross-cultural exchange. Moreover, participants felt that their social skills improved as a result of playing WoW and maintaining contact with fellow players. They became aware of the nuances in social situations and how to act consciously towards those with different personality types in order to preserve the socially set balance and harmony.

Another important aspect of being social in the game was building empathy and seeing the commonalities rather than differences. Many participants started developing a sense of understanding for fellow players and even “strangers.” Even though the game took place in a virtual environment, the human condition prevailed in social situations where players felt that they could understand one another and form healthy bonds. In addition, just as a real life social setting helps to bring out what people have in common, WoW provided an opportunity for players to get together for a common goal and learn about each other in the process to realize how alike they were rather than different. For example, one participant indicated

I think I’ve learned things about how I relate to groups from my very similar behavior patterns across different guilds, and that I’ve sort of learned these things faster than I could have in real-life groups, maybe simply because of the different sense of time in a guild. I also figured out that we have a lot in common with other people than we realize. You just need to step back and pay attention.

Nevertheless, some players mentioned “not seeing eye-to-eye” and “disagreeing with other players” when they felt that their approach or opinion was right. One participant stated
It’s not always easy to play with people because sometimes they have some idea or opinion that’s really opposite of what you want or maybe it’s something you don’t want to do but they are so pushy or keep saying they are right.

Therefore, for some players, it was difficult to establish a common ground and the clashing of opinions made it unpleasant for them to try to cope with the needs and desires of other players they did not necessarily agree with and understand. A more thorough discussion about social conflict is provided in the upcoming section on “Social Challenges.”

**Personal growth.** Personal growth emerged as a sub-theme of collaborative learning brought on by playing WoW collaboratively with people from categories such as real-life friends who also play WoW together, people that became friends as a result of playing together, and random people within the game.

Participants saw a positive change in themselves in terms of becoming more tolerant and patient, building more effective communication skills, recognizing social behaviors and patterns, and appreciating and respecting the group one belongs to if that group is creating positive vibes for them. For instance, a participant stated, “WoW teaches you how to tolerate others if you want to succeed as a group.”

Interacting with different personality types and recognizing other players’ needs and goals helped participants to become more tolerant of differences. They also understood the importance of not acting impatiently when things did not always go their way and a more viable solution was needed for the good of the group rather than individual players. For example, as stated by one participant, “Whenever I get agitated, I
just say this to myself: If they can stand me, I can stand them; if they can be patient, I can be patient.”

Furthermore, the negotiations, planning, deliberations, discussions, and solution creating done with fellow players helped participants to become more effective communicators who were able to transfer these skills to real life social situations and work related practices. As put by a participant,

After a while, you get used to negotiating and discussing everything. This is a multiplayer game; you have to at least try to understand the other players; you can’t ignore their needs, just like you can’t ignore your coworkers at work. Participants became better “people readers” as a result of engaging in recurring social interactions both during and outside raids and individual gameplay.

Lastly, given the personal incentives for the formation of networks within the game, participants developed a sense of gratitude, pride, camaraderie, and security for and towards those in their group. In other words, they learned to appreciate those working with them to achieve a common goal even at times of conflict. They felt safe and reassured knowing help would always be available as long as they remained loyal to their own group, which is an essential and expected characteristic of group mentality that manifested itself in WoW guilds. For example, one participant indicated

It made me more respectable to the people around me and I come to understand strongly that being in a guild, brotherhood, clan or whatever should surround you and other with the security that help is always there. It doesn’t matter how the guild is strong but how that strength is operated to someone in need.
Social challenges. Social challenges and issues were experienced while playing WoW collaboratively. Participants seemed to have an understanding of the concept of conflict as a natural part of any human interaction; WoW being no exception. The more knowledge they acquired with regards to social situations, existing or recurring disputes, and potential crises, both related and unrelated to gameplay, the more confident they became about being able to manage conflicts among players and in real life situations. They learned to pay close attention to different opinions and understand the reasoning and the motives, which, in turn, allowed them to be more flexible and resourceful when dealing with a conflict. For example, according to one participant,

One can never avoid conflict, but can control his reaction to it. WoW is the perfect place to practice such skills. Instead of saying “If it were me…” you actually get to do it and see how you react to conflict in real time.

Despite the anonymity virtual environments “indulge” and the ambiguity they provide for people to “become a different version of themselves,” the structure and nature of conflicts and how often they might emerge are still dependent on other uncontrollable factors. Therefore, physical presence is not required to be involved in a social conflict and virtual conflicts demand the same attention and management strategies as their real life. As one participant suggested, “Just because you are online, it doesn’t mean you can step out of line. If somebody goes against the common rules and courtesy, it’s good to know what to do about it and how to control the situation.”

Even though the overall reactions to the collaborative learning aspect of playing WoW were generally positive, some participants believed otherwise. They did not refer
to the virtual environment as a natural social setting and suggested that it caused people to become anti-social because it deprived them of physical contact. According to one participant, “I became anti-social. I’m always at home just playing and doing nothing else. Talking to people online is not the same as talking to a friend at a café.”

Additionally, the idea emerged that if the players cannot maintain a balance between playing the game and going out and actually socializing with people, they will not be able to distinguish between the two different worlds. Lastly, some participants viewed hardcore game playing as a form of social isolation and believed that social and collaborative skills needed to be acquired from more naturally occurring circumstances.

For instance, one participant expressed that

> It depends the time you spend in wow. If you are hardcore player I’m sure you can communicate some good people and they can help maybe to gain some social skills. But it’s also how much isolate yourself from real life. This kind of skills should be learn in family or your natural childhood environment.

Similarly, another participant mentioned that

> Sometimes I feel like I shut myself away from the whole world when I play WoW. I even forget to call my family. I am certain that I used to be more social before. There were times that I actually forgot to eat and drink.

**Negative comments of collaborative learning:** Even though the overall reactions to the collaborative learning aspect of playing WoW were generally positive, some participants believed otherwise. They did not refer to the virtual environment as a natural social setting and suggested that it caused people to become anti-social because it
deprived them of physical contact. According to one participant, “I became anti-social. I’m always at home just playing and doing nothing else. Talking to people online is not the same as talking to a friend at a café”. Lastly, some participants viewed hardcore game playing as a form of social isolation and believed that social and collaborative skills needed to be acquired from more naturally occurring circumstances. For instance, one participant expressed that “it depends the time you spend in wow. If you are hardcore player I’m sure you can communicate some good people and they can help maybe to gain some social skills. But it’s also how much isolate yourself from real life. This kind of skills should be learn in family or your natural childhood environment.” Similarly, another participant mentioned that “Sometimes I feel like I shut myself away from the whole world when I play WoW. I even forget to call my family. I am certain that I used to be more social before. There were times that I actually forgot to eat and drink “

**Leadership Training Survey Data**

Results of the overall descriptive analysis of Leadership Training questions revealed that many participants (3.55) indicated that playing WoW improved their leadership skills. Below, the rendered results for each survey question are explained.

**Q1. I have learned leadership skills in WoW.** (3.60 rating on survey) The guild system in WoW presents a hierarchy consisting of a guildmaster, officers, classmasters, and regular members. The guildmaster leads and directs the guild, the officers act as assistants to the guildmaster, the classmasters help the members to improve their class rankings and gameplay, and the regular members have responsibilities resembling a foot soldier in battle. Players who belong to a guild agree to the rules and play their parts.
The positions of the guildmaster, officers, and classmasters directly require leadership skills whereas the regular members learn or improve on these skills by observing and repeating these leader roles’ actions. Therefore, this positive result could be based on the idea that even those who do not have direct leadership roles can still learn from those who do in terms of tactics, strategies, decision making, people managing, and effective communication. Participants referred to this concept in the survey comments and stated that WoW provided them with leadership experience where they needed to make important decisions and stand by them, to manage conflicts within and outside the guild, and to lead in a courteous and effective way when dealing with different personalities and difficult situations.

Q2. I think playing WoW has taught me to make important decisions for other people. (3.51 rating on survey) Since the guild system in WoW requires decision making on micro and macro levels, players have to decide for themselves and sometimes for other players. For instance, a guildmaster makes decisions that affect every member of the guild. Similarly, a classmaster makes decisions for the members of each class that might determine their achievement level or ranking at the end of a raid. In real life, people are not always comfortable making decisions for others because there is the possibility of error and negative ramifications such as choosing a certain path for a group project as the group leader and realizing time was not managed properly and every member of the group has to suffer the consequences. Therefore, participants might be thinking that WoW provides them a safe and controlled environment where they can practice making important decisions for other players and regardless of the consequences,
actions can be repeated for a better outcome. As supported by the survey comments, participants believed that not having to face a person physically when kicking them out of a guild, resolving a conflict by asking people to tell their own sides of a story, and deciding on a certain strategy that would affect 50 members at the same time proved to be easier than they expected in the WoW environment.

Q3. I think playing WoW has taught me to effectively control/manager/direct small or large groups of people in real life. (3.64 rating on survey) As previously stated, WoW creates a simulation-like environment where players get to experience leading groups of people varying in size. This involves the practice and application of leadership skills that they can later transfer to their real lives. For instance, when a player learns how to convince a guild member to agree to take on a task he or she does not necessarily want, the player can then apply similar strategies to a situation in his or her life where he or she needs to be more persuasive and build a credible argument. For instance, the survey comments showed that even though participants did not have to lead people into certain situations as often as they had to in WoW, they found themselves to be more confident and calm when doing so in real life regardless of the size of the group or the gravity of the situation. Also, some participants indicated that they became better leaders at their companies and some mentioned having confidence in themselves to lead small to medium sized communities outside of work.

Q4. I think teaching new knowledge/skills to less competent players improves/enhances my own learning. (3.67 rating on survey) This statement received the highest agreement in this category. This notion supports the old well-known Latin
principle “Docendo discimus; the best way to learn is to teach.” In order to be able to teach, one should first rehearse and collect knowledge, which results in more effective retention. Therefore, it is natural for the players to feel that teaching new knowledge or skills to other players improves their own learning as they need to know enough to be able to pass it on. For instance, for a classmaster, it is necessary to be competent in the principles, attributes, and the specifications of a certain class if he or she is going to teach these concepts to a new member in his or her guild. In other words, he or she is responsible in the new member’s training. Therefore, the classmaster’s knowledge and knowhow need to be vast enough and in order for him or her to achieve that level, he or she needs to be well-versed in his or her subject matter. The survey comments supported this idea where the participants mentioned that found themselves “studying” before they could start teaching to players with less experience and that they realized how many new things they learned as they had to do research and create new ways of approaching the teaching of new knowledge to different types of players.

Q5. I think the training strategies that I learned and applied in WoW are transferable to real life. (3.32 rating on survey) Even though this is a relatively positive result, it has the lowest score among the other questions in this category. This could be due to the notion that the players might be thinking about learning how to use certain skills, when to use them, and how to get the best possible outcome from these skills. Since this is a very game-specific training strategy, it is possible that they might not be able to make a concrete connection between the game and real life as skills and situations in real life would differ tremendously and it would require abstract thinking to visualize
such a relationship. That is not to say that the participants lack abstract thinking, but rather to point out that some players think of the in-game strategies and interactions separately and assign them “game” value whereas some players look for or naturally see parallels between the game and the real life. For instance, in the survey comments, it was mentioned that identifying the opponent, finding a strategy to defeat that particular opponent, being aware of the guild members’ specific abilities, and strategically distributing roles based on these abilities in the game could easily be transferred to real life where a team faces a challenge or needs to complete a project and has to follow similar guidelines and procedures.

The leadership training theme revealed two sub-themes: (a) managing different personalities and (b) acquired leadership skills.

**Managing different personalities.** Participants referred to being able to manage different personality types as a positive trait gained by playing WoW and leading guilds. One outcome of learning to deal with different personalities was becoming a better listener in order to understand the other players and what needed to be done to accommodate multiple needs while maintaining a balance among players. Participants became aware of the effort that goes into keeping a team together and ensuring productive outcomes while maintaining harmony. They indicated that it became clear to them that it was not enough to lead with directions; they needed to learn how different personalities would react to the given directions. For instance, one participant suggested that “you can’t treat everybody on your team the same way! People are different. If you don’t pay attention to different personalities, people will start fighting. You should know
how to manage and control.” They believed that this trait applied directly to real life where people had to predict the potential reactions from those with whom they are in contact in social and professional settings and needed to alter their approach depending on the type of person with whom they were dealing. According to a participant, it was important to “get to know people so you can foresee a possible outcome just like in the game.”

In addition, participants indicated learning about how to deal with negative personality traits and managing those with differing characteristics. This also revealed participants’ self-perception and which personality types they deemed to be opposite to how they viewed themselves. They were able to recognize, acknowledge, understand, and effectively manage people with whom they might not have otherwise had a desire to communicate. Consequently, learning to coexist in a guild and having to lead a team made up of these different personalities helped the participants to develop people management skills. For example, one participant admitted

I honestly would NOT want to deal with some of the people in my guild, but I see it as a challenge and I think it has helped me develop some important skills. I don’t just tolerate them. I manage them.

Some participants were enthusiastic about how player management transferred to their real lives and work environments as a skill to regulate interactions and supervise group dynamics without micromanaging, but rather with finesse and attention to human emotion and sensitivities. The comments pointed out the difference between managing people with keeping human nature in mind and directing people with an unwavering
resistance to recognize nuances and subtleties in human interactions. The former prevailed with long-term benefits in forming strong bonds and the latter fell short because it disregarded elements that build the foundations of long lasting and productive human communication and collaboration. A participant mentioned that “people react more positively to empathy and understanding. Harsh treatment does not last. If you’re rude to people, they will play with you, but they won’t be your friend.”

Lastly, skill and personality evaluation in effective job assignment distribution emerged as a skill participants believed to have gained by leading teams made up of people with different skill sets and personality traits. Participants became informed about how an effective leader operates when it comes to assigning tasks and positions to the right people for the most efficient outcome. For example, it was mentioned by a participant that “everyone has different skills. I learned to assign jobs according to people’s skills because not everyone can do everything. It saves time and energy, too!” It is a crucial ability a leader is required to possess if he or she expects to get the most out of the people he or she is managing. Not everyone is suited for every task and it is up to the team leader to strategically place people in positions where their skills are not wasted or undermined and different personalities work cooperatively rather than clashing and hindering the pace of the process. Naturally, this is expected of any leader in real life and in work situations and participants learned how to transfer this valuable skill to their own lives after realizing they had already been practicing it within the game.

**Acquired leadership skills.** Participants stated in their comments that acquiring newly developed leadership skills or improving the already existing ones they possessed
were positive outcomes of leading a guild, managing a raid, or even strategically
directing a smaller party group within WoW where they made leadership-bound
decisions.

Being in control and keeping calm and collected in the face of a problem or a
challenging situation was a leadership skill participants believed to have gained. Some
stated that before playing WoW, they used to become anxious and agitated when they
were asked to solve a problem or lead a team. However, after playing WoW and leading
a team, the experience gave them confidence and taught them how to remain
level-headed and poised. Instead of panicking when they needed to make an important
decision and let other players know what was expected of them, they began to act more
self-assured and assertive which are qualities of a compelling leader. To demonstrate,
one participant stated

Before WoW, I was a nervous man when it came to making big decisions. I
didn’t like it. It was easier to let others do it for me. I know it sounds bad. WoW
gave me important skills. I’m not intimidated. I make a decision fast.

Another important quality of an effective leader that the participants believed to
have gained was becoming more courteous, polite, and approachable. They explained
that leaders had to possess these qualities if they wanted to “lead” rather than “order”
around. Participants realized that other players reacted positively when approached in a
socially acceptable and considerate way rather than an aggressive and pushy demeanor.
One participant stated that “when the guild master is a nice guy, I don’t mind him telling
me what to do. I’m normally a hot-tempered man.” People need to see that a leader can
remain civil, sympathetic, and attentive in changing circumstances because they want to be able to depend on his or her character as a consistent person.

In addition, participants mentioned striving to be fair and objective as a leader because they believed that players needed to know that their leader is treating everyone equally and being fair even if his or her close friends are on the team and there could be a conflict of interest. It was suggested by a participant that “if your leader is not fair, it takes away all the enthusiasm and the joy” while another mentioned that “when you know everyone is getting an equal chance, you start to trust your guild leader and become more productive.” They stated the importance of this quality in real life where trust played an undeniable role in team building. Participants explained that it was crucial to remain unbiased and not give in to nepotism if team members were ever to put their trust in their leader to do the right thing when needed.

Furthermore, taking on responsibility, standing by a decision that is made, and accepting the consequences of a decision were all viewed as leadership skills gained through playing WoW and leading teams regardless of the number of members. In real life, even though the whole team might come to a consensus regarding an issue, the team leader needs to take the responsibility for the final decision regardless of the consequences. Therefore, even if the decision proves to be the wrong or the unfavorable one, the leader has to accept his or her failure, yet stand by his or her decision, as it was reflective of the process and what was believed to be the solution at the time. A leader who tries to blame team members or questions his or her ability to make decisions will not be regarded as trustworthy and credible. Participants stated that this was a crucial
skill that could be transferred directly to real life where, as a leader, they could efficaciously earn the trust of their co-workers at work or team members in a school project by taking responsibility for their actions and decisions. One participant recalled an incident where

One time our guild master made a huge mistake and people started complaining and he was like “I know my mistake but when I made up my mind, I believed it was the best idea or something like that.” It made me respect him more and I didn’t say anything about his mistake.

Lastly, participants referred to the idea of being able to reach out to every member on the team; not just the most dominant characters. One participant mentioned that “leaders must remember that everybody in the guild contributes and everybody should be praised for their efforts” while another participant suggested that “I don’t want a guild master that’s too nice or too hard. If he can’t keep that balance, the guild will fall apart.” They believed that the secret to establishing stable relationships and strong bonds with all team members was to create a balanced display of power. Leaders who came across as “pushovers” or too gentle and easily influenced were not respected and could not get their team members to do what was needed of them. People did not want to follow a leader they did not respect. However, people did not want to follow a leader who did not treat them properly and courteously, either. A leader that was perceived to be too aggressive or to have impossible demands and expectations believed to bring down morale and put the team members in an unpleasant mood. Therefore, it was important to create balance
where the leader possessed enough power to lead, but was still able to let the team have fun without overwhelming them and abusing this power.

**Negative comments of leadership:** The leadership category yielded some negative comments regarding participants’ opinions towards the presence and transferability of this particular skill. For instance, one participant mentioned that Real life and virtual life is so different since you have nothing to lose in a virtual environment except your time. You may lose virtual gold, virtual equipment and virtual points. In real life you may lose a lot by strategic failures. So, in a virtual environment, you can behave careless. If you apply same way of thinking in real life, you'll be in trouble. And you may badly affect people who work under your command.

Similar to this comment, there were other ones that focused on the differences between a virtual world and a real world. The reason why these participants felt that the skills gained or used in WoW were not transferable to real life could be that participants believed in a definite distinction between the two worlds that created dynamics that can only be attributed to either the real world or virtual world. In other words, since they viewed the reality of everyday life to be detached from the fantasy of the virtual world, they could not visualize or did not believe that actions taken and skills learned in the virtual environment could have any merit or application in the physical world they identified with.
Researching Survey Data

Results of the overall descriptive analysis of Researching questions revealed that a majority of the participants (3.97) indicated that they do research for WoW. Below, the rendered results for each survey question are explained.

Q1. I take initiative in reading/doing research about WoW. (3.84 rating on survey) This positive result could be due to the fact that WoW players, like any other game player, start and continue playing this game because they ultimately want to succeed and move forward in the game. Therefore, since players willingly start playing WoW with personal intentions to do their best while having fun at the same time, it is natural that they purposefully read and do research about WoW for personal reasons. The research they do entails visiting websites like thottbot.com, allakazam.com, battle.net, reading online forums such as wowiki, reddit and watching videos on strategy, tactics, skill improvement, and leveling guides on YouTube. In other words, not every guild member needs to be instructed by a guildmaster or a classmaster to acquire more knowledge; he or she can make the conscious decision to learn more and actually enjoy doing so because he or she might start seeing it as a necessary part of the gameplay that is both informative and beneficial. Similarly, as the participants mentioned in the survey comments, they believe that the research they do helps them to become better players and even serve them well in terms of getting ahead if they are playing competitively.

Q2. In real life, I engage in a similar research process as the research process that I conduct for any part of WoW. (4.08 rating on survey) Majority of the participants agreed that they engage in a similar research process in their real life. Since the research
techniques and strategies used for WoW involve determining a problem, using keywords, finding relevant sources, getting general and specific information regarding any aspect of the game, comparing information, assessing the information’s relevance, usability and credibility, and using the product of the research to find a solution to the problem, players who do research can easily see the parallels between real life research and WoW related research. Especially players who can be referred to as “serious” players tend to start tackling tasks with initial research regardless of their level of knowledge in order to get the best possible results. Therefore, the similarities between real life research and WoW related research become apparent to those who have established their ways of looking for information. For instance, as the participants mentioned in the survey comments, they were able to observe the commonalities between work and school related research processes and WoW related research in terms of looking for multiple perspectives, accessing legitimate sources, reading user and expert comments, and doing critical comparisons in order to get superior results rather than mediocre ones.

Q3. I think I know how and where to get information regarding WoW related content. (4.16 rating on survey) The overall agreement in this statement could be based on the premise that once players need information, they find sources by doing an individual search as well as consulting fellow players and accessing well-known, WoW-dedicated sources known by the WoW community. Therefore, learning how and where to get game-related information and content becomes a natural part of gameplay. This notion is similar to a doctoral student learning about the main “go-to” databases for journal and article finding and internalizing the process as part of his or her student life.
Similarly, just as a doctoral student seeks his or her fellow candidates’ advice in terms of how and where to get research-related information, the WoW community acts as a similar valuable source of information for its players. Learning information gathering becomes one of the first things a WoW player does when he or she starts playing the game. As supported by the survey comments, participants were aware of forums, websites, video sources, and even well-known WoW players publishing WoW-related tactics and strategies and they accessed these sources frequently and successfully.

Q4. I use multiple resources to gain information about a task/problem/strategy. (4.06 rating on survey) As stated previously, accessing multiple sources and perspectives can be thought of as a necessity for problem solving and task completion within WoW since there is not “one way” of killing a boss, slaying a dragon, and taking on a raid task. In addition, oftentimes, guilds might find themselves in a situation where a strategy they believed would be successful does not suffice and they end up having wasted hours and sometimes even days on one mission. In order to avoid this situation, they can either immediately look for additional sources for different strategies or do their initial research by using multiple sources to have more than one strategy at their disposal. Using multiple resources can also help them to eliminate strategies or tactics that have been already tested, failed, and reported on. Supporting this notion, participants stated in the survey comments that just as their guilds are made up of multiple players who bring something different to the table with their varying perspectives, multiple resources are necessary to gain insight into what the members might miss, not know about, and can utilize within the game effectively.
Q5. I read/watch tutorials about WoW related content. (4.24 rating on survey)

Reading instructions and watching tutorials and recordings of WoW gameplay is a common practice among players. Similar to watching a cooking demonstration or a sewing technique video, WoW players are known to watch online tutorials. For example, there are WoW-dedicated YouTube channel owners and live-gaming-video streamers who publish gameplay videos and WoW-related content including information, tactics, strategies, and tips and are viewed by millions every day. It is practical to watch a video of a successful raid or a boss kill before going into battle to do the same in the game as it saves the guilds time and energy. In addition, players most probably enjoy watching other players’ gameplay, not just to learn something new, but almost as a hobby that comes with being involved in WoW in any capacity. This resembles a football coach watching other teams’ gameplay videos to learn what kinds of techniques and tricks the other coaches are using and to also appreciate and enjoy the display of what he or she is already interested and invested in. As the survey comments showed, participants like to watch “kill videos” to get ready for a boss just as they would for their other hobbies or to get practical information quickly.

Q6. I think research enhanced my play quality and player ability. (3.92 rating on survey) This result could be based on the notion that even though play quality and player ability are personal and individual components that differ from player to player and depend on competence, experience, and skill, they are not static entities that remain the same throughout the gameplay span of a player. These qualities can be improved by particular efforts and doing research is one that can enhance and elevate them. As
previously mentioned, WoW-related research reveals information, tactics, strategies, and already tested approaches from multiple perspectives that can help the players to refine and apply these ideas to their own particular problem or situation. Therefore, even though gameplay is perfected through experience, practice, and trial-error, players might be seeing the benefits of research in terms of adding finesse and expertise to their skill sets and play quality. This concept was supported by the survey comments where the participants referred to research they do for their professions. They stated that just as work-related research “polishes” the outcomes and helps them to become better at their jobs by adding expert value to even a simple task, WoW-related research helps them to become better players by presenting additional viewpoints that enrich the gameplay process.

Q7. I think I have successfully mastered practical skills in acquiring information needed to play WoW. (3.95 rating on survey) As stated above, doing research can be a crucial part of WoW for its players. Therefore, it is expected that they feel the need to acquire information in practical and instantaneous ways rather than lengthy and cumbersome research sessions. As this skill is a valuable one to have and is practiced often, it is natural that the players gain control over and master it as a “survival” instinct that can help them get out of situations and solve problems promptly. Naturally, it may take some time and practice for some players to master this skill, especially if they do not have any prior MMORPG experience. However, the fact that participants are almost in overall agreement in believing they possess this skill shows that they use it frequently and effectively. This notion is showcased in the survey comments where the participants
stated that they can easily and quickly get information because they know how to assess and compare the sources they get access to since they practice it many times as part of their gameplay routine.

Q8. I do research independently and for self-directed purposes. (3.48 rating on survey) Since players who belong to guilds do research for specific purposes as part of a raid or a boss kill, there is a sense of collectivism as opposed to individualism. This can even be true when a guild member is doing research for his or her own class specifications and strategies because he or she will utilize the product of the research to aid the ultimate goal of the guild. Nevertheless, the research inherently aids the individual player because his or her character specifications improve and his or her level advances. Therefore, the reason for this close-to-neutral result could be that even though players are conscious and aware of the independent and self-directed research they do, they might be viewing its outcome as related to the group rather than the individual. This surfaced in the survey comments where the participants stated that even though they realized the importance and benefits of research for the individual player, they referred to it as a process they also engaged in for fellow players in case specific information was needed for a certain class or a race and someone needed to supply it to help and to accelerate the progress. It is also possible that the participants interpreted this question as referring to the game rather than real life where group activities are not as dominant as within the game.

The researching theme revealed two sub-themes: (a) research for playing WoW and (b) research for other purposes prompted by WoW.
Research for playing WoW. Participants stated engaging in research for immediate and practical use within the game. It was important for the participants to gather practical information in terms of “Raid knowledge. Class knowledge” and “…quests, bosses, areas, weapons, and armors.” Their aim was to possess mastery of the game skills as well as equip themselves with raid and quest survival sets. All participants indicated a desire to become better at the game by learning more about what a raid required, what their class was capable of, and how they could troubleshoot more effectively during a raid or a quest. Even though they knew the foundational information that was needed to complete a raid or a quest, they felt the need to go beyond the surface level and search for further information that could provide them with more success and better results.

Participants felt especially responsible for the people in their guilds and on the raids. The sense of responsibility they had for their fellow players motivated them to do research beyond what was needed minimally. For instance, a participant indicated that “I find myself doing a lot of WoW related research. Not just for me, but also for the other players on my team.” In order to accelerate the raid process and raise the quality of the endgame, they engaged in research involving not only their classes and roles but other players’ classes and specs as well. This behavior driven by the incentive of enabling further success rather than settling with minimal results resembled a group project where members engaged in research that would add a layer of quality to the work and could easily be utilized. As stated by a participant,
It is easy to finish a raid if you know what you are doing but if you want superior results, like time runs, you should also know what other players are supposed to do. To do that, you might have to do research for yourself and for others.

Participants referred to the specific procedures in the information gathering process in terms of where and how to retrieve information. Gathering and accessing the information was revealed to be a crucial part of the research process that the players engaged in prior to and after raids and quests. Finding the necessary and relevant sources was highly important for the sake of time and effort. Players wanted to be time-efficient and reach information that was meaningful and useful. The research activities included accessing relevant databases, tutorials, video and audio, images, Wikis, forums, and even other individuals who may know about and even be experts on the search topic. For instance, one participant mentioned, “If I cannot solve my problem, I ask other players.” When doing a search does not yield the results one is seeking, it is natural to consult others who are known to have knowledge and expertise similar to a real life situation where a co-worker can consult his or her superiors to benefit from their experience when his or her current knowledge proves to be inadequate even after doing research.

It is important to know where and how to retrieve information when doing research as finding the right sources constitutes a major part of the process. Therefore, it was beneficial for players to learn where to find the relevant information and turn it into a habit to maximize the useable results of their search. It was suggested that new players might have a difficult time when learning about and determining the specifications and the requirements and to overcome this initial phase, it is advisable to do research and
gather information from multiple sources including other more experienced players to simplify the process and get acquainted faster.

**Research for other purposes prompted by WoW.** Many participants pointed out the resemblance of doing research in and for WoW to doing research in real life. These participants strongly believed that the research skills utilized within WoW were highly similar to the research skills they used in terms of gaining practical knowledge of concepts ranging from everyday activities such as “how to bake an apple pie” to more complicated work related knowledge like “wind turbines in smart grid systems.” For instance, one player suggested

I guess if one wants to paint with a broad brush, I suppose there are similarities between my WoW research approach and other forms of research I do. They all involve some question/concern/problem that sparks a need to know more. This need is followed up my reading materials either online or on paper, asking others questions, reflecting on the materials, and applying ideas to see what happens.

This participant’s account of how he views the research process of WoW showcases the similarity between real life research and gameplay research that are both based on a premise that emerges from a need or a desire to find out more for the improvement of whatever activity or situation in which one might be involved. Once the research is done, the outcome can be applied to the area for which the research was being conducted.

Some participants indicated that they not only engaged in research but went beyond the initial goal of practical use and dedicated time and effort to gaining a deeper
level of knowledge with regards to the topic and its subtopics they were interested in and curious about. For example, one player indicated that

I have quite a lot of hobbies other than playing WoW. One of those hobbies is paper crafting. Before I start any new project I do lot of research, from suitable paper types to tools I need to use, from tutorial videos to pictures of completed projects. It’s not much different than getting prepared for a new boss, reading and researching tactics, and watching kill videos.

According to this participant, similar to doing detailed research about a topic one enjoys or simply needs to know more about, WoW players engage in such research that provide them with detail, finesse, and long-term retention of knowledge. Such dedication to gather information beyond what is needed is rooted in the fact that the person is genuinely interested and invested in the subject matter. Therefore, the scope and depth of the research done exceeds the practical use parameters and results in in-depth and long-term learning.

Additionally, participants referred to real life and professional experiences and pointed out the similarities between doing detailed, in-depth, and critical research for work related matters and performing equally demanding research activities for WoW. For instance, one player stated

I think the expectations from the player of a specific class while tackling a raid boss is quite the same when an individual tries to solve a problem. Player should be proficient with his or her set of skills and be able to react to certain conditions that the raid boss creates. If not, then the player should prepare him/herself
regarding those conditions. From a computer engineer’s perspective this approach is similar in my professional life. While I have the required programming and algorithm skills, a problem that I have never encountered would have me delve into the web and try to figure out other people’s approach to the same problem in order to gather an insight from their experiences.

This player’s account was an indication of how it was not enough to know the necessary information needed for successful raid completion, but how players needed to be prepared for possible unforeseen circumstances, issues, and problems. For such detailed preparation, equipping oneself with the initially and commonly available information would not suffice; one would need to learn about subtopics and gain deep, mastery level knowledge. Therefore, just as a person’s job may require dependable and deeply embedded knowledge of the subject matter, WoW players engage in research that would qualify them to be experts in the field in case an unpredicted offshoot surfaces within the game.

Additionally, participants mentioned how the research skills they gained in WoW influenced their life habits in terms or researching and information gathering from sources. For example, one participant stated, “I do and even on internet I use search methods parallel to my WoW researching. I use careful catch phrases in Google, more advanced forum, image and video researching about various subjects” while another mentioned that

Researching became a habit as I continue playing WoW and MMOs. While WoW is pretty complicated to the new players, I started researching for Wikis and
guides of the game, which also made me do the same for all the other subjects in real-life.

Both accounts were representative of players having gained source finding and information gathering skills due to playing WoW and how these skills transformed into research habits utilized by the participants on a regular basis.

**Negative comments of researching.** In terms of comments regarding doing research for WoW and outside of WoW, there were some comments that focused on the comparison between WoW research and real life research. For instance one participant suggested that “Research topics of a MMO is so limited compared to real life objectives… Real life research and development is much more complex and awarding then a game.” Similarly, another participant mentioned that “i don’t engage in a researching process in real life that i resembles the one i was engaged in wow because even wowhead.com and wikia will be enough for knowledge for wow”. The reason why these comments centered on the extensity of research could be that participants viewed WoW related research as limited in scope in contrast to real life research that can be done about an infinite number of topics. Therefore, they found WoW research to be less challenging than research done in real life. They also thought that WoW research was limited to known WoW related sources rather than outside sources that could include material that could be utilized.

**Implications of the Study**

Video games in general and MMORPGs in particular traditionally have not been viewed as valuable educational platforms or tools as the word “game” itself seems to
entail a lighthearted environment where learning is not the ultimate goal. Even though games are being utilized more in educational settings in comparison to earlier efforts, their educational potential still does not seem to make a convincing argument for skeptics and others who believe in generally accepted guidelines for how learning can take place. It appears as though video games need to be justified or even defended in order to prove that they have a legitimate place and value in education and learning settings in terms of providing learners with exciting, motivating, and stimulating opportunities resulting in high quality learning and skill application. Perhaps the easiest and most straightforward positive attribute of video games to showcase and validate is their motivational aspect, as few scholars would deny the enthusiasm games achieve to manifest. However, it is imperative to recognize that video games and MMORPGs can and do go beyond this obvious and well-observed characteristic and present a plethora of learning opportunities that need to be explored and capitalized on.

This study contributes to the field in the sense that it demonstrates the potential of a commercial MMORPG as a social platform that offers and provides repeated skill building and improving moments where multiple types of learning occur. It shows that even a game not designed with learning in mind as the end result can promote crucial skills such as critical thinking, problem solving, collaboration, decision making, leadership, source utilizing, and personal growth. Therefore, it helps to “build a case” in favor of video games in general and MMORPGs in particular as educational platforms where a variety of types of learners can be targeted and engaged. Especially considering the new generation of learners that demand tools that are more multidimensional and
more reflective than what traditional education systems have been implementing and “prescribing” as a remedy for all needs, video games can be seen as valuable tools that will answer and accommodate such demands and fall in line with the current and future educational trends that require creative and evolving methods of knowledge and skill transfer.

**Limitations of the Study**

This study had been intended to involve active WoW players only. However, some of the participants that responded were former WoW players. Even though their input and reflections are still valuable because they are based on past experience, perceptions of a group that consists of only active players could have provided more generalizable results as to the representation of current active population of players. In addition, since the data were collected via self-reports of participants and were based on participants’ perceptions regarding the application of the learning skills they have gained from playing WoW to real life, it cannot be conclusive as to the actual extent of how much these learning skills are applied or reflect an overall reality. In addition, the perceptions of highly active WoW players may differ from the perceptions of casual WoW players who do not spend as much time in WoW as the participants of this study.

At the time of the study, WoW had 13 million subscribers. This study recruited 1,149 players who started the survey and only 258 of these players completed the survey and became the actual participants. Therefore, the small number of participants in comparison to the number of subscribers worldwide yields results that only apply to that particular group instead of reflecting the perceptions of larger populations.
Even though the survey questions were in English, some participants whose first language is not English, were able to translate the questions and provide answers accordingly. However, the premise that translation might cause losses in meaning cannot be denied. It is possible that participants who had to translate the questions could have misunderstood or misinterpreted what they read. Additionally, they might have left out some statements they could have otherwise mentioned just because they could not form complicated sentences due to English as a second/foreign language.

Another limitation that occurs frequently with surveys that include open-ended questions was observed in this study where not all participants completed the comments section even though they completed the survey. Had they provided responses for the open-ended questions, more comprehensive and varied data could have been obtained. It could have also helped to explore further options as to how participants from different background and cultures react to concepts in view of their experiences.

Furthermore, since the study procedures were conducted online, even though the participants consented to being over the age of 18, it is possible that some participants could have provided misleading information. Therefore, assuming that some participants could have been under the age of 18, it is possible that they may not be familiar with the concepts presented in the survey.

Originally, I included questions that would render demographic data. However, I made the decision to leave out the analysis of those questions as they would have supplied a whole set of data with further implications that would have overwhelmed and complicated the analysis phase. It would have meant that the relationship between the
demographic data and survey results would need to be explored. Therefore, I came to the conclusion that another study could look into that specific relationship. I also did not want to overwhelm the participants with a larger number of questions because I did not want them to be discouraged and drop out.

Lastly, this study was limited in the sense that the researcher himself used to be a highly active WoW player and has prior involvement with the game. Therefore, the researcher’s attitude towards and experience with the game might have had presented unintentional biased views. The researcher did his best to set aside certain expected outcomes regarding participants’ perceptions due to his own prior engagement with the game even though it is challenging to separate human subjectivism from all research.

**Future Research**

The purpose of this research was to explore the educational benefits and the transferability of skills gained or improved while playing World of Warcraft (WoW) to real life. The results have shown that WoW players are engaged in learning opportunities and they perceive to be able to transfer the skills they gain or improve during gameplay to real life. However, several additional questions could be beneficial to explore. It would be worthwhile to investigate whether other types of learning could occur besides the ones that were found in this study. In order to do so, predetermined learning categories for the study design might have to be eliminated so that the data gathered can be categorized into themes without presumptions. Similarly, other uninvestigated types of learning and concepts can be explored in detail.
This study investigated the educational potential of an MMORPG in its natural setting with no intervention regarding specified implications or controlled practices that could provide target outcomes. In other words, this study was not concerned with controlling certain aspects of the game or its application in a classroom to test its potential; it proceeded to determine its pure educational potential when played with its intended purposes. Therefore, future research on MMORPGs’ educational potential should be empirical and move to a classroom setting with implementation targeted for learner populations who are not casual gamers, but are expected to use the game for specific learning outcomes. For instance, depending on the major and minor learning outcomes of the curriculum, certain aspects of the MMORPG can be manipulated and controlled in order to determine how a collaboration of the instructor or the facilitator and the game environment and controls can lead to purposeful learning and transfer.

For instance, since the majority of game content focuses on quest completion, classroom practices can capitalize on quest modification to fit curricular goals. If a quest involves using an element, it can be modified in order to require students to carry out the procedures for the necessary chemical reaction that will create that element. Similarly, the puzzle type quests in the game where the players have to gather information in order to solve the puzzle can be modified for the specific target knowledge that the curriculum is calling for. For example, a puzzle quest might provide hints that can lead the player to do research about a famous composer, scientist, or author. In accordance with the curriculum, the puzzle quest can be designed to lead students to look for specific information regarding a target topic or person from history depending on the subject that
is being taught at the time. Additionally, excerpts from a book or a story that the students are assigned to read can be implemented into a series of chain quests for the purposes of dramatization or visualization, which can help students to retain information more effectively and put into context. Therefore, modifications in terms of accessing prior knowledge, researching new information related to current knowledge, and imagining and experiencing new knowledge across varying formats can be utilized in order to control aspects of the game that can initiate, enhance, and elevate learning. Future research can focus on learning outcomes that are achieved through making these purposeful modifications that align with curricular goals.

Additionally, future research on MMORPGs’ educational potential can analyze the principles these games operate on in order to examine how players’ interactions with other players and reactions to the game mechanisms emerge. Understanding and analyzing these principles can help educators to design elements that rely on the principles for the motivational and goal oriented aspects and that focus on specific learning goals and benchmarks. Therefore, instead of investigating whether MMORPGs have an educational potential, it is more practical to accept their potential and find ways to maximize the benefits of the principles they rely on since these principles are proving to keep the players engaged, interested, and motivated.

Some of the principles of MMORPGs operate on are advancement, skill, variability, risk and reward, immersion, justice, limited intervention, rarity, community, identity, and existence. Players build identities in these fantasy worlds where they exist to make a difference and affect outcomes. These worlds are designed to provide a
coherent flow and a logical story that players can be immersed in and become part of a community built around the idea of collaboration towards a common goal. They become accustomed to the idea that even though there is limited intervention on part of guild masters in cases of conflict, justice will be carried out. Players also know that improving their skills and playing in a dedicated manner, they will advance in the game and achieve their target goals. Additionally, players are aware that besides the obvious rewards they receive by playing the game consistently, there will be other more appealing rewards that can be gained by taking risks. Along these lines, finding rare items or achieving rare accomplishments is an appealing aspect that is accomplished in the game’s design by employing variability. Future research can look into finding parallels between these principles and ways of achieving educational goals and determine how these engaging principles that seem to work well for MMORPGs in terms of motivating and captivating players can do the same for certain groups of learners.

As mentioned earlier, even though participants were intended to consist of active players only, some participants were former players. Since most of the data gathered from the participants is dependent on their active involvement in the game, their perceptions are informed by their regular interactions. Therefore, active players and former players might have changing attitudes over a certain time period. It might be beneficial to conduct a study on former WoW players to determine whether there is retention regarding types of learning and learning skill transferability. The former players in this study reported that they had recently quit playing WoW, which could mean that their accounts will resemble those of active players. Therefore, the question of
whether long-term withdrawal from the game causes the skills to diminish could be investigated.

Moreover, out of the 1,149 people that had started taking the survey, only 258 of them completed the questions in their entirety. This is due to the research design where surveys do not necessarily guarantee that participants will follow through until all usable data are collected. Even though participants in research studies are generally not obliged to complete the procedures, this becomes more problematic with online survey design where dropping out of a study has no important implications such as having met the researcher in person and being apprehensive about letting him or her down. A future study could employ other research procedures to ensure higher participation follow through. Since WoW has the highest number of subscribed players among all MMORPGs, in order to render richer and more generalized results, the study could be replicated with a much larger group of participants under varying circumstances that could involve more dedicated study participants.

This study involved participants from a variety of backgrounds and cultures. Considering the fact that different cultures have different perceptions and attitudes about what learning is, where and how it takes place, what it means, and what constitutes a learning environment that is inducive to learning, multiple studies that are culture specific can be conducted for comparison reasons. Cultural influences can be a determinant with regards to perceived types of learning and skill transfer that can be tested across cultures.

Since I had made a decision to leave out the demographic data questions that I had originally planned to include, this study has no distinctive data categories in regards
to age, race, ethnicity, gender, and socio-economic status. One of the reasons why that decision had to be made was because MMORPGs are the only social institution where a younger age group with limited life experience and skill set is able to collaborate with and even lead older age groups and act as a leader they follow and respect. Notions such as this introduce multiple layers of implications that need further investigation and at the time went beyond the scope of this study. Therefore, future studies can focus on a variety of demographic specifications and determine how each element affects learning and skill transfer. Additionally, social issues that have real life consequences and implications such as ageism, sexism, racism, classism, able-bodyism, homophobia, and xenophobia can be explored in future studies by employing demographic data and other specifically designed questions. Some of these concepts emerged in the comment sections of the survey, but could not be explored further because they went beyond the scope of this research study.

The participants in this study consented to being 18 years and older. A similar study can be conducted with a younger group of participants who are in their developmental stages and are actively registering and responding to stimuli resulting in learning and new information gaining. Since WoW players are playing across cultures, the game creates an opportunity for younger players to be exposed to other cultures and to gain attributes such as cultural awareness, tolerance, cultural sensitivity, and diversity. This research study found that players experienced personal growth through socializing and collaboration with other players. A future study can take into account the mentioned
personal traits and investigate whether they can be achieved through collaboration, teamwork, and socializing in younger players.

This study focused on the learning outcomes and skill transferability potential of playing WoW; it was not concerned with the reasons behind playing WoW. Considering the fact that people have different motivations for playing WoW, it might be beneficial to determine what they are in order to plan interventions that could parallel and enhance these motivations with specific learning goals. A future study can be designed to uncover the reasons behind playing MMORPGs in general and WoW in particular as well as to determine whether these specific reasons have effects on learning and skill transfer.

The results of the study have shown that participants believed to have gained leadership skills as a result of playing WoW. Some of these participants mentioned that they had leadership roles in their lives, usually in their jobs. Therefore, a more controlled study that focuses on whether individuals who do not have leadership responsibilities in real life can gain and improve leadership skills solely by playing WoW.

Furthermore, a longitudinal study can be conducted in order to observe skill building and learning over time such as following a player’s journey where he or she starts from scratch and continues for a year or two years. In addition, a future research study can be conducted in a classroom setting where a video game or specifically an MMORPG is implemented in the curriculum and class design, which would provide more controlled data.

For instance, a social responsibility project component can be added to an MMORPG where students are exposed to social skill building, empathy building, and
awareness building as well as developing ideas for fund raising, community involvement, and resource allocating. At the end of the school year, the students can be tested on whether these specific skills were developed and utilized and to what extent. Similarly, an MMORPG designed as Fortune 100 Company can be implemented to determine whether leadership and management skills are improved during a specific time frame. Furthermore, a study can be conducted on the effectiveness of an MMORPG where players can ascend to the next level by solving scientific problems that involve physics, chemistry, biology, and math skills to determine which skills are developed most or whether scientific facts and rules are learned long term. Finally, a language focused MMORPG with a variety of tasks that involve specific vocabulary and grammar structures for task completion can be used in a language program and its communicative potential can be studied.

MMORPGs can be utilized in various different environments of real world applications. They can provide a secure environment where otherwise risky application with serious consequences can be tested and applied if necessary. In sectors such as military and health, mistakes on the job can cost lives. Therefore, by utilizing the MMORPGs games, the users are allowed to try and test out the skills that they have learned so far in their training and even make errors without the fear of real life consequences. It can even be beneficial to make a mistake on purpose just to see the results and the extent of impact. Certainly, MMORPGs can be utilized in a variety of situations that do not necessarily involve dire consequences. For instance, criminal justice programs can use an MMORPG that will create a crime scene for a team of
investigators to look into to determine a cause of death or a sequence of events.

Similarly, law programs can employ MMORPGs that can simulate court cases with assigned responsibilities such as a judge, attorneys, prosecutors, and defendants. In addition, due to the dominant social interaction element of MMORPGs, counseling programs can use them for the practice of communicative skills and case simulation such as facilitating a virtual AA meeting. Finance and economic programs can have an MMORPG component where a variety of situations can be experienced such as unforeseen financial crisis or budget distribution in a big scale company. Similarly, a virtual company with assigned roles can be used in business administration programs where students can practice being all the way from a CEO to a beginner level intern. Along the same lines, corporate training programs can be carried out in MMORPGs where leadership and management skills can be built and developed. Finally, education programs can utilize MMORPGs for classroom management, subject matter development, lesson planning, PTA meeting simulations, and pedagogy.

The purpose of this research was to explore the educational benefits and the transferability of skills gained or improved while playing World of Warcraft (WoW) to real life. It set out to illustrate how a commercial online game such as a highly popular MMORPG can double as a learning and a training platform for its players by equipping them with certain skill sets or helping them to advance already existing skills and how such potential can be maximized in educational settings. It proceeded to reveal that if even an online game designed without educational outcome goals can have an educational impact on its players, a purposefully educational or instructional game can
bring about considerably positive results for learning. Therefore, this research demonstrated the potential of an MMORPG as an educational platform where by creating educational content, desired learning outcomes can be achieved.

This research also showed that, in essence, an MMORPG has a built-in real-life like structure in terms of social groupings, teamwork, human communication, goal orientation, work ethics, and learning by doing. Future game designers can pedagogically manipulate and modify this structure and create stimulating, engaging, and motivating educational games based on a conceptual framework.

**Conclusion**

Previous studies regarding video games, simulations, and MMORPGs have shown that experiential learning opportunities manifest themselves in these platforms where the players can practice their knowledge and skills (Ellaway et al., 2009; Moffit et al., 2010; Ranalli, 2008). Particularly, literature demonstrated that critical thinking, problem solving, scaffolding, practicing, and relational thinking are important skills that can be gained and improved by playing video games (Myers, 2007; Muñoz-Rosario & Widmeyer, 2009; Squire, 2003). These skills are foundational to learning through experience and can be implemented to real life when obtained from a virtual environment. This research study supports previous research in terms of the manifestation of experiential learning in an MMORPG and its transferability to real life.

Similar to prior studies investigating the educational potential of video games, simulations and MMORPGs, this research study found that playing WoW promotes critical thinking, problem solving, decision making, and relational thinking, which are
target primary skills that traditional education strives to provide learners with. In addition, it also showed that language learning is a skill that WoW helps to improve, as multiple studies had previously pointed out (Rama, Black, van Es, & Warschauer, 2012; Schneider & Zheng, 2007; Wiklund & Ekenberg, 2009).

In addition to aspects that had surfaced in prior literature, this study found components of experiential learning that had not been investigated or mentioned in prior research or had been found to render negative results. These particular components are personal growth and time management. Participants of the study frequently referred to positive personal traits that they believed to have acquired through playing WoW consistently. Since education systems are designed to promote personal growth to raise individuals who can lead healthy lives and add value to society, this positive outcome can be seen as another benefit that the virtual environment provides as an educational outcome. In terms of time management, prior research mentions negative implications (Sanders, Atkinson, Dowland, Furnell, & Papadaki, 2011) regards to game players not being able to manage their time effectively and even wasting valuable time they could have dedicated to other more important activities. Even though some participants in this study made statements that support previous studies and their negative implications in terms of time management, a higher number of participants stated that their time management skills improved and they became more organized in their real lives.

Collaborative learning is another component that virtual environments and MMORPGs in particular have been reported to promote (Gee, 2003b, 2004, 2005; Prensky, 2001, 2006; Steinkuehler, 2004; Williamson & Facer, 2004; Winograd, 2005).
Studies have shown that collaboration, socialization, communication, and coordination are outcomes of playing MMORPGs and becoming active agents of social groupings within games (Chen, 2010; Cole & Griffiths, 2007; Dickey, 2007; Golub, 2010). These concepts make up the basis for learning collaboratively as individuals need to utilize them when engaged in social interactions that are goal driven, product oriented, or even simply created for communicative reasons. This research study found evidence that support the findings of previous research in terms of collaborative learning emerging from collaborative, social environments of video games in general and MMORPGs in particular.

This study coincided with prior research in terms of collaboration and socialization. It revealed that teamwork through effective social interaction was a key element that players believed to have acquired by playing in groups to achieve a common goal and learning from one another in the process. In addition, supporting previous research in terms of social skill building and collaborative strategizing for problem solving (Curry, 2010; Steinkuehler & Duncan, 2008), this study found that players developed transferable collaboration and socialization skills by being active members of guilds whose goals are to achieve certain goals within the game by utilizing each individual’s talents through effective communication for a collective outcome.

Furthermore, in this study, two additional aspects of collaborative learning emerged that had not been mentioned or investigated fully in previous research. One of these aspects was participants’ perceptions of their own personal growth in terms of developing tolerance, patience, awareness, needs assessment, social cue recognition,
pride, security, and gratitude as a result of being part of a group working towards a common goal. These attributes are necessary pillars of interpersonal relationships that are hoped to be implied in education systems and sometimes end up remaining as utopic nuances as their implementation is hard to achieve in traditional school settings. Therefore, players’ self-realization of these attributes and their transfer to real life demonstrates a naturally occurring positive outcome of MMORPGs that could be applied to education.

Another aspect of collaborative learning that emerged in the study was conflict management. Recognizing, acknowledging, assessing, and managing a conflict are crucial skills that players were appreciative of obtaining by playing in a collaborative and social setting that presented conflict as both an avoidable and a necessary part of collective and individualistic goal achievement. MMORPGs create simulated opportunities of conflict management where players get to repeatedly practice patterns of resolution and negotiation which traditional education systems do not always have the luxury of implementing.

According to prior research, commercial computer games, simulations, virtual worlds, and especially MMORPGs can help their players obtain leadership skills through the tasks they need to complete and the leadership roles they take on in the game (Brown & Thomas, 2008; Squire, 2003, 2006; Yee, 2006). It was also stated in previous studies that leadership skills emerge as a result of following a set of procedures within games and are not intentional. Leadership experiences allow the players to gain and practice skills such as recruiting, evaluating, assigning tasks, planning, managing crisis, communicating
effectively, motivating, and taking responsibility for decisions and actions. These make up the foundation of a successful leader who as a player can transfer these to his or her real life on multiple platforms. This study supports previous research in terms of the emergence and practice of leadership skills and their manifestation in real life.

Similar to previous research referring to multiple and specific leadership skills that are acquired or practiced by playing video games, this research study found that players perceived themselves to have become strong and effective leaders or at least to have gained certain leadership skills they were able to apply to their real lives. Specifically, a leadership component that Squire (2003, 2006) had uncovered in his research involving Civilization III surfaced in this research study which was making important decisions and taking responsibility for actions. In addition, participants in this study referred to aspects of a respected and effective leader that had not been mentioned in previous studies. These particular skills were being approachable, consistent, fair, and assertive yet flexible to a degree.

An aspect of leadership that had been briefly mentioned in previous research proved to be highly prominent in this research study. Even though previous research had shown that dispute resolution and conflict management involved managing players, the concept of managing different personalities and its importance in terms of transferability to real life, especially the workplace, had not emerged as a substantial theme. This research study showed that participants were highly aware of having gained the ability to manage different personality types effectively in order to control crisis as well as to keep harmony and peace which they found to replicate in their real lives.
Previous studies had referred to autonomous learning as a skill that emerged within video games through the need for discovery, research, and personal motivation (Gee, 2003a, 2005; Prensky, 2001, 2003; Shaffer, 2004). Research also showed that players were expected to do research by accessing and utilizing multiple sources providing information and a variety of perspectives. Becoming autonomous learners who can identify their needs and consult outside sources with a motivation to explore and discover is a foundational and necessary skill that education systems strive to administer. This research study rendered results regarding intrinsic motivation related research, information gathering processes, and source utilization.

This study revealed that participants engaged in research for practical use within the game driven by interest and motivation as well as research for other purposes prompted by the game. This result coincided with previous research (Chen, 2009; Gee, 2005; Nardi & Harris, 2006) in the sense that video games reinforced the need for information gathering by accessing players’ already existing motivation to learn more and be more successful within the game. The research process was enhanced by the intrigue and motivation the game supplied. It also showed that participants saw similarities between the research process they engage in for the game and the research process they encounter in their real lives.

Furthermore, in terms of specific information gathering procedures that included finding and accessing online and offline manuals, databases, Wikis, discussion forums, video tutorials and informational websites, this research study was in agreement with previously done research studies (Dickey, 2007; Steinkuehler & Duncan, 2008). Playing
WoW helped participants with research habit formation, which is necessary for becoming an autonomous learner.

In addition to the above-mentioned notions, this study presents qualities that make it stand out as a unique investigation of the learning potential in an MMORPG game. First of all, due to the design and mechanics of the study, it can be considered as the most comprehensive study of what can be learned from MMORPGs as it examines a wide variety of learning issues rather than focusing on one or two specific categories. Studies in this field have typically focused on motivation, identity, collaboration, socialization, and language learning as individual outcomes. However, this study explored several learning and skill building issues and more importantly, their transferability to real life. In addition, it does so in depth as it explores the participants’ perspectives and perceptions through their comments. It allows the participants to elaborate on what they think and feel in terms of their own learning, which is not a common practice in similar research studies. This provides an additional dimension and even an interesting angle in terms of examining learners’ detailed depiction of their learning experience.

Furthermore, the majority of the previous studies focused on simulation games and educational games that were either designed for educational purposes relating to real life or were based on real life situations that could be replicated or experienced. However, this study was based on a commercial fantasy role-playing game that had no known educational purposes or intentions and was not concerned about creating real life scenarios. Therefore, this study is unique in the sense that it was able to document how learning from a world that exists in imaginary realms with creative unreal content can be
transferred to the physical, everyday life. Finally, the vast amount of data obtained from a global audience gives this study an edge in terms of more homogeneous and relatively more generalizable results. Considering the fact that the gathering of participants simply depended on their voluntary response to a request they came across online on various different types of sources such as forums and web sites, the high number of responses elicited suggests a strength in terms of credibility and validity.
APPENDICES
APPENDIX A

INFORMED CONSENT FORM OF SURVEY
Appendix A

Informed Consent Form of Survey

Transferable Learning Skills of an MMORPG: A World of Warcraft Quest

This is a research study. I am inviting you to participate in this research study because of your interest in online role playing games. In recent years, Massively Multiplayer Online Role Playing Games have become increasingly popular. With this increasing popularity, it emerged as a potential educational tool.

The purpose of this survey is to attract attention to Massively Multiplayer Online Role Playing Games in general and World of Warcraft in particular as interactive and effective learning environments for today’s educational needs and demands. I ask that you read this document and ask any questions you may have before agreeing to participate in this study.

If you agree to participate in this research study, you will complete the online questionnaire found at the conclusion of this consent form. The questionnaire will take approximately 15-20 minutes to complete. This Survey asks questions about your World of Warcraft playing interests, social interests and needs, potential excessive Internet use, motivational aspects, research, leadership and your overall learning experience. After completing the survey, you will automatically enter a random lottery drawing for an in-game rare World of Warcraft item.

I will keep your participation in this research study confidential to the extent permitted by law. No personally identifiable information will be requested of you for participating in this study. However, at the end of the survey, you will be asked to provide a valid email address for two purposes: to automatically enter a random lottery drawing to win an in-game rare World of Warcraft item and to be contacted to be interviewed by the researcher. Please note that not all survey participants will be asked to be interviewed. In addition, please be informed that your email address will be solely used for the drawing and for contacting you to provide with the information regarding the item in case you win and for contacting you in terms of determining whether you would wish to participate in an interview or not.

In case you are contacted to be interviewed, the interview procedures are as follows: you will be asked to participate in a VOIP (Voice over Internet Protocol such as Skype) in-depth semi-structured interview regarding the same topics covered in the survey. With your permission, interviews will be audio recorded.

It is possible that other people may view your survey submission. For example, federal government regulatory agencies and Kent State University Institutional Review Board (a
committee that reviews and approves research studies) may inspect and copy records pertaining to this research.

To help protect your confidentiality, I will limit access of all research records to the Kent State University Institutional Review Board. All individual survey data pertaining to this study will be destroyed after seven years. If I write a report or article about this study or share the study data set with others, I will do so in such a way that you cannot be directly identified. If you have any questions or concerns regarding your rights as a subject in this study, you may contact the Kent State Institutional Review Board (IRB) at 330-672-0837 or access their website at http://www.kent.edu/research/researchsafetyandcompliance/irb/index.cfm

Taking part in this research study is completely voluntary. You may choose not to take part at all. If you decide to be in this study, you may stop participating at any time up until the point you hit the submit button at the end of the survey. Due to the anonymous nature of this study, it will be impossible to tie survey to specific individuals.

You will not receive any direct personal benefit from completing this study. However, your participation could provide me with important information about the possibility of transferring the learning skills that you may acquire from playing World of Warcraft to real life and could help to promote a better understanding of using these environments as learning tools.

There will be no physical or psychological risks to your participation in this study.

I encourage you to ask questions. If you have any questions about the research study itself, please contact:

Project Advisor: Drew Tiene, Ph.D.
Professor, Kent State University
330-672-0607, dtiene@kent.edu

Researcher: Evren Koptur
College of Education, Health and Human Services, Kent State University
330-389-0783, ekoptur@kent.edu

If you are 18 years of age or older, understand the statements above, and freely consent to participate in the study, click on the “I Agree” button to begin the experiment.
APPENDIX B

INFORMED CONSENT DOCUMENT FOR INTERVIEW
Appendix B

Informed Consent Document for Interview

Transferable Learning skills of an MMORPG: A World of Warcraft Quest

EVREN KOPTUR

I agree to participate in an audio-taped interview about my learning experience in World of Warcraft game as part of this project and for the purposes of data analysis. I agree that Evren Koptur may audio-tape/video tape this interview. The date, time and place of the interview will be mutually agreed upon.

________________________________________________    ______________________
Signature                                                                 Date

I have been told that I have the right to listen to the recording of the interview before it is used. I have decided that I:

____want to listen to the recording            ____do not want to listen to the recording

Sign now below if you do not want to listen to the recording. If you want to listen to the recording, you will be asked to sign after listening to them.

Evren Koptur may / may not (circle one) use the audio-tapes/video tapes made of me. The original tapes or copies may be used for:

____this research project    ____publication    ____presentation at professional meetings

________________________________________________    ______________________
Signature                                                                 Date
APPENDIX C

SURVEY QUESTIONNAIRE
Appendix C

Survey Questionnaire

Please select the most appropriate choice of each statement which corresponds most closely to your desired response. At the end of each section, there is a comment question.
(1-Strongly disagree, 2-Disagree, 3-Neutral, 4-Agree, 5-Strongly agree)

<table>
<thead>
<tr>
<th>Experiential learning/Personal Growth/Continuous Feedback</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
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</thead>
<tbody>
<tr>
<td>1. I have changed in terms of personality/skills/knowledge/thinking since I have started playing WoW.</td>
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<tr>
<td>2. WoW has taught me something about myself.</td>
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<tr>
<td>3. I learned something in WoW that I applied to my real life.</td>
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<tr>
<td>4. I find myself making changes in my decisions/manners/actions based on the feedback that I receive in WoW and this manifests itself in real life.</td>
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<tr>
<td>5. My experiences in WoW resemble real life experiences.</td>
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<td>6. I find repeated raids/actions/fights/interaction effective in terms of perfecting game play and player skill.</td>
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<td>7. Playing WoW improved my problem-solving skills.</td>
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<td>8. Please elaborate on your experiential learning experiences in WoW.</td>
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Collaborative Learning/Social Skills

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<tr>
<td>1.</td>
<td>I believe that WoW guilds and/or communities resemble Collaborative Learning environment/settings in real life.</td>
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<td>2.</td>
<td>I think PvE raids/dungeons help me to develop socially.</td>
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<td>3.</td>
<td>Interaction with other players helps me with/accelerates the learning process.</td>
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<td>4.</td>
<td>I think the negotiations made during game play in WoW are transferable to real life in terms of success.</td>
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<td>5.</td>
<td>Multiple perspectives of fellow players create critical thinking opportunities for me.</td>
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<td>6.</td>
<td>I think the social dynamics of WoW transfer to real life.</td>
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<td>7.</td>
<td>I find myself applying the social skills that I developed in WoW to real life situations.</td>
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<td>8.</td>
<td>How do you apply collaborative and cooperative skills you have in WoW to your real life? Do you think you have gained social skills from playing in a WoW guild? Please elaborate.</td>
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<td>Leadership Training/Tutoring</td>
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<tr>
<td>1. I have learned leadership skills in WoW.</td>
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<td>2. I think playing WoW has taught me to make important decisions for other people.</td>
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<td>3. I think playing WoW has taught me to effectively control/manage/direct small or large groups of people in real life.</td>
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<td>4. I think teaching new knowledge/skills to less competent players improves/enhances my own learning.</td>
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<td>5. I think the training strategies that I learned and applied in WoW are transferable to real life.</td>
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<td>6. In what ways and to what extent are training strategies and leadership skills that you have learned from and apply within WoW are transferable and applicable to your everyday life? Please elaborate.</td>
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## Autonomous Learning/Researching

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<tr>
<td>1.</td>
<td>I take initiative in reading/doing research about WoW.</td>
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<td>2.</td>
<td>In real life, I engage in a similar research process as the research process that I conduct for any part of WoW.</td>
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<td>3.</td>
<td>I think I know how and where to get information regarding WoW related content.</td>
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<td>4.</td>
<td>I use multiple resources to gain information about a task/problem/strategy.</td>
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<td>5.</td>
<td>I read/watch tutorials about WoW related content.</td>
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<td>6.</td>
<td>I think research enhanced my play quality and player ability.</td>
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<td>7.</td>
<td>I think I have successfully mastered practical skills in acquiring information needed to play WoW.</td>
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<td>8.</td>
<td>I do research independently and for self-directed purposes.</td>
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<td>9.</td>
<td>Do you engage in a researching and information gathering process in real life that you believe resembles the one you are engaged in WoW? Please provide an example.</td>
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APPENDIX D

INTERVIEW QUESTIONS
Appendix D

Interview Questions

Question 1: General Info + Motivation
1. Please tell me about how and why you started playing WoW. What aspects of WoW are appealing, motivating, and engaging for you?
2. Please tell me about the WoW guild you belong to, how and why you joined it, and why you enjoy playing with the people in your guild.

Category 1: Experiential Learning/Personal Growth/Continuous Feedback
3. In what ways are your experiences in WoW similar to your real life experiences? Please provide an example.
4. To what extent do you think you can apply what you learn from your experiences in WoW to your real life? Please provide an example.
5. In what ways has playing WoW affected your personal growth? Please provide an example.

Category 2: Collaborative Learning/Social Skills
6. Do you think you have gained social skills from playing in a WoW guild? Have you found yourself applying these social skills to your everyday life? Please provide an example.
7. Playing in a WoW guild requires constant negotiations regarding game-play, strategies, task assignments, trading, etc. How much do you think these negotiations resemble real life situations? Please provide an example.
8. Do you believe that WoW guilds are collaborative learning environments? Have you found yourself benefiting from working with other players in terms of attaining a goal? Do you benefit from being exposed to multiple perspectives? Please elaborate.
9. Does WoW promote cooperative play or competitive play? Do you think it might promote both? In what ways? Is your guild a cooperative or competitive environment? How do you apply collaborative and cooperative skills you have in WoW to your real life?
10. Do you think you learned something from playing in a guild that you think is not related to the game, but still valuable to you in your real life? Please provide an example.

Category 3: Leadership Training/Tutoring
11. Please tell me about your role in your guild. Do you have a leading position? If yes, please tell me about your responsibilities. In what ways has playing WoW taught you to manage and lead people in real life? Please elaborate.
12. In what ways do you think playing WoW enhances leadership skills? Please elaborate.
13. In what ways and to what extent are training strategies that you have learned from and apply within WoW are transferable and applicable to your everyday life? Please provide an example.

Category 4: Autonomous Learning/Researching/Information Gathering
14. Please tell me about what you do to get ready for raids/dungeons/quests in WoW. Do you do research regarding content/game-play/strategies? Please elaborate.
15. Do you engage in a researching and information gathering process in real life that you believe resembles the one you are engaged in WoW? Please provide an example.
16. What kinds of resources do you use to gather information regarding WoW? How does referring to different resources affect your researching skills and abilities? Please elaborate.
17. What has playing WoW taught you about where and how to find information? Do you find yourself applying these skills to your real life?
18. In what ways have you become an independent learner who is in charge and control of their learning based on what WoW has taught you? Please provide an example.

Question 19 & Question 20: General Info + Learning + Closing Statements
19. Please tell me about the most important life lesson/experience-instance that you believe playing WoW has taught you and in what ways it affected you.
20. If you had a chance to make a change to World of Warcraft in terms of enhancing or implementing a learning aspect, what would it be and why?
APPENDIX E

EXPERIENTIAL LEARNING SURVEY COMMENTS
Appendix E

Experiential Learning Survey Comments

1. First of all, to be able to play WoW functionally, I needed to know English to read quests and socialize with people whom I play together. WoW helped me to learn English. I did not know any English but now, because of playing WoW, and English lessons I can speak English. After being able to play WoW properly, focusing on new tactics of raids, teaching people what to do, analyzing enemy players skills improved my social abilities, problem resolving ability and faster reaction time.

2. I improved my linguistic skills while interacting fellow players from all over the world, and it was an altogether different experience to know them and chat about anything be it inside or outside game. Playing WOW helped me to interact foreign colleagues in my multinational company more easily and this helped me in my job greatly.

3. I learned to work with people to achieve things even if I don’t like all of them. Wow somehow taught me act and work professionally to achieve an objective with a team.

4. Learning how to communicate with other players in real time, really helped me in real life too. In raids or PvP you just need to understand each other and think empathy at the same time. So after the game, it affected my work life in such a good way. Also learning to observe others and environment and thinking out of box, in any condition, you can get more answers to any question. Also it depends on my engineering education too.

5. Actually WoW didn't change a lot of things in my life. WoW just changed my ideas about MMORPGs.

6. I've learned about "competitive" mindset and honing skills through experience, which in turn gives courage and confidence to do stuff that I thought I couldn't before. For example, I was quite bad at PvP and I hated duels. But once I started dueling with my guildies, I learned more and more and became a better pyper. Now I'm bad again but I know I can get back on track if I put effort in it. This is same in real life situations. WoW has taught me to always try again when there is failure and give your best to what you do. Some people may think it is just a game of killing monsters but the people who play the game is aware that it is gazillions much more than that.

7. I find myself using the same techniques when I have to deal with a problem in my life. I think it’s the same process with the same steps. It’s actually fun to see the outcomes in real life because you’re doing the same things you do in the game.

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8. Have lots of experiences about getting along with different cultures and people, moving/acting with a group and a leader, playing games on daily basis with certain times and take responsibility in a group.

9. If you are playing a class that you haven’t played before, you need to go through a learning phase. You need to do some researching about class dynamics. After the learning phase, improvement phase begins, where you start to dig more, search more, even do theory crafting how to maximize your dps/hps/tps etc.

10. As the name of the genre suggests, playing in an environment that encourages/promotes team play is quite beneficial. Just as a group in WoW, which challenges a raid boss, requires different sets of skills and professions, any individual should follow the same approach in order to tackle the actual world problems.

11. Actually, I don’t find anything useful about playing WoW for years that has effect on my real life. And also I think that if I use the time that I spent on playing WoW or other computer games, I could be Oppenheimer of my era.

12. Even if I had fallen in the face of events, re-taught me to stand up and fight me, taught me to fight all the time to achieve the final result.

13. It’s almost funny how I just repeat the same words when I have a conflict. Whatever I say in the game that works seems to work in real life, too. It’s like being at one of those retreats where they teach you how to solve problems.

14. Being in a raid for the first time without knowing what to do, is exiting which is what to expect from a game. But knowing what to do or not to do after a research from others' experiences is only helpful for oneself and the party but not fun at all. But being helpful for the party can be fun time to time depending on who you play with.

15. i didn't get any experiential learning experiences from wow sorry

16. Actually wow taught me about people. How they can be hypocrite. How can they try con you?

17. In WoW, I was coming up with radical solutions and ideas and surprising the people around me. It helped me to become unpredictable in a good way. Things don’t always go your way. You need to be creative sometimes.

18. In Wow or in other MMOs everyone have got some responsibilities for their guild/raid. Someone should take damages, others must heal that their damaged friends. but main purpose is defeat enemies and getting loots. If we could do that cooperation in real life there wouldn't be any problems anyway. No i am not a communist.
19. I compare my current work life to my previous work life and I see that I’m more professional because now I realize how every detail is important and I should take advantage of the critique to make myself better.

20. It made me more careful. And started to do my job a bit more seriously.

21. I have learned from watching other players, gear setups or combat rotations. tried it myself and practiced till I perfected my rotation and tweaked to my liking.

22. The more I play the better I get at the game. After a while, it turns into an automated process; but not a monotonous one. It keeps me interested and wanting to advance more. It is exciting and challenging, but you get better at it with time.

23. Personality and team relations which is very important in real life. wow communities are like a simulated version of a project based company's office environment. at least that is how I feel.

24. I used to be late for meetings, but now I find it disrespectful to be late and I make sure I show up on time. I have to thank WoW for that!”

25. I have played WoW since vanilla and am now almost 19 years old, of course my personality has developed a lot, it is however only lately that I have begun to reflect on how it has affected me, and noticed that it indeed has. Quite a lot. I am not English or American, however my English grades have always been top notch, I am certain I have WoW to thank for that. I also, perhaps more importantly, noticed some things in my social life. In WoW I am a quite well known character in the twink (twink in the wow meaning of it) community and I have been second in charge of two of the most successful twink guilds ever to be. In real life I have a similar role in my school, Captain of the chess team. That means that I am the one keeping control of the team, however we have a coach as well that I answer to. Quite the same as being the Guild masters right hand in WoW. Because of WoW I realized this is a role that I am very comfortable in and I really think I will have use of this when I start working and quit school. In both real life and WoW I have been the problem solver, chess team as well as guild. Stopping arguments when they got too hot and taking necessary actions after talking with GM/Coach. As well as creating and planning some events. My parents doubt that WoW has helped me very much but I am 100% sure of it.

26. I don’t give up easily anymore and I think I became more determined to succeed since I started playing WoW. It’s not about being stubborn. It’s about resilience.

27. I learnt to be punctual and gained the ability to take positive criticism. I have made friends and I believe that friendships and human relations in WoW is no different than real life experiences.
28. Sometimes you got to make sacrifices and take one for the team. I don’t particularly enjoy it, but I do it because I have to be the bigger person and think of my fellow raiders.

29. 5 years from the day 1 it started. I strongly agree that the concept of team work, timing, perfection in details and repetition to some point develops an individual especially in career.

30. Some people just aren’t worth your time. I believe it more now because WoW has shown me people will do unnecessary evil just to benefit themselves.

31. Respect each other’s time. Every minute counts. I don’t want to waste my time or anybody else’s time. I am more punctual now.

32. Quests of this game were awesome, i was wondering about whole story of Warcraft. Tried to read all quests as i can. In this way i improved my English.

33. I must admit that WoW improved my focus in real life.

34. World of Warcraft isn't just a game. It's a virtual world with honor, friendship. I've been playing long time this game and see people reactions. Some people is angry some people is very kind. Just like real life. I can make better decisions with playing games. With wow i can truly say I’m happy with this. 'fuz theaches me long life period experiences. Making worlds with unlimited imagination. if i ever find the guy who wrote the scripts in wow -chris metzen- i want to shake his hand and say thank you. with wow lore i can image lots of possibilities in real life. sorry about my English i hoe this will very useful for you

35. When you fail or close to fail, I've learned that if you respec or change items, in real life it means change the perspective and use different tools, it clearly effects your problem solving capacity. And you make less mistakes.

36. Waiting in the raid/dungeon lines, keep trying to drop the item i wanted so bad made me a more patient man.

37. Discovering the source of problems and solving them, especially in multi-player scenes like dungeons and raids have really increased my problem solving and learning curves using social interactions. Also I have to add, this way it also increased my English, because I did that with people from various countries.

38. human resource management skills

39. Whatever you do with stupid people, they never going to learn it.

40. Never jump off from roof of a 30 feet building and expect to survive. That’s a fact!

41. Team spirit, to be receptive, to help gather information, meet new people, develop the English language, since the game to learn, have fun, not to fight, public order,
the squad set-up, struggle to survive, to solve the problem, I learned a lot. Virtual different. The real world is different. Two in the world to be like that yourself.

42. I've learned that I like to follow a good leader. I've learned that I work willingly with good motivation.

43. Playing a game is okay, but it’s a bit pity for the people who is using this game as a runaway from real life and the ugly truth

44. I met the person I am married to now on Wow.

45. For me Wow has not too much difference in real life experience if you think meeting new friends and communicate with them. If you meet good people and nice person Wow can give you experiences otherwise it will be bad ones.

46. Everything in a game world has a solution, however in real life there may be events that you may not solve such as losing a loved one, an illness which cannot cured, disabilities, etc. Players believe that they can overcome anything if they worked hard enough. But in real life this is not the case. Several players suffers from this reality/virtual reality conflict.

47. As a former officer in a guild (gone back to being member due to lack of time because of work) I have been better at accepting different kind of people and learning to handle different kind of people.

48. I think I've learned more about communication and leadership that actual game mechanics (= still pretty lousy at my class), which is saying a lot seeing as I'd already had RL leadership roles before playing wow, guild experiences just added some new layers.

49. My experiential learning is Wow was more about learning of certain patterns, such as combinations of spells/moves to kills enemies. I would say this was more for PVE playing. As for PVP, this also included knowing certain combinations of moves, but my learning would have to extend into other characters' classes and learning the various skills and skill combinations they used. PVP, also, required an element of prediction because you are never certain exactly the moves the other person might use.

50. The social element of the game - and its role-playing elements as well - are practice both for story-building skills as well as for general social skills. This game is not the only source, or even the principal source, of learning these skills, but the multi-player social environment does provide the opportunity to practice and hone those skills, if the opportunity is taken.

51. Wow made me an even more cynical person, now I know that everyone deserves to be treated badly, except for few people.

52. I specially learned how to do things as a team. Interactions between team members, communication skills etc.
53. I lead raids, so practicing my skills in managing a cooperative group of people is definitely something that applies in real life as well.
54. Hmmm, it is very minor details that wow have affected
55. It's fantastic. I've learnt about my capabilities to interact normally despite my then agoraphobia. As a guild leader, I've learnt how to interact with people . . . and have also learnt and practiced perfecting my ability to make abstract mental models during raids.
56. What does experiential mean?
57. i love wow I love wowwwwwwwwwwwwwwwwwwwwwwwwwwww
58. I have learned a good deal about cooperation, from my time in wow. This has aided my social skills a good deal, with that: I've learned a bit about problem solving, as well. This being from boss battles/events.
59. WOW F**** game
60. Just taught me to play together to do something together.
61. friendship hard work teamwork
62. Playing WoW as a hardcore raider requires a lot of theory crafting about your class, so you need to do researches, calculations, deal with formulas etc. This alone is enough to increase one's skills in mathematics. I can also say I learned to be more patient with people in general in real life, since this is a must have skill in game if you're raid leading.
63. I'm studying econometrics. WoW(i was playing hardcore) makes me best thinker in life. I have to make decisions speedily in real life. I learn that from wow
64. Well I agreed with just the last one because some of quests, dungeons and raids in WoW really hard to do. You should watch videos and learn the tactics before making end game raids. That might have helped me in real life. But that's just it.
65. I've been playing MMOs for over 10 years now and starting from Ultima Online to WoW, MMOs have been effecting my life style and actions. So I can probably say, not only WoW but all sorts of games can be a reason of change in your personality. Some gamers, such as me, can be effected positively, without losing their sociality in real life and learning a lot about people in spite of the fact that WoW and any other MMO can be harmful and dangerous as it may be addictive to some people.
66. i am a walking calculator now
67. Being a Guild Master, make yourself better, stronger and faster . . .
68. In controllable virtual environment, players can learn about decision and how to decide about something.
69. Actually it taught me how to handle my every 24 hrs.
70. i learn trust your friends ideas
71. You learn how to work with people that they speak
72. Taming a beast and having a pet. After looting the legendary tarantula combat pet in WoW which I always wanted, I decided to get a tarantula for real. It is 5 years old now. Thanks to WoW
73. If you have money or honor you have all permission =)
74. I played WoW since Burning Crusade, it make my skills better. Now I don’t play game, because of family problems. But it's how I learned English, how I learned team work.
75. How to ride a dragon: D
76. There is none
77. As an high-end gamer, WoW thought the importance of team play and dedication.
78. Best of all, my language skills (especially English) improving with WoW.
79. Well I’m from Slovenia and most Slovenian people have problems with learning English: P World of Warcraft helped me with my English, I have playing this game since 4 years and teach me things a lot :) I took never English lesson in my life.
80. I learned that evil is make people do everything. In WoW we got so much bosses and they all want to control world or destroy it. But I guess pandas will bring peace to WoW
81. It has improved my way of thinking, by means of taking a different approach to things, think fastly and form strategies in real life. As I started to play WoW at a very young age, It also improved my English language.
82. F****(messed up) my life
83. It's a fun game but it brings to light that people can have fun but be addicted to it at the same time, kind of like a two way streak.
84. It's not too easy to answer these questions. Requires some thinking. For one you learn that to achieve something truly great you might have to be part of a team. You will need to respect the role that you have been given for the benefit of the whole team. (Dungeons & raids in-game.) You learn that if you run in to a problem you cannot easily solve, you need to evaluate the problem and yourself, then make a decision on what to do. Sometimes a change is needed in order to succeed. (Change specialization in-game in order to defeat an elite enemy on your own.) These are a couple examples of something I believe I have learned from playing world of Warcraft.
Appendix F

Collaborative Learning Comments

1. MMO OR Wow game helped me to work together with someone. It helps me to be understanding or not demanding.
2. From having guild and group play i think when teamwork is need at real life i find myself trying to lead them to success.
3. As i mentioned before it helped me in my former job greatly.
4. I became anti-social. I’m always at home just playing and doing nothing else. Talking to people online is not the same as talking to a friend at a café.
5. In my opinion online games shouldn’t be compared to real life. You have to socialize in order to gain social skills in real life, but in my opinion computer games makes one more anti-social. According to me if you want to be social you must go out and communicate with people instead of sitting on your chair in front of a computer for 10 hours a day.
6. I have friends that I’ve met in real life all over Europe.
7. Guildmaster is also a Manager. Class Master is also a Teacher. it helps a lot.
8. Absolutely, because playing with guild members is creates helping to each other. So it’s important in WoW.
9. Just because you are online, it doesn’t mean you can step out of line. If somebody goes against the common rules and courtesy, it’s good to know what to do about it and how to control the situation.
10. Simply put, I don't think this should even be questioned. In a "real" social life, there are people and there are situations, good or bad. It holds true for games too. It's true that internet provides some sort of anonymity but even if you would have created an alter-ego online, it is also another character and you still face the same issues. So it is of course like real life. In fact, it IS real life. We don't really live in a virtual world.
11. Generally I play with a healer class so party success is depend on me most times so we have to play coordinated with the group. With positive (and of course negative) feedbacks I try harder and harder to achieve that. When with a less experienced group I try to show them how to solve dungeons or with more experienced group I followed the lead. And sometimes when get into a really bad group we got success with communication . . .
12. Either deciding on tactics of how to get the boss kill while you are racing for the server first or deciding on the sampling strategies of a soloing campaign for calculating the best suitable model for a pollution distribution for a field. Collaboration and cooperating are key for both situation. I’m not sure if I gained
any social skill from playing WoW but for diffident person this might be different.

13. I don't think that WoW had me gain social skills which were not there at the first place. But creating an environment that promotes the use of those skills is surely an positive aspect for honing them.

14. One can never avoid conflict, but can control his reaction to it. WoW is the perfect place to practice such skills. Instead of saying “If it were me…” you actually get to do it and see how you react to conflict in real time.

15. Although wow is a mmo game and you have to interact with other people I believe that this is the worst way to be social. It may give you more patience to tolerate others mistakes. But come on, you can do better things to improve your cooperative skills than playing wow on a glass screen.

16. I know people from many places around the world and I have met some of them and I still keeping touch. Which I find very nice. I have these friends with social skills that I already have but WoW made it possible to have these friends, it was only a tool.

17. After a while, you get used to negotiating and discussing everything. This is a multiplayer game; you have to at least try to understand the other players; you can’t ignore their needs, just like you can’t ignore your coworkers at work.

18. For instance, as supported by the survey comments, participants applied their negotiation tactics and strategies to real life situations such as salary negotiation, picking a venue for a meetup, and even a discussion with a significant other that is saved from turning into an argument.

19. I don’t think i gained any cooperative skills from wow. but if a player doesn't have any collaborative skills can’t play wow or any other mmo.

20. I think so that wow would help your social skills. You meet some new friends by MMOs. But it can harm your real social life if you can't handle your playing instinct :). A player should see the balance between MMO Social and Real Life Social.

21. It's basically the same, relying on more people than just on one to help organize or lead a group is exactly the same in my opinion. I don't really think that social skills are all gained from WoW, it's helpful but not much though.

22. I find that the negotiations/deliberations teach me how to communicate more effectively with people in real life. WoW teaches you more about human thinking and social behavior.

23. How do you apply collaborative and cooperative skills you have in WoW to your real life? We can apply with collective organizations in real life(with guild mates)
Do you think you have gained social skills from playing in a WoW guild? yes, i learned
24. I think I answered this question in the previous one accidentally but as I said, I am GMs right hand in my twink guild as well as a well-known character. I am also Captain of the chess team in my school, keeping the members in check but answering to our Coach. Most of the 1000 people in my school got a fairly good idea of who I am. In the twink bracket that I play in WoW most people know my name as well. I would estimate there are around 2000 active twinks there. Note that I don't mean the real life kind of twink, I mean the player that locks xp and maxes out his character. I hope to have a similar position in my future work, something I realized from having this role in WoW. The role isn't a coincidence either, I have had it in two guilds with different members and GMs.
25. Whenever I get agitated, I just say this to myself: If they can stand me, I can stand them; if they can be patient, I can be patient
26. I have gained the ability to be a team player. I learnt that as much as individual skills, skills as a team matter.
27. It made me more respectable to the people around me and I come to understand strongly that being in a guild, brotherhood, clan or whatever should surround you and other with the security that help is always there. It doesn't matter how the guild is strong but how that strength is operated to someone in need.
28. In my opinion, if you want success at team work, listening each other, doing your part is too important. Raiding with a guild in this game can gives little tips about this situation, so if is your main goal is team working success, not to obtain a gear.
29. It's not just about WoW but I’ve spent lots of time on online games and mostly WoW. I've met with lots of good friends since then and we are still talking almost every day even if we are not playing WoW anymore.
30. I have a real life. i know that. Wow just a game. Can’t collaborate everything i learned from wow to real life. but sometimes it’s very helpful
31. it's not always easy to play with people because sometimes they have some idea or opinion that’s really opposite of what you want or maybe it’s something you don’t want to do but they are so pushy or keep saying they are right
32. Even they think about MMOs makes people distant from social life. I don’t believe it, if 20M people around whole world play this game, then all of us has a small common side, a topic we can talk and chat all day/week/month/year/decade long. For talking skills, MMOs and WoW also the very Internet itself has its own unique language. All people around globe, as one language, one body, as one.
You can understand each other with digital avatars and writings and not clearly voices.

33. I made many friends in WoW and im still in touch many of them in fact i met them like 5 years ago and thanks to WoW when i met someone who plays WoW i can easily socialize with them

34. It's the teamwork success. When people just play it without social interaction, it's not fun and not much different than any other solo-playing experience despite the game's quality. But when people talk about tactics, work together, warn each other, it's very fulfilling. These efforts and successes count as a proof for the real life situations; I personally became much more patient about real life problems and crisis situations, I interact much easier with crowds and listen more carefully about other people's opinions and guiding.

35. Well that Orc Warrior is a human in real life. So chit chat with orc same in real life :)


37. I'm a the founder of the all hearing impaired / deaf e-sport team:
   http://www.facebook.com/MagicGamers?fref=ts This can explain everything

38. With WoW, I don't judge people with their looks.

39. There is no way of using any skills on real life. no i do t think so because its taking you away from real life and virtual relations doesn’t count as sociality.

40. Social skills and communication cannot be developed by a anti-social "nowadays" working figure. Wow or similar MMORPG's invoke a communication level which the ancient societies used to have; such as Bartering for better equipment and sharing your combat experience with a junior guild member; which unfortunately is not applicable to the monetary, cold technocratic capitalist system of our "new world". I for myself consider this to be the most important value which the MMORPG fan is looking for. I have not gained any "applicable" social skills from wow of course; since the 21st century society does not share any honorable and high valued ideals which the fantasy world is offering.

41. I feel like I know them so well, some even better than my high school or college friends. We spend so much time together and sometimes we even talk about our personal issues

42. It depends the time you spend in wow. If you are hardcore player im sure you can communicate some good people and they can help maybe to gain some social skills. But its also how much isolate yourself from real life. This kind of skills should be learn in family or your natural childhood environment

43. I couldn't apply wow skills in real life. In real life your actions towards your co-workers or friends will have permanent consequences. But in a virtual game,
when you make a huge mistakes towards other people, you just change your "game server" and start over if you have to.

44. Been better at seeing solutions etc. on problems i may encounter. More patient

45. I think I've learned things about how I relate to groups from my very similar behavior patterns across different guilds, and that I've sort of learned these things faster than I could have in real-life groups, maybe simply because of the different sense of time in a guild. Not sure if I've gained any social skills, maybe understanding, I guess, by meeting a lot more different people in Wow than I would IRL, my country's demographics is pretty uniform.

46. I'm not certain I gained social skills playing WoW. I think the social skills I already possessed just transferred into playing the game. As for collaborative and cooperative skills, I think I applied similar skills from everyday life into the avatars I maneuver in WoW. In order to complete group projects or, I know I use a level of interpersonal sensitivity that involves listening to others ideas, trying those ideas out, learning from those ideas, and moving forward with that knowledge onto other tasks. Motivation to engage/participant in a given task and the ability to compromise are also skills that I can see at work in playing WoW and in everyday life, but I believe I knew how to enact these prior to WoW.

47. Whilst the typing format of Warcraft is not the same as real-time speech communication OR face-to-face body-language-and-speech communication, it is still practice in communication, and as long as there are those who take on the "mentoring" role in that social community, those skills can be learned; regardless, it does allow for the practice of those social skills already learned.

48. Getting used to certain personality types in a lower stakes environment (online) can help me learn how to work better with them so that I am more prepared irl for those types of people.

49. Again. Guild leader experiences and conflict management.

50. I started playing WoW at age 56, so I think my social skills were fully developed without playing WoW.

51. There are some people in my guild that are friends with the guildmaster. Our personalities clash, but WoW has taught me that I don’t have to like them; I just have to work with them for a common goal without getting on each other’s nerves

52. In a way yes. I can talk better English as a non native speaker.

53. I love wowwwwwwwwwwwwwwww

54. I have become a bit more knowledgeable about social situations, along with how to get along with people. In response for the next question; yes.

55. Neither Agree nor Disagree

56. it just gives us learning play together
57. Understanding the needs of team members helps to improve person's coordination skills. If you are at the top of this team you better control and coordinate the team.

58. I became more social and also I improved my foreign language skills.

59. I find a lot of friends in wow we create guild and doing some real life stuff together.

60. I do not apply and I do not think I have gained any social skills from playing WoW.

61. Since I'm dealing with a lot of foreign players daily, now I feel more relaxed communicating in English in my real life (I used to be a bit shy in that past). I'm also more successful at organizing people in real life now.

62. I learn how to people management in wow.

63. It’s such a different experience when you are part of a team. Every success feels more satisfying and you want to share moments like that with your friends in the game.

64. Even though WoW is a multiplayer game, your interactions with other players are restricted. I mean, you become level 85, do dungeons, gather gear, do raids, gather better gear, upgrade your crafting skills, sell the items you made etc. In this circle of gathering best gear in game, you really don’t have to socialize with other people. All you have to do is join a nice guild and listen to what your leader says. Of course when I was playing WoW, I made some friends. But that happened because I ALREADY have social skills. Not that I learned that in WoW. If you are shy and alone person in real life, I don't think you really could make some friends in game.

65. Zaaaaaaaaaa

66. Well, at first, with playing and meeting strangers’ in-game, you experience the, as some-say, weird social condition in game. Which also helps you to understand strangers and get connected with them in the correct way. This fact also makes you able to contact with people in work/school much easier.

67. Trust no one without good reason.

68. There is a huge problem about his question. I mean, which period of WoW we are talking about? If this question only matters for last two expansion; my answer will be yes. Since guild numbers are decreased dramatically, many guild member have more interaction. However, if u asked for original WoW and TBC, my answer will be no. Because, and especially 40 man raids, and more than 200 member for each guild was a problem. You see, people who have time during the day time, just hang out together regardless of if other member were online or not . . . Hope I could have make my point . . .
69. I've learned about resolving the dispute between players, especially between my friends.
70. First if all you are playing with millions of people from different cultures. It makes you learn new things every time. It effects the way of connecting with people, to help someone etc. In the end it makes you a freak from other people's point of but you learn how to interact socially with people.
71. I learned how to be part of a team. I bring value and I expect the other players to bring value. It's a real team effort
72. yes i meet my wow friend in the other country
73. i learn how to play teammate
74. Communicating with guild-mates (for PvE) or team-mates(for PvP/Dungeons) develop friendships which may last longer than raids/fights. Which binds you to the game more than you expect. Also with the same reasons you may develop a leadership in real-life based on your experiments on WoW
75. Sometimes, social skills which learn on game stays in game. But if you can calibrate this to real life, you can have good skills. Also, I gained too many Friends from game to real life. From turkey and from other countries . . . It is increases my social environment.
76. I have learned how to meet ladies without forejudgements :P
77. My school life is like an MMO, to beat the boss (exams) i join some parties, and study tactics (subjects). Now everything is better. I am a more tolerance guy than before thanks to random people in the raids.
78. I don’t think about myself separately from my guild. We are a team. I never want to let them down
79. I learned better communication with peoples. I'm playing WoW for 8 years and I guess it's improved my second language and communicate with other nations.
80. Absolutely yes. I've gained leadership, self-confidence and suchlike social skills thanks to WoW.
81. For starters, when doing raids with a guild you quickly learn that you have to earn your spot. You have to work for the rewards. You have to accept that you're not always the one to get the payoff. You also learn that to earn respect you need to take your role seriously and do it well. There is no half-way. If you slack off, there is evidence to prove it. (Damage Per Second trackers that can be added to the game through the Add-on function etc.) I strongly believe that playing WoW makes it more difficult to interact with people in real life. I don't know of anybody who have created friend-groups as a way to introduce guilds to the real world or equivalent. Maybe people have made friends online and becoming
friends in real life, I don't know. My overall standing is that WoW has more of a de-socializing effect.
APPENDIX G

TRAINING AND LEADERSHIP COMMENTS
Appendix G

Training and Leadership Comments

1. I ran a small guild in WOW, and had interacted very different kind of players in and outside our guild very often. Sometimes that was very challenging as some people seemed to be very different from your normal life friends and you had to somehow try to understand them and helped them. Now i ran a small engineering company with one of my both real life and wow friend and we got to understand and interact with lots of different characters in and outside of our company.

2. I don't think that strategies that you learn in a computer game helps you in real world. Real life is so competitive and hard; so according to me a computer game can't help someone in real life.

3. I can foresee future of young players as well as in real life I can see unexperienced guy’s problems in work.

4. From Raiding and PVE.

5. You can’t treat everybody on your team the same way! People are different. If you don’t pay attention to different personalities, people will start fighting. You should know how to manage and control.

6. I haven't led a guild but I was second-in-command and I've observed how bad and good leadership effects people and how it is that there are always other holding your back for things not to fall apart.

7. You are playing this game with people that have more gameplay knowledge and they are usually leaders. You get to know people so you can foresee a possible outcome just like in the game.

8. Study and training is important before going to new dungeons. And have to get better in dungeons you have to work harder on lesser ones so with better equipment you can achieve more. And with Raids or PvP teams you have to react and decide quickly that’s why you must play with a trained group.

9. Again I am not sure if this is the case for me, but I think directing people in the right way with the correct manner and deciding on the right move is important while playing any MMO, which also important in real life if the person is a head of chair or something. It actually goes both ways, from real life to the game or from the game to the real life, the skills are transferable and applicable.

10. Ok. I agree with that, you can improve your leadership skills in wow.

11. I honestly would NOT want to deal with some of the people in my guild, but I see it as a challenge and I think it has helped me develop some important skills. I don’t just tolerate them. I manage them.

12. I gain more understanding against people and i gain this skill from mmos.
13. I learned how to work with people more carefully after I played this game.
14. Every situation can be a mentor for a person. Yes, applicable.
15. People react more positively to empathy and understanding. Harsh treatment does not last. If you’re rude to people, they will play with you, but they won’t be your friend.
16. A guild leader or raid leader is big boss of your game. They decide what you play, how you play and how much loot you get at end of progress. I don’t think so these circumstances could transferable to real life. Some people would agree that, but that strategies and leadership skills you learned by game. They would be great experiences for your real life.
17. Everyone has different skills. I learned to assign jobs according to people’s skills because not everyone can do everything. It saves time and energy, too! “Training in WoW is simply practice, practice, practice. Practice is good for everything in life.
18. Playing and leading in WoW teaches you responsibility and the importance of making decisions and standing by them. With that sort of experience, you have practice when it comes to leading others and are not afraid to make big decisions.
19. Before WoW, I was a nervous man when it came to making big decisions. I didn’t like it. It was easier to let others do it for me. I know it sounds bad. WoW gave me important skills. I’m not intimidated. I make a decision fast.
20. Training strategies, not so much. Leadership skills, as I said I have a similar role in WoW (Gms right hand) as in real life (chess team captain answering only to coach). As you don't look the persons you are with in the eye in WoW it was easier for me to make hard decisions there to start with, like kicking a guild member for going to far or stopping a conflict by forcing the parts to explain themselves to me. Just a short while ago I had to do this in my chess club as well, it was hard but had to be done and without the leadership skills I got from WoW, I wouldn't have managed.
21. When the guildmaster is a nice guy, I don’t mind him telling me what to do. I’m normally a hot-tempered man.
22. While managing a raid or even a party group, I learnt to be a better leader. The experience teaches you to be able to solve problems in a polite and social way, while taking control of problematic situations.
23. I was a supporting character since I did not have the chance to develop my character to the ultimate point but it was enough for me to appreciate the teamwork and the essence of cooperation of everyone else.
24. I cannot give any examples from real life but, this game is giving sense about it. Starting a raid event just in time is too hard. People may have urgent situations, or
if you cannot affect them by discipline of yours, they dont care what you want, meaning of success with team work.

25. Managing a guild or raid is not an easy job. Especially if we are talking about 25man raids, it's kind of pain in the somewhere. Sometimes the problem is just focus but sometimes and mostly, the problem is communication. If you are too soft, you cannot reach everybody and there is always someone who will not respect your leadership. If you are too hard then it effects players' morale. So you need to find a point that you can reach everyone. I strongly believe this also improves our skills about communication and leadership.

26. Maybe, but not too much

27. As both a Loremaster/Storyteller and a Rogue ClassMaster of my guild, I teach and tell everyone what I know, nothing more. After my suggestions give its benefits, people around me start to respect me. And no leader can hold ground without respect. In real life example, in WoW the age Scala is ever-changing and young or old you need to show respect to your followers/fellow players, as this happens IRL as I said without ego I can get my facts straight to other co-workers around me. And they understand that’s enough.

28. When I’m in a group for an essay or some university stuff like that i can easily organize people for who will do what

29. if your leader is not fair, it takes away all the enthusiasm and the joy” while another mentioned that “when you know everyone is getting an equal chance, you start to trust your guild leader and become more productive

30. In real life I don't have to lead people into anything, but in WoW you are often facing struggle that needs team effort to solve, so when your turn comes to lead people, you become more confident after some battles fought, this strongly applies to real life situations if I need to lead, I am definitely more cool headed and calm against almost any situation. I know I never was before.

31. Controlling the party members or raid member is teaching you to control a small group in real life. But cannot be same in the game because this is reality but still you learn something.

32. Now I can yell to people groups ranging 10 to 40 and manage not to feel bad about it.

33. Have good communication with my Magic Gamers - Deaf teammates and sponsors :)

34. I don't like leading but with WoW I've learned that I am totally mess in that thing ^^

35. In real life you may have circumstances that you cannot retry. Also another thing is, as a hardcore player in WOW you cannot have regular life or any
responsibility to lead anyone. only thing that i learn from wow is good English and express myself in multinational community

36. One time our guild master made a huge mistake and people started complaining and he was like “I know my mistake but when I made up my mind, I believed it was the best idea or something like that”. It made me respect him more and I didn’t say anything about his mistake

37. As I mentioned before; skills and techniques learned from wow are not applicable to our real life. Though it is possible that an average player can share the synergy and friendship ideal in real life and try to make the real world a better place.

38. Simple, if you have a leadership in real life you can apply that to wow too. But this is also not about only working on tactics etc. its also about your capability to communicate with people too. its much more easy to communicate the peoples you are not see their face and their behavior. So wow and real life its different.

39. Real life and virtual life is so different since you have nothing to lose in a virtual environment except your time. You may lose virtual gold, virtual equipment and virtual points. In real life you may lose a lot by strategic failures. So, in a virtual environment, you can behave careless. If you apply same way of thinking in real life, you'll be in trouble. And you may badly affect people who work under your command.

40. Logic thinking and awareness. Better to find solutions to small in real life problems

41. I've never actually developed and tried training strategies IRL before starting to do that in wow, so it's all been new there. I think that with it being a game, the risk even if something fails are smaller, so you're more likely to try out and experiment with various approaches in a way you couldn't afford to say in a work situation.

42. I was never really in a leadership role in WoW, for example, I was never a raid leader or a head of a guild. Therefore, I think I cannot adequately answer many of the questions in this section nor can I provide any depth here.

43. I think that the language of this survey should be changed from "taught" to "helped me to learn." There is a distinct difference. WoW play will not TEACH those skills, but other players, through the medium of WoW play, may teach those skills both directly and by example, and WoW play gives a broad and accessible medium through which to practice those skills.

44. They work well with the management experience I have, and vice versa. It is hard to know which element has influenced the other more.

45. I've learnt more about how to manage certain types of aggressive personalities

46. For me, I've seen nothing like that transfer to real life.
47. disagree
48. it’s just a game there is no relation with real life
49. People are people, it does not matter if it is a game or not. Rules, that include human behaviors applies in all worlds.
50. It improved my team lead abilities in my company
51. at the beginning in season 9-10 i was the rbg leader and target caller and i learn leadership and i do what i learn in rbg at leadership
52. I do not learned anything
53. I'm the guild master of my guild, we're a hardcore raiding guild founded in 2005 and we're still alive and kicking. It requires a lot of effort to keep such a guild together, you exactly need to know how to deal with different people. I'm pretty sure all this time I spent for this guild taught me a lot as a leader and I'm confident that I can now easily manage small/medium sized communities in real life too.
54. Leaders must remember that everybody in the guild contributes and everybody should be praised for their efforts” while another participant suggested that “I don’t want a guild master that’s too nice or too hard. If he can’t keep that balance, the guild will fall apart
55. 10 or more people waiting for my command. I have to give them to right command. in real life a company waits my decisions it’s the same thing for me
56. Well I was playing holy priest in WoW and I've never been a raid leader so for myself I cannot say that I've learned leadership. And all classes have some mechanics. When you are teaching somebody to how to play that class, you just say that "use that skill first, then that. If the situation like this, use these skills bla bla bla." Sorry but I can't see any personal improvement for the who teaches. But like i write at the first page, WoW has some long and hard raids. There might be a small chance that my memorizing skills are improved when i was training for raid strategies.
57. asdas
58. As I was a student in the past, I thought I was "born to be" a leader. In the past few years, I am getting to the conclusion that actually, no individual can be a leader from the birth. In WoW and all the other MMOs, I've been experiencing the leadership as I mostly become the Guild-Master or an authorized Guild-Member in games and also being the Commander class in Dungeons, made me good at leadership.
59. Deaf people and dumb people are different things
60. Despite of the amount of stubborn players, most of the people can learn and teach how to play, how to resolve things and etc.
61. First of all you need to focus on training gaining reputation collecting materials in this game. And that makes you try harder to achieve your goal. In real life it helps you study losing weight and your carrier dedication. To control large ir small group in this game has no difference from real life.

62. yes because i work my job and i use that on my workers

63. Strongly agree with that. Your leadership and your skills of managing groups highly improves during WoW. As a former raid-leader, class-leader, loot-master all of those skills can be applied to the real life.

64. I am a leader of chess class in my own high school and I have learned how to teach or speak or judge them with teaching or showing tips etc.

65. All decision making process is possible to transfer to real life, it's easier to convince people to do something.

66. I am a Computer Graphics Artist. I specialize in character design and character animation. I attended DADIU in Copenhagen fall 2012, and one of the segments in their program is to create a game over 4 weeks. On this production we were a team of 5 people. 4x Artists, and 1 programmer. I quickly took the lead role in this team, and out of the 6 games that was presented at the end of the month, our game was the best one. By far. We presented Team 5, and our game was 'The Ninja Academy'. During the 4 weeks we had to go through a whole pipeline of progress. We used Motion Capture technology for our Ninja character's movements. My point is, that every artist has strengths and weaknesses. I took the responsibility of handing out the tasks accordingly. This production was a great success, and my team gave me great credit for my leadership. I can honestly say that my experience from playing WoW has had a pretty huge effect on how to lead people in real life. A clear example in this case is that I had to evaluate every member of the team, and put the people in the positions they would be best suited for the benefit of the team. Isn’t it what you do in real life. There are 2 references to this in-game. 1: Battlegrounds & Arena. You need to quickly identify your opponents, and you have to know what abilities your enemies has in order to think up a strategy on how to defeat them. 2: Dungeons & Raids. Your team members can have extremely helpful abilities that can balance whether or not you succeed as a team. Knowing every class in your team opens up the opportunity to do achieve something great. As for the future my goal is to someday lead my own department or even direct productions. What I’ve learned from WoW have made me realize I am suited to lead. And I have also realized that playing WoW have helped me discover my leadership skills. (Sorry if these answers are way too long mate :P)
APPENDIX H

RESEARCHING COMMENTS
Appendix H

Researching Comments

1. Gained after gathering information and using that information for creating new solutions for problems
2. Not available.
3. My dissertation thesis. I learn how to research academically from WoW, researching best talent trees and cycles for DPS. Just like researching Wind Turbines in Smart Grid System . . . Once you got it, you can use it everywhere on every topic.
4. I guess no.
5. Again, this holds for any given situation. I've learned many classes (computer engineering major) from online research, same goes for WoW. Be it raids or pvp or some drop rate or builds . . . or operation systems, logic gates and object oriented design.
6. I did not understand the question.
7. For most of MMO you have to take research for toon builds, dungeons, tactics and etc. If you want to get better. Players generally build theirs toons with current game meta, but when a new patch changes game meta players tend to find new ways/builds to get better.
8. I am MSc student, and yes the researching process and information gathering process is similar. Maybe it is just not as detailed and in depth research as I do for my real life needs.
9. I think the expectations from the player of a specific class while tackling a raid boss is quite the same when an individual tries to solve a problem. Player should be proficient with his/her set of skills and be able to react to certain conditions that the raid boss creates. If not, then the player should prepare him/herself regarding those conditions. From a computer engineer's perspective this approach is similar in my professional life. While I have the required programming and algorithm skills, a problem that I have never encountered would have me delve into the web and try to figure out other peoples approach to the same problem in order to gather an insight from their experiences.
10. “I read/watch tutorials about WoW related content.” that indicates now. But i am a former wow player so i don’t have any interest in wow for now. But I did that in 2005.
11. i don’t engage in a researching process in real life that i resembles the one i was engaged in wow because even wowhead.com and wikia will be enough for knowledge for wow
12. After I played WoW I had some research skills from this game and when I search something in real life to solve my problem I do a lot research and ask everyone for this.
13. Hmm, I don’t know. I don’t believe I’ve ever needed to gather info in WoW :P
14. Yes, for instance, when I need additional information with regards to a certain subject (related to any field), I go through the same process as WoW research. I look for legitimate resources with multiple perspectives, read user/expert comments, and compare what I have learned. Practice makes perfect and in that sense, WoW teaches to how to do individual research.
15. My master thesis: “Historical Geography of the Meander Basin at Late Bronze Age”
16. Not very much actually, however I act a bit like a teacher in both cases. For example, I have written a well-known twink guide in WoW. In school I am writing a chess learning book for beginners. Quite the same thing. I also work as a teacher at a Sports camp for 5-12 years old kids, and have only got good criticism.
17. I am not sure whether it would far fetched or not, but WoW does give you an ability to conduct a research - especially googling skills.
18. I don't play WoW anymore but for the 5 years that I did, a significant time that I spared for the game was for the research on the quests, bosses, areas, weapons and armours. At one point I started doing not a single purchase without checking it on the web related to usefulness, actual value, future value etc.
19. Wow is just a game, dont need to gather information about it. So I didn't.
20. Google is your best friend in WoW or in real life.
21. Can’t answer right now. doesn’t ring a bell for me
22. As an Engineer and an Academics Personal, Research and Development is my main profession. Even in WoW I use academic data, even now in this form I'm filling, is a general part of research both about WoW and interaction of real life. As a lore master I read a lot, done a lot, searched a lot. I can’t give a single example right now, cause they're many. Even in my thesis I research like in WoW.
23. I learned the whole game by myself and as the lore I read the Warcraft books
24. I do and even on internet I use search methods parallel to my WoW researching. I use careful catch phrases in Google, more advanced forum, image and video researching about various subjects, even in hobby related stuff.
25. Well I research in wow more than real life. That means if I want something I can research for it. Yeah I think that’s the point.
26. I picked the lore of Warcraft out of self-interest and absorbed it fine.
27. I met different people. I took them to my Magic Gamers - Deaf e-sport team. I made contact with other people for sponsors. I gathered a lot of information about them :)

28. Skip-scan it is!

29. i am a scientist and also an IT administrator. So i am curious and i had that research and learning ability from birth. so it’s not related with WOW

30. It’s about desire to learn that’s all. I’m doing that in real life also so wow it’s not an exception

31. Research topics of a MMO is so limited compared to real life objectives. And, there are lots of people who played WOW. Those people can provide lots of information on game subjects. However these game related subjects have very narrow point of, because if you want to be successful in the game, you have to follow the exact same path with someone else. Real life research and development is much more complex and awarding then a game.

32. Absolutely. When encountering something hard in real life do better research online. Similar to the raid strategies i look at when not doing well in a raid

33. Oh definitely, both in wow and real life I tend to read up on things, especially if it's something new or something I'm really interested in. Like for example wow-related, I read up on rogues a lot because that's my main and I love them, and then when I start a new class I tend to read up on them as well. And even if someone asks me something relatively simple that I'm not sure of I tend to go look it up and provide them with a couple of links. Likewise in real life whether it's buying a new coffee-machine, re-painting the walls or drawing up a marketing strategy I always start with getting as much info on the subject as I can, and like in wow tend to have certain website I go to first.

34. I feel one of the primary parallels between how I research in everyday life and WoW is using the internet as a starting point for finding information. Take for example, if I wanted to find out how to bake an apply pie or if I wanted to learn how to create a certain character build like a DPS warlock, I would begin by searching online, re ing written and video materials, and refining and applying the ideas to my situation. If the end result was unsatisfactory to me, I would start the process again based on what I learned prior. I guess if one wants to paint with a broad brush, I suppose there are similarities between my WoW research approach and other forms of research I do. They all involve some question/concern/problem that sparks a need to know more. This need is followed up my reading materials either online or on paper, asking others questions, reflecting on the materials, and applying ideas to see what happens.
35. I did not, however, learn my research skills THROUGH WoW, nor even because of Warcraft. I practice those skills, yes, but again I am not taught them by the game producers, or the game environment, or, in this case, by the in-game social community.
36. I actually do less research for my personal life than WoW, but in my schooling I am doing SO much that I think its more an issue of overload.
37. Raid knowledge. Class knowledge. How to execute rotations better
38. No, I have no longer any need to research in RL.
39. I constantly do investigation into the best ways to play wow, including role play, and boss guides. I then examine the material from each site, choosing which is best
40. I'm sorry I do not understand
41. This has never been happened to me. I never gathered information and researched for something that is in-game. Because it is a game in the end. I just tried to enjoy it.
42. I am searching more and more to improve myself
43. if i didn’t search and videos about wow pyps probably i cant go 2k rating at arena
44. Of course. I searched everything on internet, google, Wikipedia etc.
45. I have quite a lot of hobbies other than playing WoW. One of those hobbies is paper crafting. Before I start any new project I do lot of research, from suitable paper types to tools I need to use, from tutorial videos to pictures of completed projects. It's not much different than getting prepared for a new boss, reading and researching tactics, watching kill videos.
46. nope
47. Well I'm studying at a really hard departments which needs lots of research. (genetics) When tracking for a quest or how to gain a mount, for example, i learned that the following the rope.
48. sadsfq
49. Researching became a habit as I continue playing WoW and MMOs. While WoW is pretty complicated to the new players, I started researching for Wikis and guides of the game, which also made me do the same for all the other subjects in real-life.
50. not one in mind now
51. no time to comment sorry =/
52. My knowledge of playing WoW may help me with persuading or simply “chatting” with real people. My thoughts about other people's consideration rather than predicting may also contributes to my ability to communicate.
53. For example i research and Read lots of articles for my studies
54. Yes every time . . .
55. sanane amk.
56. That is not so relevant because if you are into something you can research about it. That includes wow or real-life. That's up to you.
57. I researched WoW information and tutorials a lot. The first thing I did is researching about my issue. If I cannot solve my problem from internet, I ask other players. Im DOING SAME THING ON REALLIFE. I am the best Rogue Class of my server and I learned this from YouTube Tutorials.
58. An example? Well there it is, with those thousands of lore in WoW I have learned much from hero characters: P like emm . . . connecting with people (: P) and tactics a job about to I am doing or leadership and more like this!
59. All school projects is like that. Gather some information about the subject, study and explain to people
60. Maybe the professions. I had fun while i was doing profession skills and skill development.
61. A bit tricky to answer this one. I do look up stuff frequently when playing WoW. I do research before going into raids in order to know my role well. (Online and talking to friends). I started playing WoW when I was 14-15 years old. It is a long time ago which makes it hard to remember, but I think I can be pretty sure this habit of doing research before getting into something important has made me apply this approach in real life. Especially for situations where other people depend on you.
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