

Enjoyment of Customization in Multi User Online Games: A Survey Study with World of Warcraft and City of Heroes/Villains Players

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Abstract: Massively Multiplayer Online games (MMOGs) have been a new venue of entertainment where millions players from anywhere in the world share virtual environments and shape their experiences. One might wonder what makes these virtual spaces so enjoyable to people from different demographics. This paper aims to examine the ability to customize as a factor for MMOGs players' enjoyment, and to capture players' reasons for specific game customizations, and investigate differences in gender, player experience in these areas. To do so, we conducted an online survey with players of popular MMOGs, World of Warcraft and City of Heroes/Villains (n = 456). Findings are discussed throughout the paper.

1. Introduction

Enjoyment is defined in Merriam Webster's dictionary as: "To have a good time", or "to take pleasure or satisfaction in". Vague definitions, but in spite of this most people know when they're having a good time. When it comes to entertainment, it is among the major driving motivations of creators to engage large numbers of people regardless of their backgrounds. One of the most popular entertainment venues, massively multiplayer online games (MMOGs), does just what it says; it pulls a massive number of people from many different demographics. In particular, massively multiplayer online role playing games (MMORPGs), which are virtual spaces where many players have been recorded as spending more than 20 hours a week (Yee, 2006a). The fact that gamers can freely begin playing these types of games at anytime ("pick up and play") just as easily as they can terminate play at anytime (Goldstein, 2003), raises the question of what makes them so enjoyable to gamers that they engage in play for such extended periods of time.

Online gaming enjoyment is one of the strongest predictors of intention to play, and it greatly affects attitude toward playing online games (Wu and Liu, 2007). Players who experience enjoyment and the emotional response of pleasure are more likely to be motivated to play more (Huang and Cappel, 2005; Kim et al., 2002). The research on specific design features that make multiplayer games enjoyable to gamers is lacking. This study is a part of a larger study which investigates the effect of customization on players' enjoyment, engagement and motivation compared to other game features and across different player demographics. In this paper we will examine a single design feature of MMORPGs as enjoyment: ability to customize with "World of Warcraft" and "City of Heroes/Villains" players. Therefore, our research questions are:

- 1) What role does the ability to customize play add to players' overall enjoyment?
- 2) What are the different features of customization that players enjoy the most?
- 3) How does the enjoyment differ depending on the customization offered, gender of the player, demographics of the player, and type of game?

Previous research has indicated user-control to be a motivating factor for continued engagement (Wise & Reeves, 2009). One common form of user-control found in games today is the ability to customize; giving players control over everything from their player-character's appearance to how the appearance of their virtual environment to altering how the interface behaves.

Studies which found out what game elements gamers preferred to control (Choi & Kim, 2004; Wood et al., 2004), but did not examine the reasons behind these choices. For example, the ability of customization, the degree of realism offered within the game, and the feature of having multiple simultaneous players were found to be preferred

by gamers (Choi & Kim, 2004), but the reasons why were not looked into. Many games, especially massively multiplayer online games (MMOGs), offer players ways to customize their experience either through built-in options as well as the ability to create or obtain additional software modules. This type of customization allows players to personalize their avatars or characters and control these aspects of their play experience. In this manner, by injecting their own likenesses into the game, game-players were possibly identifying more with the game by feeling that they were *taking ownership* of it.

Massively multiplayer online role playing games (MMORPGs) provide persistent, networked, interactive, narrative environments. These pockets of space can support huge numbers of people, either synchronously or asynchronously. MMORPG realms allow players to move and interact in simulated realistic or fantasy environments through their created game characters (also known as *avatars*). These features enable players to experiment in these simulated worlds. In designing these worlds, it is important for learners to have opportunities to explore and manipulate their surroundings inside the learning environment in order to encourage the construction of knowledge (Cognition and Technology Group at Vanderbilt, 1990; Jonassen, 1999).

The two games currently used in this study, “World of Warcraft” (“WoW”) and “City of Heroes/Villains” (“CoX”) both belong to the same genre of digital games, MMORPGs, but they belong to different sub-genres. “WoW” uses a fantasy setting while “CoX” gives users a modern-day superhero theme. Despite their sub-genres they have similar mechanics, allowing players to create and evolve characters. However, the degree of user control in various areas differs greatly.

For example, the degree of user-control during character creation in “CoX” is widely acknowledged as among the most flexible in the field of gaming. Visually, each body-part can be colored to the user’s preference, and many can have a variety of textures applied to them (i.e. scales, metallic shine, etc). This is the initial creation of an avatar; players can customize the surface of their characters, how they will look to other players.

While “WoW” does not have such graphical detail in the initial character creation, it has massive options for customization of how gamers interface with the game world. It supports user-created add-ons (succinctly called “mods”) that alter the visual aspects of the game and how information is displayed. WoW also gives users the ability to create “macros”, single-button shortcuts that begin a chain of pre-set actions, instead of manually entering each command. But in both games, there is also a wide range of equipment for characters to wear. Be they readily available or difficult to obtain, each item is unique on its own merits though the player’s outward appearance of that equipment may not be as customizable.

In each of these games as gamers’ characters grow and change, they obtain skills of their choice and unlock character improvements. This brings the aspect of player-choice in deciding and balancing what strengths and weaknesses their game-likenesses would have, selecting certain traits instead of others. In both “WoW” and “CoX” there is also the aspect of re-doing these choices, also called “re-specing”. This gives users the option of resetting these selections, dubbed character-abilities or powers or skills or talents depending on the game, and playing the game in a new manner with a character that is visually the same.

2. Enjoyment

Enjoyment has received considerable research attention in many fields such as marketing (Koufaris, 2002), education (Kuh et al., 2006; Harackiewicz et al., 2002), media consumption (Sherry, 2004), and game research (Jansz & Tanis, 2007; Sweetser & Wyeth, 2005). MMORPGs must generate a significant amount of enjoyment, as they continually attract large number of players to invest a great deal of time in their virtual careers (Yee, 2006b). Therefore, the element of enjoyment is a term that is used very often when talking about games. Yet studies of what game features make MMORPGs enjoyable is still lacking.

Explaining the reasons for why players derive enjoyment from playing MMOGs and MMORPGs is of scientific relevance as it promotes understanding of how these games come into such popularity and why players focus so much attention on them. From this researchers and game designers can model the enjoyable aspects of the MMORPG to other applications, such as learning games (Klimmt, 2009b).

Sherry (2004) identified entertainment as enjoyment, and then proposed that enjoyment is achieved when users experience a flow state that results when media message content balances with individual ability to interpret that message. Similarly, Vorderer, et al. (2004) conceptualized enjoyment as the core of entertainment; thus there are concrete motives for enjoyment as well as distinct effects of enjoyment. They speculate that of the three motives for enjoyment, escapism, mood management, and achievement/competition, that achievement/competition is salient for interactive media (i.e. digital games), (Vorderer, et al., 2004). This is confirmed through research on motivations for playing digital games (Yee, 2006a, 2006b).

On their qualitative study, Chen et al., (2007) identified the role of social interaction in enjoyment as something that may facilitate or impede the enjoyment through semi-structured interviews with MMORPG game players. For example, while collaboration and inter-mingling may facilitate players' enjoyment, bullying and scamming may reduce players' enjoyment (Chen et al., 2007).

Nabi and Krcmar (2004) conceptualized enjoyment as an attitude which may serve as a moderator of gratifications sought or obtained, as opposed to a gratification itself. Previous research shows that enjoyment can play a crucial role in predicting system behavior (Lee et al., 2005; Wu et al., 2007). Lee et al. (2005) empirically show that users who enjoy using Internet-based learning are more likely to have positive attitudes toward it. In addition, players who perceive online games as enjoyable and pleasant are more likely to be satisfied. Thus, the satisfied players will probably give high overall evaluations of the outcome of playing online games and will expect beneficial outcomes. Therefore, they will develop a favorable attitude toward playing.

Green et al. (2004) presented transportation theory as a lens for understanding media enjoyment is (Green et al., 2004). Transportation is the process of becoming immersed in a narrative world, and transportive media are typically the most enjoyable. Games, both digital and non-digital, are interactive and therefore more likely to facilitate transportation.

“Interactive media may be particularly transporting, and thus particularly enjoyable, forms of entertainment because they allow users to easily leave their physical and psychological realities behind and become fully immersed as an active participant in the narrative of an alternate ‘virtual’ reality”

-- Green et al., 2004

This may explain why games are so popular. In a study to find the role of interactivity, mainly examining the receiving of immediate feedback and influencing game world, Klimmt and his colleagues found that players enjoy watching the results of the actions they perform, and their fun declines if these efficacy experiences are declined (Klimmt et al., 2007). Klimmt et al. (2009a) conducted a research on relationship between the role of suspense and player enjoyment. Their experimental research found that if video games create suspense over time, a player's game enjoyment was sustained (Klimmt et al., 2009a). Also, the importance of social interaction among players in MMOGs has been found to be crucial for player enjoyment (Klimmt & Hartmann, 2008; Steinkuehler & Williams, 2006). Wu et al. (2008) conducted an online survey to find out how specific game features, online game story, graphics, length, sound and control relate to player enjoyment. While they found all features except sound significantly related to player enjoyment, the survey items were not specific enough to delve any deeper reasoning how and how much they affected a player's enjoyment. Sherry et al. (2006) emphasized the importance of social interaction among players for enjoyment of a game. Enforcing social interaction might be particularly important for MMORPGs. Also, when we study MMORPGs, the length of the game becomes irrelevant as these games do not have a specific end. While players can advance and expand their characters or explore the large game world, the game environment is limited. Characters will run out of advancements to choose from and the world will have borders (invisible walls relegating the world into a large island or virtual “sandbox”). Despite hitting this transparent barricade, the most popular MMORPGs will have varying additional activities players can do in the game.

When players' behaviors are prompted by intrinsic motivation such as interest and enjoyment, they are more willing to persist in such behaviors in the future (Deci and Ryan 1985; Deci et al. 1999). Therefore, the need for determining the importance of and effect of targeted design priorities on player enjoyment is crucial if an audience is to be attracted and retained. This is especially true for lesser funded projects.

Several studies have applied Flow Theory to better understand the appeal of games (Choi & Kim, 2004; Sherry, 2004; Sweetser & Wyeth, 2005; Voiskounsky et al., 2004). Sherry (2004) identified the importance of Flow Theory by arguing it could be used to address shortcomings in entertainment theory regarding what it means to “enjoy” media and why people spend so much time pursuing entertainment. Flow Theory explains why people engage in certain activities without external rewards. Goal directed activities which are bounded by rules, require mental energy and appropriate skills are those people experience flow with (Sweetser & Wyeth, 2005). Flow is an experience “so gratifying that people are willing to do it for its own sake, with little concern for what they will get out of it, even when it is difficult or dangerous” (Csikszentmihalyi, 1990). The ability to exercise sense of control over actions is one of the eight elements create flow experience (Sweetser & Wyeth, 2005). We will be taking the ability to customize as a form of user control, and examining its effects on player enjoyment. While doing that, we will examine both how much players enjoy customizing specific game features, and how much in general affects game enjoyment.

3. Customization

Innovations in new technologies enable users to do several things that they were not able to do a decade ago; networking, sophisticated graphical representations, and being interconnected through mobile devices are all part of these new innovations. Many people can and do use these technologies, but the question remains of how important they are to our lives and what their strengths are.

Customizability is a principle of flexible design, defined as “modifiability of the user interface by the user of the system” (Dix et al., 1998, p. 168). Based on these definitions, most research on customization has focused on user interfaces, and marketing, not on features such as customizing game characters, audio, terrain, etc. Similarly, Dyck et al. (2003) reviewed fourteen PC games and identified deep customizability as one of four novel contributions that provide clear benefits to players. However, they did not relate player demographics to types of customizability. Developers need to understand which types of customization are important, related to what kind of users they are developing to, and the software/game being developed.

This study builds on the research done on user control in the area of Computer Based Instruction (CBI). The results of several studies on student control in CBI indicate the positive effects of this control over elements of instruction (Corbalan et al., 2006; Kinzie et al., 1988; Shyu and Brown, 1992; van Merriënboer et al., 2002). Learner Control allows users to determine their progress through a lesson, and to choose learning activities that suit their personal preferences and needs (Carrier, 1984). While CBI research exists implying that personalization leads to identification and ownership, and is related to motivation and achievement, research examining specific uses and effects of customization in games is lacking.

Vogel et al. (2006) conducted a meta-analysis of computer games and interactive simulations for learning. They found studies that used programs where the learner controlled their navigation through the system more effective than traditional teaching methods in creating cognitive gains. This suggests more effective learning when learners can control their navigation in a computer game or interactive simulation.

Another guiding foundation of this research is Dickey’s research (Dickey, 2007) on understanding and re-using design principles from MMORPGs for educational applications. Game developers need to understand which types of customization are important, related to users, and the software/game being developed. Petty et al.’s study showed that individuals prefer objects or experiences that are closely tied to their personal tastes and experiences (Petty et al., 2002). For example, in the last year Ducheneaut et al. (2008) at PARC (Palo Alto Research Center) have questioned players and found that the most important avatar customization feature was hair. The cross-examination was consistent across three virtual worlds. The observation was drawn that changing their avatar’s hair provided the most visual manner for users to define their personality. This current research aims to shed more light on how and why game players chose to customize certain features and how designers and educators can use this information for better instructional design.

4. Methodology, Participants and Data Analysis

We used a survey method to collect data from online forums through snowball sampling. These forums were public and private WoW guild forums and the official CoX forum. The surveys asked questions about participants’ demographic information, their game characters, play styles, their enjoyment of game play based on different game features, their motivations to play, and the game features that they would like to customize. A pilot study was conducted to ensure the clearness and appropriateness of the survey items. We modified the survey questions based on the feedback we received from participants. The final survey had 26 five-point Likert scale and 18 open-ended questions. Participants were 354 WoW players (65 female, 289 male) and 102 CoX players (17 female, 85 male). The data was collected from participants over the course of a year and a half.

Data was analyzed by using the quantitative data analysis software SPSS 17.0, and qualitative data analysis software Nvivo 8.0. In this paper, we will be reporting mostly from descriptive statistics and comparison of means between males and females as well as experienced and inexperienced players. Open ended questions were analyzed with Nvivo 8, using inductive codes.

5. Findings

In general, out of the total population, 65.94% +/- 6.14 (p<0.05) said that customization affected their enjoyment to a moderate or large degree. Players chose the ability to customize as a more important feature for their enjoyment than sound, quality of graphics, leveling mechanics and, surprisingly, the social aspect of game play. Between the two games, CoX gamers think that being able to customize affects their enjoyment of the game more than WoW

players ($p < 0.01$). Furthermore, CoX players value customization higher than WoW players. (58% of WoW and 85% of CoX players said being able to customize strongly affects their interest in the game).

Desire to be unique is one of the most favorite reasons for enjoying customization. As a male European CoX player puts it, “Ability to customize - again, not just aesthetically, but functionally. I hate playing cookie cutter builds, and CoX gives me lots and lots of ways to be my own unique snowflake.”

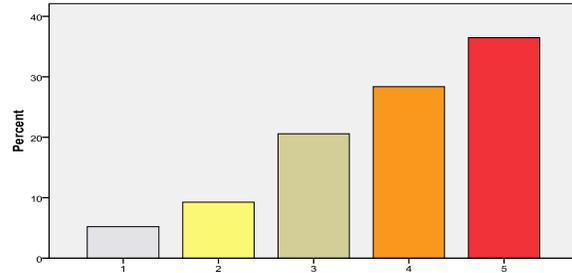


Chart 1. Ability to customize affects enjoyment of the game.

We categorized experienced players (EP) as those who have played the target game more than 2 years, ranked their knowledge in this game ‘high’ or ‘very high’ and play more than 20 hours a week. We categorized novice players (NP) as those who have played the game less than 6 months, ranked their knowledge below average, low or very low and play the target game less than 10 hours a week. After filtering these specifications, we had total of 53 expert players (13% female) and 39 novice players (25% female) (See Table 1 for the means on the games features across expertise and gender). We found a significant relationship between the level of expertise and the how much players think ability to customize affect their enjoyment of their game ($p < 0.05$). There is no significant difference between males and females in this item.

	General Population	Expert Players	Novice Players	Gender	
				Male	Female
Sound	2.46	2.24	2.53	2.45	2.54
Quality of graphics	3.46	3.13	3.41	3.38	3.81
Ability to customize	3.82	3.67	3.55	3.80	3.90
Choosing and playing talent/power set specializations	4.00	4.08	3.95	3.95	4.23
Social aspect of game play	3.66	3.17	3.95	3.62	3.81
Leveling mechanics	3.54	3.35	3.68	3.48	3.77
Varieties of class/race (archetype in CoX) options	3.84	3.91	3.43	3.83	3.87

Table 1. Means of the answers for ‘How much do the following game features affect your enjoyment of the game?’ (In the 5 point Likert scale of 1=Not at all and 5=Very much)

Choosing and playing talent/power set specializations is the feature that affects player enjoyment the most across expertise and gender. Sound is found to be the feature which has the least effect on players’ enjoyment of the game across demographics.

	General Population	Expert Players	Novice Players	Gender	
				Male	Female
Character's physical appearance	3.97	3.83	3.92	3.87	4.39
Character name	3.68	3.57	3.56	3.57	4.09
Talents/Power Sets	4.03	3.87	3.74	4.02	4.07
Interface	3.69	3.65	3.56	3.63	3.93
Mods	3.49 (n=354)	3.68	2.89	3.47	3.58
Macros	3.04	3.15	2.74	2.97	3.33
Class/Archetype selection	3.95	3.80	3.68	3.90	4.21

Table 2. Means of the answers for ‘How much do you enjoy customizing following game features?’ (In the 5 point Likert scale of 1=Not at all and 5=Very much)

In general, female players enjoy customizing more than male players, and expert players enjoy customizing more than novice players. When it comes to customizing specific features, across expertise and gender, all players enjoy customizing talents/power sets the most and customizing macros the least.

	General Population	Experts Players	Novice Players	Gender	
				Male	Female
Character Appearance	3.75	3.37	3.89	3.66	4.09
Sound	2.48	2.36	2.54	2.47	2.52
Gear	3.68	3.63	3.74	3.65	3.78
Interface	3.19	3.19	2.97	3.13	3.43
Animation	2.99	2.91	2.83	3.01	2.94
Talents/Power sets	3.75	3.84	2.74	3.73	3.83
Quest Rewards	3.22	3.26	2.87	3.14	3.60

Table 3. Means of the answers for ‘ How much would it affect your interest in the game if you could further customize following features?’ (In the 5 point Likert scale of 1=Not at all and 5=Very much)

Female players generally think that customizing game features further will increase their interest in the game. When asked about further customization, expert players think that further interface customization, talent customization and being able to customize quest rewards would affect their interest in the game they play. This last is possibly due to quest rewards being useful to speed through the leveling process, which experienced players are eager to do, since they’ve done it before and want to get to the endgame faster.

5.1. Game Interface

A game’s interface is where players communicate with the game, so it has intrinsic importance to players. The quality of game interface affects players’ gaming experience. As a male WoW player puts it *“Interface affects the core mechanics of the game, so flexibility here is desirable to allow for a player to process game information and interact.”* Many games offer limited interface customization to players. Among all the participants, 66% said interface is important for their interest in the game. Although male players rated the importance of interface higher than female players did, the difference was not significant. We found that if players find interface an important feature of the game, they want to be able to customize it ($p < 0.01$). We wanted to know how important it is to WoW and CoX players to be able to customize their game interface.

“To me, the User Interface is second only to the appearance of the world it is the way you interact in game it has to make sense and it has to be enjoyable to use. OR it has to be customizable to achieve these ideals. ;)” – A Female WoW Player

As we mentioned earlier WoW supports user-created add-ons (or “mods”) that alter the visual aspects of the game and how information is displayed. Mods give WoW players an enormous amount of latitude when it comes to interface control. This was reflected in our results. Significantly more WoW players favored interface customization as an important feature than CoX players ($p < 0.05$). There was no significant gender difference either in how much interface affected interest or how much they are interested in customizing the interface. In an earlier study, we had found that 90% of WoW players use mods (Adinolf&Turkay, 2009).

5.2. Graphics

One of the primary goals in the development of graphical games is to improve visual technologies (Smith, 2002). Quality of graphics in games is known to be important for an immersive experience. Many PC games give players a set of choices to determine the settings for graphics quality based on their system and their game play. We found that players preferred the ability to customize over quality of graphics. Quality of graphics is the feature that has the second least affect on players’ enjoyment after sound. In terms of gender differences, female players think that quality of graphics affects their enjoyment of the game more than males ($p < 0.05$).

WoW is not considered a game that draws it huge player based because of the graphics. Compared to advanced realistic graphics of many new stream games such as X,Y, Z. A WoW player puts it well how he feels about the graphics quality of WoW, *“Graphics- most people either HATE them or love them... I LOVE them. I think the art style is amazing even after almost 5 years playing. Other games I’ve played try for too realistic a look and fall flat. Wow was smart enough to not even try and because of it it’s still the most original look out there.”*

5.3. Sound

Sound in games can be categorized as background/ambient sounds and sound effects. Sound effects are used to provide support for the game play and immersion in many games. In 3D games, sounds often convey a lot of information to the player, allowing them (as in real life), to know generally where something is, without having to look at it. Therefore, sound not only provides an audio complement to action in the game but also helps create a sense of realistic physical environment (Morris, 2002). Since sound is so useful, it is a little surprising that most users across the board showed little to no interest in it. Specifically, only 4% of all participants said that sound effects their enjoyment of the game very much (chose point 5 on the Likert scale). This result is consistent with Wu et al.'s (2008) results where they found sound did not have a significant effect on player enjoyment.

Players not only didn't want to customize sound in the game, they generally thought it was significantly less important than any other game feature. This was true across games and gender. On the other hand some players who value sound in game think that it would be motivating to have customization options for sound: "...game experience could be dramatically changed if we were allowed to choose different voices or foot-step sounds. That'd be fun." – A CoX player

5.4. Character Appearance

Game characters are virtual representations of players in the game world. What allows each character to differ from others are the various attributes, skills, decorations/physical appearance, and traits (Dickey, 2007). Character appearance is one of the favorite customizations for both WoW and CoX players. As we mentioned previously, character creation in CoX is more flexible than WoW. It is possible that this flexibility is one of the features of the game which attracts gamers. Supporting this idea, we found that CoX players are more motivated to play the game when there are character customization options than WoW players do ($p < 0.01$).

Customizing characters' physical appearance affected female participants' interest in the games significantly more than male participants ($p < 0.05$). Women also enjoy customizing their character appearance significantly more than men do (64.87% of men and 85.29% of women; $p < 0.01$). Female players indicated a desire for further character appearance customization more than male players did ($p < 0.05$). Moreover, character appearance is the most favorite customization for female players. Analysis of open-ended question revealed that being unique in the gaming community is one of the driving reasons to desire to customize character appearance. A female player complains about character customization in WoW: "*Character appearance is the most important. ...though you can make your avatar pretty there are a million players that have the exact same avatar... I want to be the one to decide how big my bust and hips are not have it automatically chosen for me.*" The most common features the participants talked about in the open ended responses were changing their body and build, and generally making changes that would be noticeable from a reasonable distance.

Several players said that their character is a persona they choose to be in a virtual environment, so they desire to have a control over how they want to be represented (More specifically, 25% of participants said so). They see the time spend on their character creation a personal and emotional investment, so they do want to have more control over it. A CoX player states how he sees his character: "*The character name and physical appearance tie in together, and are best explained in my last answer. I'm not creating a "toon" like others do, I'm crafting a persona, a role and vehicle for my escapism.*"

5.5. Talents/Power Sets

Talent trees are one of the most versatile aspects of customization in WoW. Once players' characters reach level 10, they are able to spend their first talent point, then characters get 1 point for every level they gain. Talents are special abilities that enhance game characters in many different ways, for example by giving them an edge in melee combat, or by increasing the power of their spells, or by unlocking completely new and unique skills. By spending talent points, players can customize their character to fit their own personal style of play, so that the same character class can be adapted to several different ways of playing this class (www.worldofwarcraft.com). The corresponding game element of CoX is called *power sets*. They not only define how well a character does things, they also determine what the character can do at all. Without any powers, a superhero would quite literally be powerless.

As we can see in Table 1., choosing and playing talent/power set specializations had the most effect on players' enjoyment in the game. Players customize how their characters behave and what their characters will specialize in through talents/power sets. Therefore, it is a way to customize their characters.

CoX and WoW players agree on the desire of custom build talent trees/power sets for ultimate flexibility in the game. Among all participants, 71% rated talents/power sets an important or very important factor affecting their interest in their game. Although CoX players rated power set customization more desired than WoW players did, it was not a significant difference.

Players think that customizing talents/power sets is important as those features allow them to choose what their characters do in the game. Many reported that talents allow them to experiment within the game until they find the best combination for their characters. We found a significant correlation between how important people think their characters do in the game and people think that talents/power sets affect their enjoyment in the game ($p < 0.001$). Especially in WoW, where character appearance does not make a big difference, talent customization can make a character very different from others. Some WoW players, on the other hand, think that being able to distribute talent points across talent trees is a way of managing the balance across player expertise.

“Talents: It's always nice to see the programmers and developers tweaking the characters in order to make them better. Sometimes that doesn't happen, and sometimes the changes don't go over very well with the community, but the major players realize that it's only to balance out each of the classes. Being able to customize your talents to your liking and your game play is a great way to encourage new players to join, and having a complete overhaul of these talents, ie: adding new ones, or changing the amount of points” – Male WoW player from USA

5.6. Social Aspect

MMORPGs are social environments. As a CoX player explains very well: *“Collaborating with other players, largely because the CoX community is noticeably more mature than those of other games I've played. Take away the other people and MMOs are tremendously dull; other players make the game more interesting to me - even the terrible ones.”*

Social features are those related to social aspects of the game such as using the chat window, making other players friends, collaborating for quests, or ignoring them etc. Multi user virtual environments have potential to enhance social interaction, support connectedness, and identity construction. For example, Salazar (2009) discusses social identity reproduction in virtual worlds and states that as the set of traits and characteristics that differentiate one group from another in MMORPGs and this allows them to *“assume the existence of an overarching construct – social identity.”* This concept can be better understood with the discussion in avatar appearance.

26% of the participant players in our study said that the social aspect of games affect their enjoyment very much. For the EP, this percentage is 17 and for NP, 39. There is in fact a significant negative correlation between expertise and how much player think social aspect affects their enjoyment of the game (Correlation is significant at the 0.05 level, 2-tailed). Therefore, social aspect of the game is not very effective on expert players' enjoyment in the game. One interpretation for this result might be the hard core gamers may not be playing for the social aspect but more for challenge or fantasy features in the game. Further data analysis of open-ended questions and other survey items needs to be conducted to investigate other possible reasons.

A total of 86 players answered the open ended question about what they want to be able to customize of social features in certain ways. Here is the one of the female players comment, *“I would like to see the ignore/friend list a bit more customizable. I want to ignore people, I want to friend them, I want to make a note that this person isn't good to group with but I don't need to ignore or friend them, I want to make a note that this person is excellent to group with, etc. Without having to have a separate mod to allow me to do so, as that means I have to have another item cluttering up my screen for me to put the notes in.”*

6. Discussion

The study presented in this paper has its weaknesses; the participants who filled out the surveys may not be a representative population for all the WoW and CoX players as there are millions of WoW players around the world. Another problem of online surveys is the self-selection of the respondents, which may result in a bias, as Internet users decide themselves whether or not to take the survey. Thus, users who are highly involved with the topic are more likely to complete the survey than uninvolved users. Players who use forums may be over-represented in the sample, as they might participate in surveys more than others. However, since MMORPGs are online games, doing online surveys for researching game related questions are still relevant and appropriate.

The relevance of this line of customization research may not be seemed relevant to education. However, we believe that educators and designers of educational games can learn from successful commercial games. Therefore, another guiding foundation of this research is Dickey's research (Dickey, 2007) on understanding and re-using design principles from MMORPGs for educational applications. Game developers need to understand which types of customization are important, related to users and the software/game being developed.

One of the core principles of design is: *“Know your audience.”* In the case of user control options, this can't be stressed enough. People feel so strongly about various types of customization that failing to provide support for

them can greatly decrease their enjoyment of your product. If players' enjoyment drops enough, they'll stop playing. Of course, since providing extra features takes resources, knowing their audience can save developers from spending time and money on things their player base may not care about. When considering demographic differences, there are not only gender differences but also cultural differences in wanting to customize. Yee noted that many Asian MMORPGs have pre-defined character appearances while Western MMORPGs give the user the ability to customize many physical features because while using complex character creation tools, Asian gamers get frustrated when more skilled gamers create more attractive characters than theirs (Yee, Deadulus project). Yee further acknowledges that "While this at first appears as if Western gamers care more about their appearances and individualism compared with Asian gamers, the underlying issue is two very different views of egalitarianism"

Female MMORPG players tend to play female characters more (Yee, 2006a). While female players rated customizing their character appearance as the most enjoyable form of customization, female characters have fewer options than male characters in WoW. This kind of results can inform game designers when creating engaging games for a target audience.

7. Conclusion and Future Work

Games are considered to be enjoyable and motivating in general. Although there has been considerable progress in the field of game research, empirical research which targets understanding the design features which make games enjoyable and motivating is still lacking. This study is taking customization, an important variable which has been found to make games enjoyable, and trying to capture the importance of it compared to other game features across game genres and player demographics. The first stage of this study we briefly talked about in this paper demonstrated that players' engagement with two very popular MMORPGs depends on players' control over their character development, as well as the overall game play, and how players value different customization options over others in different types of games. We believe that this line of research is important to pursue as there are dozens of virtual worlds and games are being created every year. Since educational applications of these environments are still being explored, it is important to exploit engaging features of these environments. Proceeding from here, along with survey studies, we are preparing to further broaden our game sampling by including more games (both multiplayer and single player) in the study, and conduct experimental studies through working with players in face-to-face environment for a deeper understanding of their internal processes. We believe that these steps will bring researchers closer to truly understanding of the complete structure of player's interaction with customization and its relationship to engagement, enjoyment and motivation in game.

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