# Use of Computer Mediated Communication in Massively Multiplayer Online Role-Playing Games

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## Introduction

Since the late 1990s, massively multiplayer online role-playing games (MMORPGs) have gained increasing popularity (Griffiths, Davies, & Chappell, 2003). This evolution from single-player games such as Pong to multi-player games like Mario Kart to MMORPGs consisting of millions of players worldwide has led to an evolution in Computer Mediated Communication. With this influx of players has come a social revolution shown through the increased use of forums to discuss game play and other relevant topics.

## Background

### *World of Warcraft*

One of the world's most popular MMORPGs is World of Warcraft, created by Blizzard Entertainment. According to the official World of Warcraft (WoW) website, "Players assume the roles of Warcraft heroes as they explore, adventure, and quest across a vast world. World of Warcraft is a "Massively Multiplayer Online Role Playing Game" which allows thousands of players to interact within the same world. Whether adventuring together or fighting against each other in epic battles, players will form friendships, forge alliances, and compete with enemies for power and glory" (Blizzard Entertainment, 2005). Players choose a server, or realm, that they access and explore with characters of their own design. Characters can belong to different classes: warrior, hunter, druid, rogue, etc. and different races: Night Elf, human, troll, orc, and more. Players gain experience points for defeating creatures and other players in battles or by completing quests. Quests are assigned by computer-generated characters in the game and involve the player carrying out a certain task or collecting an item. As these experience points accumulate, players "level-up", or gain a level. All characters begin at level 1 and gain

experience points until they reach level 60, the highest level that can be achieved in the game. It takes several months of daily playing to get to this level.

Players communicate with each other both in real-time chat during gameplay and on the Internet via official and unofficial forums. Official forums are located at www.forums.worldofwarcraft.com. With a total of four million players worldwide, one million in North America alone, it is the number one selling MMORPG in the world. In just over a month and a half, nearly one and a half million customers in China signed up for the subscription-service game (Blizzard Press Releases, 2005). World of Warcraft is a subscription service game that costs for both the initial game purchase and a specific price per sixty day subscription.

*Computer Mediated Communication and MMORPGs*

Computer mediated communication (CMC) is an interaction between two or more people who interact using individual computers via a network connection. This interaction involves the use of social software, including instant messaging, e-mail, and forums (Jonas, Boos, & Sassenberg, 2002). This form of communication is in direct contrast to face-to-face (FtF) communication, in which two or more individuals communicate while in the physical presence of one another. Uses of CMC today include businesses facilitating project groups, students communicating with professors, and video game players discussing strategy and game play. There are two types of CMC, synchronous and asynchronous (CMCa). Synchronous CMC would refer to a real time chat occurring in the game while CMCa, which is the focus of this report, occurs with time in between message and feedback, thus causing another hindrance to communication (Becker-Beck, Wintermantel, & Borg, 2005).

One of the use for CMC is for communication concerning MMORPGs, or massively multiplayer online role-playing games. These are new-technology games that involve sprawling, graphically sophisticated, fantastical worlds and environments. In opposition to the generally accepted view that games are solitary endeavors, these multi-player games rely on social interactions (Schiesel, 2005). These games mix real world players from around the world who create characters who have a range of identities and races with computer-created characters demonstrating the latest artificial intelligence technologies (Griffiths, Davies, & Chappell, 2003). In these games players can either choose to explore the world alone or to join up in groups. Formal groups with established hierarchies are known as guilds, and these are among the groups more likely to utilize CMC than non-organized players**.** Many players join these guilds, grouping together in sets of tens, hundreds, or sometimes thousands of players. These guilds display camaraderie similar to that of sports teams, in which each player relies on others to succeed (Schiesel, 2005). These inherent social aspects of multi-player games bring players from around the world closer together, "while role playing games and shooter games give birth to clans, tribes and guilds" (Sotamaa, 2004).

The immense popularity of these games has given way to the development of social communities and forums, both sponsored and non-sponsored (also known as official and unofficial) websites. A gaming forum is an interactive site where members can post their thoughts and respond to other posts (called "threads") concerning related game play topics (Bell, 2004). Each person in a forum can either to respond to active threads already being discussed or to begin his or her own thread. These conversational threads "refer to the different, but parallel conversations taking place simultaneously in the same digital space" (Greenfield &

Subrahmanyam, 2003). These threads are often easy to follow as they are designated by subject and organized on the webpage so that one thread's posts may be found together.

A forum can also serve as a virtual community. Communities are "networks of interpersonal ties that provide sociability, support, information, a sense of belonging, and social identity" (Wellman, 2001, qtd. in Siitonen, 2003). The virtual comes into play when a network and computer software are used to communicate within this community, i.e. when CMC takes place (Siitonen, 2003). Thus, forums are interactive, virtual communities built from members around the world who come together to discuss topics that are related to the site's subject matter.

*CMC: Social Interaction and Social Learning*

The explosion of growth in the use of computer mediated communication (CMC) in recent years has led to a study of this relationship between technology and socialization called social informatics (Halavais, 2005). This field attempts to define how certain technological and societal relationships establish and develop. Many of these relationships form in MMORPGs and in the forums created around these games. These established forums help to facilitate communication among members that are geographically distant from one another (Lemus, Seibold, Flanagin, & Metzger, 2004). These relationships lead to interpersonal discussion about the games, which in turn creates a better understanding of the game and its features for all members who contribute to the forum, and this will increase the popularity and replay value of the game (Hardy & Scheufele, 2005). When a game's replay value is increased, more participants will play the same level or area over and over, looking for a better score or a new feature that was missed earlier. Forums increase the replay value of these games by promoting discussion of these new features.

Computer game forums are often environments for social learning, or for learning social skills necessary for cooperating in the massively multiplayer environment. According to Ducheneaut and Moore (2004), there are four parts of social learning: self-organization among players, instrumental coordination, in-game sociability, and helping behavior. Self-organization among players would include conversation revolving around "group creation, group maintenance, and group disbanding" (Ducheneaut & Moore, 2004). Instrumental coordination would take place as a group was communicating about a specific event, such as a planned attack or raid. In-game sociability is simply the small talk and side conversation that occurs with many social interactions. Helping behavior allows advanced or experienced players to share their knowledge with players who may not have the same degree of skill. When players acquire the skills taught by all of these social learning experiences, they will learn what role they play in the group, how to be sociable and agreeable, and how to later teach skills acquired from this group interaction to new and developing group members (Ducheneaut & Moore, 2004).

Two conversational strategies used to maintain a steady social interaction in these forums are role functions and relevance functions. Role functions are individualized, social identity functions where an individual identifies him or herself and decides who he or she is communicating with in a thread (Greenfield & Subrahmanyam, 2003). For example, a person could have the role of respondent and reply to an already active thread, or a member could be a mediator, communicating with a forum as a whole in order to maintain its standards. Relevance functions decide whether or not a response is applicable to the thread being discussed (Greenfield & Subrahmanyam, 2003). With other social needs being met in these forums, side conversations will occur, and arguments or other discussions may interfere with the original

discussion. Mediators are often in charge of these relevance functions, making sure that threads stay on topic.

*Interaction Analysis: Categories and Social Learning*

Author Robert Bales denotes twelve categories of interaction analysis, all of which can be used to classify different conversations occurring in CMC. These categories offset each other, so that one type of interaction is seen as the opposite to another. The first two types of interaction are showing solidarity and showing tension release. Tension release is a purely social interaction, and it includes joking or responding to a joking comment. Solidarity "raises other's status, gives help, [or] rewards" (Bales, 1951). Another response a forum participant could issue is an agreement, wherein he or she concurs or complies with the previous post. In a thread, a participant can offer three types of new information: a suggestion, an opinion, or an orientation. A suggestion gives direction, an opinion offers the person's analysis or judgment, and an orientation gives clear information or clarifies earlier data. Other players may request a suggestion, opinion, or orientation from the other players in the forum. Other posts may show disagreement with previous items discussed, show tension within the forum, or show antagonism towards others.

As a whole, the use of these social and conversational strategies plays a large role in the use of Computer Mediated Communications in forums concerning MMORPGs, particularly World of Warcraft. This study will attempt to discern the differences between higher and lower level players as they use different social and conversational strategies in forums. The three hypotheses that this study will investigate are:

H1: Higher level players, particularly those belonging to guilds are more likely to utilize social learning to organize and coordinate their groups and give rather than ask for help.

H2: Lower level players are more likely to disagree or start trouble than players of a higher level who are more experienced.

H3: Higher level players are more likely to give information than to ask for information, while lower level players are more likely to ask for information than give it.

**Method**

For this observation, a random selection of forum topics was chosen from the World of Warcraft homepage at www.worldofwarcraft.com. Using a selection from a table of random numbers, five random categories were chosen and, from each of these categories, three threads were randomly selected. The five categories selected were: Quest Discussion, General Discussion, Guild Recruitment, Hunter Discussion, and Off-Topic Discussion. Three threads within each of these categories were saved as html documents for future reference as posts are added to threads every minute. These forums were accessed and saved on October 12, 2005. From each of the three threads, the first ten posts were analyzed. If a player posted more that two consecutive posts, the third post and the rest of the consecutive posts were ignored. This helped to eliminate the negative effect that spamming, or players posting advertisements or other non-game related information in excess, would have on the results.

The posts were analyzed according to the categories mentioned previously. These categories included the type of social learning displayed, conversational strategy utilized (role or relevance), and interaction category most prominently displayed. These results were chosen based on the coder's view of what was most evident in the post. This was decided in several ways. The first was that the post was almost automatically asking for something if a question

mark was in the post. Another method of deciding the social learning strategy or information category, if there were multiple strategies/categories in the post, the one that seemed to be the goal of the post would be selected. The level of the player posting, the guild status of that player, and other game demographic information was also recorded. The posts were examined to see if they served only a social purpose or if the post applied to WoW. All of these questions were answered with one response on a coding sheet, and the result was a collection of 150 random posts.

**Results and Discussion**

The first hypothesis makes a claim concerning the aspect of social learning displayed by the post. The different categories that were choices were: self organization among members, instrumental coordination, in-game sociability, helping behavior, or no aspect shown. The most common aspect shown was in-game sociability, which was shown in 36% of posts. For the rest of the data, see Table 1 below.

**Table 1**

**Aspect of Social Learning Displayed**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Self-organization among members | 21 | 14.0 | 14.0 | 14.0 |
| | Instrumental coordination | 5 | 3.3 | 3.3 | 17.3 |
| | In-game sociability | 54 | 36.0 | 36.0 | 53.3 |
| | Helping behavior | 38 | 25.3 | 25.3 | 78.7 |
| | No aspect of social learning shown | 32 | 21.3 | 21.3 | 100.0 |
| | Total | 150 | 100.0 | 100.0 | |

When the data was grouped into six ranges, levels 1-10, 11-20… 51-60, a clear pattern of aspects of social learning emerged (See Table 2). For example, sixteen posts by players who were levels 20 and under showed in-game sociability, while only two showed self-organization among

members. Contrastingly, eleven players above level 50 showed self-organization. It is very significant that the lower level players showed mainly in-game sociability and higher level players used forums more for self-organization and instrumental coordination ($X^2$=37.164; p=.011, df=20). This data clearly supports the hypothesis.

**Table 2**

**Level Range * Aspect of Social Learning Displayed Crosstabulation**

**Level Range * Aspect of Social Learning Displayed Crosstabulation**

| | | | Aspect of Social Learning Displayed | | | | | Total |
|---|---|---|---|---|---|---|---|---|
| | | | Self-organization among members | Instrumental coordination | In-game sociability | Helping behavior | No aspect of social learning shown | |
| Level Range | 1-10 | Count | 1 | 0 | 7 | 2 | 5 | |
| | | % within Level Range | 6.7% | .0% | 46.7% | 13.3% | 33.3% | 100 |
| | 11-20 | Count | 1 | 1 | 9 | 1 | 0 | |
| | | % within Level Range | 8.3% | 8.3% | 75.0% | 8.3% | .0% | 100 |
| | 21-30 | Count | 4 | 0 | 2 | 4 | 4 | |
| | | % within Level Range | 28.6% | .0% | 14.3% | 28.6% | 28.6% | 100 |
| | 31-40 | Count | 4 | 2 | 3 | 5 | 1 | |
| | | % within Level Range | 26.7% | 13.3% | 20.0% | 33.3% | 6.7% | 100 |
| | 41-50 | Count | 4 | 1 | 3 | 2 | 6 | |
| | | % within Level Range | 25.0% | 6.3% | 18.8% | 12.5% | 37.5% | 100 |
| | 51-60 | Count | 7 | 1 | 30 | 24 | 16 | |
| | | % within Level Range | 9.0% | 1.3% | 38.5% | 30.8% | 20.5% | 100 |
| Total | | Count | 21 | 5 | 54 | 38 | 32 | |
| | | % within Level Range | 14.0% | 3.3% | 36.0% | 25.3% | 21.3% | 100 |

Hypothesis two theorizes that lower level players will display a lack of social skills that will lead to argumentativeness and antagonism. Several of the interaction categories show a lack of social skills, including showing tension and showing antagonism. A total of 7 posts out of 15 posts by players with a level lower than 10 showed antagonism in their posts, as compared to 7 out of 78 posts by players with a level over 50. The action the post conveys (posing a question,

answering, arguing, commenting, or socializing) is also indicative of different levels of social skills. 5 out of 15 posts made by players with a level lower than 10 are argumentative, while just 4 out of 78 of higher level players show that action. This data is also statistically significant ($X^2$=93.975; p=.001, df=55). Lower level players do indeed show more argumentativeness than higher level players, and thus supports the hypothesis.

The last hypothesis conjectures that higher level players will give information rather than ask for it. 32 out of 78 (41%) of posts made by players with a level greater than 50 show them giving an opinion, information, or orientation. Only 9 out of 78 (11.5%) of posts by players with a level greater than 50 show them asking for information, an opinion, or orientation. Comparatively, players with a level lower than 30 (players most likely to be new to the game) gave information, an opinion, or orientation 9 out of 39 times (23%) while they asked for information, an opinion, or orientation 13 out of 39 times (33%).

**Conclusion**

The data collected from these forums clearly supports the previously stated hypotheses. Higher level players posted significantly more than lower level players, because of their interest in the forum topics, their greater grasp of the uses of CMC, and their boredom with a game that they have beaten (level 60 players have no higher level to strive for). This evidence supports the first hypothesis. One aspect of CMC, social learning, seemed to be difficult to grasp for lower level players, while higher level players easily used the forums for instrumental coordination and self-organization among members. Much of this learning existed between guild members and in recruiting new guild members. This version of teams in WoW required such coordination and organization in order for all of the players to maintain togetherness. Because the data clearly

supports the idea that higher level players, particularly members of guilds, use social learning for coordination and organization, the data supports hypothesis two.

Lower level players had a much higher percentage of posts displaying antagonism or anger. These players have not had experience with the basic social expectations when using CMC, and this immaturity is evident in the content of their posts. Lower level players also posted more in the off-topic forums rather than forums dedicated to guild discussion and game play strategies. This shows that these players have not grasped the usefulness of forums for improving their play. Because the data collected from these forums proved to be very significant, the third hypothesis was supported. Aside from using forums for mainly social uses, lower level players also used them to ask questions about game play. These two actions made up the majority of the methods of interaction lower level players used. Because they have a lesser knowledge of game play and quests or areas within the game, they are more likely to have questions about the game. Higher level players (particularly those above level 50) are more apt to answer questions because they are experienced in almost every aspect of the game.

In this experiment, results may have been swayed by the coder's personal views or preferences in deciding which categories or strategies were most prominent. Future research could include selecting all categories or strategies in the post, instead of choosing just one. Another problem may lie in the selection of which forums to code, as there was a much higher number of players with a level of 30 or greater than those with a level below 30. Again, future research could take this into account and specifically target lower level players and their posts to see the CMC skills used. During the course of this experiment, it was observed that many posts began as question and answer discussions, but then evolved into social conversations. Another

study could track the progress of these conversations as they developed from informational to social.

As a whole, higher level players posted more, and showed more game relevance and social skills than did lower level players. There are many possible explanations for this, including the increased knowledge of the game that these players show and the fact that, once at level 60, there is nowhere for them to go, because level 60 is the highest level able to be obtained by players in the game. These players have experience with the computer mediated communication skills and can take advantage of the social learning provided by CMC.

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