

Social Interactions Experienced in the Massively Multiplayer Online Game  
Environment: Implications in the Design of Online Learning Courses

Toru Fujimoto

The Pennsylvania State University

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Toru Fujimoto  
The Pennsylvania State University  
314 Keller Building, University Park, PA, 16802  
[tuf105@psu.edu](mailto:tuf105@psu.edu)

### Abstract

The purpose of this research is to clarify the details of social interactions and experiences players encounter in the non-combat Massively Multiplayer Online Game (MMOG) environment. The research focuses on creating fundamental data for discussion useful for implementation for online learning courses. An ethnographic study approach is used for the research. Several possible themes which are relevant to the social interaction in the environment are found. Applicability of those themes to the educational settings is discussed.

### Introduction

Video gaming, today, is becoming one of the major forms of entertainment, and as the industry has kept growing so has its market size. Generations born after 1970 are called “the game generation.” Videogames are naturally a major form of entertainment for the game generations (Prensky, 2001). Online games provide players with opportunities to interact with others who are physically disconnected. Among the genres of the online game, Massively Multiplayer Online Game (MMOG) has become one of the most popular genres. The games in the genre have acquired millions of players (IGDA, 2004).

As using digital games for instruction has directed notable interest toward education, and extensive research has been conducted in this area (Leemkuil et al, 2000; Mitchell & Savill-Smith, 2004). One aspect of games that educators and instructional designers have focused on is enhancing the social interaction in online learning environments (Muirhead, 2001). MMOG is also becoming a field of educational research. MMOG, considered a learning community (Steinkuehler, 2004), prompted college instructors to use MMOGs as a virtual classroom (Terdiman, 2004).

What often happens when games are designed and used for educational purposes is that they lose their aspects of fun, and the game does not engage student participation as one would expect. For this reason, principles and methodologies especially for utilizing games to maintain their engagement aspect in the learning environment need to be further researched and established.

The primary focus of this research is to investigate social interaction in the MMOG environment. In the MMOG environment, game players engage in peer mentoring and mutual learning, and the game environment becomes an online learning community (Yee, 2002b). This type of environment is what educators try to create in educational games.

### Literature Review

#### Social interaction in online community

Social interaction is defined as “the acts, actions, or practices of two or more people mutually oriented towards each other's selves, that is, any behavior that tries to affect or take account of each other's subjective experiences or intentions”(Rummel, 1976). Online community is a research topic investigated by researchers in various fields (Tu & Corry, 2001). It is also called a “community in cyberspace” (Mccarty, 1999), and a “virtual community” (Erickson, 1997). Wagner (1997) outlined specific instructional outcomes which enhance learners' experience achievable through interaction in distance education settings and emphasized that social interaction in the distance education environment is important.

### Massively Multiplayer Online Game (MMOG) research

Past research on MMOG investigated the following issues: (1) understanding the ways people are, or are not, attracted to the game, and game addiction (Yee, 2002a; Choi & Kim, 2004; Foo & Koivisto, 2004); (2) clarifying how social interaction plays a role to engage people (Steinkuehler, 2004; Yee, 2002b); (3) defining the experience which players have in the MMOG environment (Griffiths et al, 2003); and (4) economic activities in a virtual world (Castronova, 2002).

The research shows that social interaction among the players takes on an important role in creating an online community in the game environment. However, most of the past research has been conducted on combat type MMOGs such as “Ever Quest” and “Ultima Online,” and not on non-combat MMOGs. The combat type games are a type of “Dungeons and Dragons” game, which contains clear missions in the game system such as fighting with monsters and raising the strength level of the character. Even though the game players construct online communities in such environments, the game system and game contexts are not analogous to the learning communities in educational settings.

Detailed research, focused on social interaction in the non-combat environment is necessary to clarify why and how social interaction works for online game players in terms of engagement and motivation. The research has to be designed to provide a clear understanding of what engages players and what does not in the game environment. Detailed data on player behaviors and thoughts need to be collected, as well.

### Research purpose

The purpose of the research is to describe the social interactions and experiences among game players in the non-combat Massively Multiplayer Online Game (MMOG) environment.

The research is aimed at collecting data to answer the following questions:

- (1) What are the elements creating social interactions which enhance players’ motivations to play the game?
- (2) What are the players’ experiences which promote their engagement in the game play?

This research anticipates producing fundamental data to understand what kinds of social interaction occur in the MMOG environment. The research is also expected to establish a framework which can be applied to other MMOG research and other online community research, which investigates experiences of people in the environment.

### The field: MMOG “A Tale in the Desert”

The research is done on the game environment of “A Tale in the Desert” (ATITD), a non-combat MMOG which simulates ancient Egypt world, provides the players with a cooperative environment in which players need to collaborate with others to accomplish their missions (Figure 1). “The objective of ‘A Tale in the Desert’ is to build the ideal civilization by perfecting the ‘Seven Disciplines of Man’. The outcome of the game depends solely on the players. The storyline will revolve around what the players do. How they go about building their own cities, how they choose their own leaders, and how they face the stranger's challenges. If they can organize themselves and negotiate for what they need, Egypt will flourish (eGenesis, 2003).”



Figure 1. The environment of “A Tale in the Desert”

### Methods

As this research intends to collect detailed data and create “thick description” (Geertz, 1973) of culture in the field, ethnography (Rossman & Rallis, 2003) is chosen as a research approach. Coffey and Atkinson’s qualitative data analysis (1996) is chosen as a data analysis guideline. Because authentic ethnography requires long-term immersion which does not fit to the time span of the project, the research approach is considered mini-ethnographies.

Observations on game players’ behavior, formal and informal interviews with game players, and document analysis of reflective journals, written by the game players are conducted. Observations occurred at the multiple locations in the game environment. Face-to-face and in-game chat interviews take place with game players. Document materials originate with the official game website and fan community websites.

### Research procedures

Data collection occurred at the beginning of research. Documents related to the game were collected mainly originated with the ATITD wiki website (<http://wiki.atitd.net/tale2>), and ATITD.net (<http://www.atitd.net/home/>). Detailed information regarding game systems, in-game events, and game player interaction were compiled. Observations in the game environment were conducted to identify broad ideas on the behaviors of the game players. Several in-game events were observed. Interviews sourced from online chat and in-game chat functions in the game. These interviews consisted of seven formal interviews (six face-to-face interviews, one online-chat interview). Interviewees recruited from different identity groups allowed data collection from multiple aspects. An experienced MMOG player who has played ATITD for a long time, a novice game player who played ATITD, experienced MMOG game players who played ATITD for the first time, and a mother whose son is an experienced MMOG player, were the interview subjects.

The analysis phase included reconstruction of collected data. The expectation was that analysis will also reveal indications of interaction patterns, their meanings, power relations, roles, and interactive sequences. Based on the reconstructed data, a set of descriptions and evidences to addressing the research purpose and responding to questions emerged.

## Discussion and Results

### Game systems - the engine for social interaction

There are some cultural forms found through the data analysis. The game systems and those cultural forms are closely related. Open-ended environment, cooperative tasks, and user-participated operation create the cooperative, autonomous player community.

#### (1) Open-ended environment

There are certain requirements to accomplish tasks, basically the game players are able to choose to pursue any tasks as they like. They run across the land of Egypt, visit seven different types of schools and universities (Schools/Universities of Leadership, Human Body, Worship, Art and Music, Architect, Conflict, and Thought) and learn skills (e.g. planting, cooking, mining, and construction) collect resources (e.g. woods, sands, irons, and slates) they need, and produce products (e.g. bricks, carrots, linens, and beers) which are necessary to accomplish the tasks.

#### (2) Cooperative tasks

The game players are required to accomplish the tests assigned by schools and universities. Some of the tests can be done individually, however, most of the tests require (or encourage) cooperation with other players. The players also have to donate resources to the universities to release the higher-level skills. The resources required for releasing skills are large and difficult to gather alone. It is also necessary to cooperate with other players to release the skills.

#### (3) User-participated operation

One of the unique features of ATITD is that the game system depends highly on user participation. The game websites (e.g. ATITD wiki and ATITD.net) are administrated and updated by player community. Tests in the game are also designed to encourage player participation to create social interaction by themselves. To pass the test of the host, the players have to host in-game events. The events are such as a gemcutting contest, a fireworks contest, a cooking contest, and so on.

ATITD also has a unique legal system in which the players prepare and pass around a legal petition to create a new game rule. Other players sign the petition if they agree to the new rule. Once the law is approved, the request is sent to the game designers. For example, "Driftwood Recycling Act" is the law to require the players on the novice island to remove the constructions they created, and "Full ban of Machiavelli" is the law to exile a misbehaving player. These laws petitioned by the players improve the quality of community life. Game publisher usually handle these sorts of requests as customer requests, however, ATITD includes the request process as a part of its game system.

In-game events take place to increase entertainment in the MMOG world. Though the game publisher usually produces the events in other MMOGs, in this game, players are also able to host the events. In-game events are opportunities to meet with other players. Just like in the real world, people enjoy

conversation and play with the skills they learned. "...Others plan it in advance and invite a lot of people. then [sic] have drinks and acro and games. :)" (Data from online-chat log, 04/17/2005)

#### Guilds – the place of mentorship

A guild is a player group to share buildings, resources and manpower. It also works as a base for the players. The guild has a rank system and the higher-ranked players manage the guild. In the guild elder players support novice players through mentorship, or apprenticeship style instruction. The following dialogue is from online chat of the guild channel. A novice player learned how to move to other areas using a chariot stop from a guild elder.

A: How I can travel to other area?

B: ok, there are chariot stops, which are also shown on your map. They go to different regions. You can find what goes where on wiki

B: eventually you can get anywhere :) [smiley face]

B: the chariot stop is up the road from Thoth, north...from the chariot stop you would go to Nile Delta, then Sinai, then RSO. Travel at the chariot stop can be free if you want to wait, or if you are in a hurry, you can use travel time, it will tell you when you click [click] on it.

A: Cool, now I can see pyro

B: :) (Data from the online-chat log, 03/27/2005)

#### "Acro?" – the designed social interaction patterns

As the game designers of ATITD intended, social interaction opportunities are designed and embedded in the game play. The players experience various types of social interaction. One of the unique phenomena observed is that the players start communicating with other players by asking "acro?" It means "Would you like to play acrobatics with me?" Acrobatics is one of the tests for the Human Body in the game. The players have to learn 28 moves to pass the test. To learn the moves, the players stand close to each other and perform the moves. The players need to communicate with others to know if they know the other moves.

KK: I have a petition that needs sigs, if anyone's within reach? [petition has to be signed by other players to be approved]

P: KK, I will check it out after the competition

KK: Didn't you take a copy, P?

(Data from the online-chat log, 04/09/2005)

#### Barrier created by the social interaction

On the other hand, existence of other player may create a barrier for the new players. Below is dialog with a novice ATITD player who has had no experience of MMOG play. She reflected why she did not feel engaged in the game.

Q: ...So you are saying you have the same personality in the real and in the game.

A: Absolutely. I tell you what, not in the game, in the real world, if I am in the event, there is one or two

persons I know, then I am fine. But when there are no people I know, then I become uncomfortable, and I will find a reason to leave.

Q: Yeah, I see... In the tale in the desert, did you talk to the mentor?

A: Yeah, my relationship with mentor was uncomfortable because I don't know who the mentor was. If the mentor was you, or other members of the class, I would have been fine. But when I was not knowing who the mentor was, I was not comfortable. (Data from interview with GS 04/11/2005)

Novice players tend to be overwhelmed by the complex MMOG environment. The interviewee above was also not familiar with the anonymity of the environment. Some informants stated that they prefer to play solo if their friends in the real world do not play the game. The personality of the player seems to affect his/her attitude to other players in the game.

Conclusion – implications for online course design

The social interactions in ATITD are carefully designed and embedded in the game play. Interactions take place in various ways. The significant differences between the player community in ATITD and learning community in online courses are that the role of provider, and the relationship of provider and receiver. The learning community in online courses is usually instructor-led. Automated course are unlikely to create interaction among learners. Provider (instructional designer and instructor) and receiver (learners) are clearly separated. Mutual learning among the learners passively occurs in partial ways. Continuous facilitation by the instructor is necessary to sustain the learning activities in the course.

In ATITD, on the other hand, the game designer is the service provider and designs and implements the game system to realize the planned activity (Figure 2). Once the activity is implemented, the players operate the activity and the advanced players voluntarily support novice players to learn and participate in the process.

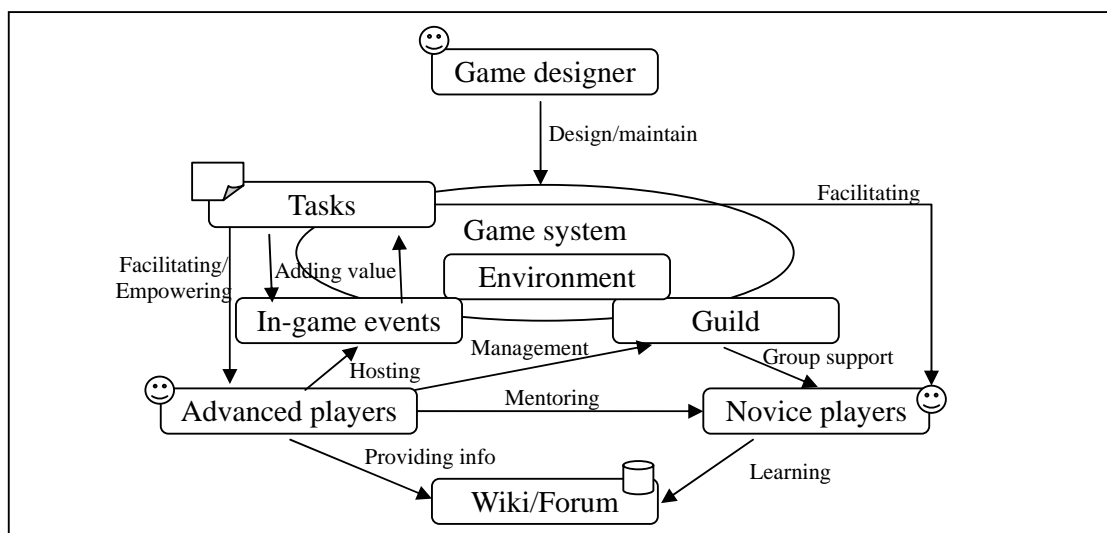


Figure 2. Relationship in the game world

In-game events and festivals are planned and hosted by advanced player who pursue the higher-level task.

The community works autonomously, and the players learn mutually without direct help or intervention of the providers. The main providers' roles are an initial design and implementation, and maintenance. The design concept and design constructs are different between ATITD and online courses. Social interaction opportunities are interwoven in ATITD, whereas social interaction is not necessarily a concern of design in the online courses. Perhaps taking these differences into account in the online course design could improve them.

Playing a new MMOG is analogous to starting a new life in a foreign country. Significantly a researcher who studies MMOG has to become acclimated not only the language, but also the culture and rules of the "world". Despite the hardships, meet the people in ATITD world was a wonderful experience. The elders of the guild were generous and cooperative. People in the gemcutting contest welcomed and encouraged the novice player. Everyone encountered during the research positively supported each other to build a better society. Compared with other popular MMOGs, ATITD is just like a small village with just about 1500 villagers; however, with a unique and valuable culture in the village. As past ethnographers who studied uncivilized tribes become enchanted with the field, the field of ATITD provided the researcher with engaging and invaluable experiences. Amazingly the game arose from a small team of game developers, but the encouraging news for instructional designers is that a small team could create such an online learning community which is filled with social interaction and learning opportunities.

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