

## Cover Page for:

# A Case Study of Using Online Communities and Virtual Environment in Massively Multiplayer Role Playing Games (MMORPGs) as a Learning and Teaching Tool for Second Language Learners

## Authors:

**Isara Kongmee**

School of Computing, Engineering and Information Sciences,  
Northumbria University,  
Newcastle upon Tyne, NE1 8ST, Tyne and Wear, United Kingdom

Email: [isara.kongmee@northumbria.ac.uk](mailto:isara.kongmee@northumbria.ac.uk)

Tel: +44 191 2273979

Fax: +44 191 243 7240

**Rebecca Strachan \***

School of Computing, Engineering and Information Sciences,  
Northumbria University,  
Newcastle upon Tyne, NE1 8ST, Tyne and Wear, United Kingdom

Email: [rebecca.strachan@northumbria.ac.uk](mailto:rebecca.strachan@northumbria.ac.uk)

Tel: +44 191 2273979

Fax: +44 191 243 7240

**Alison Pickard**

School of Computing, Engineering and Information Sciences,  
Northumbria University,  
Newcastle upon Tyne, NE1 8ST, Tyne and Wear, United Kingdom

Email: [alison.pickard@northumbria.ac.uk](mailto:alison.pickard@northumbria.ac.uk)

Tel: +44 191 227 3766

Fax: +44 191 243 7240

**Catherine Montgomery**

School of Health, Community & Education Studies,  
Northumbria University,  
Newcastle upon Tyne, NE1 8ST, Tyne and Wear, United Kingdom

Email: [c.montgomery@northumbria.ac.uk](mailto:c.montgomery@northumbria.ac.uk)

Tel: +44 191 232 6002

Fax: +44 191 243 7240

# **A Case Study of Using Online Communities and Virtual Environment in Massively Multiplayer Role Playing Games (MMORPGs) as a Learning and Teaching Tool for Second Language Learners**

## **ABSTRACT**

Massively Multiplayer Online Role Playing Games (MMORPGs) create large virtual communities. Online gaming shows potential not just for entertaining, but also in education. This research investigates the use of commercial MMORPGs to support second language teaching. MMORPGs offer virtual safe spaces in which students can communicate by using their target second language with global players. Using a mix of ethnography and action research, this study explores the students' experiences of language learning and performing while playing MMORPGs. The results show that the use of MMORPGs can facilitate language development by offering fun, informal, individualised and secure virtual spaces for students to practise their language with native and other second language speakers.

**Keywords:** MMORPG, virtual environment, second language learning, online education, e-learning, online gaming, personalized learning

## **INTRODUCTION**

Over the years, computer games have developed from single player game consoles to online gaming where large numbers of players play the game simultaneously over the Internet. Since the games progressively feel realistic and interactive, many researchers have discussed the potential of using online games to support learning and teaching. Rankin et al (2006) point out that computer games allow learners to acquire deep knowledge by "learning by doing". Playing computer games can offer active learning and the ability to view the world in new ways (Gee 2003). As online gaming becomes more common among young people, the excitement, enthusiasm, and entertainment from game play can

motivate them to achieve in their educational endeavours.

Among the many genres of commercial games, Massively Multiplayer Online Role Playing Games (MMORPGs) have gained the most popularity. The game brings many players together in a large virtual community and serves both individual and social purposes such as enjoyment or forming interactive relationships among players. MMORPGs can facilitate different in-game activities to support players in how to think, plan and solve problems. They can also help with learner motivation. According to Underwood et al (2007), the characteristic of commercial MMORPGs are likely to offer individual players the opportunity to learn new skills through group problem solving, socializing

and communicating within the virtual community. This social network role in MMORPGs benefits players, especially second language users (L2) by allowing them to practice their target language in a safe place with other players across the globe. Moreover, MMORPGs contain some authentic language related to the main and sub stories within the game which players can apply as language models.

## **BACKGROUND**

English language has dominated as an international language in recent times. Students learning English as their second language need to acquire communication competence in this target language. However L2 need to practice their language skills and there are limited opportunities to do this in the traditional classroom environment. Llurda (2011) claims that second language teaching in a classroom should offer practical language skills and not just traditional tools and examples from textbooks. Language acquisition can be enhanced by exploring and sharing the target language, including culture with native speakers (Mckay, 2000, 2003 in Llurda). In some countries it is difficult to provide 'live' language opportunities in the classroom. Thailand is one such country and forms the centre of this study. L2 in Thailand are under achieving as the traditional classroom based instruction focuses on grammar based lessons with artificial language examples from textbooks, and limited English native speakers to draw on. Rankin et al (2006) suggest that L2 should be able to progress in target language at the communication level by: 1) using and responding to the target language context; 2) constructing and comprehending the appropriate structure of language; 3) actively negotiating the meaning with other speakers through target language; and 4) applying the target language in real life.

Thai L2 seem to miss out on several counts according to the above categories. Current technology developments have the potential to support and enrich L2 learning. In particular MMORPGs could be used as a communication tool for language development, especially using MMORPGs as communicative tool in L2 language development. MMORPGs are popular compared to other game environments and thus can help a player's motivation and engagement in their learning. According to Gee (2003; 2006) in Bryant (2007), the MMORPG digital environment offers a learning experience that:-

- Enables learners to transfer skills from the classroom to a practical performance
- Applies and adapts to real-life situation
- Uses communication skills with other players
- Provides immediate/active feedback
- Gives the opportunity to use the four language skills: reading, writing, speaking, and listening
- Becomes part of self-learning as MMORPGs provide different levels of difficulty.

In addition, the in-game community can immerse L2 players into the target language community since the world of MMORPGs blurs personal identities. This benefits L2 in the sense that L2 users are no longer separated from the native-speaker community (Cook, 2011). This allows native speakers and L2 to create new communities without any language tendencies being a major issue.

## **PREVIOUS RESEARCH**

Computer game-based research has been conducted in different areas to promote and support (online) gaming as a learning tool.

Spring-Keller (2010) defines 'the enjoyment of learning in a digital

environment' and states that without enjoying the experience of learning, the learners will only achieve a minimum to standard level in educational knowledge. This study explores the components and connection among individual players, social environment (teachers, family, friends, and game-related community), and the game. Each component influences the player to participate in learning not only in the game itself but also with regard to outside learning activities. This results in greater enjoyment in the learning process. In order to use the digital environment (online game) to support the traditional classroom, the teacher needs to be aware of the following:-

- there are two types of students: gamers (hardcore/casual) and non-gamers. Non-gamers require more fostering and instruction
- the 'learner group' should be a mix of different players (hardcore/casual)
- classroom activities built around the game content should challenge the different types of players
- sufficient time should be given to allow creative thinking to take place in the classroom activities.

This active process that deals with play and learning can be adapted to this research to support learning language.

Gee (2003) proposes that learning via video games can explore learning in an active way. Although the game used in this study, *Arcanum*, is a Role Playing Game (RPG) not an online game, some basic components of the game are considered similar. The author presents the nature of the typical player as they play and learn the in-game rules, roles, and system. The player generally needs to know the new world of a particular RPG so they can make a distinction between this world and other RPG worlds. The storyline is presented both visually and in text so that it can help the player set individual objectives in order to tackle the game's goal. Selecting their game character (avatar) is a key activity that starts their

engagement with the game. It needs to be done with care. Choosing the name and race (human, elf, orcs) binds the players by appearance while choosing alignments (good, evil), physical attributes (strength, dexterity, intelligent), and special skills (pick lock, persuasive) affects the player's plan and strategy through the game. Gee suggests that learning via video game could equal classroom learning since the video game provides active, critical learning where the player designs how to play on their own with their character's representation. It also provides committed learning where the player put their effort into their virtual character to gain achievement, and self-knowledge where the player learns and accepts their avatar's strengths and weaknesses.

Regarding language study, gamers are required to understand written text provided in the game. They also need to convey meaning in different situations and interpret different texts and actions holistically. These elements could support literacy learning during the game. Connolly et al (2006) present a quantitative view of university students towards using computer games for learning. The survey conducted at a Scottish university used a questionnaire with 972 participants. They answered questions on demographics, reasons for playing games (using Malone & Lepper's (1987) framework (challenge, fantasy, curiosity, control, co-operation, competition, and recognition) and rated the importance of using computer games for learning. The results showed that 85.6% of participants played computer games. Male usually spent more time playing games per week (6-10 hours) compared to females (35% to 9%). The average game experience among males was greater (12.82 years) than females (10.24 years). The main reasons given for playing games were relaxation, pleasure, and challenge. Challenge was an increasing response when games got more difficult. The majority of respondents believe that

computer games can be used in higher education (85.1%) and they rated challenge, curiosity, and co-operation as the key factors in learning. The survey suggests that computer games can play a significant factor in higher education. The characteristics of MMORPGs address the main reasons outlined above for playing computer games. MMORPGs challenge players to solve different level of problems, keep them engaged with the game play, curiosity of the unknown and fantasy content in the storyline and graphics and provide cooperation through working with other players in temporary/permanent relationships.

Bryant (2006) suggests that MMORPGs which contain authentic language and culture opportunities with other players can provide a great classroom setting for learning a second language. The MMORPG 'World of Warcraft' (WOW) was used to enhance the learner's language skills in a second language course in German. The project allowed learners to play WOW and provided the opportunity to interact with native German speakers in a German virtual world. Learners also used the in game communication channel and Skype for voice communication. As well as the main game play, the researcher also assigned to the students to communicate with other players for different purposes (advice, asking direction). Later they were expected to join a guild in order to gain greater social contact, especially outside of the game. The results reveal that students have more positive responses to their language exchange with native speakers in the game as compared to having direct videoconference in person. The study also showed that the teacher needs to be well prepared in order to support the students during this process.

Often L2 lack confidence in performing language tasks in the traditional classroom. Some students feel vulnerable and do not want to take a risk and make mistakes in front of their teachers and peers. Riegle & Matejka (2006) claim that MMORPGs

deliver a safe place for students where they can make mistakes with less teacher control. This feature of MMORPGs encourages learners to try activities related to their learning performance and gain ownership of their learning without the frustration of making errors.

Hung et al (2009) suggest that MMORPGs players are motivated by the competition and a sense of achievement. Players gain respect and admiration from others as their avatar progresses through the various levels in the game. Social achievement is gained through relationships with other players either temporary (party group) or permanently (guild or clan).

These studies demonstrate that MMORPGs have the potential to provide a suitable virtual environment to support second language teaching and learning. The combination of interacting with the MMORPG and using classroom activities based around the game could provide an engaging approach that benefits language acquisition and motivates the second language learners.

## **RESEARCH QUESTIONS**

The following research questions were formulated.

1. What role can MMORPGs play in supporting second language learners?
2. How can MMORPGs be used to support learning in formal and informal contexts?
3. How do L2 learners perceive their language development when using a MMORPG?
4. Do L2 learners enjoy playing MMORPGs as a tool for second language learning?

## **RESEARCH METHODOLOGY**

The research methodology uses action research together with virtual and real ethnography to provide a case study of two L2 students and their experience in using

MMORPGs to support their second language learning in English. The aim is to analyse their language performance and motivation while using MMORPGs to support their second language learning. Their language development can help explore the application, status and importance of computer games in education.

### **Participants**

The two participants in this study were drawn from Naresuan University in Phitsanulok, Thailand. The participants were undergraduate students in their first years. Both are Thai who have been educated in English as a second language since their fifth grade. They have different levels of English competency. Honey is a 21 year-old female, currently studying English major and K is a 20 year-old male, currently majoring in economics. The participants were asked to play certain MMORPGs on an international server where English language was mainly used. The tutor used an avatar in the game to provide support and observe the students' interaction in the game environment.

### **Instruments**

#### **GodsWar online**

GodsWar online (GWO) is a 3-Dimensional (3D) free MMORPG. Based on Greek mythology and culture, Gods, human beings, demigods and monsters share the same virtual world. Players can choose from four classes of characters: warrior, champion, mage, and priest. The GWO interface is typical of other MMORPGs and has 1) avatar status, 2) mini map, 3) skills and inventory windows, and 4) chat log. When a player interacts with Non-Player Characters (NPCs) a dialogue window appears. Players communicate with active real players through a chat channel which can be selected for: 1) talk – default menu for general conversation, appeared for everyone in GWO, 2) friends – dialogue only appears in friend list, 3) party – dialogue for temporary groups that a player participates in for a specific

purpose, and 4) PM – personal message, only used between two players. The game also exposes players to considerable written language through NPC dialogue, item/ object descriptions, and help messages. The general objective of the game is quite simple. Avatars receive quests from NPCs. The quests vary with the level the avatar has reached in the game. Players receive basic prizes for completing each quest: 1) EXP point – accumulative attribute points to grow a player's avatar, 2) Money – currency silver and gold, and 3) Gift – usually items or gear (weapon and armor). In addition, the game also offers a 'master and apprentice' system which allows low level players (newbies) to get help from a higher level player. This system can benefit players as newbies can easily build a social network in their early play.

#### **Hello Kitty Online**

Hello Kitty Online (HKO) is a cartoon character based MMORPG. Unlike other MMORPGs which are generally based on defeating monsters, HKO has minimized the killing of monsters and offers a wide range of activities such as producing materials, farming, cooking, and building houses. Choosing an avatar is simple since a player does not need to select a class/ race. The quest system looks similar to other MMORPGs with players receiving Exp, money, and gifts on completion. Special skills differ from other MMORPGs as HKO requires players to contribute on craft and making skills rather than combat skills (HKO has none). Social interaction dominates HKO and is very active and helpful. The chat system allows player to communicate in the different levels of relationship: friends, general talk, party and personal message. Player can also have direct contact to a Game Master (GM) avatar, which is very helpful for newbie players. HKO was selected for this study as it offers a different MMORPG environment that might be more attractive to certain students based on their gender or other characteristics.

### **Perfect World International**

The large virtual environment landscape MMORPG, Perfect World International (PWI) is based on Chinese ancient mythology. PWI is a full 3D MMORPG that requires advanced player skills. Avatar creation is complex and requires players to choose their race, each of which is strong in some aspects and weak in others. The different races are 1) Human – balanced, 2) Winged elf – flight, low life point, 3) Tideborn – high damage attack, low defence, 4) Untamed – high life point, no magic resistance, 4) Earthguards – unknown. There are also classes which are jobs related to the chosen race. For example, a winged elf can only choose to be an archer (range combat) or cleric (healing magic). The large landscape in PWI means players rely on themselves and this causes low social interaction in the beginning between players. However the game has a typical chat channel just as in other MMORPGs.

### **Asda Story**

Asda Story (AS), is a fantasy based MMORPG. The main purpose of the game is to defeat monsters. This is combined with in-game activities and seasonal events for players to participate in. The selection of an avatar is simple requiring only a name and some basic information such as zodiac. There are no classes or races until a player reaches higher levels. At level 5, a player starts to take classes related to a player's strategy of play: warrior, archer, and mage. Each subclass makes clear distinctions on how a player can contribute to the game play. For example, the Mage has three subclasses; 1) Hellfire – high magical damage, 2) Heavenly light – healing mage, and 3) Flooded land – enhance magic to support other players' ability (buff). If a player chooses to be a healing mage, they will need to rely on teams in combat by making less direct damage on the target monster and focusing instead on healing the life points of teammates. Although a healing mage can hardly survive in solo plays, this subclass

is highly demanding when building social interactions. Seasonal events are presented for players to enjoy and explore such as Christmas. The community system is highly interactive. Apart from party quests, player can have various temporary social relationships; soul mate, and clan (guild) and permanent relationships such as a soldier member of the team; Players choose sides: Chaos, Light, and Darkness and once chosen, a player cannot change sides for the rest of the game.

### **Website**

Various websites were used as supplementary tools during the game play and served different purposes. The first type of website is the games' official website used for downloading the game, reading a game's introduction and instructions and getting information from the forum and web board. The second type are game related websites providing external forums. The third type are social network sites such as Facebook and the final type is an online dictionary website.

### **Dictionary**

A new model dictionary (English- Thai) (So Setraputra) was installed as a companion program to explain some of the more difficult vocabulary and translate it into the Thai language.

### **Pre-test and post-test**

Two tests were used during this research; pre-test, and post-test. After the students were familiar with the first game play the English test was used to examine the student's existing English knowledge and skills as a pre-test. The ELLIS placement<sup>3</sup> test was selected. It is a standard computer based English test used for Naresuan university students as a compulsory test. ELLIS tests three English skills: vocabulary, grammar, and listening via a multiple choice set of questions. Each part takes no longer than 30 minutes. The range of scores for each skill is between 5 and 605 and the level is between 1 and 12. A similar test was used as post-test with randomly assigned questions to allow

comparison of their language proficiency between the start and end of the study.

### **Game related assignments**

The two participants were given several tasks related to the game play. They were assigned individual tasks during the game play. The individual tasks in GWO were based on in-game vocabulary and conversation produced by NPCs and other players. They also created their own quest following the GWO quest model. The students were asked to participate in in-game community in different ways according to their specific language skills while playing AS.

### **Interview**

The first short interview was conducted to examine each participant's language proficiency and experience of playing MMORPGs and recruited them to the project. During the individual interview, they were asked about their attitude towards playing MMORPGs and how it could be used to practice their language skills. A group discussion was conducted with other students using English and related to their MMORPG experience.

### **Preparation**

To conduct this research, the selected MMORPGs and associated software were installed in computers provided by Naresuan university. The computer room was set out like an internet café where the participants can feel comfortable with casual students visiting and playing as normal. The sessions started around 5-7 pm, two days a week for 10 months. The sessions adopted a learner centered approach as suggested by Bryant (2007) with traditional activities such as structured grammar and vocabulary greatly reduced. The tutor played in the game at the same time as the students. The tutor adopted two different avatars, one known by the student and used to help them in the game with language exchange and help with getting advanced items. The tutor also had a second avatar that was hidden from the students and used to observe their interaction with the game. During these

sessions, students and the tutor contacted each other using chat within the game rather than orally in the actual classroom.

## **RESULTS**

The two subjects completed playing the MMORPGs. Data collection was divided into three phases to explore if MMORPGs can be used successfully to support second language learning and teaching. The first phase aims to introduce MMORPG basic instructions and systems. The researchers also introduced an international online community for students to feel comfortable with non-Thai language players. The second phase comprised giving 'self-direction' for students to choose MMORPGs based on their interests and gender. The third phase used a suitable game for students to transfer their learned knowledge from previous games and become an advanced player and language learner.

### **First study**

The first study aimed to observe student K who has been playing MMORPGs mostly on a Thai server for four years and had no experience on an international server. His proficiency in English as a second language was limited. During the first interview, he admitted that he only used English in the classroom. He had difficulty answering questions such as '*what is your student ID number?*' or '*what kind of game do you like to play the most?*'. K was likely to have a long pause and think about every question asked before asking back in Thai '*What is the question? Again please?*'. K said in Thai that '*playing games (MMORPGs) on an international server sounds good to me but I'm not sure if I can understand in English*'.

K took the pre-test before seriously playing GWO. His results showed a level 6 in vocabulary, 5 in reading and listening and an overall level of 5.

### **Godswar online**

After receiving an introduction to the game, K went directly to begin the game.



It took him less than five minutes to complete his avatar creation. He spent the longest time making the decision whether he wanted to be a 'warrior' or 'champion' since these two classes are combat characters. After he saw the words 'shield' and 'sword' in the class description, he knew what he wanted to be (champion uses spear). His avatar named Cloze is a warrior with very high Health Points (HP) and has many defensive skills. 'Tank' is a specific term for this type of warrior in MMORPGs. They can defend a party member by being the first player to charge a monster and draw its attention from attacking the rest of the team. At the end of creating his avatar he asked the tutor '*what does gender mean?*' even though he had already seen his male character on the screen.

K avatar spawned in the town centre with a lot of NPCs surrounding him. While waiting for his friends, he used the text window for Newbies to interact with the Newbie guide NPC to collect his first quest. Talking with his first NPC via a text window, K tried to understand by spending time reading the text before clicking the accept button. Before K went out to kill the monster for his quest, he used the chat bar to say 'hi' to his friends who were playing in the same room. He introduced his name saying '*I'm K*' rather than Cloze. K was very slow finding the right gear for Cloze to wear. He needed to read each gear description in order to be as strong as possible. He learned the quest system in the game and gained his first level quickly.

After reaching level 24, he still played solo. Cloze was very quiet and has no master to guide him. However he still kept reading the NPC dialogue. While walking around the map he started to use the help menu and read 'social aspect' and 'normal chat' descriptions. He often asked for some definition of unusual or new vocabulary such as '*apprenticeship*' or '*path*' from those nearby or the tutor. At level 40, he became a member of the guild '*Warrior of Spartan*' and started each day

by saying '*hello*' to guild members. Although while playing GWO, Cloze was not talkative, his character was very strong and rose to a high level in a relatively short time.

### **Perfect World International**

K chose this MMORPG based on his research via the website. He wanted to play a more serious MMORPG which had realistic action.

K looked excited with the game he chose for himself on the very first play. He spent more time than in GWO in creating his avatar. After reading race descriptions, he finally selected to be a winged elf giving himself the opportunity to fly. He chose the archer – warrior class in this race. He chose his name '*Destiny*' but it was used by others during this time and he was confused by the warning '*There is already a character by this name*' which he could not understand so he decided to redo his character creation. He picked the same name many times. He finally understood what the sentence meant and changed his name into '*Chaos*', '*Shadow*', and finally '*Kloze*' though these times he did not redo the whole creation like he did first time with his choice of the name '*Destiny*'.

He started reading the game tutorial and configuration information before moving his character. He talked to the newbie guide NPC but ignored the conversation. The result of this is that he failed his first quest attempt. He went back to the same NPC again and this time read it carefully. He also read each item and gear with care over a longer period. Although the game system in PWI has more complexity than GWO, K gained full understanding about the game in one session (GWO took 2 or 3). Trading and crafting skills which were ignored in GWO, were paid attention in this game. Since the virtual landscape in PWI is enormous, while running from place to place, he often opened the game encyclopedia and read about Chinese mythology.

In PWI, he tried to react with other players even though his surroundings were not crowded. Apart from 'hi', he used 'where r u from?' and got response 'Slovenia'. He also helped other players defeat tough monsters. PWI was withdrawn and thus played for only a very short time. K admitted that the action combat was very active and real but he also said 'it's too big to find party member to travel together'.

### **Asda Story**

K reacted in AS differently from the other two MMORPGs. Razarus was his avatar's name and he created the whole process very fast. He spawned in the beginner's town called Alpen, surrounded by NPCs and players. He read the very first instruction and talked to the newbie guide NPC. He read everything including the quest and item descriptions, notifications, and system notices. In the character status window, there is space for a player to introduce their avatar. K spent some time thinking about this but did nothing.

At Level 7, he became a warrior – tank type. The game becomes complicated after Level 5. He tried to get around other players to find out about the sowel system – a gem which attaches to an avatar's gear and gives different attribute points to become more powerful. The player 'Master Reeves' opened a chat and offered him help and explained how to use and control this item. Master Reeves used very fluent English in conversation, but Razarus was too confused. He only replied '...' and 'I can't'. He ended the talk by 'thank' and ran away. This was the end of his first day in AS.

Razarus talked more often with his peer players but kept to solo actions. Every time when he needed to advance new combat skills, he read the description over and over before making his selection. Moreover he tried to understand new activities such as fishing which he had never felt familiar with from previous

MMORPGs and often consulted with the dictionary.

In the middle of AS play, Razarus faced difficulty with getting his character level up even though he ran many solo quests. His level was considered low in comparison with his peers who started at the same time (he was 23 while the lowest peer member was 37, excluding Honey (21)). His strategy changed at this point. He began interacting with others and used Party chat to get his level up. His interest in AS returned and he enjoyed travelling with party members. His class was also required by the team as a protector so it was easy for him to join the group. At the end of this section Razarus gained level 35, almost reaching the highest beginner level, 39). He used more personal messages to contact friends and party members, and opened conversations with international players.

### **Second study**

In contrast to the first study, which observed K an experienced MMORPG player with limited English competence, the second study observed the female student Honey with no experience of MMORPGs but quite fluent in English. She responded to the interview questions with confidence and intended to reply in English though there were some doubts about the questions during the actual interview. Similar to K, she has been educated in English as a second language since her fifth grade and had no experience of talking with native speakers outside the classroom. Speaking was her best skill while she accepted that grammar was her main weakness. When asked about her gaming experience, she replied she has never played a serious computer game, only casual games such as puzzles. However she knew the main idea of MMORPGs through watching her friend play. She said 'I don't know much about MMORPG, but it is about killing scary monster' and when asked 'do you think shooting game – Counter Strike (First

*Person Shooting game) is one of MMORPGs?* she replied *'if it about killing it may be MMORPG'*.

She finally got recruited for this project and took ELLIS pre-test. Her first time score was quite high with her vocabulary and listening at Level 7 and grammar which was her main concern during the interview coming out at Level 9. Her overall level was 8 which meant that she has already passed the university requirement on her first attempt.

### **Godswar online**

During the briefing on GWO, she tended to listen rather than explore the game's official webpage. It took a long time for her to enter the game and begin creating her avatar. Creating the avatar went very well and she chose the name *'Swazchhof'*. She spent a long time choosing hair style, colour, and face and she asked what the classes are (in terms of their relevance to her character). The tutor asked her to go back to read the class description on the game's webpage. She then finally selected the warrior class, the same as K. She admitted that because she was a non-gamer, she chose the warrior as it had the highest HP and could not be killed easily.

Swazchhof spawned in town late due to her delay in creating her avatar. She read the newbie guide window and a couple of explanation text boxes very carefully. Unlike K, the tutor showed her how to move and explained the difference between active players and NPCs on screen. She knew the basic rule of dressing an avatar but did not know about the gear attribute system, so she dressed in a tuxedo not armor. She started talking to her first NPC to receive a quest and said *'hello I'm Honey'*. She found it easy to read and understand her first quest (to defeat the monster bees) but she did not know how to locate the bees. Normally MMORPGs facilitate an auto-path (auto-pilot) for the player to click on the name of the monster or place and the character will run to the destination automatically. Once Honey

learnt about auto-path, she got to the bees' location and started her first quest. Though her assignment asked her only to kill 20 bees and return, she kept slashing bees over the expected number. This continued until the end of her first day playing GWO.

After reaching level 23 she responded to her quest more actively but still slowly. She sometimes chatted with the tutor in long conversations such as *'where do you live in UK?'*, or said *'hello...'* to other players via the chat channel. She chatted to one international player, Paul in PM. Her participation in conversations dominated her game play and prevented her progressing up the levels as she often stopped a quest to chat. When reading a quest, she often consulted the dictionary program and as a result, she often could not use the auto-path or complete the quest. For example, a NPC asked her to run to another town to help them kill vipers. The actual act used auto-path to town gate (click *'town gate'*), proceed to second NPC (then click *'2<sup>nd</sup> NPC'*) and then start killing viper (click *'viper'*). Her first reaction was click on viper and when this did not work, she consulted the dictionary to look up the meaning of the text, choosing the following keywords *'damned'*, *'defend'*, *'slay'*, *'viper'*, and *'suburb'*.

After playing GWO, Honey knew some basic elements of MMORPG, including how to control and use the basic devices.

### **Hello Kitty Online**

HKO was selected by Honey based on her preference for colourful characters (NPCs) and a game not based defeating monsters. She created the avatar more easily this time and named her character *'Swazchhofsky'*.

Again she did not know what to do in the actual play in the early sessions. She dedicated herself to chatting with other players and the game master asking what to do such as farming, trading, cooking, and finding materials. Since she claimed that reading the conversation log between players was fun, she started to talk a lot

more while she was questing. She spent more than 10 minutes talking with Roderick from Holland, mainly on the topic of what is it like in Holland. Many players came and talked to her about Thailand, so she finally used the official game forum write about Thailand and invite her international friends to visit. She blended herself in the in-game community group (entitled 'evilgenius' while the tutor had never reached that point). There was some language and culture exchanges between her and her friends. For example, she often used '555+' to her peers (Thai friends) and when other players asked her what it meant, she explained that the sound of laughing 'hahaha' in the Thai language is the same as 555 (in Thai), so they both finally used '555' at the end of their conversation.

In HKO, Honey showed more expertise in selecting her dress code and guiding new players. In addition, she showed her enjoyment in playing HKO by farming, chatting, crafting and had no hesitation in killing monsters. Honey still continues to play HKO.

#### **Asda Story**

Honey played AS on two attempts in relation to class selection. As mentioned, there was no need to select a class during the character creation until Level 5. Her first avatar was an archer (Swazchhof). However she felt that when it came to battle, this character could die easily. Her new avatar (Swazchhof2) was a warrior-tank with high and used a sword and shield like K.

In the beginning (with Swazchhof), Honey was still confused by the new game. She read the introduction carefully. She first learned how to use the chat system and tried to produce sentences such as 'hi dear' or '555'. She went to work on questing more naturally by finding the correct NPCs (with '!' marked on the head) to receive assignments and collecting multiple quests once and then travel (she used to collect one quest and go). She used auto-path automatically once

she opened the quest log. On the way, she reacted with her surroundings such as unharmed monsters saying 'hi lion'. Her first quest was completed very fast compared to GWO and HKO. She talked to her peers many times but did not talk with international players. She reached Level 5 very quickly and at this point decided Swazchhof was not very strong and she wanted a new character.

She chose a warrior for her second character and reached Level 5 quickly. In two hours, she reached Level 8, gained more confidence and asked her first international player to PvP (player versus player). She learned the complexity of combat skill for her avatar (it was ignored by herself in GWO, and there was none in HKO). After consulting with the tutor and friends, at level 17, she learnt how to gain special attacks and defenses. By level 20, her conversation with soul mate (buddy system) and guild members had changed to more online structures such as 'gj' for good jobs and 'np' for no problem. She used 'lol' instead of '555'. Her level still developed slowly compared to her peers (21 compared to 37) and she looked for ways to increase it. She sometimes helped lower level players to defeat monster as a party member and uses chat such as 'u stay behind, it's dangerous'.

In the end of playing AS, she learnt game skills such as creating materials (crafting), and marketing (selling item as auction) in addition to complex combat skills. She finally reached level 24 which allowed her to attend her first official game event 'fraction war' and become a permanent member of 'Light' army, one of large three war teams in the game.

## **DISCUSSION**

Barnes & Gini (2008) claim that the social interaction system in MMORPGs help players participate and enjoy the game. MMORPGs also offer a challenging and exciting user centered environment and for second language learning offer native speakers, live language modeling

and a safe place for trial and error. Students can control their learning based on their strengths and weaknesses. K has low English skills while Honey has no gaming experience. MMORPGs support both these students' learning approach. For K, although playing MMORPGs can stimulate his language learning, his lack of confidence slows down his character's development. The safe environment and hidden identity can help him take risks when practicing his language. Initially in GWO he was reluctant to chat but in AS he tried to talk with other players in order to gain membership of the guild. Honey was often confused by the game system and used chat to help her progress through the levels and make friends.

MMORPGs bring many players around the world together. There is no doubt that both students had chances to encounter foreign players. Bryant (2007) points out that there can be language exchange between native speaker and L2 learners. Honey interacted with many players from many countries such as England, and Australia. K was more limited in his encounters with native speakers. Language exchange was evident in both cases. Honey explained her use of '555' to represent 'hahaha' and then used 'lol'. K usually scrolled the chat log to find the right word before answering. After looking at what others had said he selected the word 'wanna' to use in his sentence 'I wanna play so bad' on AS Facebook page when the game was under maintenance.

Stanley (2008) suggests using online games as an alternative to educational games as they offer more interesting opportunities for creating language assignments based on the game. During the research the tutor provided 4 assignments based on GWO:

Assignment 1 and 2 contained the following elements: 1) reading quest and action. The student needed to read and explain what needed to be done to the tutor without using the auto-path, 2) writing down chat dialogue – write down the

conversation between other players and start chatting and record that, 3) identify the tense used in the NPC window, 4) vocabulary and definition, 5) interesting/unusual words and phrases

Assignment 3 involved pair work between players imitating the quest pattern from NPC and adapting it

Assignment 4 required the students to participate in the game community forum and write a comment, write about the story of a current MMORPG and identify what they liked and disliked about the game.

There were group discussions practicing listening and speaking skills where students exchanged their experiences from playing MMORPGs.

Informal tasks were used in order to address Honey's and K's weaknesses during the game play. K was assigned to find a stronger guild in AS by asking for help via the Party chat. This provided the opportunity to talk with higher level players and required reasonable conversation for negotiation. Honey at the lower level was asked to find lower level players than her and help them defeat the monster. She needed to be the leader of a temporary party. In this case, she learns the role of the character in teamwork and the purpose of playing MMORPGs.

Paraskeva et al (2010) claim knowledge and skills can be transferred from virtual to real world when players encounter multiple given tasks. With K and Honey, language skills and knowledge of playing games were transferred from the first game to the third game. Honey also developed her English skills through her chat experiences. She used 'baseball game, huh?' in HKO instead of the standard question form 'what city that you come from, in England?' that she used in GWO. She also used online language forms such as 'gj' for 'good job'.

Table 1 shows Honey's pre and post test scores. Her vocabulary and listening levels increased while her grammar level remained the same. Although her grammar score reduced slightly, her time to take the

post-test was 7 minutes compared to 10 minutes for the pre-test.

[INSERT TABLE 1 HERE]

K chatted less with other players compared to Honey but played at a higher level. He read quests and instruction and learned to read these again when he failed a mission. His conversation improved especially when he fell behind with his level compared to his peers and realized he needed to join a guild and participate with other players. The support from the tutor and assignments helped reduce his fear of talking to strange players in English. His standard score was much improved in the post-test compared to the pre-test (*see table 2*). His vocabulary and grammar improved by 2 levels and his listening skills by 3.

[INSERT TABLE 2 HERE]

Using MMORPGs to support second language learning provides the opportunity for students to learn and immerse themselves into the course context. Personal achievement, social participation and acceptance, and game immersion (Yee, 2007 in Hung et al, 2009) can motivate them to engage in what they are learning. Seay (1997) quotes Sara Lightfoot in Kafai (1995, p. 310) "Learning is at its best when it is deadly serious and very playful at the same time". MMORPGs offer these two elements for second language learning.

At the end of the project, Honey commented "*playing MMORPGs were difficult but it is also the place where I can practice my English language with native speakers. I thought the game challenges me to learn new things. People in game*

*were wonderful*". K stated that "*I thought of playing an international server MMORPGs but I was too afraid of using English. Now reading was not that hard anymore I can do many quests. Players are nicer than I thought*"

## CONCLUSION

This case study follows two students in their use of MMORPGs to support their second language learning. It provides a comprehensive insight into the players' play and learning development within the virtual game environment. The students clearly build on their earlier experiences in the latter game play and are motivated to develop their language skills. Results from this study indicate that MMORPGs are a useful vehicle for supporting language learning providing an informal, fun, safe and community based learning environment that mirrors a number of elements from the real world. Players gain confidence in using their second language through a variety of communication mechanisms. These skills are transferable between the virtual and real world and from game to game. In addition students find this method of learning enjoyable and this motivates them to engage with their language learning.

## REFERENCES

- Barnes, R., & Gini, M. (2008). Developing a text-based MMORPG to motivate students in CS1. *AAAI AI Education Workshop*
- Bryant, T. (2007). Games as an ideal learning environment. *Nitle Transformations*, 1(2). 1-8. Retrieved February 10, 2009, from <http://hdl.handle.net/10090/6565>
- Connolly, T.M., Boyle, E., Stansfield, M.H. & Hainey, T. (2006). Can computer games help next generation learners? A survey of students' reasons for playing computer games, In *13<sup>th</sup> International*

*Conference of the Association of Learning and Teaching ALT-C 2006: the next generation*, 5-7 September 2006 (pp. 121-131), Edinburgh, Scotland.

Cook, V. (2011). The nature of the L2 user, In Wei, L. (Ed.), *The Routledge applied linguistics reader* (pp. 77-89), New York: Routledge,

Gee, J. P. (2003). *What video games have to teach us about learning and literacy*: Palgrave Macmillan.

Hung, K. H., Kinzer, C., & Chen, C. L. (2009). Motivational factors in educational MMORPGs: Some implications for education. *Transactions on Edutainment III*, (pp. 93–104).

Llurda, E. (2011). Non-native speaker teachers and English as an international language, In Wei, L. (Ed.), *The Routledge applied linguistics reader* (pp. 69-76), New York: Routledge,

Paraskeva, F., Mysirlaki, S., & Papagianni, A. (2010). Multiplayer online game as educational tools: Facing new challenges in learning, computer education, *Computers & Education*, 54(2), 498-505.

Rankin, Y., Gold, R., & Gooch, B. (2006). Evaluating interactive gaming as a language learning tool. In *Conference Proceedings SIGGRAPH 2006 Educator's Program*, Boston, MA.

Riegle, R., & Matejka, W. (2006), The learning guild: MMORPGs as educational environments, In *22nd Annual Conf. on*

*Distance Teaching and Learning*, University of Wisconsin, USA

Seay, J. (1997). Education and simulation/gaming and computers. Retrieved November 5, 2009, from <http://seayj.people.cofc.edu/cb/simgames.html?referrer=webcluster&>

Spring-Keller, F. (2010). The enjoyment of learning in digital environments; In McDougall, A., Murnane, J., Jones, A., & Reynolds, N. (Eds.), *Research IT in education: Theory, practice, and future directions* (pp.79-87): Routledge.

Stanley, G. (2008). Language learners & computer games: from Space Invaders to Second Life, *TESL-EJ*, 4(4).

Underwood, J.D.M., Banyard, P.E. & Davies, M.N.O. (2007). Students in digital worlds: lost in sin city or reaching treasure Island? In Underwood, J. D. M., & Dockrell, J. (Eds.), *British journal of educational psychology: monograph series II: learning through digital technologies* (pp. 83-99), 5: The British psychological society.

Table 1: *the example of ELLIS result from one of the participants, Honey*

	Pre-test			Post-test		
	Score	Level	Total level	Score	Level	Total level
Vocabulary	290	7		345	8	
Grammar	375	9	8	365	9	8
Listening	305	7		320	8	

Table 2: *the example of ELLIS result from one of the participants, K*

	Pre-test			Post-test		
	Score	Level	Total level	Score	Level	Total level
Vocabulary	260	6		310	8	
Grammar	235	5	5	285	7	7
Listening	210	5		325	8	