Affective Learning in Massively Multiplayer Online Games (MMO)

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Abstract
Online Games are created by having certain content specification for users to play with each other through an imaginative virtual environment. The key elements for each game differ based on the gaming objectives that can demonstrate analytical gaming skills among users. These activities manage to contribute to users' engagement and encourage their sentiment by 'storing' the gaming experiences to be used in real-life situation. Traditionally, if users are able to connect emotionally to the gaming content, it facilitates their affective learning experiences. The domain in affective learning relates to users' emotions, mood and attitude towards the gaming objective. In this article, the author discusses users' viewpoints towards their experiences with engaging factors in Massively Multiplayer Online Games (MMO) and how their experience correlate to affective learning processes.

Keywords: Massively multiplayer online games, affective learning, MMO engaging factors

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Introduction

Committed online game users are more active with the current popular products of MMO (Massively Multiplayer Online Games) where users are more exposed with dynamic social experiences, collaboration and interactivity (Hsi-Peng and Shu-Ming, 2008; Shamsuddin, Ugail and Lesk, 2011). For instance, MMO activities manage to contribute to users' engagement within the gaming environment and encourage users' sentiment and excitement by adapting the gaming content into real-life.

The literature reveals that MMO engaging factors are related to the impacts based on MMO gaming components. Yee (2007) indicates a concept where MMO has three main motivational components; achievement, socialization and immersion; and from each components users will 'saved' different types of experiences. The accountability of the concept has been acknowledged; with an additional component of assessment, it suggests that MMO users 'saved' experience are related to their responses and tasks (Snodgrass, Dengah II, Lacy, Fagan, Most, Blank, Howards, Kershner, Krambeer, Reynolds, Reynolds, Larson, Whaley and Winterseen, 2012). Significant to the aim of the study, MMO activities are known to contribute in the area of affect related to users' adaptability of the game content into their after-game behaviour (Ibrahim and Jaafar, 2011). Table 1 below summarizes the 'saved' experiences reflected in each MMO engaging factors.

Table 1: 'Saved' experiences from MMO engaging factors

MMO Engaging Factors	'Saved' Experiences
Assessment Component	Quick responses while taking part in challenges and ability to cope with the given tasks.
Socialization Component	The managing of social skills and achieving the same objectives with other players
Achievement Component	The competition value of the game; the beginning of users' connection to the game objectives.
Immersion Component	The customizing of actions based on discovering new feelings and emotions from playing the game.
Real-life Affect	After game behaviours or the outcome of users' participation throughout the overall gaming activities.

Snodgrass et. al. (2012) stated that users' saved experience in MMO achievement is related to the competition value of the game; usually at the start of the game play by understanding the game objectives. As for MMO socialization component, it is related to users' experiencing their social skills management with other players (Yee, 2007). Moving on, users' 'saved' experience from the immersion component is the customization of actions based on their feelings and emotions (Shen and William, 2010). For the next factor, Lisk, Kaploncali and Riggio (2011) reveals that MMO assessment component relates to users' 'saved' experience of having quick responses while taking part in challenges and coping with the mission. In addition, users'

'saved' experience for the after-game behaviour is related to their real-life affect which will be the final outcome of users' participation in the whole game.

From understanding MMO engaging factors, the underlying factor of this paper is to investigate how users' experiences in MMO engaging factors can contribute to their affective learning. Specifically, this paper addresses two research questions:

1. What are users' viewpoints towards their experiences with MMO engaging factors?
2. How did MMO engaging factors correlate to users' affective learning process?

Affective Learning

Jegadheesan, Fathima and Mohan (2014) affirm that based on users' gaming experience, the value of affective learning will evoke feelings such as threats or pleasures. Parallel to that statement, other than the concept where users' feelings and emotions gets attached to the gaming content, it could also develop users' personality (Mohayidin, Suandi, Mustapha, Kanting, Kamaruddin, Man, Adam and Abdullah, 2008; Rupani and Bhutto, 2011). The processes of affective learning orderly include the process of 'receiving', 'responding', 'organizing', 'valuing' and 'internalizing' as presented in Table 2 below.

Table 2: Affective Learning Processes

Processes	Description
Receiving	Basic learning of acceptance on 'what to learn' within the learning mechanics
Responding	On-going activity throughout the whole learning by reacting towards challenges
Organizing	Intermediate learning by establishing team work and organizing tactics with others to achieve the same goal
Valuing	Advance learning of connecting to the escape world by customizing emotions and actions
Internalization	Post-learning to bring forward the learning outcome and experiences into real-life

Imperatively, the literature reveals that each of the processes contribute to different sets of learning characteristics where each are as important in influencing users' awareness and motivating their future action (Hewitt, Leise and Hall, 2012). In addition to the significance of this approach, Yee (2007) support the idea that game users' state of emotions, feelings and behavioural activities can be monitored within the gaming environment, thereby enabling affective learning processes conducive to users' engagement and learning attitude.

Method and scope

This research draws its data from Malaysian university students in interdisciplinary of computer gaming and technology programme on Production in Game Technology, Game Programming and Game Arts. All participants are active MMO users; thus they are well equipped with knowledge on the components and features of MMO and very familiar with online gaming experiences specifically Educational Online Game activities. Their age range from 18 to 22; that falls under the main target population of online game users. The date collection methods were qualitative data from the focus group discussion. 21 participants were picked randomly from the whole faculty. By having 7 participants in each session, the author conducted 3 sessions to investigate the pattern of answers from each group.

Findings

The identified patterns from the focus group discussion were categorized based on users' viewpoints towards MMO assessment, achievement, socialization, immersion and real-life affect experience; and how each experiences correlate to affective learning.

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                    ┌─────────────────────────────┐
                    │  'Saved' experiences from MMO│
                    │   Achievement Activities     │
                    └─────────────────────────────┘
              ↙                  ↓                  ↘
┌──────────────────┐  ┌──────────────────┐  ┌──────────────────┐
│ Give the extra   │  │ Make the game    │  │ Provide the      │
│ drive for users  │  │ attractive because│  │ path of          │
│ to play          │  │ users play to win │  │ advancement      │
└──────────────────┘  └──────────────────┘  └──────────────────┘
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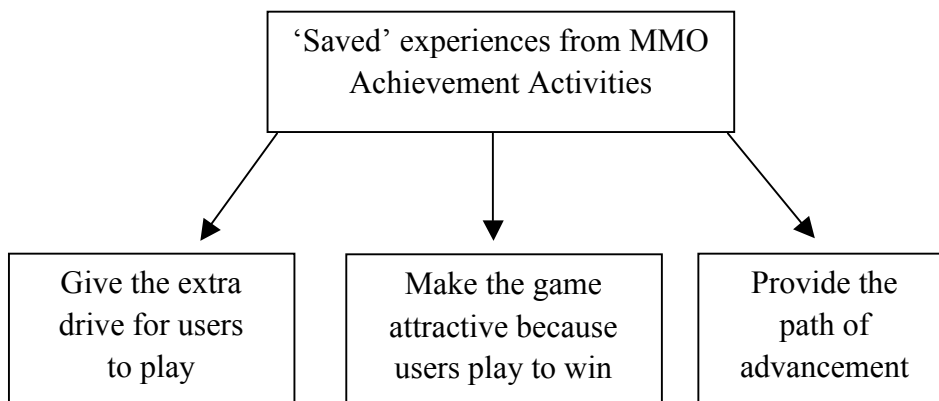
Figure 1: 'Saved' experiences form MMO Achievement Activities

Figure 1 presented the pattern on users' viewpoints towards their 'saved' experiences in MMO achievement activities. The identified discussion relates to the ability for the game to provide extra drive, make MMO more attractive and provide users with path to advance further in the game. Participant P09 from the second session says

I believe that MMO approach towards achievement activities are able to motivate gamers to keep on playing and progress further in the game.

In addition, participant P03 say that

What I experienced from achievement activity is that it encourages gamers to climb up to the top and give huge drive for players to play and win the game. This makes MMO really attractive.

Participant P08 states that

Let's think about it, if you don't want to achieve something or compete in something, you would not play online games. People play games to win!

Based on the discussion, users' 'saved' experienced in MMO achievement activities correlate with **receiving learning process**. Participant P12 stated that

To know what to achieve, is related to the received information and how players make full use of what they know.

Participant P20 say

In an attempt to achieve the goals, it requires exploring and assessing the surroundings

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                    ┌─────────────────────────────┐
                    │  'Saved' experiences from MMO │
                    │    Socialization Activities   │
                    └─────────────────────────────┘
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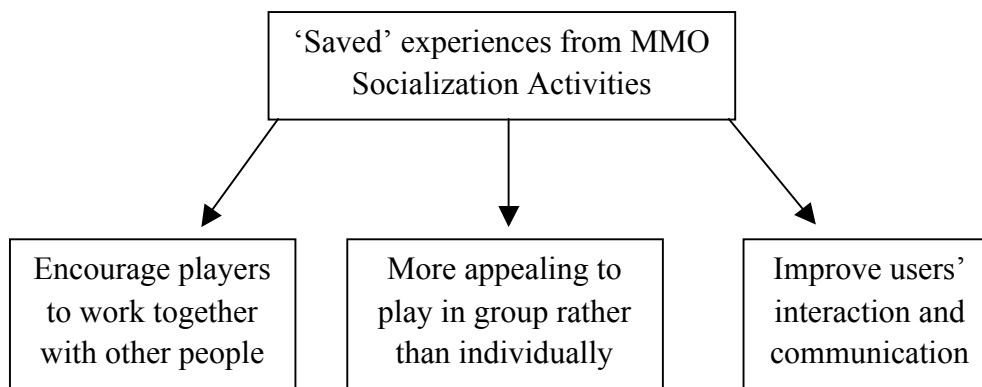| Encourage players to work together with other people | More appealing to play in group rather than individually | Improve users' interaction and communication |

Figure 2: 'Saved' experiences form MMO Socialization Activities

Figure 2 presented the pattern on users' viewpoints towards their 'saved' experiences in MMO socialization activities. The identified discussion relates to the ability for the game to encourage players to work in group and it can improve users' interaction and communication skills. Participant P14 mention that

With this type of activities, players will definitely improve on their social communication skills as they are required to communicate with other players in a same team to complete a mission which is way more fun.

For instance, participant P15 say

Socialization aspect is about learning together, doing things together or in my experience with MMO; it is about completing mission together.

Based on the discussion, users' 'saved' experienced in MMO socialization activities correlate with **organizing learning process**. Participant P18 stated that

To complete certain tasks with other people, it will test gamers' organization skills; by managing the tactic of the game in group.

Participant P09 say

Socialization activities is very much related to the process of managing trust and emotions.
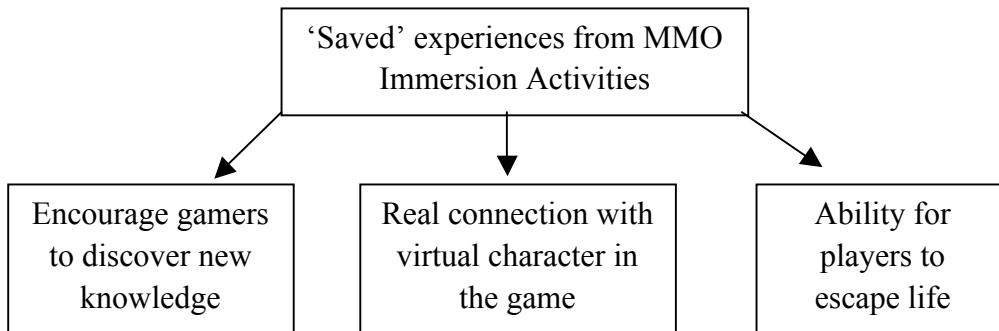

Figure 3: 'Saved' experiences form MMO Immersion Activities

Figure 3 presented the pattern on users' viewpoints towards their 'saved' experiences in MMO immersion activities. The identified discussion relates to the ability to encourage players to discover new knowledge, connect with the virtual characters and escape real life. Participant P19 mention that

This is how immersion assist players' appreciation towards the gaming content. By having so many interesting knowledge to discover, players will be very excited to see what more the game can offer.

Participant P06 from the first session says

Role-playing of my virtual character is one of my favourite activities because it will be about how I connect to my avatar; and from there, how well I can control my avatar throughout the game. This is how I escape the real life stress.

Based on the discussion, users' 'saved' experienced in MMO immersion activities correlate with **valuing learning process**. Participant P11 stated that

This immersion activities are related to accepting values, exploration and reflection of what they learn from the game

Participant P10 say

Ability for players to immerse in the game is a stage where players appreciate the experience and it is stored inside the mind

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           ┌─────────────────────────────┐
           │  'Saved' experiences from MMO│
           │    Assessment Activities     │
           └─────────────────────────────┘
          ↙              ↓              ↘
┌──────────────┐ ┌──────────────┐ ┌──────────────┐
│Ability to    │ │Provide quick │ │Provide risk- │
│repeat the    │ │feedback in   │ │free          │
│challenge more│ │the game      │ │experience    │
│than once     │ │              │ │              │
└──────────────┘ └──────────────┘ └──────────────┘
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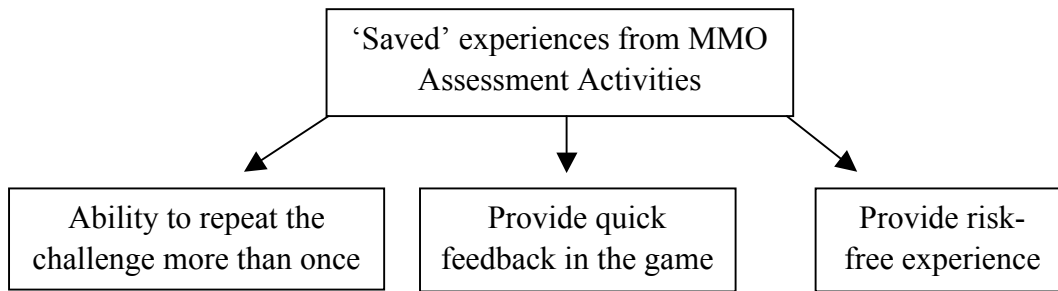
Figure 4: 'Saved' experiences form MMO Assessment Activities

Figure 4 presented the pattern on users' viewpoints towards their 'saved' experiences in MMO assessment activities. The identified discussion relates to the ability to repeat the task by having risk-free challenges and provide quick feedback and responses.

Participant P18 mention that

Risk-free test is what I experienced in MMO. The challenges are very intricate that you will definitely to test your actions more than once; hence that is why it is risk-free should you fail the first few times.

Participant P02 mention that

In MMO, while I was in the challenge, I need to learn how to choose my action quickly and wait for an instant feedback towards my action in the game.

Based on the discussion, users' 'saved' experienced in MMO achievement activities correlate with **responding learning process**. Participant P06 stated that

To face challenges in games, it requires sharp thinking as it often test on quick responses.

Participant P13 say

Different sets of obstacles will acquire different responses from audience. Achievement activities in MMO definitely train users to respond better.


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           ┌─────────────────────────────┐
           │  'Saved' experiences from MMO│
           │       Real-life Affect       │
           └─────────────────────────────┘
          ↙              ↓              ↘
┌──────────────┐ ┌──────────────┐ ┌──────────────┐
│Provide       │ │Encourage     │ │Tendency to   │
│feeling of    │ │players to    │ │bring positive│
│pride after   │ │trust their   │ │aspect in life│
│complete the  │ │own feelings  │ │              │
│game          │ │              │ │              │
└──────────────┘ └──────────────┘ └──────────────┘
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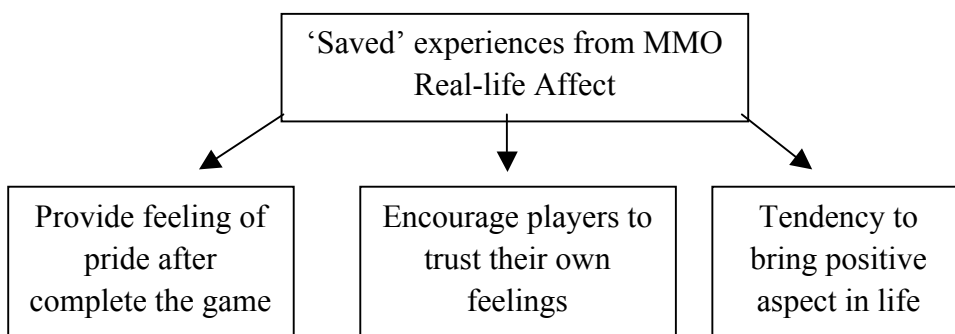
Figure 5: 'Saved' experiences form MMO Real-life affect

Figure 5 presented the pattern on users' viewpoints towards their 'saved' experiences in MMO real-life affect. The identified discussion relates to the ability for users to feel pride, encourage them to trust their own decision and be positive in life. Participant P01 mention that

I believe as a gamer, I will feel proud when I completed the whole game. It is almost like even in real-life, I will feel just as proud as how my online gaming character feels. Even though it is just an online activity, the accomplishment and hard work is real. This I believe is the positive impact.

Participant P17 says

After playing MMO, it affects me in real-life with each decision that I make. Each time when I need to decide on something, I think about how I usually react in MMO. My emotions will tell me how I feel about certain decision; so I will make my decision and trust my feelings.

Based on the discussion, users' 'saved' experienced in MMO real-life affect correlate with **internalizing learning process**. Participant P17 stated that

Real-life affect from MMO is related to personal development, accepting outcomes and self-actualization

Participant P13 say

In real-life affect is when the stored ('saved') learning content internally is to be adapted it in future situation

The findings discusses how the 'saved' experiences from MMO engaging factors correlate to five different affective learning processes.

Discussion

As the findings has stated, users' 'saved' experiences in MMO assessment component provide users with the ability to face challenges; thus, it correlates to users' responding learning process. As for the 'saved' experience in MMO achievement component, it encourage users to study the overall goals and objectives of the game; thus it correlates to receiving learning process. Moving on, the 'saved' experience in MMO socialization component are able to improve users' management skills with other players in constructing the game tactics; thus, this correlates to organizing learning process. Next, users' 'saved' experiences from immersion component is the ability for users to immerse and go 'deeper' into the game; thus, this correlate to valuing learning process. Lastly, the 'saved' experience in MMO real-life affect is about adapting the overall experiences from online games into real-life situation; thus it correlates to internalizing learning process.

Conclusion

From participants' discussions, users' 'saved' experiences from playing online games bring different value depending on the types of experiences they gauged from playing the games. This research also provide evidence that the 'saved' experiences from playing MMO are able to enhance users' affective learning process. The research output illustrates the benefits for players to be active in online game activities.

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