

Heuristic Evaluation of a MMORPG: Guild Wars 2

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Abstract. Usability of computer games is essential for the competitive game development market. Heuristic evaluation is one of the frequently used methods for this purpose. In this study, heuristic evaluation of Guild Wars 2 was conducted. Heuristics that were specifically developed for computer games from the literature were extracted for the evaluation under five categories. These were ease of playability and learnability, decent visual design and adequate interaction with the player, adequate satisfaction level of game content, game play and game mechanics, adequate fictionalized and supportive game narrative and adequate communication components and socializing opportunities. Six evaluators evaluated the game based on the given heuristics. The participants reported some usability issues which should be resolved.

Keywords: HCI, heuristic evaluation, game, MMORPG.

1 Introduction

Recent data show that the revenue gathered from the game market was 70,4 billion dollar in 2013 and it was expected to be 86,1 billion dollar in 2016 [1]. Massively multiplayer online role playing games (MMORPGs) are the one of the computer game genre that attracts millions of gamers and defined as the fast growing game genre [2]. The reason for the success of these games is based on the emerging technologies that provide more realistic virtual environments and socialization opportunities to its users [3].

Applying usability evaluation methods in software development since 80s had a positive effect on the productivity and profitability of software [4]. Heuristic evaluation method is the one that is generally used in the evaluation of computer games. It is an expert-based inspection method based on the investigation of the system according to design heuristics [5].

In this study, one of the MMORPGs, Guild Wars 2, has been selected to implement a heuristic evaluation based on a heuristic set extracted from the computer games literature to reveal the usability problems. This MMORPG was selected because it had the highest market share in 2012 [6] and it has been claimed that it did not have the shortcomings of the previous MMORPGs [7].

2 Related Work

MMORPG genre is different since it provides an interactive social environment to its users. They are somewhat difficult to learn since intense knowledge related to the game narrative and fantastic items should be transferred to the players and interaction which is too many, takes place through different combinations of keyboard commands. Therefore, it is not easy to enable sufficient level of player-game interaction.

Use of heuristic evaluation in games has been increased since Malone's [8] study on developing heuristics specific to computer games. Afterwards some researchers had studied on the usability of games and game heuristics development [9-15].

There are also some specific usability studies related to MMORPG genre. Cornett [2] conducted a study with nineteen participants who were inexperienced with MMORPGs and revealed that they ran into difficulties due to usability issues. Another study was conducted by Song and Lee [16] on a popular MMORPG called World of Warcraft and they determined eighteen problems. They defined fifty four key factors for heuristic evaluation in four areas which were game play, game interface, game narrative and game mechanic. Turkay and Adinolf [17] studied whether different forms of customization would affect the user enjoyment or motivation to play in MMORPGs.

3 Method

3.1 Participants

The study was conducted with six participants who were experienced in MMORPGs because inexperienced users will not be able to assess the game according to the given heuristics since they will not be able to learn the game in a short time. However, these six participants were grouped as experienced Guild Wars 2 players and inexperienced Guild Wars 2 players in order to determine whether experience level would affect their assessments. MMORPG experiences of the participants were between 8 to 10 years. All participants were male and graduate students of engineering or information systems. The ages of the participants range from 21 to 27.

3.2 Data Collection Tools and Procedures

Heuristics from the game usability literature were extracted for the evaluation. Forty items were determined and grouped under five categories as can be seen in Table 2 in Appendix. Only one heuristic "Provide adequate localization and language support" (Heuristic 10) was added based on the detailed narrative that needed to be understood by the players. The categories were ease of playability and learnability, decent visual design and adequate interaction with the player, adequate satisfaction level of game content, game play and game mechanics, adequate fictionalized and supportive game narrative and adequate communication components and socializing opportunities.

Participants were required to evaluate Guild Wars 2 game based on the given heuristics in two phases. In the first phase they were required to determine whether there

was a usability problem related with the heuristics. In the second phase they defined the severity of the usability problems based on the severity rating determined by Nielsen [18]. Inexperienced Guild Wars 2 players were allowed to play the game 12-24 hours before the evaluation in order to explore and learn the game.

4 Findings

In the study, heuristics that were rated as 2 to 4 were considered as having a usability problem based on the Nielsen's [18] 0-4 scale. Usability problems found in the 15 of the 40 determined heuristics as can be seen in Table 1. Nine of the problems were determined by experienced Guild Wars 2 players while 2 of the problems were determined by inexperienced Guild Wars 2 players. In addition, four problems were determined by both experienced and inexperienced Guild Wars 2 players.

Table 1. Heuristics that were rated as having usability problems

ID	Heuristics	Participants (given rates)
1	Provide adequate help content and interesting and absorbing tutorial	Exp3 (2), NExp2 (2)
4	Allow customization of user interface	Exp1 (3), Exp2 (2), NExp1 (2), NExp2 (2), NExp3 (2)
5	Allow customization of the functions of control elements such as keyboard buttons	NExp3 (2)
7	Game atmosphere do not enhance cognitive/mental load	Exp2 (2), NExp2 (2),
10	Provide adequate localization and language support	Exp1 (4), Exp3 (3), NExp1 (3), NExp3(3)
11	Well-organized hierarchical structure and proper depth and breadth of menu layers	Exp1 (2), Exp3 (2)
16	Provide adequate (neither more or less) audible feedback	Exp3 (2)
24	Provide fair reward system and satisfying reward contents	Exp1 (3), Exp2 (2), Exp3 (2)
26	Different game modes (PvP, PvE, WvW) have been included in a balanced manner	Exp1 (3), Exp2 (2), Exp3 (2)
27	Pace to apply adequate pressure to the gamer without discouraging them	Exp2 (2)
29	Provide the fair play between all gamers, different classes and races	Exp1 (3), Exp2 (3), Exp3 (2)
30	The player has a sense of control over game and there are no limitations to restrict player.	NExp2 (3)
32	The story should be great and adequately laid into the game	Exp1 (2)
37	The game story reaffirm gamer interest after they have become bored with general gameplay	Exp2 (2)
38	Easy to communicate with other players in the game	Exp1 (2), Exp3 (2)

Inexperienced players defined that players were limited since it was difficult to increase level without accomplishing a task and it was difficult to move the avatar just by using keyboard. However, experienced players did not mention these as problems. Some players from both groups found the tutorial or help feature of the game inadequate and mentioned that the game increased the cognitive load since it had too many details. Serious usability problems were related with the issues of “customization of the interface” (4,5), “the need of adequate language support” (10), “fair reward system” (24), “balanced game modes” (26), “balance between classes” (29), “player’s sense of control” (30).

5 Conclusion

This study reports on a heuristic evaluation of the game Guild Wars 2. Forty heuristics which were grouped in five categories were used for the evaluation. Evaluation results show that game did not comply 15 of the heuristics. Among these problems the customization of the interface and language support were rated above the average of two points in evaluations. Therefore these two issues should be dealt primarily.

Experienced Guild Wars 2 players revealed more problems than inexperienced players since MMORPGs are complex and hard to learn. Experience and knowledge about the game becomes essential during the evaluation. On the other hand, inexperienced players revealed some problems which were missed by experienced players since they might have internalized them.

One of the important findings of this study was that localization and language support was essential in MMORPGs. Because they include a detailed narrative [10], [12] and if there is no language support, players can lose focus of the game and can not follow the story. Although some studies [19] mentioned about the comprehension difficulties due to being in other language, there was not any heuristic specifically defined for the language support. In addition, the features of games, especially MMORPGs, are enhancing rapidly due to technological advances in game industry. Therefore, new heuristic sets that will cover the current usability requirements of MMORPGs should be developed in future studies.

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Appendix

Table 2. Heuristics list extracted for usability evaluation of *Guild Wars 2*

Heuristics	Source
A. Ease of playability and learnability	
1. Provide adequate help content and interesting and absorbing tutorial	[5], [11], [12], [15]
2. Easy to learn and easy to manage in game character, but hard to master.	[8],[12], [16]
3. Easy to comprehend the functions of user interface components	[15]
4. Allow customization of the user interface	[16], [17]
5. Allow customization of the functions of control elements such as keyboard but-	[11], [15], [16]
6. There are similarities between game and real world (metaphors)	[5], [8], [16]
7. Game atmosphere does not enhance cognitive/mental load	[5], [12], [15], [16]
8. Provide sufficient and perceptible visual representations such as icons, signs and descriptions	[15], [16]
9. Provide standardized key combinations, shortcuts that are used in MMORPGs	[11], [12]
10. Provide adequate localization and language support	

Table 2. (continued)

B. Decent visual design and adequate interaction with the player	
11. Well-organized hierarchical structure and proper depth and breadth of menu layers	[5], [11], [12], [16]
12. The game design is aesthetically satisfactory	[5], [16]
13. Provide minimalist on-screen interface that comprise only necessary elements	[12], [15]
14. Provide consistent interface in control, color, typography, and dialog design	[11], [12]
15. Provide adequate (neither more or less) visual feedback	[8], [11], [15]
16. Provide adequate (neither more or less) audible feedback	[8], [11], [12], [15]
17. Provide consistent, clear and immediate responses to the user's actions	[8], [12], [15], [17]
18. Allow to customize video and audio settings	[5], [15]
19. Game atmosphere and visual elements provide recognition rather than recall	[5], [12]
C. Adequate satisfaction level of game content	
20. The gamer empathizes through game play and game character (avatar)	[12], [16], [17]
21. Provide clear tasks and overriding goals	[12]
22. Provide the opportunity to choose a task or a goal within the multiple tasks and goals.	[8], [9]
23. Provide multiple ways to win	[9], [12]
24. Provide fair reward system and satisfying reward contents	[9], [12]
25. Provide various difficulty level according to each gamer's level	[8], [9]
26. Different game modes (PvP, PvE) have been included in a balanced manner	[14], [20]
27. Pace to apply adequate pressure to the gamer without discouraging them.	[9], [11], [12]
28. Provide game content re-playable	[11], [12]
29. Provide the fair play between all gamers, different classes and races	[9], [16]
30. Provide sense of control over game and there are no limitations to restrict player	[5], [12]
31. The game's AI provide reasonable yet unpredictable outcomes	[8], [12], [15], [16]
D. Adequate fictionalized and supportive game narrative	
32. The story should be great and adequately laid into the game	[10], [11], [16]
33. Provide the players create, control their own story content	[10], [11], [16]
34. The game story evokes famous tales, mythology and other works	[10], [16]
35. Discovering the story as part of game play	[12], [16]
36. The game contain intriguing and interesting game story	[11], [12], [16]
37. The game story reaffirm gamer interest after they have become bored with general gameplay	[10], [16]
E. Adequate communication components and socializing opportunities	
38. Easy to communicate with other players in the game.	[14], [20]
39. Provide adequate game content to ensure being part of a team.	[14], [20]
40. Provide to access community pages to players for exchange ideas and procure information	[14], [20]