11 DESIGN AND USABILITY HEURISTICS FOR ONLINE POKER GAMING

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Poker is one of the most popular games of chance. It is a game whose success and enjoyment is dependant highly on identity establishment and sustaining that impression throughout the game.

Designers and usability evangelists design online poker games from the interface perspective to make it as realistic as possible and strive to deliver a complete emotional experience from a psychological perspective.

One of the significant problems while designing for online poker games is the lack of emotional and personal experience of real poker game which greatly affects the authenticity and enjoyability of the game. This paper explores various design and usability heuristics, both interface and psychological, which shape the online poker experience.

The methodology incorporated a study of available usability heuristics and methods and most popular online poker clients to arrive at unified usability heuristics method. The analysis resulted in giving an understanding of the role of various heuristics and their interplay with each other to design r an enjoyable poker experience.

General Terms: Human Factors, Usability, Design, User experience Design

Keywords: Online game, Poker, HCI, Game design, Interaction design, heuristics, User testing, User centered design, Design methodology.

1. INTRODUCTION

Poker is one of the most popular online card games where human players play against one another. It is a game of imperfect information.[1] Players need to deduce from the behavior of other players by observation. It is fundamentally a game of deception or deceit.

A user study published by Paddypowerpoker.com[2] reveals that "poker is a game of bluffing but they didn't expect so many players to tell little white lies so they could play the game they love. 37% of players have fibbed in order to play. The Irish are slightly more devious, with 40% having bluffed involving poker compared to 35% of UK players. Faking it isn't big or clever. Keep the cheats for the game people!"

Online poker is a fast paced game where the nuances of real poker game, like player emotions and expressions are missing. The player is playing virtually with his opponents to win maximum in real time.

Hence it is a challenging task for the designer to create a online poker game as the success of the online game design is dependant on how much of the real psychological experience can be replicated in the design of the game and that increases the player retainability.

1.1. Need

Usability professionals and designers constantly face challenges with respect to the design and usability parameters to design more popular and successful online poker games.

Various usability and design methods are available, but none of the methods cater to all the USPs (Unique Selling Preposition) of popular poker clients.

Evaluation of some existing successful online poker games resulted in a realization that a common and obvious design method and usability criterion could not be established.

Hence, an in-depth study of the available usability methods and especially existing established methods of designing successful online poker games needs to be done to arrive at a unified applicable user method.

1.2. Objective

This paper examines the existing usability heuristics for designing online poker games to arrive at an optimal heuristic method, which includes interface and game specific parameters.

2. THE POKER GAME

2.1. Poker Game Psychology

Poker is a game of deceit unlike other games where fun may be more important. Two-time world poker champion Doyle Brunson observed that, "more than any other game, poker depends on your understanding your opponent". It is in a player's best interest to develop an understanding of each opponent and their playing style.[1] Brunson stresses the importance of psychological factors such as alertness and control over emotions, and social factors, such as developing a reputation.

There are many kinds of nonverbal yet socially interpretable information that we assess to make judgments about others' character, personality and mood. Poker has been analyzed as a "scripted competition" that fulfills social-psychological needs not fulfilled in daily life.[3]

Poker is mostly a competitive game, due to players' desire to avoid many kinds of self-expression so as to not provide potentially self-damaging information to others in the form of "tells." However, even conversational spaces are partially competitive; people compete for high status, for turns to speak, and for recognition as being right in an argument.[1]

2.2. Poker Game and Player Depiction

The player selects a poker room and then joins a table of his choice. After choosing a table, a player is presented with a bird's eye view of a poker table, often surrounded by chairs. The game play is fundamentally spatial with the players taking turns in clockwise circle.[4]

All players are represented by their chosen handles or avatars along with handles. The players choose an avatar provided by the poker game room or in some game clients one can upload his own avatar. Visual interpretation and appeal is an important aspect of an online poker room design. A text-only representation is much more difficult to see at a quick glance than a graphical one. Avatar-based interfaces not only make it easier to see that someone is present; they also have the potential to make it easier to see who that someone is.[1]

2.3. Common Gaps/issues Faced by Designers and Usability Professionals:

- Understanding of user psychology, needs and behavior
- Understanding of game rules, dos and don'ts.
- Continuous improvement of game behavior and features
- Simulation of features and behaviors of real game behavior
- Understanding of the business model in terms of sustainability and profit making
- Game media like computers, mobile, kiosk, etc

2.4. Considerations for Poker game Design

Terms like fun, flow and playability are most often used to explain user experience in game design.[5]

Three main aspects in designing and evaluating computer games as per Jegers[6] are: a) the interface, b) mechanics, and c) game play.

A designer needs to understand several aspects of online poker gaming and need to find answers to the following questions:

- Why people play poker – what people try to achieve from this game. What character is associated with this game?
- Does the character change when one plays online?
- Are there nuisances attached to poker which are not a part of the real poker game — brick and mortar poker game.
- How is this different from other online games?
- What are the characters/features that an online poker game has attached onto itself because of the web experience?
- What is the difference in play pattern of a novice and an expert?
- Are there different aspirations and requirements that need to be fulfilled for these user profiles?
- What do the poker users want?
- What are the usability heuristics/principles that need to be tested for online poker gaming
- What is the current scenario? — Why some poker clients are more popular than others and reasons why they are popular.
- How can one bring the real poker game elements in virtual poker game environment? E.g., make a poker face to hide your emotions.
- Is there a checklist or a set of rules which can make a new poker gaming client popular on the net?
- Is there a pattern or learning from other similar games which can be used for poker game design?
- What can online poker game gain from usability or user centered design.

3. STUDY OF AVAILABLE USABILITY METHODS

Poker is largely a game of social and psychological information. However, online card room interfaces do not support the subtle communication between players that is integral to the psychological aspect of the game, making the games less authentic and less enjoyable than they could be. Being able to recognize other players and remember past interactions is essential.[1]

Usability professionals and designers do not have a common and tested usability method to evaluate and propose an optimal online poker experience.

The designers and Usability professionals try to combine the knowledge and experience pf real poker game with the features and practices available in the web. The resulting poker game play has the basic rules of real poker game and technology and experience of the web and internet. Online poker game then becomes fast paced and a player can play with anyone across the globe.

Various web based features like ‘avatars’ (an image depicting a player identity) with a name are a hit with players. A player can put notes and remarks on other players of his game play or choose not to play with players of particular types.

Algorithms at the game providers servers checks for any fraud or confluence which is difficult to catch in real poker games. Online poker is a very good tool to learn real poker. Usually a professional online poker player plays several online poker games at the same time.

An investigation of different aspects of evaluating user experience of online games is required. Many authors have introduced methods and parameters for usability reviews through heuristics and principles.

3.1. Questionnaire Based Usability Studies

In traditional usability studies, user satisfaction is measured by means of questionnaires, whose focus is usually on aspects of importance for ensuring high productivity in the use of software. Ensuring player productivity is quite different from ensuring player enjoyment.

3.2. Game Playability and Approachability

User experience is the sum of several factors, like playability, flow or usability[7]. Playability can be seen as a key factor in the user experience. Some researchers have adapted the 'traditional' usability evaluation methods (like user testing and contextual inquiry and expert reviews) to address the specifics in games evaluation.

Heather Desurvire has introduced HEP (Heuristic Evaluation for Playability),[8] which are a comprehensive set of heuristics for game playability.

Game designers have been focusing on meeting the needs of less savvy and less frequent casual gamers in addition to the desires of hardcore gamers. Out of a total of 10 Game Approachability Principles (GAP) for improving Game learning levels, Heather Desurvire has identified the following six major principles:[9]

1. Observation and Modeling
2. Self Efficacy
3. HEP (Heuristic Evaluation for Playability)[8] and PLAY Based
4. Gee Game Based Principles (Identity, Manipulation and Perception);Guidelines (such as players not being penalized repetitively for the same failure; varying activities and pacing during the game to minimize fatigue or boredom; etc.);
5. Demonstrate Actions and Reinforcement;
6. Likeability of the Tutorial

3.3. Game Flow Model

The "Gameflow Model for Player Enjoyment" by Sweetser and Wyeth[7] is a possible concept of evaluating games enjoyment in traditional computer gaming. Gameflow is based on two cornerstones: the theory of flow integrated with appropriate criteria from computer game usability and user-experience literature. Briefly, the flow theory describes the fundamentals of an optimal experience of enjoyment that is the same in contexts and cultures the world over and is independent of any particular activity.

The gameflow model consists of eight core elements,[6] which in turn are based on a number of criteria related to flow elements. The core elements are concentration, challenge, skill, control, clear goals, feedback, immersion, and social engagement.

Game flow model serves as a starting point for academics and game developers to understand enjoyment in games and to conduct further research into understanding, evaluating and designing enjoyable games.

4. ANALYSIS

User experience by definition is the sum of several factors, like playability, flow or usability.[7]

Traditional usability testing involving individual participants and trained observers was found to be "an excellent method to discover problems…and to understand the thoughts and beliefs of participants and how they affect their interaction with the game".[4]

Game Approachability Principles (GAP) based Heuristic Evaluation provides more applicable and useful information about game approachability while Usability Testing provides more information regarding game playability and usability.[10]

4.1. Online Poker Game Design and Evaluation may have the Following three Stepped Approach

- Conceptual design based on game psychology, rules and user expectations
- Heuristic evaluation of newly designed game on the basis of online user experience and best practices of game approachability, game playability and player enjoyment.
- User testing to arrive at usage patterns and user needs across the user base

4.2. A Detailed Process needs to be Prepared for Designers and Usability Professionals

- The process may include (but not limited to):
- Understand the game rules
- Understand the game psychology (emotions and rewards attached to it)
- Test the visual appeal of the game design with users.
- Demo of game rules with undo options for users to learn the game
- User preferences: Give multiple options for users to choose their comfort level in terms of
  - Game pace
  - Risk level
  - Rank other players and put notes on them/block them
  - Chat and interact with other users
- Give multiple options for users to customize and personalize
  - Visual look and feel and style
  - Personal touch like — screen names, avatars, shortcuts, comments on other players
- Iterative user testing for game improvement

5. INFERENCES

Evaluation of some of the most popular online poker game clients with heuristics could not establish the reason of their popularity. Some game clients did not meet the usual usability/design parameters but still were popular. This requires an in-depth study of the various heuristic evaluation methodologies and the design features of poker game clients.

The User interface of Bodogpoker (Figure 1) does not have any metaphor of the real poker game as a poker table, chairs and players. Bodogpoker had avatars along with other player details.

Ultimatebet interface (Figure 2) has 3-dimensional perspective view of the poker room with players. This poker game is the closest representation of the real poker room. This poker game still does not top the poker game rankings.

Paddypowerpoker interface (Figure 3) falls somewhere between the Bodogpoker and Ultimatebet interface. This poker game has a top view of the well designed poker table with chairs and players are represented as avatars. This poker game is quiet popular although it does not represent a real poker room in its look and feel.

Analysis results in a three pronged approach towards online poker game design and evaluation. This includes conceptualization, preparation of comprehensive heuristics combined with user testing.

Designers and usability professionals often miss the psychological aspects of game design which make the game experience more realistic and enjoyable.

Analysis indicates towards the preparation of comprehensive heuristic design and evaluation criteria which combines the aspects of game approachability, game playability and player enjoyment.

Figure 1. Screenshot of Bodogpoker.com.

Figure 2. Screenshot of pokerroom.com.

Figure 3. Screenshot of paddypowerpoker.com.

However, in spite of building up comprehensive heuristic evaluation criteria, problems and issues of identity representation and impression management[3] are yet to be looked at in online poker game play.

6. FUTURE SCOPE OF STUDY

There are established heuristics which help in designing and evaluating online game experience, but some subtle nuances of real poker game experience have not been integrated into the online experience so far.

An important characteristic of online poker game play is to establish a reputation for a player's playing style, has been used to some extent in online poker game play by various means like putting notes for another player or categorizing a player by his player ranking and earnings.

Terms like "poker face" which represents an emotionless and expressionless face during a real poker game has not been integrated into the online poker experience.

Challenge before designers and usability professionals is to develop the online poker game experience by developing improved heuristics and integrating user study of existing online player behavior and then finding ways and means to incorporate real life scenarios into online experience.

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