Exploring the Applicability of Game Design Heuristics for Different Game Platforms

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Abstract

Within the improvement and expansion of game industry, there has been a need for a set of rules to accomplish some fundamental requirements for the fun factor in games. Many heuristics have been proposed so far, but none of them could provide the whole need for covering the issues related to usability and/or playability of video games. One of the answers for the reasons can underline the objectivity of the research and can be the adaptation problem to the rapid changes in the game platforms. This paper introduces a question, whether existing heuristics can be used to in the evaluation process of usability (and playability) on different platform experiences. If the answer is no, the possibility of whether the different control mechanisms on different platforms have an impact on that will be searched. With the result of these questions, the heuristics can be extended for different platform usages.

Keywords: Heuristics, playability, play testing, design guidelines, video games, evaluation, usability, user testing, game platform

Exploring the Applicability of Game Design Heuristics

For Different Game Platforms

The transformation on the gaming devices, multiplayer and social networking leads researcher to improve the game designs. To satisfy the massively increasing number of players, the usability, playability and enjoyment factors should be ensured by the game developers. According to a research conducted by Entertainment Software Association (ESA), in 2013, approximately 58% of American households play computer or video games (http://www.theesa.com/facts/pdfs/esa_ef_2013.pdf). The reason for playing games have been searched and according to the findings of Korea Creative Content Agency (KOCCA), among 1700 game users the main reason for playing video games is fun (http://www.kocca.kr/knowledge/publication/indu/__icsFiles/afieldfile/2012/10/30/BW3rWbGbtuvJ.pdf) (see Figure 1). To accomplish the fun factor in games, much more research has been conducted and the only aim of developers has become trying to keep the player in the GameFlow (Sweetser & Wyeth, 2005).

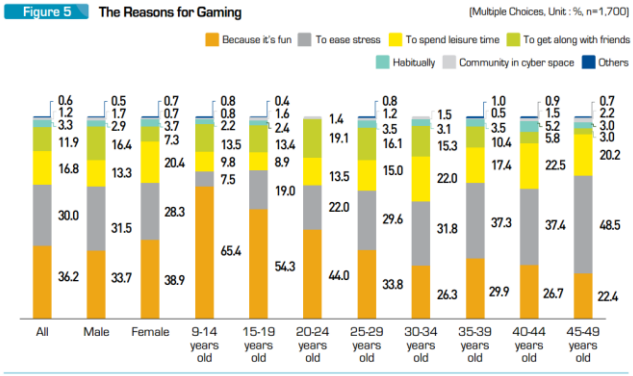

Figure 1. The Reasons for Gaming (KOCCA)

Game Platform Evolvement In recent years, with a rapid development, more game consoles or platforms have been introduced to the users. It is stated by ESA that, in 2013, 43% of gamers play games on their phones and 37% of them play on handheld devices. (http://www.theesa.com/facts/pdfs/esa_ef_2013.pdf). A study conducted in 2011 by Bernstein has declared that "gaming goes mobile" [2]. This claim has been supported by the industry data showing that games are more that 75% of the revenue of the top 100 apps downloaded at app store. Beside of the rapid changes in mobility, some other game platforms have been created and proposed to users. Game consoles, TV Set-top Boxes are some of them. According to Park

Associates, in 2011, computers/laptops are still the top platform but mobile phones are almost top platforms too (http://www.parksassociates.com/bento/shop/whitepapers/files/Parks%20Assoc%20Trends%20in%20Digital%20Gaming%20White%20Paper.pdf) (see Figure 2).

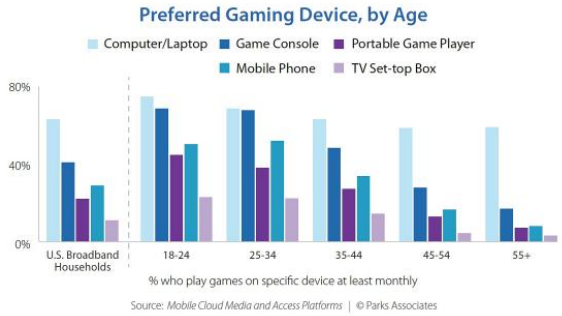

Figure 2. Preferred Gaming Device (Park Associates)

Through the changes in gaming devices and players' satisfaction criteria, there are some set of rules as a guidance to be used in game development and evaluation processes. Many heuristics for playability and usability to assure flow and provide fun have been proposed. However, because the verification of heuristics is performed with user test studies supported by interviews, many of heuristics are more open to be expanded. Among these, for the aim of this paper, Heuristic Evaluation for Playability (HEP) can be one of the most general and accepted set in terms of heuristic categories and applicability in the field. In HEP, four game heuristic categories are focused and because of this categorization, the effectiveness of the rules is stabilized. Therefore, to analyze the applicability on different platforms, starting with more generalized set is reasonable. The questioned part in this set is that how much this generalization includes the scope of platform dependent features.

Literature Review

The excessive demands of players and improvements in the game industry arisen the need for creating better games. Initial implementation of usability guidelines could not fulfill all the needs for game design and usability has been transformed to playability. Additional playability heuristics for games have been introduced to support game design and evaluation processes.

In 2002, for the first time, Federoff collected set of usability guidelines for games from the literature, improved them with a conducted case study and compared the current guidelines

with J. Nielson's Heuristic. She stated a correlation between them and offered 40 heuristics categorized under *game interface*, *game mechanics* and *game play* (pp. 13-19).

In Heuristic Evaluation for Playability (HEP), Desurvire et al. (2004) improved and offered 43 playability principles under *game play*, *game story*, *game mechanics* and *game usability* categories with the results of usability testing and heuristic evaluation (p. 1511). In their work, they extended previous sets and instead of mapping Nielsen's usability heuristics to the principles, they have included "game usability" as a playability factor. Thus, human-computer interaction principles have started to be applied for the following game designs.

Because of the increasing usage of mobile devices, in 2006, Korhonen and Koivisto from Nokia introduced 29 heuristics including *mobility* category in addition to *game usability* and *game play*. After including mobility, in 2007, they introduced another set of usability guidelines for multi-player games.

In Game Usability Heuristics (PLAY) For Evaluating and Designing Better Games, Desurvire and Wiberg (2009) revised their previous HEP heuristics by considering different game genres and increasing their number to 50 under *game play*, *coolness-entertainment-humor-emotional immersion* and *usability-game mechanics* categories (p. 1). They generalized their set to support multiple genres.

Another multiplayer game usability heuristics were introduced by Pinelle et al. in 2009.

To be adapted to the social era we are in, Paavilainen (2010) introduced social perspective to the game design heuristics. After observing Korhonen and Koivisto's research, he stated 10 principles and heuristics that a social game should have in its design such as *spontaneity*, *sharing*, *sociability* and *ranking* besides of usual usability and playability factors (p. 62).

Within the introduction of interactive surfaces, additional heuristic features have been needed to be included in the design guidelines. In their research, Haller et al. (2010) proposed 10 heuristics for tabletop games (pp. 293-296). After mobility (which is for mobile phones), device dependant heuristics have finally been taken into consideration.

Another multi-genre supported generic evaluation framework was introduced recently by Al-Azawi et al. (2013). Their framework includes game evaluation criteria introduction and its evaluation process by user and expert testing (pp. 237-239). As they claim, with 100 heuristics, "they aim to achieve clarity, generality and usefulness heuristics" (p. 238). So besides

playability, *usability* and *mobility*, they included *enjoyment* and *quality* criteria with efficiency, adaptability and functionality sub-criteria.

Research Questions

Because usability, as the initial point, is no longer sufficient to support intended aspects of the games, newly introduced accessibility, playability, security, cross-platform, networking, sociability, collaborative terms should be satisfied on needed game designs. According to the researches, until the latest years, the order including some of them was like:

1. Usability
2. Playability
3. Mobility
4. Multiple-genre support
5. Multi-player support
6. Social support
7. Collaborative support
8. …

For this reason, according to Masip et al. (2012), for a specific application domain, a combination of some set of guidelines should be used (p. 53). (see Figure 3). For the aim of this paper, the intended sets are related to mainly three categories: Usability, Playability and Platform related heuristics. To evaluate the overlapping sections this structure, existing heuristic set, HEP will be used. Because it includes usability and playability related rules and platform dependant rules are known to exist in this set.

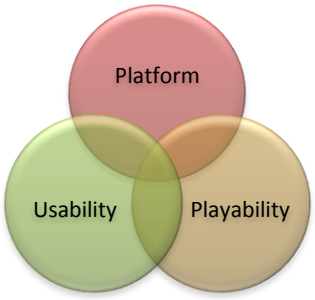

Figure 3. Intended Combination of Game Design Heuristics

Platform is the nearest interface to the user while playing the game. To evaluate the game play sufficiently, before the playability and usability (and other heuristic criteria mentioned in literature review part) features of the game, the player is welcomed a platform specific features

including interaction. These features like response time for gesture control, display size, player interaction and game play action applicability (slide/touch on screen can be more natural and engaging than throwing birds with bare hands or) can be influential in all usability and playability (see Figure 4).

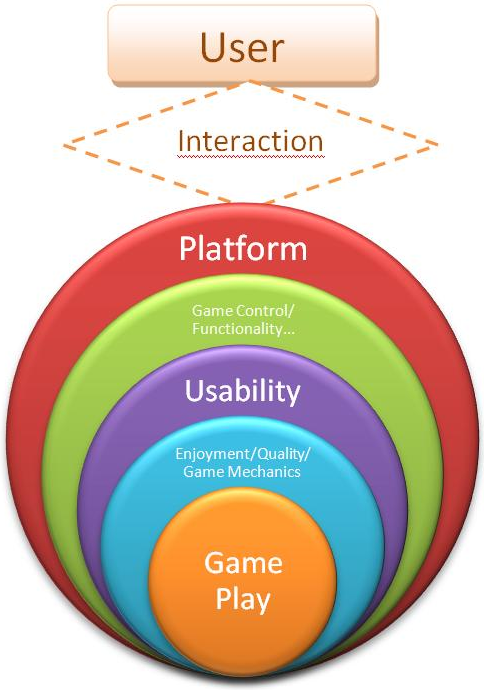

Figure 4. Proposed Design Layer for Heuristics

When the heuristic sets mentioned in literature review section, covered categories and sub criteria can be summarized as in the following table:

Table 1
Heuristic Categories Covered by the Current Sets

TIME (2002-2013) →											
Usability	**Playability**	**Enjoyment**	**Multi-player**	**Mobility**	**Multi-genre related**	**Sociality**	**Tabletop specific**	**Web Service Related**	**Accessibility**	**Security**	**Quality**
effectiveness	game play			easy & fast learn	consistency	spontaneity	cognitive workload	linked service	perceptibility (for the disabled)	user data protection	adaptability
efficiency	game story			efficient	customizability	interruptability	challenge	cross platform			efficiency
satisfaction	game mechanics			easy to remind	Artificial intelligence	continuity	reach	social interaction & navigation			functionality
user interface				low error rate	View Mismatch	discovery	examinability	dynamic			
game control				comfortable to use	Skip Content	virality	adaptability	contextual			
					Input	narrativity	interaction	service			

					mappings			usability(consistency, error prevention)			
					Controls	sharing	level of automation	safety			
					Game status	expression	collaboration and communication	technical issues (browser compatibility)			
					training & help	sociability	feedback	service and content suitability			
					command sequence	ranking	comfort(physical setup)				
					visual representation						
					response time						
					predictability						

When we observe this changing in the additional features games are expected to have, we can say that it is parallel the developing technology and social trend. With the expanding usage of mobile phones and interactive surfaces like Microsoft Surface, the adaptation of the games to these novel devices was inevitable. Therefore, the existed design heuristics were revised for specifically for these platforms. However, while heuristics for multi-genre support and cross-browsing web services have been introduced, cross-platform heuristics should have been as well. Either, each platform is waiting for its unique heuristic set when players are rushing to use them.

In the era of the mobility, the need for cross-platform support for games has revealed. In this paper, the answers for how much the existing playability heuristics are applicable for different game platforms and if specific heuristics are needed for specific platforms or the existing heuristics be generalized to support cross platform feature questions were analyzed.

Methodology

To analyze the current heuristic set's applicability on different game platforms, the followed steps were as follows:

1. *Selecting a set of heuristics:* In the selection process, the initial usability & playability & platform merging aim was kept in mind. As a general design guideline set; HEP set by Desurvire et al. was chosen.
2. *Improvement of the set:* Because the evaluation of the heuristics on different platforms depends on observing the consistency of platform dependant heuristics in the set with each other, "platform deficiency reason field" is added in the evaluation form besides of heuristic descriptions.

3. *User Study on Improved Set (Procedure):* In this research, because the differences of platforms were tried to reveal, keeping the played game fixed, only the platform dependant heuristics were applied for the evaluation by players in the user study.
4. *Interviewing with Players:* After improved HEP evaluation, additional platform related design problems recognized by the evaluators were collected.
5. *Improvement of the set:* According to the results of heuristic violations, the game design features needed to be improved according to the platform were revealed. The suggestions for cross-platform supported heuristic set were proposed.

Improvement of HEP

The effect of different platform usage is not considered in HEP. While defining the heuristics, user experience differentiation can change the rule in an expanding manner. Or while evaluating the heuristics on a specific platform, may not validate the rule. Therefore, the platform choice may restrict the widely generalization of the rule set. Addition of the platform to the heuristics may lead us to think about the heuristics much more. For example, finding whether the failure of an issue in a specific platform may arise from the control mechanism of it can lead developer to improve the controls in their games accordingly. Because the capability of game platforms is diverse, each rule should have mapped to a platform layer features.

As indicated by Federoff (2002), she claimed that "when games are developed, they are created specifically for specific platforms" (p. 10). But this claim may not be valid lately. In fact, with the introduction of different game platforms many of the developers of popular games published and are publishing their games' multiple platform supports, to like Smart Phone, Tablet or Smart TV. As she stated (2002), "the usability of the product cannot be evaluated without taking context into consideration" (p.13). Therefore, the playability heuristic set of Desurvire et al. should be generalized for supporting multiple game platforms as they did for supporting multiple game genres in HEP.

To observe the platform related evaluations in the HEP set, additional columns "'X' Platform Experience" and "Control Mechanism Deficiency of the 'X' Platform", where 'X' is substituted for experienced platform, were added to the list of heuristics table in HEP. The data was collected via this extended list was evaluated by traditional users during user study. According to answers, controls in game were questioned in the game design process. Therefore,

especially while creating a game with cross-platform support, this paper proposition can be very useful (see Table 2).

Table 2

Improved HEP heuristic

Heuristic and Description	*{…}*
Platform Deficiency (at PC Platform)	*{…}*
Platform Deficiency (at Smart Phone Platform)	*{…}*
Platform Deficiency (at Tablet Platform)	*{…}*
Platform Deficiency (at Smart TV Platform)	*{…}*

Procedure

Analysis of HEP. Because this paper aims to observe the effect of game platform over the game via HEP, first thing to do is to distinguish the platform related issues in the heuristic set of HEP. A similar approach was followed in Röcker and Haar's study (2006). Their aim in the paper was to explore "whether HEP can be used by pervasive game developers, or if specific design guidelines for smart home environments are required" (p. 1). However, instead of comparing the requirements and finding a map among proposed heuristics, in this paper, failure of the heuristics because of the lack of platform aspect is observed. And accordingly, the game controls on each platform, in which the failures in the enjoyment occurred, will be tried to improve in the game development process. The heuristics of the 'game story' category mainly includes game aspects which are not directly related to platform. The following table is the list of heuristics from HEP filtered by platform dependency (see Table 3-4-5-6).

Table 3

Game Play HEP - Platform Relation

No	**Game Play Heuristics**	**Platform Relation**
P4	There is an interesting and absorbing tutorial that mimics game play	Platform dependent
P5	The game is enjoyable to replay	Platform dependent

P12	Player's should perceive a sense of control and impact onto the game world	Platform dependent
P13	The first player action is painfully obvious and should result in immediate positive feedback	Platform dependent

Table 4
Game Story HEP - Platform Relation

No	**Game Story Heuristics**	**Platform Relation**
S5	The Player has a sense of control over their character and is able to use tactics and strategies	Platform dependent

Table 5
Game Mechanics HEP - Platform Relation

No	**Game Mechanics Heuristics**	**Platform Relation**
M4	Mechanics/controller actions have consistently mapped and learnable responses	Platform dependent
M6	Controls should be intuitive, and mapped in a natural way	Platform dependent
M7	Player should be given controls that are basic enough to learn quickly	Platform dependent

Table 6
Game Usability HEP - Platform Relation

No	**Game Usability Heuristics**	**Platform Relation**
U2	The Player can easily turn the game off and on	Platform

		dependent
U5	Upon initially turning the game on the Player has enough information to get started to play	Platform dependent
U6	Players should be given context sensitive help while playing so that they do not get stuck or have to rely on a manual	Platform dependent
U8	Player do not need to use a manual to play game	Platform dependent

The Game. Because, this paper aimed to generalize the usage of HEP rules for multi-platform, a cross-platform game was used. "Angry Birds" by Rovio Entertainment was chosen as a user study game.

The Platforms. As four platform options PC, Smart Phone (iPhone), Tablet (iPad) and Smart TV (Samsung) will be used. Their hardware capabilities and input differentiations are not discarded in this user testing (see Table 7). Because they are the factors that can affect the decisions in the evaluation of filtered HEP heuristics.

Table 7
Interaction Types of Game Platforms

Platform	Interaction
PC	Mouse
Smart Phone	Touch
Tablet	Touch
Smart TV	Hand Gesture

User Study. There were 5 players with the average age of 25. It was aimed that many of them were previously a game player, so they were familiar with games, game plays and many of the platforms which was a good chance to make critical observation (see Figure 5). The prepared and filtered list of heuristics from HEP was proposed after **3 minutes** (maximum level reach is limited to 5) playability sessions to the volunteered game players (see Figure 5). In each session, the players played Angry Birds game on 4 different platforms. Because the familiarity to the

platforms can ease the comparison for the players, the order of the platforms was specified as firstly PC, secondly Smart Phone, thirdly Tablet and lastly Smart TV.

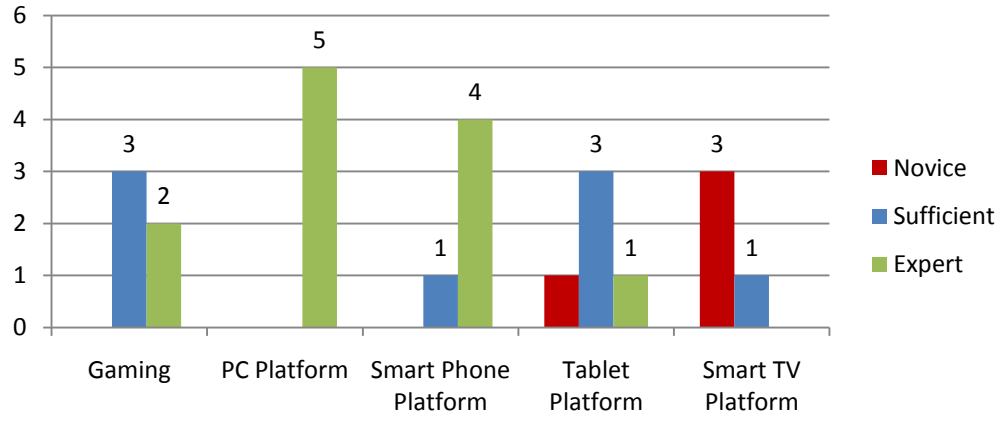

Figure 5. Participant Field Experiences

To analyze the effectiveness of each platform dependent heuristics, the relative comparison of the platforms made by the players are important. The answers to the heuristics were not leveled; they were like yes/no questions. Therefore, a break of the session can cause the players to forget about their answers for previous platform experience and not to compare their answers while evaluating the heuristics. For example, if the player was not sure with his answer for the heuristic P5 as much as in PC platform experience, he was expected to evaluate this heuristic as "no". Because this means that, the design of the game specifying this heuristic can/should be improved for that platform much more. Or vice versa; additional heuristics for that platform should be added to the heuristic set. So, the players completed the session at once with all platforms. After the sessions completed, according to the sense of enjoyment, two additional columns for HEP, " 'X' Platform Experience" and "Control Mechanism Deficiency of the 'X' Platform" were asked to fill by players in addition to evaluation of each heuristic (see Appendix). After the heuristic evaluation, short interviews were conducted with the evaluators to find out any additional platform dependant problems they were faced during the game play.

Analysis

At the end of evaluation in user study, some HEP principles failed in some platforms while succeeding in some other. Ignoring hardware capabilities, participants were asked to focus on the game play control style instead of performances. It was tried to be concluded whether an interaction style for a specific game play control were be favored (surpass the others) or not (For

example, for bird throwing action, sliding control on iPad was the best in terms of enjoyment). This action-control mapping can be used in improving HEP heuristics for the effectiveness in multiple platforms. The results from user studies revealed that how much the game "Angry Birds" succeeded in HEP on these four different platforms. By pointing the failures in some platforms for a heuristic, this paper proposes a chance to adapt the game to all the platforms successfully.

Violated Heuristics by Platforms

According to the heuristic evaluation by players, Smart TV platform was obviously failed in terms of applicability to many of platform dependant usability, mechanics and playability heuristics.

Because in Angry Birds game the failure results in repetitive play and it is hard to control in Smart TV, the sessions were resulted in penalization and not to apply tactics (P11 & S5 & U5). It can be seen that, the lack of need for context sensitive help, heuristic U6 was evaluated as unnecessary guideline for this game. The lack of manual for each device left the players get stuck at the beginning (P5). At the interview stage, totally 4 number of additional platform dependant design issues recognized by the players. These were related to the inconsistency in the functionality between platforms such as zooming does not exist in Smart TV platform, and tactic implementation with mouse is much more applicable than the smart phone with small screen size (see Figure 6).

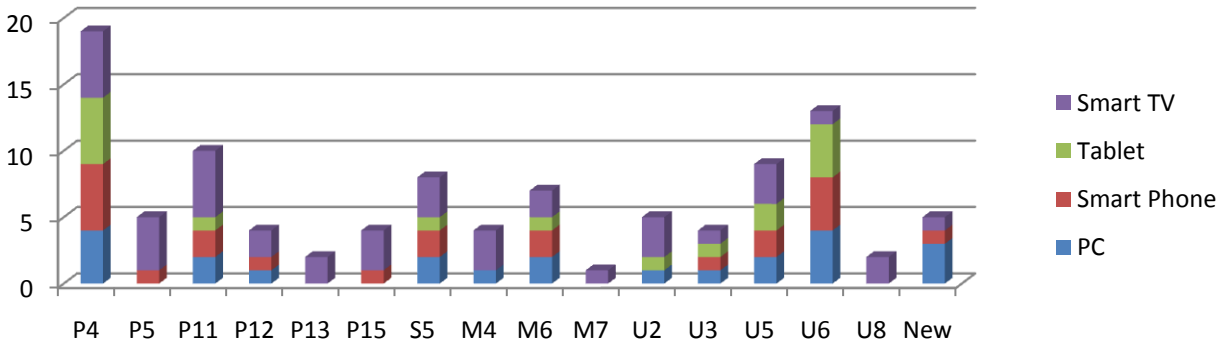

Figure 6. Heuristic Violations by Platforms

When the violations were collapsed into their categorizations back, it was revealed that the most violated heuristics were related to game play, game usability and game mechanics in order. It is interesting that PC platform has much more usability related violations than Smart TV

platform, while it has much more playability related violations than PC. The most enjoyable and with lowest failures, tablet platform was selected the best applicable platform for the introduced HEP heuristics (see Figure 7).

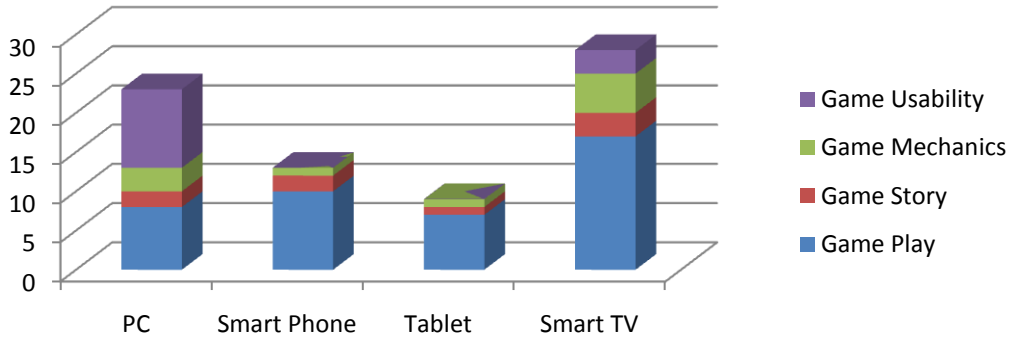

Figure 7. Heuristic Criteria Violation by Platforms

When we look at the big picture, totally maximum 40 violation occurrences, the 57% of them was related to playability issues. Therefore, this means that playability features are much more subject to be violated in the case of different platform adaptation of the game.

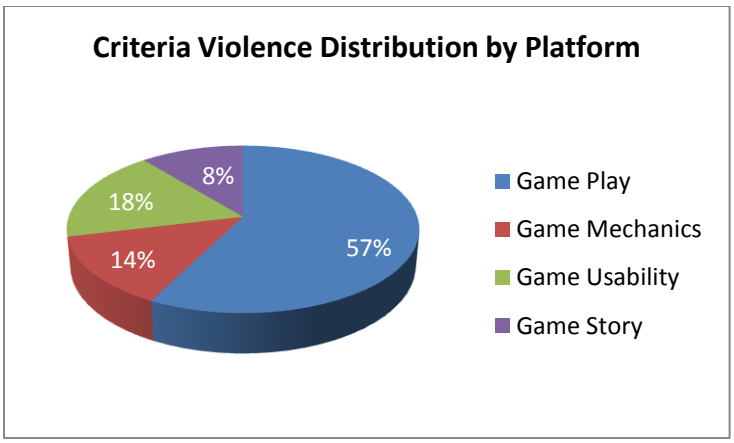

Figure 8. Heuristic Criteria Priority at Platforms According to Violation Results

Discussion

Examining the Relation between Heuristics and Additional Features

Most of the participant mentioned that the failures in the heuristics in some platforms are caused by the control mechanism. They stated that because “Angry Birds” game firstly developed and published for iOS platform, the later porting attempts to different platforms have not been successful as in iOS. The proposed and improved HEP list results are as below:

- **P4:** *There is no tutorial on TV platform about game play. So a tutorial for game play and controls in the platform specific scope should be added. For example, at the beginning of the game on Smart TV platform, some of the players could not intuitively guess that the birds are picked by closing fingers inward (like fist)*
- **P5:** *Because the control is hard, replay is not really enjoyable. So the control mechanism on TV should be improved to verify this heuristic. Maybe the difficulty of the game should be simplified on the Smart TV version of the game.*
- **P12:** *The sense of control is hard to perceive especially in Smart TV platform because of hand gesture. Because TV usage is generally in a comfortable home environment, while sitting on the couch, the player should be able to play the game easily. So gesture control should be improved. The precision of the control-so on the impact is not satisfied on Smart TV platform.*
- **P15:** *Because hand gesture is exhausting, instead of the pace in the game itself, the player is stuck in the platform limitation level. So, instead of the challenge in game, the player try to deal with control mechanism of the platform.*
- **P13:** *After learning how to play with tutorial (especially for TV platform), it is not painful for first action.*
- **S5:** *Because TV platform and PC platform are not as sensitive as touch control on smart phone or tablet; it is hard to be able to use tactics and feel control. Therefore, on Smart TV version of the game, the birds can be bigger visually. Furthermore, the smart phone screen is relatively small, so it is not so applicable as well.*
- **M4:** *On TV platform, the mechanics have not consistently mapped. On PC platform, when exceeds from the game play scene on a browser, the controls fails. It is good to fit device screen as phone or tablet.*
- **M6:** *On TV platform, the controls are not intuitive. This causes an unwilling state to progress in game. Some easy interaction gestures or speech control can be added. For example, at the beginning of the game on Smart TV platform, some of the players could not intuitively guess that the birds are picked by closing fingers inward (like fist).*
- **M7:** *On TV platform, controls are easy to learn but not so flexible to implement. Moreover, the control cause fatigue on hand and arm. Gesture control should be*

improved. On PC platform, the flexibility is not good as touch screen devices like smart phone or tablet.

- **U2:** *On TV platform, the menu including exit option is hard to learn. You should move your hand to the top of screen. It should be intuitive by adding a user interface on game play screen.*
- **U5:** *On TV, there is lack of sense how to play.*
- **U6:** *At the game level, there is no much need for contextual help but, especially for platforms where it is hard to control, context sensitive help should be improved.*
- **U8:** *On TV, there is a need for manual to play*.

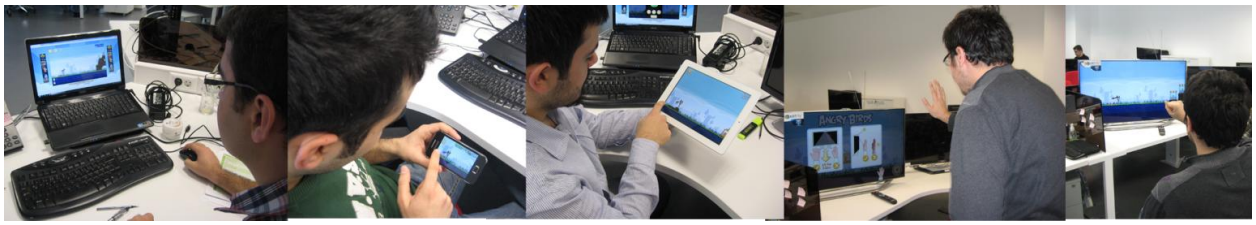

Figure 9. User Study Process with 4 different game platforms

Validating the Heuristics with Additional Features

First of all, this improved method proved the need for platform choice addition to HEP. Because, the failure or success of the game can alter according to played platform for the same heuristics. Moreover, by this method, the needed improvements in game development in terms of control mechanisms on different platforms have revealed. While evaluating the user study, some device habits of the participants have interfered to the decisions. Because "Angry Birds" firstly released on smart phones, the tendency to play on phones was easier for participants. In addition, as an alternative and newly introduced platform, TV was interesting experience for participants. However, most of participants have decided that, playing the game on touch screen devices is the most enjoyable experience.

While some of the heuristics is valid on some platforms, the failures on some others indicated that that heuristic is platform specific and so should be generalized to be applicable in the initial design process of the game. Because, while evaluating a set on the players, the results should not be conflicting. If so, the game design goes through versioning based on platform and the general mood of the game can be changed. Furthermore, additional features of a game can be

introduced in case of considering different platforms such as “durability/endurance”(especially for gesture controlled platforms in terms of exhausting), “scalability of view” and “on screen context” to discard differentiated accessibility to menus.

Conclusion

User testing has revealed that “Angry Birds” game is not successful on all platforms. It is concluded that while evaluating with HEP, the verification of a heuristics sometimes differs on different platforms. The reasons behind these failures on different platforms have been pointed out by participant statements as platform deficiency. Because these deficiencies prevent players to have fun and enjoyment during game play, according to the violation results, “Angry Birds” game can be improved. By handling with deficiencies especially for TV platform, the game can support multi platform assuring all the heuristics in HEP completely. In the case of the deficiency problems are platform control related; some platform based controls could be revised and improved. For example, some actions in game like accessing the main menu are controlled by device based configurations like clicking, or some number of finger combination on touch screens, or buttons on phones. So, these accessing and controlling mechanisms should be made independent from platform and be added to user interface. Furthermore, some action-control-platform mapping can be proposed to quickly decrease the deficiency possibility beforehand. The precision capabilities on the control mechanisms of different platforms need to be ensured with the durability of the players’ desires. These extra playability features can support to eliminate the violations on the playability category.

While designing a game, using the combination of different heuristic sets to validate on application field (in this case, platform) can result in conflict and unreliability. Even when applying one set of guidelines on different game genres or gaming platforms can be resulted in fail as analyzed in this paper. When we look at the organizational perspective, as Masip et al. stated in their research, the “intended use (support design/development and/or testing phases)”, “the level of formalization (user interface design guidelines/design patterns)” and “the scope of (generic guidelines/platform specific)” these guidelines should be specified for the game development process (p. 55). Therefore, the solution can be the generalization of the heuristic set as much as possible, and through the cross-platform supporting process, using platform specific heuristics in the evaluation. The need for different versioning is inevitable but the consistency of the game interface & interaction is an acceptable trade off.

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Appendix

Platform Dependent Heuristic Evaluation Form Used in User Study (chosen from HEP)

No	Heuristic	PC | Deficiency		Smart Phone | Deficiency		Tablet | Deficiency		Smart TV | Deficiency	
P4	There is an interesting and absorbing tutorial that mimics game play	☐		☐		☐		☐	
P5	The game is enjoyable to replay	☐		☐		☐		☐	
P11	Player should not experience being penalized repetitively for the same failure	☐		☐		☐		☐	
P12	Player's should perceive a sense of control and impact onto the game world	☐		☐		☐		☐	
P13	The first player action is painfully obvious and should result in immediate positive feedback	☐		☐		☐		☐	
P15	Pace the game to apply pressure but not frustrate the player. Vary the difficulty level so thst the player has greater challenge as they develop mastery	☐		☐		☐		☐	
S5	The Player has a sense of control over their character and is able to use tactics and strategies	☐		☐		☐		☐	
M4	Mechanics/controller actions have consistently mapped and learnable responses(easy and inituiative interaction)	☐		☐		☐		☐	
M6	Controls should be intuitive, and mapped in a natural way(speech input/output, easy interaction)	☐		☐		☐		☐	
M7	Player should be given controls that are basic enough to learn quickly yet expandable for advanced option(extendible, flexible system)	☐		☐		☐		☐	
U2	The Player can easily turn the game off and on	☐		☐		☐		☐	
U3	The Player experiences the user interface as consistent, but the game play is varied	☐		☐		☐		☐	
U5	Upon initially turning the game on the Player has enough information to get started to play	☐		☐		☐		☐	
U6	Players should be given context sensitive help while playing so that they do not get stuck or have to rely on a manual	☐		☐		☐		☐	
U8	Player do not need to use a manual to play game	☐		☐		☐		☐	