Exploring museum service experience using gamification-based personas with distinct motivations

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Abstract. In the context of museums facing challenges from the cultural and leisure market, a desirable experience that can be tailor-made for different types of visitors can serve as an indicator to measure brand equity. To explore the museum service experiences, the Bartle Test of Gamer Psychology was introduced for identifying personas representing different visitors’ motivations to visit the museum. With the personas being recruited, this study will employ the adapted rapid ethnography as the research approach to gain in-depth and detailed insights into the perceptions from the user’s perspective.

1. Introduction

Although the museum is considered the top of the cultural pyramid, the challenges from the cultural & leisure market to the museum cannot be underestimated. In order to cope with this challenge, the branding strategy in the era of symbolic consumption can help visitors to speed up their selection and enhance the museum’s brand equity. As different individuals may hold different perceptions since a brand is individuals’ gut feeling about a product or service, the Bartle Test of Gamer Psychology based on players’ type theory will be introduced to identify personas to explore museum service experiences of different user categories of motivation.

2. Museum and branding

Cultural strength can show comprehensive national strength. Notwithstanding, in the aspect of attracting new audiences, the museum faces challenges which come from the competition both within non-profits industry and the culture and leisure market industry (include the leisure FPOs [Farmer Producer Organizations]). Despite its increasing competition, museum branding is still a neglected area of research [1-3]. To a large extent, non-profit organizations, including museums, hesitate to adopt branding techniques due to seeming too commercial, resource commitment, and other risks [4].

Despite this reality that non-profit organizations are reluctant to adopt branding strategy, what needs to be acknowledged is social economy have shifted from mass production to mass customization. This is causing us to originate our choices more from symbolic characteristics [5]. For museum, brands help visitors to speed up choice-making, decrease perceived risks, and progressively help the museum survive in competitions.

Regarding the brand and branding, Neumeier defined a brand as individuals’ gut feeling about a product, service, or company, and each person creates his or her version of it. A company can be
stated to have a brand when enough individuals arrive at the same feeling[5]. Through the definition, it shows that different individuals may hold different perceptions for the same thing because the brand is a personal perception. Although the companies or organizations cannot control the personal perception version, a company is able to affect those personal impressions in the way that the company wants individuals to see its brand. This process of brand building is branding[5-6].

3. Service experience design

Having defined what is meant by brand, move on now to discuss services in the brand. According to Murphy[7], the concept of branded things has been expanded successfully to include services, and non-tangible factors have become progressively to distinguish services from one another. Service undoubtedly needs to be designed. Specifically, Service Design is the design of how a service deliver an experience to their customers over time[8] to improve customers’ service experiences.

According to the definition of the service design described above, it can be concluded that what service design (SD) provides is user experience (UX). Many studies concluded that experiences are a feeling of extreme emotional excitement[9-10], that is, something extraordinary or memorable that differs from everyday life. In detail, SD extremely focus on the experience of individuals in their own context during all stages of the design process[11]. Therefore, SD can serve as an approach to explore UX for museum. Further, Camarero, et al[3] concluded that repeating a satisfying experience in future dates can even serve as a measure of brand equity for cultural organizations. For the museum, it is not only the educational institution. To attract visitors in the leisure market, other experiential values of museum brand identity ought to be considered to integrate into the brand communication by employing SD approach.

4. Gamification-based visitors’ motivations

Until now, this study has focused on SD and museum UX and concluded that service experience design emphasize the feeling of individual rather than the so-called general public. Based on this conclusion, the following will discuss the personal motivations of museum users. A study provided new insights into another potential problem: “How can potential visitors be motivated to visit the museum continuously?”[12]. In recent years, there has been an increasing amount of literature on Gamification, and authors believed that Gamification is a way to improving user motivation, engagement, and experience[12-14].

Specifically, Gamification is the use of elements of game design in non-game contexts[15]. In this definition, the term ‘non-game contexts’ refers that the purpose of using game elements is to help accomplish something non-gaming. Further, Bartle[16] drew on an extensive range of sources to identify four types of players: achievers (A), socializers (S), explorers (E), and killers (K) (we re-name killers as attackers). In other words, the four player types make up four categories of ‘fun’. In brief, achievers want to book results, socializers want to collaborate, explorers want to understand, and attackers want to win. According to the analysis of axes, Bartle found that achievers and explorers were more interested in the game world (environment) than in other players, while attackers and socializers were more inclined to focus on players. When turn to the other axis, attackers and achievers were actively interested in acting, while socializers and explorers prefer to interact in an environment of Gamification. These four types of players identified by Bartle will help researchers use the visitors’ motivation to explore museum UX.
5. Introducing the Bartle Test of Gamer Psychology

Based on the above taxonomy established by Bartle, Andreasen and Downey developed a questionnaire (GamerDNA test) for the Bartle Test of Gamer Psychology to identify gamers’ playing style preference that predominates in a group of players. According to Konert, Göbel, and Steinmetz [17], this test already collected data of more than 200,000 recipients. However, this version of the Bartle test is now offline. Thus, based on the same underlying data/questions as the GamerDNA test, Dr Matthew Barr who works at the University of Glasgow has implemented his own version.

We corresponded with Barr and he gave the consent for us to use his implementation of the online test in our research. Furthermore, he emailed us the questions pool and some principles for building the test. Drawing on an extensive range of sources, especially the mail conversation with Barr, we know that there are 39 questions in the pool, in detail the number of groups for each combination are: S/A (7), S/E (6), S/K (7), E/A (6), E/K (7) and K/A (6). Accordingly, the script takes 30 questions at random but checks that there are an equal number of questions for each player type combination. In this way, one of the choices relates to one specific playing style preferences. Thus the questionnaire works by asking questions for each combination of two different Bartle playing style preferences (e.g., socializer vs. achiever) and adding the numbers to get your own score. For instance, if one participant chooses the first option in the following socialiser vs. achiever question, he or she adds 1 to his or her socializer (S) score; conversely, if the second option is selected, it will add 1 to achiever (A) score.

**Are you more comfortable, as a player on a MUD:**

A. Talking with friends in a tavern? (+S)

B. Out hunting orcs by yourself for experience? (+A)

Consequently, the result of the Bartle Test is known as the ‘Bartle Quotient’. Specifically, the ‘Bartle Quotient’ is computed according to the individual answers that grant a 200% entirety in four categories of preferences, without any separate style achieving above 100%. For example, a user get a result with “100% socializer, 50% explorer, 30% achiever, and 20% killer”, which indicates the player’s motivation for playing is collaborating or interacting with others more than alternative style of interests. This result may be abbreviated as SEAK.
6. Identifying personas to explore the museum service experience

As a basic SD tool, personas usually represent a group of people with shared interests, common behaviour patterns, or demographic and geographical similarities[18]. In order to recruit personas to explore museum service experience, the Bartle Test questionnaire will be distributed to our students. Actually, most respondents have a dominant characteristic, which determines their overall preference. In the end, participants can be judged which player type he or she predominantly belongs to according to which category achieve the highest score among the four. In addition, another essential criterion is the difference between the highest score and the second highest score is extremely large.

With the four player types being identified, this study will initially involve four personas (one achiever, one socializer, one explorer, and one attacker) as respondents in order to get in-depth and detailed data. When referring to research approach, the ethnography will be used in this museum UX investigation. In fact, many design disciplines which emphasize users’ experience in their own context at whole stages has employed the ethnography as a research approach [11]. In detail, the ethnography is an effective approach to gain in-depth and detailed insights into the perceptions from the user’s perspective, which provides a holistic way to understanding UX with services. However, researchers find it difficult to adopt conventional ethnography due to the major issue of severe time consumption. This is because in most cases, it is not possible to spend months or even weeks in the museum to gather data. Thus, researchers have sought adaptations of traditional ethnography [19]. It is hoped that these adapted strategies will enhance the practicality of field research and come up with richer field experience in a shorter timeframe. Under the adapted rapid ethnography, observation methods will be employed by taking advantage of the Service Safari and Shadowing techniques.

7. Conclusion

To conclude, this work has employed Gamification perspective to identify and create personas to help the museum better understand its different types of users. The ultimate goal of this research is to enhance the museum branding through SD experience. In order to explore the service experience in museum, this article mainly emphasizes individuals’ motivations rather than the so-called general public. There are 34 provincial-level administrative regions in China, and each province has at least one or several provincial-level museums. Additionally, there are nearly 5,000 museums of various levels in China. Therefore, the widespread application of research results will be worthy of attention.

References

[1] Belenioti, Z. C., Tsourvakas, G., & Vassiliadis, C. A. (2017). A Report on Museum Branding Literature. Strategic Innovative Marketing, (September), 229–234. https://doi.org/10.1007/978-3-319-56288-9
[2] Ober-Heilig, N., Bekmeier-Feuerhahn, S., & Sikkenga, J. (2014). Enhancing Museum Brands with Experiential Design to Attract Low-involvement Visitors. Arts Marketing: An International Journal, 4(1/2), 67–86. https://doi.org/10.1108/AM-01-2014-0006
[3] Camarero, C., Garrido, M. J., & Vicente, E. (2010). Components of Art Exhibition Brand Equity for Internal and External Visitors. Tourism Management, 31(4), 495–504. https://doi.org/10.1016/j.tourman.2009.05.011
[4] Ritchie, R. J. B., Swami, S., & Weinberg, C. B. (1999). A Brand New World for Nonprofits. International Journal of Nonprofit and Voluntary Sector Marketing, 4(1), 26–42.
[5] Neumeier, M. (2005). The Brand Gap: Revised Edition (2nd ed.). Peachpit Press.
[6] Holland, D. (2006). Branding for Nonprofits: Developing Identity with Integrity. New York: Allworth Press.
[7] Murphy, J. (1988). Branding. Marketing Intelligence & Planning, 6(4), 4–8.
[8] Sandoval, S., & Sortland, O. (2013). Building A Service Design Explanation. Retrieved from http://odasortland.com/service-design-explanation/
[9] Ober-Heilig, N., Bekmeier-Feuerhahn, S., & Sikkenga, J. (2014). Enhancing Museum Brands with Experiential Design to Attract Low-involvement Visitors. Arts Marketing: An International Journal, 4(1/2), 67–86. https://doi.org/10.1108/AM-01-2014-0006

[10] Zhou, H. Y. (2014). Zhou Hongyi’s Own Statement: My Internet Methodology. Beijing: China CITIC Press.

[11] Segelström, F., Raijmakers, B., & Holmlid, S. (2009). Thinking and Doing Ethnography in Service Design. IASDR: Rigor and Relevance in Design, (January 2009), 1–10.

[12] Döpker, A., Brockmann, T., & Stieglitz, S. (2013). Use Cases for Gamification in Virtual Museums. Informatik 2013, Informatik Angepasst an Mensch, Organisation Und Umwelt: Tagung Vom 16. - 20. September 2013 in Koblenz; 43rd Meeting of the German Informatics Society, (September 2013), 2308–2321.

[13] Zichermann, G., & Cunningham, C. (2011). Gamification by Design: Implementing Game Mechanics in Web and Mobile Apps. US: O’Reilly Media, Inc.

[14] Hamari, J., & Koivisto, J. (2015). Why Do People Use Gamification Services? International Journal of Information Management, 35(4), 419–431. https://doi.org/10.1016/j.ijinfomgt.2015.04.006

[15] Deterding, S., Khaled, R., Nacke, L., & Dixon, D. (2011). Gamification: Toward a Definition. CHI 2011 Gamification Workshop Proceedings, (January 2011), 12–15.

[16] Bartle, R. A. (2004). Designing Virtual Worlds. US: New Riders.

[17] Konert, J., Göbel, S., & Steinmetz, R. (2013). Modeling the Player, Learner and Personality: Independency of the Models of Bartle, Kolb and NEO-FFI (Big5) and the Implications for Game Based Learning. In Proceedings of the 7th European Conference on Game Based Learning (ECGBL) (pp. 329–335).

[18] Stickdorn, M., Hormess, M. E., Lawrence, A., & Schneider, J. (2018). This Is Service Design Doing: Applying Service Design Thinking in the Real World. O’Reilly Media, Incorporated.

[19] Millen, D. R., Drive, S., & Bank, R. (2000). Rapid Ethnography: Time Deepening Strategies for HCI Field Research. In Proceedings of the 3rd conference on Designing interactive systems: processes, practices, methods, and techniques (pp. 280–286).