

Serious Questionnaires in Playful Social Network Applications

Aneta Taktamysheva, Markus Krause, and Jan Smeddinck

TZI, Arbeitsgruppe Digitale Medien, Universität Bremen, Bibliothekstr. 1,
MZH 5060, 28359 Bremen, Germany
{Aneta, Phateon, Smeddinck}@tzi.de

Abstract. Conducting surveys is a costly and time-consuming process. We developed a playful questionnaire that addresses the issue of motivation for voluntary participation. In addition, distributing playful questionnaires on Facebook gives access to basic user data, which may allow employing some of them as quality control questions or simply help to lessen the number of questions.

Keywords: questionnaire, human subject survey, game, social networks, social media, Facebook, playful applications.

1 Introduction

As social media experiences an unparalleled growth, it inspires studies that aim at better understanding the patterns of behavior inside social networks.

Social network tools and application, are playing a strategic role in helping to create bonds among virtual friends and consequently with the network itself [1]. Facebook, the leading social network site and a virtual socializing spot for more than 550 million users [2], gained grounds partly by hosting more than 20 million applications that kept users attached to the Facebook. Most popular are social network games that managed to attract more than dozens of millions of active players per month [3], [4].

Although the most successful games gained their noteworthy number of players by offering flexible never-lose game play (*Farmville*¹, *Café World*²), there are many win-lose games like *Brain Buddies*³, *Diamond Dash*⁴, *Quiz Monster*⁵[5] that attract millions of active participants in spite of their classic result-oriented game mechanics. Moreover, there are numbers of serious applications, including opinion-mining games, discussed in the section 2, that also have a classic game set-up that gained their niche in the Facebook application environment.

In addition, one of the strongest advantages of using Facebook is the opportunity that it gives to access user's basic information like age, gender, location, marital status, educational background, etc., since studies show that overwhelming majority of Facebook users enter valid demographical information about themselves [7].

¹ <http://apps.facebook.com/Farmville>

² <http://apps.facebook.com/Cafeworld>

³ <http://apps.facebook.com/Brainbuddies/>

⁴ <http://apps.facebook.com/Diamonddash/>

⁵ <http://apps.facebook.com/Quizmonster/>

2 Related Work

Variety of studies has shown the potential of using playful elements for research purposes. For example, Bernhaupt [8] attempted to improve the process of cultural probing by joining it with classical table card games. Participants perceived the process of probing as a natural part of the card game, which altogether encouraged more active involvement of participants.

Castranova [9] put forward that MMORPG video games are amenable to controlled social experimentations. He observed that various human interactions like coordination of actions, etc., can be studied in MMORPG game environment.

In addition, there is a variety of games with the purpose that outsource serious tasks to the crowd. *GWAP*⁶ is a classical example of massive human computation effort at common sense tagging.

Furthermore, social networks are also efficient platforms for experiments with serious tasks. Human computation experiments with the collection of a common sense data through games on a Taiwanese social network reported adequate quality level of obtained data [10]. Similarly, *Phrase Detectives*⁷ [11] motivates Facebook users to annotate various texts by rewarding them with points and levels. Simultaneously, the integration with Facebook allows promoting the game among wider number of users by enabling friends invitations and reporting the results of players on their news feeds. Another playful application, a serious game called *Sentiment Quiz*⁸, integrated into Facebook collects emotional responses of players to a vast list of English terms in order to compare them with the results obtained through controlled experiments. Finally, an application named *My Personality*⁹, run by psychology department of Cambridge University for scientific purposes, reaches more than 100 000 active users per month and so far accumulated input from four million users in total [6]. This permits to conclude that Facebook may serve as a productive environment for dissemination of serious surveys of other types, provided that they are presented in formats that are appropriate for this domain of social networks: give users some useful outcomes and/or contain entertaining elements.

3 Playful Questionnaire

The projects discussed in the previous sections permit to posit a successful integration of serious surveys into a playful social network environment. While scoring systems are not applicable for non-competitive one-time-use survey applications, introducing rich graphics, playful metaphors, and rewarding outcomes at the end (i.e. playful personality reading report) may increase the appeal of the questionnaires to a greater number of Facebook users.

⁶ <http://gwap.com>

⁷ <https://apps.facebook.com/phrasedetectives/>

⁸ <https://apps.facebook.com/sentiment-quiz/>

⁹ <http://apps.facebook.com/MyPersonality/>

We created a playful questionnaire called *Bake Your Personality*¹⁰ where users answer four “serious” questions in a step-by-step manner (Picture 1). The questions are asked using a metaphorical concept of a cooking process and of choosing ingredients for a final product (a cake). Each question represents a stage of ingredient selection or amount adjustment process; and answers are represented by visual items that users interact with. When translated to traditional questionnaire format, our questionnaire contains the equivalents of two single-choice questions (age and gender - to verify the reliability of results by comparing with actual Facebook profile data), one multiple-choice question on preferred game genres (with a strict limit of 3 answers), and the necessity to rate selected game genres in terms of their importance to the user. When necessary, the answers to past questions can provide content for the following ones and thus allow more sophisticated approach to the opinion mining. Once all answers are given, the players “bake” their unique cakes, and receive a personality description based on the “ingredients” they used. The anticipation of the outcome (personality reading report) motivates players to give thoughtful answers and thus increases our chances of receiving good quality input data.



Fig. 1. A screenshot of the *Bake your Personality* playful questionnaire

The visual design of the questionnaire is created following the established visual style of most social network games: simple one with colorful objects that make part of our daily life and provide realistic interaction patterns (taking and placing various items). We intended to appeal to a general feminine social network gaming audience, which consequently influenced the selected visual style and inspired the metaphorical concept of the cooking process.

¹⁰ <http://apps.facebook.com/hcompgames/>

4 Conclusions

The benefit of the free-style metaphorical questionnaire is that it provides the freedom of designing questions and answers that fit the needs of the researchers.

In addition, distributing questionnaires on social platforms such as Facebook provides a good opportunity of establishing a quality control by asking questions that can be verified through the access to the personal profile of the users; and in likewise manner help to cut on certain questions, the answers to which can be accessed through the Facebook profile of the user.

The next steps in this research will include experiments and analysis to verify the effectiveness of playful questionnaire concept in terms of the rate of participation and quality of data, including the degree of bias introduced by the playful elements. Also, more studies with regards to the appeal to different groups of users are needed. This would potentially allow for the creation of a well-defined framework of content construction (both visually and conceptually) depending on the profiles of segmented groups.

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