

DOING PROBES DIARY WITH CHILDREN IN REPORTING SOCIAL NETWORKING BEHAVIOUR

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ABSTRACT. This paper describes the qualitative technique approach in an attempt to understand child personality with regards to social networking sites. It was applied during the user requirement phase. We used a probes diary approach to collect qualitative data from selected children. Seven children from 10-13 years old participated in the study and completed the diary. In this paper, we describe about our probes diary approach with young children participants. We have identified seven important elements in designing diaries for children. We believe that the work presented in this paper might help other researchers to design children's diary for their own research.

Keywords: Cultural probes, diary, social networking sites, children

INTRODUCTION

Children were entirely different user population with their own culture, norms, and complexities (Druin, 2002). Nowadays, they are often referred to as Digital Natives who spend most of their time online with social networking sites (SNS). The previous studies reported the young generation feels that SNS is more important than other online activities. They prefer communicating through SNS and instant messaging and considers email “so yesterday” (Grail Research, 2011). There is a need to address SNS behavior to understand why they too connected to.

In the field of psychology, asking people to respond to questions or statements about what they are like or how they behave seems to be the most preferred method (McDonald, 2008). The researcher concluded the children's opinions, attitudes and behavior should be collected directly from the children as children is different from adults (Read & MacFarlane, 2006). There are common methods used in HCI approach such as interview, observation or focus group. However, SNS behavior is not easy to investigate through those techniques as the children spending time online personally and privately. They may use it in longer period in a day at different places. While considering the child's abilities, it is hard to reveal children's needs, attitudes, and behaviors using interviews. Younger children may have a difficulty in discussing their opinions and thoughts, especially when it comes to abstract concepts and actions (Druin, 2002). Studies have shown that Malaysians are generally indirect and avoid being direct in communication (Omar, 1995). Likewise, Malaysian children are less verbally expressive compare to western due to cultural background.

The above situation opens the opportunities to explore the probes approach specifically the diary study which is adopted from western culture. By exploring the probes method, we found it was the suitable tool to gather natural user behavior in their natural environment without the

presence of the researcher. Cultural probes have become a common method to gather qualitative data based on user self-documentation. In this paper, we explore the use of probes diary to discover child personality on SNS. It was a child centered approach which emphasizes on children as a user, tester and informant. It is predicted that probes diary exploring new ways to discover children's natural interests in order to gain the useful or interesting data.

RELATED WORK

Probes approach

The probes concept, largely credited to Gaver, Dunne, & Pacenti (1999). It has been a widely used concept even before Gaver's definition. The core of the probes approach is to give users tools to document, reflect on and express their thoughts on environments and actions. Commonly, the probes used as a technique to "discover the unknown" (Gaver, Boucher, Pennington, & Walker, 2004). Probes are primarily subjective with the aim to understand the individual. The cultural probes were aimed to gain a source of user information, supporting inspiration, initiating interaction between designers and users, and provoking the users into participation in the design process (Gaver et al., 1999). It also has proven as the suitable tool in qualitative research techniques in the context of private settings (Wyeth & Diercke, 2006). In particular, cultural probes proved to be useful to capture experiences in an engaging and creative way (Moser, Fuchsberger, & Tscheligi, 2011).

Probes have become an umbrella term covering everything from diary to user and field studies (Moser et al., 2011). This includes some techniques that have been used for a long time like diaries, self-photography, postcard, collages and map (Gaver et al., 1999). Generally, probes have been used widely with children in various area of research. Iversen & Nielsen (2003) use the digital cultural probes as a way of advising the design of children's technology while Horst, Bunt, Wensveen & Cherian (2004) use cultural probes to get empathy and inspiration from children and their parents. Then, probes study has used by Wyeth & Diercke (2006) to discover insights into children's interests and ideas within an educational context. It also used by Moser et al. (2011) to investigate gaming behaviors and requirements of children aged 10 to 14 years.

OUR PROBES DIARY APPROACH

Our diary was designed for children for both genders (see Figure 1). The small size diary was similar to the size of children exercise books make it close to them. The idea was that will be easier for children to carry everywhere. The cover was the colorful handmade design with a variety of designs for both genders. The different color page is made to distinguish each day. It gives a sense of inspiration and motivation to complete the diary as well as to get the children engaged. This child's diary was designed with playful activities to inspire participant such as sticking, coloring and drawing activities. A set of stickers was provided in communicating and interpreting the mood and feelings. It consisted of variety of shape colored stickers and facial expression stickers.



Figure 1. Boy's diary, Girl's diary

The purpose of this diary was to record children everyday activities and feelings relating to SNS with the ultimate purpose to understand participant behavior. This is the structured diary which makes easier for children to fill in immediately after an activity has ended. The children allowed writing it either in Malay or English language. The diary should gather data on SNS activities and experiences.

We have design various fun activities such in Table 1:

Table1. Diary activities

Purpose	Fun activities
Getting children's routines	writing
Expressing children's feeling	drawing
Showing and rating children's feeling	using stickers
Categorizing children's routines	coloring

It was divided into four sections: Personal Information (see Figure 2), Routine (see Figure 3), Feelings (see Figure 4) and Doodle of doodle (see Figure 5).

PERSONEL INFORMATION SECTION

Children need to complete a 'biography' with a photo, their 'favorite things', 'interesting facts about me', 'my goals' and 'words best to describe me'. These sections allow participants to give self-perception about who they are.

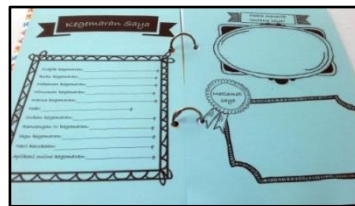


Figure 2. Personal Information

ROUTINE SECTION

Children need to write their everyday activities in the timetable (time-based sampling) for seven days. In the timetable, they are required to color their respective activities based on the color code given. A set of faces expression sticker was provided which required the participant to stick on each entry based on their mood of activity. The faces expression sticker was from the *What apps* application.



Figure 3. My routine, Mood sticker

FEELINGS SECTION

This is the main section to stimuli emotional expression before and after spending time on SNS. Children need to express their feeling of the day through drawing and sticking activities. The sticker was provided to help them express their emotions easier in giving a rating on their feelings.

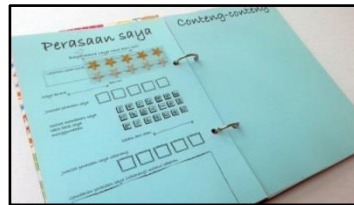


Figure 4. My feeling (How do feel today?), Doodle of doodle

DOODLE OF DOODLE SECTION

This is a blank page section, whereas children could freely express their thoughts. It was not restricted to any form of messages.

DEPLOYMENT AND COLLECTION

We gather the potential child participant based on purposive sampling. The entire chosen participant was the experienced and active users of SNS such as Facebook, Instagram, Twitter and YouTube. We also specified the participant age, ranging from 10-13 years old. We managed to get seven participants to involve in this voluntary study. Two were male and the other five were females. Then, we obtain the consent from children and their parents to get involved in the study. The study was done during the school holiday. It was sufficient time for them to have used SNS in maximum ways. Furthermore, they have more time to reflect when writing the diary. The probes diary was distributed to children and briefed in person. Participants are given a seven days of time to complete the diary. During the self-documentation by children, we keep in touch by asking problem and remind them about the given task through instant messaging. The completed probes diary was returned at the end of seven days. However, participants who requested more time were given an extra one week to complete their diary. At the end of the study, we are giving gifts and goodies as a reward to the participants.

DISCUSSION

Based on our probes diary study, we have identified seven important elements in designing diary for children:

Child centered design

The diary should specifically design for children and put the children at the center of focus. The focus should be upon the child needs and abilities which is not so much goal oriented (Antle, 2007). The basic idea is to emphasize good understanding of the children. Needs diversity involves accommodating users with expertise difference, knowledge difference, age difference, gender difference, and cultural difference (Schneiderman, 2000). However, the abilities factor should consider the materials that is applicable to children age (Druin, 2002). The designed questions need to match their intellectual abilities and cognitive level (Markopoulos, Read, Macfarlane, & Hoysniemi, 2008). Besides, the exact wording of the questions should be convenient for local participants and included with English version. Thus, children should be capable of text writing.

Fun and Playfulness

Diaries should be fun. Designing diary for children should base on children natural interest. For children, interaction is more about the nature of fun (Read, 2011). This is an important factor for sustaining children's engagement and provoking responses. The diary should include with playful activities such as drawing, using stickers and any other children's activity rather than the text writing alone. Such activities not only bring fun to children but help them to be more creative.

Aesthetically appealed and creative

From the visual aspects, the probes diary should be designed to be aesthetically appealed to children. A good aesthetic design was attracts children's interest and provide enjoyable experience during self-reporting process. This is found in both design element and content.

It is important to decorate diaries. In this study, the handmade cover was replaced the normal plain cover. The suitable image and illustration was used to support the design. Such art based approach sets the tone of communication with the diarists and influence the data gathered (Markopoulos et al., 2008). Apart from that, researcher needs to be creative and innovative of design content. The content should be carefully presented by keeping the simple layout and straightforward. Conveying the question through informal language is good to create sense of fun and humor yet it was suitable language to use with children. Indirectly, children may imitate the writing style of the questions for their entries rather than answering homework strictly.

Structured

It was suggested the structured diary for children. It may help the children to get focused and guided. Structuring diaries must be in both content and question. The content of diary was designed to allow children to self-report their routine and feelings. Both of them were ideally being organized in different pages. Each activity should be clear, differentiable from other activities (Wyeth & Diercke, 2006). It should be appropriately designed, understandable and well organized. A set of closed questions may uncover trends and usage pattern (Markopoulos et al., 2008). The question should specify clearly what we want children to record. The question is made simple, short and understandable, appropriate for children age and abilities. Even the diary was in structured design there should be some open space for children to freely express their thought.

Expressive

The diary should allow children to be expressive. A good way to express thought is through drawing (Abdul Razak, Salleh, & Azmi, 2013). It may uncover unexpected data and interesting issues. In hard situation to express children feeling through writing, they could place a mood sticker. A set of stickers was help in communicating and interpreting the mood and feelings (Mattelmäki & Battarbee, 2002). Limited expression may due to privacy and safety issues. It is good to have lockable diary. Diary is a place to whispered secrets. Thus, nature of diary is to keep precious secret safe and protected. The children may not want others to enter their privacy. It should allow the children to have a great freedom and control over the diary.

Minimal effort

Commonly, diaries require much more effort from participant. They may not fully complete the diary or withdraw from the study. The tasks for children should not burden the children with too many activities. The diary should be able to be completed in a relatively short time frame (Wyeth & Diercke, 2006).

CONCLUSION

In this paper, we demonstrated that gained experienced from the probes diary started when designing the diary. Designing the diary requires a lot of time and effort (Thoring, Luippold, & Mueller, 2013). In order to develop the diary material for children it is required to enter the children's worlds of understanding (Moser et al., 2011).

The diary is capable to record and captured a moment to reflect on the day, what they did, what sticks out in their mind and how they felt. The success of this method was dependent on the participants' motivation. Children may enjoy it initially, but eventually they could demotivate. The study suggested that the diary should be child centered design, fun and playful, aesthetically appealed, structured, expressive and minimal effort. However, the results from the diary were based on our specific diary design. Different design of a diary may produce different results.

The future work will analyze the qualitative data gathered. The post interview will be made for further clarification between participant and researcher to avoid misinterpretation.

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