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A scholastic review of procedural methods undertaking in piloting qualitative interviews

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ABSTRACT

This paper presents the essence of a pilot study being conducted by the researcher on qualitative research in relation to the study on the use of adaptive technology amongst visually impaired students at tertiary institutions in Malaysia. The researcher carried out the pilot work as a ground work prior to undertaking the large scale study and to answer methodological question (Creswell & Poth, 2017). The definitive description and valuable operational functions of pilot studies in qualitative research studies are distinctly identified. Also, to outline the advantages of pilot work, it explicates the particular viable and methodological concerns appearing in the pilot exercise together with the amendments made for the main research study, as a result of the pilot work. This article describes four ways that proved the implementation of the pilot study is crucial. They are (i) finding obstacles and problems with regards to recruiting prospective participants, (ii) the Employing empathy techniques in which researcher is able to describe the experience from the participants' angle as well as engage himself from a case study perspective, (iii) reflecting the essence of the research process such as the interviews, epoche and transcribing process, alongside its difficulty in carrying out qualitative case study design inquiry, and (iv) amending interview questions accordingly. It is, therefore, a useful and a fundamental part to undertake the Pilot study for interview in the course of carrying out qualitative research as it identifies the weaknesses and flaws prior to the full scale research study. This paper discusses the preponderance of pilot study, the methods procedural steps used and what educational aspects has the researcher gained during the course of the process.

Keywords: *Qualitative, Pilot Study, Adaptive Technology, Visually Impaired, Interview*

1. INTRODUCTION

In the study, a qualitative research is utilized to gather data with regards to what, how, and why something has happened and to find out experiences and perceptions in the descriptions of those who have experienced it, in the setting in which it happened, and absolutely without any manipulation by the researcher (Yin, 2014).

To investigate the influencing factors of the visually impaired university whether to adopt or reject the use of adaptive technology, a case study was determined to be the most apposite method. Case Study Qualitative research is utilized to collect in-depth, personal information and experiences from participants in relation to a specific phenomenon (Curtin, Martins & Schwartz-Barcott, 2015). This process is needed to accurately and effectively answer the research questions.

When it comes to pilot studies, they are generally connected to quantitative research studies to examine a certain research instrument. Obviously, the significance of pilot study has been expanded to qualitative research in which its undertaking is to prepare the researcher for the main research study (Creswell & Poth, 2017). Hence, piloting the interviews is essential to test the interview questions and to gain some experience in interviewing.

Piloting the interviews could well fortify interview protocols. It could assist to ascertain if there are weaknesses or loop holes within the interview design that require much needed amendments to the main research study (Mitra, Shukla & Sen, 2014). Nevertheless, in spite of the practicality of piloting the interviews, it is significantly limited literature discussing pilot work in qualitative research (Johnson & Howell, 2017).

It is particularly useful and helpful to conduct a pilot study and fine-tune the interview guide questions accordingly prior to commencing the full scale research study (Hewett, Torgerson, Douglas, 2014). Additionally, the interview guide is an essential aid that maintains the researcher's constancy (Jacob & Furgerson, 2012).

The pilot interviews were conducted with two visually impaired students as part of an initial preparation for the main research study in constructing factors adopting adaptive technology instrument for visually impaired university students in Malaysia. This paper reports the amendments made for the main research study as a result of the pilot study Such as determining the requirements in recruiting prospective participants and refining the guided interview instrument, distinctly the interview questions.

In this paper, on no account does the researcher discuss the findings from the study, as they will be stipulated in the dissertation, since this is a methodological article. Research is of the view that it would be inappropriate instead of edifying, should the findings be discussed and highlighted herein. As such, the concentration of this paper is generally on the operationalised of the pilot study.

2. BACKGROUND OF THE STUDY

Various adaptive technologies have, been innovated to assist visually impaired students. The first, adaptive technologies that were developed were spectacles that could remedy myopia and long sightedness. Students have also been taught how to navigate in schools using canes (Hans-Werner, 2013). However, the advancement of information technology has contributed to the developed of various devices and programs that could enable visually impaired learners to learn through the high-tech adaptive technology particularly DETB with SRP system (Kelly, 2011). Therefore, adaptive technologies in the learning contest convert the educational resources into a form that visually impaired students could decipher Bailey, Moffat, Scholer, & Thomas, 2015).

Digital electronic textbooks (DETB) with screen reading programme (SRP) is among the leading adaptive technologies that are used by university students who are visually impaired. DETB refers to books that are in an electronic format that could have been converted into either PDF, HTML, Arkinston or Word formats output respectively by suitable computer software that is supported with SRP (Schlünz, Wilken, Moors, Gumedé, Walt, Calteaux, & Niekerk, 2017). SRP also enhanced the navigability of DETB by allowing the user to peruse through it through audio or touch commands.

With the rapid advancement of technology as well as the growing popularity of tablet electronic devices, reading tasks are shifting from traditional print to digital electronic formats. Many individuals with visual impairment are adopting mainstream technologies over other adaptive technology options (Abdel Razek & Modayan, 2012). These user-friendly, compact electronic devices designed with high-quality resolution, and they have a powerful Screen Reading Programme (SRP) pre-installed in such devices, and also other features that allow students to adjust the presentation of text or DETB, including its size, color and brightness (Zebehazy & Wilton, 2014).

Visually impaired young adults and teenagers are likely to gravitate toward their trendier streamlined embedded features (Campaña & Ouimet, 2015). This enables more sense of independence and mobility when it comes to accessing printed information such as surfing the internet, accessing on-line library or even reading daily news electronically for personal gains (D'Agostino, 2010). DETB with SRP play a significant role for visually impaired students at tertiary institutions as the specific required resources may be limited or even none. Students generally use the adaptive technologies to assist them as studying for the lectures is almost a herculean task to unravel since books and handouts are hardly provided in an appropriate electronic format (Andreas-Kleynhans & Fourie, 2014). The alteration of printed books in a suitable electronic format is hardly being prepared by the University and so visually blind students may have to change the texts themselves or refer to another volunteering organizations (Wong & Cohen, 2011).

The technology has been utilized by various people who are visually impaired. For instance, some of the organizations have acquired the technology to enable their staff to read emails, memos, and reports. Additionally, learning institutions have also utilized the technology to deliver lessons in a suitable format for visually impaired students (Ajuwon, Wolffe, & Kelly, 2013).

The use of DETB with SRP require that a student be trained on how to operate the SRP system. The technology could be run on multiple devices such as Smartphone, tablets, and Windows-based computers. Moreover, it could be installed in the students' portals, if they are enrolled in online courses (Kelly, 2011).

DETB with SRP could have a substantial impact on the quality of learning by visually impaired students (Boerner, 2012). First, it could enable them to study on their own, which could improve their performance. Moreover, it could enhance the flexibility and autonomy of the learning of the students, since they could choose the setting and time for their studies, especially if they are enrolled in online courses (Berger, Vokalova, Maly, & Poulova, 2017). Finally, it could reduce the education inequality between the students with normal vision and those who are visually impaired (Berger et al, 2017).

The present qualitative study is to investigate the influencing factors to adopt the utilization of adaptive technology distinctly Digital Electronic Textbooks (DETB) with Screen Reading Programmes (SRP), for the visually impaired students at tertiary institutions in Malaysia.

3. PROCEDURAL STEPS

This paper outlines the procedural steps undertaken by the researcher, in which the underlying crucial information is attained to address the objectives of the study. Figure 1 highlights the procedures carried out. Due to the fact that every single step supports researcher to construct an apposite interview technique for the main and actual study, each of them is explicitly discussed therefrom.

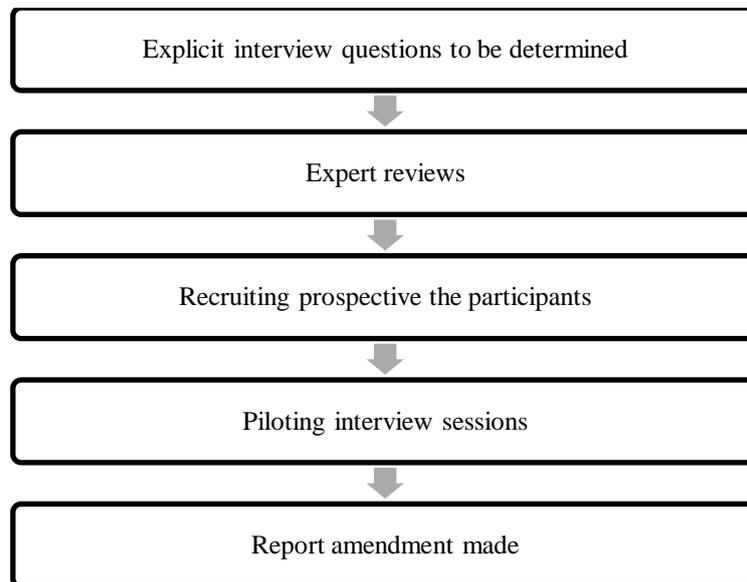


Figure 1. Procedural steps undertaken in carrying out the pilot study

Explicit interview questions to be determined

First of all, the researcher drafted some questions in relation to visual impairments, awareness of the participants towards adaptive technology, support and accessibility issues and the benefits and disadvantages of adaptive technology. The guiding interview questions were rather unrestrictive instead of Yes/No questions, so as to allow participants openly express themselves in a more detailed manner. During the onset of drafting the guiding interview questions structure, the researcher adopted the models designed by Schriesheim and Tsui (1980) and, Andrews and Withey (1976).

As for the main goal of this paper, the researcher was engrossed in making sure the interview questions are developed pertinently, in order to answer the four research questions. It is noteworthy to acknowledge that this method is able to enhance the efficacy of the interview questions and hence, warrant its significance to accomplish the objectives of the research study (Castillo-Montoya, 2016). It is undeniably crucial for the researcher to have incorporated obligatory and germane questions for the purpose of measuring the hypothesis and concept (Dikko, 2016). The interview protocol alongside the interview validation form were sent for expert reviews via email.

Expert reviews

Before the initial drafted interview questions were sent to be reviewed by experts, they had been reviewed by supervisors for relevancy, germaneness and suitability of language used. There are 17 main questions, divided into four sections, were applied and tested in the pilot study and researcher also utilised some impromptu probing questions to explore the participants’ perceptions that require further detailed information. At this stage, two interviews questions were amended and paraphrased.

Recruiting prospective the participants

Two prospective participants were identified by means of referrals. Emails were initially sent to them to seek their consent to participate in the pilot study. In pilot interviews, the recruited participants are necessary to possess as similar requirements as possible to the group of participants for the large scale of research study (Hutter & Bailey, 2011; Turner, 2010). This indicated that the selected participants were recruited in accordance with purposive sampling and willingness to participate. Hence, two visually impaired university students were chosen to be interviewed. Table 1 depicts the demographic information of the participants.

Table:1 Demographic information of visually impaired students

Pseudonym	Age	Gender	Types of visual impairment
Peter	22	Male	Total Blindness
Samuel	23	Male	Low vision

Piloting interview sessions

To begin an exploratory use of adaptive technology among visually impaired students at university in Malaysia, a pilot study has been conducted. After obtaining approval from the participants, interviews were recorded via Skype application. The interviews ranged in time between approximately 35 and 45 minutes. The interview should not exceed 90 minutes to consider other commitments of participants (Jacob & Furgerson, 2012). Including the social conversation, it was noticed that each session did not exceed the recommended time frame.

The aim of the pilot study was to test the appropriateness of the questions and to provide researcher with some early suggestions on the viability of the research. Besides, it also facilitated researcher to obtain experience in conducting in-depth, semi-structured interviews and to build rapport with the participants. Importantly, the pilot study assisted researcher to learn the skills in interviewing and the flow of conversation. Jacob and Furgerson (2012) suggest that building a good rapport with the participants could facilitate

better responses. Thus, interviewer began with a bit social conversation and demographic questionnaires as a warm-up before the interview.

Although the general issues were deeply discussed, the purpose was mainly to develop good relationship with the participants. Both participants were given opportunity to discuss freely based on the questions asked and researcher used probing questions to elicit further in-depth information. During the interviews, both participants were asked the same set of questions. The interviews were carried out in English language as it was more casual for both interviewer and interviewees to have comfortable discussions. At the beginning, both participants were given pseudo names such as "Respondent 1" and "Respondent 2".

Importantly, through the pilot study, researcher learned that it was almost impossible to determine accurately how the participants were going to answer the questions. There were times where the answers were meant for subsequent questions, or it added to the point mentioned earlier in the previous discussion. At one point, a respondent misinterpreted my question which resulted me to rephrased and asked again. That is to say, each interview incorporated unique way to probe, thus, researcher could improve the interviewing skills and further probing in important areas.

Report amendment made

After the pilot study has completed, researcher had the opportunity to transcribe verbatim, manage and code the data and had it peer reviewed by a friend who has a great expertise in using the NVivo software. The process in transcribing and managing the data enabled researcher with some knowledge on how to summarize the transcripts and identify codes. Without a doubt, the significance of the pilot study assisted researcher to refine strategies before commencing into the major study phase.

There were couple of amendments made as a result of the pilot study. Firstly, the pilot study helped researcher to refine the interview guide. Additionally, some changes e.g. some questions were rephrased and sequentially aligned. For example, Questions 5 and 6 were give almost the same answers from both respondents. As highlighted by Respondent 2, he was saying "...like the examples I gave earlier.." Secondly, question 2 under Section D is redundant. Both participants answered it in questions 1 in details. Therefore, question 2 will be omitted.

4. CONCLUSIONS

Notwithstanding the nature of pilot studies are small-scale versions, their purpose embraces evaluation of implementation matters in relation to research methods and design. In view of the small scale of participants in the pilot study, the validity and reliability of the findings may be limited. The reason for the limitation of this pilot study was due to the small number of participants in which data saturation was not reached (Connelly, 2008).

All in all, this pilot study was conducted to enable the research to prepare and gain experience in interviewing for the major research study. It is, therefore, with high hopes that this paper may furnish some directions for future qualitative researchers in the related context. This study could be the trailblazer and initial step to understand visually impaired students experiences and understanding in utilising adaptive technology, distinctly DETB with SRP to assist learning.

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