Virtual focus groups: New technologies, new opportunities, new learning environments

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New technologies and ICT provide unique and inventive opportunities for qualitative researchers. Their innate ability to accurately record discursive data in text format, as well as provide safe, secure and anonymous environments for participants, makes them amenable to trialling a variety of qualitative research methodologies. This paper reports a collaborative project involving two academics and two research students as they examine and trial the potential of online discussion boards in Blackboard©, to conduct virtual focus groups as part of an existing research project. What the researchers found was that not only was the method theoretically sound, but it was also extremely effective in creating 'authentic learning' environments for research students as they acquire research skills. The collaborative approach they established within the project team created an egalitarian, self directed learning environment for the students that facilitated acquisition of advanced research skills.

Keywords: Virtual focus groups, student research skills, authentic learning, focus group research, discussion boards, qualitative research, online methods

Introduction

Information and Communications Technologies (ICTs) in universities are predominantly language based and hence provide a myriad of opportunities for qualitative research (Burgess, 1995). They can accurately record synchronous and asynchronous dialogue and sort, retrieve and analyse qualitative data using programs such as Qualpro, Ethnograph and Nudist (Lim & Tan, 2001). What this inquiry found was that they were also extremely effective in creating 'authentic learning' environments for research students as they acquired research skills.

This paper reports on a collaborative project involving two academics (Sociology and Education) and two research students as they examine and trial the potential of online discussion boards in Blackboard© as "virtual focus groups" (Adler & Zarchin, 2002) to conduct formal qualitative research as part of an existing research project. This inquiry focuses on four key questions: whether online discussion boards can be used to carry out theoretically sound focus group research; whether an online data collection method can facilitate access to difficult to access groups who are disparately spread and often hesitant to respond; whether they allow sensitive data collection through the provision of a secure, safe and anonymous environments; and finally, whether virtual focus groups provided an authentic learning environment for the participating students to acquire sound research skills.

The team set out to identify a method for conducting the research that met the predetermined criteria of the broader research projects. In the first instance this involved a review of the technical options available; the development of the online environment; the identification and induction of participants into the online environment; and the sharing of the technical and online facilitation skills required to conduct the research.

Establishing an authentic learning environment for research students

The sociology department at Swinburne University of Technology has an established history of providing authentic learning experiences for their research students. It was paramount in this project to continue to provide this environment as well as extend the authentic learning opportunities for students. Using Newmann's (1993) model of authentic instruction, the supervising academic established a learning environment where students could use their higher order thinking skills, extend their depth of knowledge and connect with the world beyond the classroom. This was achieved through the establishment of a team that collaboratively discussed issues involved in the research project and proactively sought to include other people with specific expertise who could add to the learning experience. The group was facilitated

using the underpinning principals of inclusion, respect, high expectation, egalitarianism and co construction (Newmann, 1996; Western Washington University, 2002; Marra, 2004).

Early discussions within the group identified technology as a possible solution to accessing disparate populations. It was at this point that the online educational specialist became involved. At no point did technology drive the project. It was simply seen as a tool to support the research project and the authentic learning environment. However, given that a Learning Management System such as Blackboard© is already used for education instruction, it was a natural progression to create an online environment that could be learner centered, provide active learning experiences and authentic tasks for the students involved (Western Washington University, 2002).

Although there was support, supervision and a continuance of the collaborative teamwork, it was the honours students who took the lead in creating the online learning environment. They set up the discussion forums and chat rooms, wrote the instructions, tested the data collection process, created an anonymous 'log in' system for participants and conducted the asynchronous focus groups. They were also active in validating the online focus group methodology against Krueger's (1994) characteristics. Reeves, Herrington and Oliver (2002) state that authentic activities are ill defined, requiring students to scope the sub-tasks needed to complete the activity. The research students not only achieved this but also led the way in trialling and documenting a new research method that can be used by other researchers.

The research studies using the virtual focus groups

The virtual focus groups were three of twelve focus groups conducted following the Swinburne National Technology and Society Monitors in 2003 and 2004 – two large random surveys of public attitudes to a range of new technologies (Australian Centre for Emerging Technologies and Society, 2003) [1]. The 2003 survey included a raft of questions on DNA paternity testing and the 2004 survey asked a similar number of questions about stem cell research. Each survey was followed up with six focus group interviews to gain a more detailed understanding of public perceptions than was possible through the survey. The Virtual groups were concerned with the participants who had a stake or special interest in the technologies, whilst the face to face groups were members of the general public. The latter are not reported here [2]. In each study the researchers wanted, among other factors, to explore differences in attitudes between individuals who had a particular interest in each technology – DNA paternity testing or stem cell research. Accordingly, for the paternity testing study, a group of men's rights activist leaders who advocate direct access to paternity testing as a way of ensuring that children being supported by non-resident fathers were indeed their biological offspring were interviewed online. The second paternity testing group were mothers whose estranged partners had denied paternity. For the stem cell research project the two interest groups involved were those with a particular interest in, or stance on, stem cell research. The first consisted of a religious group with strongly held views on abortion and the second were a patient group who had a medical condition that might be helped or cured by stem cell research. The latter was conducted online but the religious focus group was conducted face to face and is not reported here.

The recruitment of participants

The online methodology was adopted in the three groups because they all involved difficult to access populations. Participants in each group were geographically separated so various strategies, including email, telephone and snowball recruitment were employed to access them from around Australia.

Recruitment to the paternity testing stakeholder focus groups was particularly challenging. The researchers were advised that men who were involved in fathers' rights groups were generally unprepared to speak to outsiders and early attempts to recruit men for whom access paternity testing was particularly important confirmed this to be the case. These men were eventually recruited from across Australia through direct approach to one father's rights group, purposive snowballing from this contact, as well as posting notices on relevant online sites and in chat groups.

The women were recruited through publicity around the survey, a flyer issued through the Council for Single Mothers and their Children, and notices in relevant online chat groups. All of the women were divorced or separated with one child each. The mothers and their children were compelled to undergo testing either to have the father's name on the child's birth certificate and/or to meet the requirements for claiming Child Support payments. All of the women were single mothers with responsibilities for young babies which impacted on their ability to participate in a face to face focus group.

The stem cell study patient group was also recruited through email and the posting of notices on relevant online sites and chat groups. The participants all had a medical condition that stem cell research promises to alleviate or cure. They were either people living with Parkinson's disease or with spinal injury and were young enough to personally benefit from any promising developments in the near future. Their restricted mobility and need for care and medication rendered it near impossible to meet in a face to face setting.

The three virtual focus groups were conducted through an Internet discussion board on Blackboard©, involving asynchronous communication over a one week period. Computer mediated communication allowed the researchers to cross time and space barriers to reach hard to access populations (Mann & Stewart, 2000). In all three cases, the online environment made it easy for the members of each group to speak openly and anonymously about a politically and personally sensitive issue in a way that was not possible in face to face focus groups.

Technology requirements and implementation

Given the difficulties that surrounded recruitment, a number of options were considered when the focus group planning took place. It was agreed by the research group that anonymity was of key importance if the researchers were to gain meaningful data from the participants. A further compounding factor was that the moderators were students who required supervision and support while they undertook the moderator role within the research project. To overcome these issues an online approach seemed appropriate.

Swinburne University of Technology has a Learning Management System, Blackboard©, which provides academics and students with an environment that has extensive communication facilities, password protection, automated data collection, Internet access and security features. Two password protected web sites were developed in 2003, one for male participants and the other for female participants. A third site was established for the stem cell research group in early 2004. Each web site had a discussion forum, an online chat room and email and announcement facilities. The coordinating researcher and moderators were registered in the sites as instructors, which gave them the opportunity to communicate fully with participants while still working at a higher technical level for data collation, record keeping and system management. Participants were populated into the appropriate sites through nominated "Name Tags" (e.g. Sandpiper, Coolcat etc.) which ensured participant anonymity throughout the data collection.

A number of preparatory sessions were run to up-skill researchers and moderators in how online communication can be used effectively to collect data for research. There was extensive debate within the group on the key characteristics of focus groups (Krueger, 1994) and how those characteristics could be transferred to an online environment. Detailed instructions on how to use the Blackboard© system, discussion forums and chat facilities were provided to participants well before the focus groups were run. It was decided that the discussion forum would act as the Virtual Focus Group with the moderator posting a series of text based questions which would give the participants the opportunity to respond in text format. Responses would later be downloaded for analysis. Participants had full access to the site for a one week period to read other participants comments, reflect and post secondary comments. All participants (male, female and patients) did take up the opportunity to re-enter the site to read other participants postings and make further comment, though the patient group did so to a lesser degree.

Does the online methodology measure up to the focus group criteria?

Broadly defined, a focus group has 'the primary aim of describing and understanding perceptions, interpretations, and beliefs of a select population to gain understanding of a particular issue from the

perspectives of the group's participants' (Kahn & Manderson, 1992:57). According to Maykut and Morehouse (1994:104), a focus group interview brings several different perspectives into contact through a process that is open and emergent. Internet mediated focus group discussions may use different a medium from face to face focus groups but it is the contention of the authors that they share all but one of the key features of a focus group outlined by Krueger (1994) and Morgan (1988). Krueger (1994) delineated a set of six main characteristics of the focus group interview whose combination sets it apart from other group processes. Other groups may contain one or more of the characteristics but not all six. The six key characteristics identified by Krueger (1994) are: focus groups involve people; they are conducted in a series; participants are reasonably homogenous and unfamiliar with each other; they are a procedure for collecting data; the data is qualitative; and, they constitute a focused discussion. These criteria will be evaluated in turn in relation to the virtual focus groups that were conducted.

Focus groups involve people

The focus groups comprised four (men's rights activists), six (women who had been paternity tested) and nine (stem cell study patients) people respectively. Krueger (1994) argued that the group needs to be small enough to share insights but large enough to allow for diversity of views. Consistent with his view that larger groups have the tendency to fragment because participants compete for the opportunity to comment, this study found that the size of the group did seem to matter. The smaller groups offered a better opportunity to share ideas. There are three possible reasons for this: first, it may be that the largest group, whose members were overall less vocal, did not feel the same level of responsibility to respond. Alternatively, it may be that their relationship to the issue was not as personal, so their views were not as passionately and volubly expressed. Finally, it may be that their restricted concentration and dexterity, due to their medical condition, made their participation more challenging. The latter point though indicates a particular value of this methodology: without online methods these people would otherwise not have been able to participate in a discussion about stem cell research, a debate which is directly relevant to them. Virtual focus groups thus foster democracy and democratic participation in research, enabling inclusion of groups whose relevant views otherwise would have been overlooked. In both these studies, individuals represented stakeholder groups that provided views crucial to understanding the social aspects of each technology.

Focus groups are conducted in series

That focus groups need to be conducted in a series is the one criterion that the virtual groups did not meet. Krueger (1994), like other researchers who undertake evaluation research, insists that multiple groups with similar participants need to be run to optimise the detection of patterns and trends across the groups – a form of data validation. Together with Hurworth (1996), he argues that it is important to run at least three focus groups, particularly when evaluating community based projects for funding purposes. They say that single focus groups can result in the collection of extraordinary results due to a variety of factors such as: dominant personality in the group, a community event, incendiary comments by an individual or when group is reluctant to participate. However, the purpose of the virtual focus groups reported here, and many other focus groups, is substantially different from that of evaluation research. In depth focus group methodology used in the studies reported here aimed to give an insight into a particular issue from the viewpoint of those with an interest or stake in the technology. Thus, it is the contention of the authors that single, stand alone focus groups can and should be used for this purpose. If their objective is not generaliseability but depth understanding from an insider or 'emic' (Pike, 1967) viewpoint, interest groups are an important and legitimate source of, and target for, research. Further, the factors causing extraordinary results that Krueger (1994) refers to are practically eliminated in the absence of the normal verbal and visual cues that indicate and enable hierarchy and dominance of views within a face to face setting. Because participants were unknown to each other in all three virtual focus groups, participants were prepared to challenge each other if they disagreed; so the idea of being part of a community group whose solidarity on particular issues might be at stake, simply did not apply.

Participants are reasonably homogenous and unfamiliar with each other

Krueger's (1994) criterion that focus group participants need to be recruited on the basis of similarity to each other was met in each of the virtual focus groups. They each included participants who had a particular stake in the issue of paternity testing or stem cell research. The selection of participants aimed

at group homogeneity within groups in terms of a shared relationship to the issue. Krueger (1994) insists that shared interest, once known to the participants, serves to enhance the permissive or non-threatening environment in which they can express controversial or private views. In each group, the participants were not known to each other, a factor Krueger (1994) claims important as familiarity tends to inhibit disclosure. Further, their anonymity and virtual engagement within the group was likely to have been enhanced by the absence of physical cues and the use of anonymising techniques afforded by the Blackboard© technology itself. A virtual identity enabled participants to find commonality beyond the usual social and physical barriers to communication, such as socioeconomic status, gender, age, ethnicity and, importantly, disability status.

Focus groups are a data collection procedure

Krueger (1994) argues that focus groups are created with the specific goal of collecting data. He says that unlike other group discussions, the goal is not to reach consensus, make decisions or provide recommendations. Rather, focus groups are narrow in their purpose and centre their attention on the perceptions of users and consumers towards solutions, products and services. This study found that the Virtual Focus Group was a superior mechanism for data collection on attitudes, particularly for these groups that each had a particular interest in the technology under investigation. The text based nature of the Blackboard© Learning Management System was particularly helpful in allowing researchers to download participants' responses to questions and probes. Because the Virtual Focus Group was run using text as the communication medium, participants' responses were accurately and automatically recorded. An online text based approach eliminated the need for the oral recording and transcription of participants' responses so there was little margin for error. Comments made using the asynchronous online chat facility can be archived and downloaded in "rtf" format, either by "threaded discussion" response or by individual participant response. The system's flexibility also allows the researchers to track the reading and response patterns of participants. It is important to note though, that participants with low levels of computer literacy and connectivity can be marginalised by any form of computer based data collection (Dillman, & Bowker, 2001; Dix & Anderson, 2002; Pocknee & Robbie, 2002).

Focus groups make use of qualitative data

Focus groups are designed to provide insight into attitudes, perceptions and opinions of participants (Krueger, 1994). These insights are gained through recording participant responses to a series of predetermined, open ended questions. The questions asked in the virtual focus groups in the presently reported studies were essentially the same as those asked of the face to face participants but the wording was altered slightly and presented in a different order to suit the specific group as well as the asynchronous nature of the online environment. In an attempt to encourage participants to set the direction of the discussion in the virtual focus groups, question construction aimed at being more open ended and less directive than with the face to face groups. Knowledge of the issues around each technology was assumed by the nature of each group's relationship to it, so Glaser and Strauss's (1967) grounded theory approach was utilised. In all groups a saturation point was reached for inclusion of new data by the end of the pre-set seven day period. This became evident when the time frame was extended by the moderators for further seven days in the paternity testing groups and nothing of a substantive nature was added to the discussions after the original close time. The research team therefore recommend that researchers adhere to close dates as indicated in the initial researcher–participant transaction.

Focus groups have a focused discussion

The final criterion set by Krueger (1994) was the requirement for a focussed discussion. By its very nature, the virtual method is a focused approach. Participants enter the discussion site with the specific intent of contributing their views on a particular topic. Like telephone interviewing, having no extraneous distractions, participants did not diverge from the topic so there was a more distilled response to the questions. Further, responses were more in depth and considered because participants had the opportunity to reflect on their answers. They had time to think through what information they were prepared to share, something very important when discussing sensitive issues. Questions were posed in a way that encouraged expression of attitudes whilst still allowing for personal experience to be shared if participants chose to include this. They were thus free to provide information in general terms, such as "people in my group think …" or as a personal experience. In the virtual setting, participants had a choice

of responding to question or deciding to withhold response, thus providing a non-coercive and truly democratic discursive environment. One main difference with Virtual Focus Group methodology was the changed role of the moderator. Once the environment for discussion and the rules of engagement had been set prior to the opening of the Virtual Focus Group, the researchers found that the moderator role was less interventionist and less directive than in conventional focus groups. Observation, virtual listening and the insertion of probes and additional questions replaced the steering role of the face to face moderator.

Benefits for teaching purposes

One of the primary benefits of this project was the successful establishment of an effective, authentic learning environment for the research students involved. This became more and more apparent as the project proceeded. To identify what had transpired, the authors decided to interview the students to ascertain what they felt they had learnt from the project and how they had learnt it. What they found was both students reported high levels of commitment, support, learning, enjoyment and satisfaction from having engaged in a project that afforded real life learning experiences.

When asked about what skills they had acquired through their involvement in the project, the students reported their personal and professional growth to be “massive”. They spoke at length of how they had felt “responsible” for the recruitment, timing, support, construction of the site, construction of the questions, trialling of the equipment, managing the participants, as well as moderation of the virtual focus group sessions. They spoke of their academic supervisor as a “resource” they could ask for guidance and support as, and when, they needed it. Both students reported a sense of “autonomy” and said people (the academics and the participants involved) took them “seriously” and treated them as “equals”. They said the “decisions” they made really mattered. They both preferred the “hands on way of learning”, and would “choose the online learning experience [over other forms] any day” even thoughthey were perhaps working beyond their comfort zone. They felt their authentic learning experience was far superior to that of other research students in their course and they felt they were “unique” in this sense. They reported having “learnt things they didn’t expect to learn”. Both had detailed the “online research experience” in their resumes and both found work as research assistants the following year.

From the perspective of the supervising academics, one of the most difficult tasks of supervising students undertaking sensitive data collection is how you support them when difficult participants and issues arise. Adopting a virtual approach allowed the supervisor to be part of the Virtual Focus Group as an observer, without having to directly intervene. Because of the asynchronous nature of the online tools used, the supervisor was able, for example, to give guidance when difficulties arose with one of the more assertive participants. The supervisor, in this instance, was able to advise the moderator on how to diffuse the situation and redirect the commentary to the focus group questions.

Findings and recommendations

Although this inquiry was relatively limited in its scope, there are a number of findings and recommendations the authors feel confident to make in regard to the three major areas of inquiry they addressed. As a formal research method, the Virtual Focus Group in the context of this trial was theoretically sound and met the key focus group criteria as outlined by Krueger (1994) and Morgan (1988). It is therefore recommended that researchers use the method more regularly and evaluate its usage in a variety of contexts to confirm these findings. Further, the authors recommend that the method be used in conjunction with other forms of qualitative data collection to for both completeness (Jick, 1979) and validation of data collected. In addition, it is recommended that researchers who conduct virtual focus groups receive appropriate training in online communications skills.

The studies reported here found that there are several contexts and particular populations for which the Virtual Focus Group appears to be particularly well suited as an effective vehicle for qualitative data collection. The authors recommend that Virtual focus Groups be considered for use whenever there are populations that are difficult to recruit and/or difficult to access. In particular, the method should be taken into account when designing a study that involves individuals or groups that are, for whatever reason, hesitant to participate in face to face focus groups. This could be when physical mobility is limited such as in health related studies (for instance, the stem cell research study), but also simply because virtual

groups can involve regular workers, shift workers, homemakers and parents, including those in different time zones, at times dictated by their personal needs. The ability of participants to be involved in research from the comfort and privacy of their own homes is an attractive option for them. Their comfort is enhanced by the secure, safe and anonymous environment afforded by the online technology. The main limitation to participation is the requirement for moderate to high levels of connectivity and computer literacy.

As an educational environment for research students, the authors found that they appear to flourish in learning environments where they have the opportunity to participate in projects that are reflective of real life experiences; where they are given autonomy and the opportunity for self directed learning; where their research skills are acquired through active learning strategies; and, where they receive timely and appropriate support from academic supervisors. From these findings, the researchers recommend that online facilitation skills be incorporated into the curriculum for students undertaking research skills programs. This method of research offers the potential for all research students to be given the opportunity to participate in real life learning situations where they direct their own learning while still gaining suitable and timely support from the supervisors.

Conclusion

New technologies and ICTs provide unique and inventive opportunities for qualitative researchers. Their innate ability to record written, discursive data accurately as well as provide safe, secure and anonymous environments for participants, makes them amenable to trialling a variety of qualitative research methods. This inquiry addressed the use of virtual focus groups but it opens up the possibilities for future use of technology to provide such things as accurate video recordings of in depth interviews from a variety of locations around the world. What must be kept foremost in planning are the theoretical underpinnings of these methods and the access and equity issues that surround them. These matters need to be carefully measured against the obvious advantages new technologies provide for connecting researchers with difficult to access populations that are disparately spread. However, coming together to trial these methods can provide a spontaneous and effective experiential learning environment for both students and academics. Facing challenges and working collaboratively optimises skill transfer for all parties. The collaborative, consultative, egalitarian and supportive environment reported by the research students working in this project were not limited to them alone; they represent the observations and reflections of the academics involved as well. Thus, the journey into new methodological territory turned out to be a real life, problem based learning environment for all the participants, including the supervising academics.

Endnotes

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2. The results of the empirical study on paternity testing are reported in Turney et al. (2003).

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