Email Surveys in Educational Research: Ethical Surveys in Educational Research

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Abstract

The growth of the Internet and the increasing application of electronic mail in many aspects of business and educational research have urged researchers to reach different individuals across geographical borders with an obvious reduction of costs and time. While the use of email surveys in educational research, as this paper mainly argues, offers significant benefits to researchers in collecting data, more awareness of ethical codes of conduct and culture of net-users should be insisted throughout the research process to enhance validity and to minimize physical or mental harm that may cause to the researched participants of different ethnic and socioeconomic backgrounds. This essay is not going to greatly discuss technological methods or concerns in the design of an email survey.

Introduction

With the proliferation of the Internet and the expansion of electronic mail in business communication, electronic surveys in such forms as polls, electronic interviews and electronic mail (email), have recently been employed as a research tool. A population of different individuals across geographical borders can be reached within minutes. However, there are still methodological challenges with this approach. This paper, which is primarily concerned with the use of email surveys in educational research, will present an argument that although email surveys offer significant benefits to researchers in collecting data, there needs to be some awareness of ethics and culture of net-users. The main points in this essay are not going to be greatly discussed in terms of technology.

The Internet and Email Surveys

North (1994) posits that the birth of the world's first computer network in the US in the late 1960s was known as APRANET, which then grew slowly until the early 1980s when it got separate into two other forms: MILNET and APRANET. Any computers that used to be part of a network have become part of the entire network of computers or the so-called network of networks. This new term was then named as an *internet-work* and shortened as the *Internet*. The use of the Internet has become widespread since its birth owing to its benefits in business and academic communication. For example, North's study (ibid.) finds that during the period from 1981 to 1995, the number of net-users at American universities began to increase sharply to about 1,000 times due to the fact that the US National Science Foundation financially supported academic people to use the Internet. The growth of the Internet has obviously impacted many aspects of the world although the number of people having access to the Internet in the world in 2003

accounted for only 11.33% with a gap between the number of Internet users in Asia and Africa being much smaller than that of people in Australia, America, and Europe (Global Internet Statistics by December of 2003).

With the birth of the World Wide Web (WWW.) designed by Mr. Berners- Lee, researchers are able to share their findings and retrieve information faster than ever (Friedman, 2005). The application of Hypertext Markup Language (HTML) has turned to be an effective method for data collection in surveys (Solomon, 2001). Present email packages are designed to automatically move universal resource locators (URLs) or web addresses in the email text to a hyperlink with a click of the mouse in order to display a survey form promptly. Marketing researchers have used the Internet as a method of gathering data in which web-based polls and questionnaires, and email messages can be sent to a great number of populations (including both targeted and non-targeted subjects with the latter known as SPAM or BULK mail). In email surveys, participants are sent an email message of a survey and asked to return it to the researcher in a reply form by clicking their mouse pointer on the "Submit" or "Send" button once they have expectedly completed the requirement(s) in the email version (Solomon, 2001).

Email surveys have the same form as ordinary written surveys except that they are carried out via subjects' email addresses. According to Gay and Airasian (2003) (also Backstrom & Hursh-Cesar, 1981), surveys are generally the scientific study of people's personalities, preferences, attitudes, practices, concerns, behaviors, and aspects of their knowledge. Surveys can also take forms of email with which researchers can send a poll to get numbers and statistics, or a questionnaire to obtain information, data, opinions and numbers. In addition to being an effective instrument to get quantitative information, survey research can be taken in the form of verbal reports and narratives which can be designed as open-ended questions in email where researchers select a sample of respondents from a population and administer a standardized questionnaire (Denzin & Lincoln, 2000). Therefore, the nature of email surveys, like surveys in normal modes, can be both descriptive and qualitative. Nonetheless, email surveys cannot always be the perfect tool to attain data in some circumstances where research requires non-written feedback (like examining different accents in parts of a country), and where the targeted population is computer-illiterate.

Advantages of Email Surveys from a Critical Viewpoint

Since the first study on the use of email surveys done by Kiesler and Sproull (1986), other researchers like Schuldt and Totten (1994), Sheehan (2001), and Solomon (2001) have had quite the same discussion on the benefits and concerns of Internet-based research tools including email surveys. Apart from Sheehan's paper (2001), which is dealt with the emergence of email surveys in educational research, it should be noted that the research context in which these authors carried out their research is based in the marketing industry where electronic surveys involving polls and email surveys are aimed to explore customers' satisfaction and dissatisfaction over a product.

In general, there are many benefits for researchers using email surveys. First, in their case studies in the US, Stewart and Yalonis (2001) prove that electronic surveys are relatively 50% cheaper than traditional postal mail, and they cost about one tenth of telephone interviews. This benefit includes savings from the elimination and reduction of paper and mailing costs (Medin, Roy, & Ann, 1999, cited in Solomon, 2001; Parker, 1992). The more participants getting involved in an email survey, the more money researchers can save on distributing questionnaires or polls compared to postal mail. Also, in some educational institutions (and even in business sectors), the fact that a certain quota for accessing the Internet is free of charge encourages an increasing number of academic researchers to use email as an efficient research tool.

Second, Bachmann, Elfrink, and Vazzana (1996) (also Mehta & Sivadas, 1995) are consistent with their findings that response speed of email surveys is faster than that of postal mail. Specifically, it takes five to ten days to get replies via email compared to ten to fifteen days via normal postal mail (Kiesler & Sproull, 1986). Sheehan and McMillan (1999) also point out quite the same estimate, which takes 7.6 days for email and 11.8 days for postal mail. However, I would argue that it might take longer in developing countries due to hindrances relating to money issues, web congestion and the unequal distribution of computers in different areas in the same country. For instance, in Vietnam (my home country), the cost of getting access to the Internet in computer shops varies from 4,000 to 5,000 dong per hour (approximately 30 US cents) in cities and towns whereas the average income of the Vietnamese is about 483 USD per year (Vietnam Profile, 2004). Those who are financially unhealthy then turn to be reluctant to use the Internet. Additionally, as Selwyn and Robson (1998) also mention about the disparities in the Internet access amongst disadvantaged ethnic and socioeconomic groups, the number of people who have computers and access to the Internet in rural areas is definitely smaller than that of people in urban places. Another concern with electronic surveys in general is of coverage bias (Solomon, 2001) when sampled people do not have access to the Internet or do not feel comfortable with the use of the Internet. In Vietnam the challenge with email surveys can result from the humble number of people having access to the Internet. The figure in 2000 was 130,000 people, accounting for almost 0.022% of people in the world using the Internet. This number rose up to 3.5 million in January 2004 (accounting for 4.31% of the Vietnamese population), and continued to reach at 5.78 million in November 2004 (making up 7.17% of the total population). Although there has not been any specific survey done yet, we should admit that there has been a big gap amongst the purposes of using the Internet. Most young people don't use the Internet for their studies and or for information searches. Instead, they surf the Internet to chat, play online games and read erotic web-pages. Moreover, the rate of Internet users in urban areas is definitely higher than that in rural regions. More particularly, farmers are the last to receive up-to-date information compared to their fellows in urban places while they need to be promptly equipped with new scientific information from developed countries for their agricultural production and environmental protection.

The third advantage is that email surveys appear to be an effective research instrument in the following types of studies in the marketing industry:

- Customer/employee satisfaction
- Product/concept testing
- Copy and ad testing
- Online product/service evaluation
- Web site evaluation

(Stewart & Yalonis, 2001, p.6)

To some extent, I do think email surveys can help explore the correlations between different aspects in educational research in similar ways as follows.

- Customer (parents, students, governance like school councils, state/federal government and other organizations) / employee satisfaction (employees are teachers, staff, and management boards)
- School performances (students' test results, effectiveness of leadership in schooling, etc.) / new concepts introduced to the school contexts (the *New Basics* program in schools in Queensland, Australia, or autonomy in universities, etc.)
- Marketing education, learning from competitors, dealing with competitors or staying economically and environmentally sustainable
- Online products (distance education, student online support programs, etc.) / services used to launch these schemes and their effects (language support for non-native English speaker students, career choice of graduates of distance education programs, etc.)
- School web site evaluation

These issues and many others can actually open a wider horizon for researchers to investigate a multitude of relevant educational research topics. It is absolutely possible to carry out such a survey in traditional modes like interviews and postal mail, but email surveys can help researchers reach some targeted participants across geographical borders with the reduction of costs and time.

In terms of response rate, a challenge in survey research is generally concerned with representative sampling which greatly affects generalized conclusions towards the end of a research issue. In fact, response rates in surveys are not high. For example, telephone surveys have difficulty achieving a response rate of higher than 60%, and most face-to-face surveys hardly gain a response rate of higher than 70% (Brehm, 1993, p. 34). But it is not necessarily true that representativeness increases whenever response rates increase. In fact, Visser, Krosnick, Marquette and Curtin (1996) challenge the commonplace assumption that representativeness increases with an increased response rate by examining the accuracy of self-administered mail surveys and telephone surveys forecasting the outcomes of Ohio state-wide elections over a 15-year period. Although the mail surveys had response rates of 20% while the telephone surveys had higher response rates of 60%, the mail surveys predicted results more accurately with an average error of 1.6% than did the telephone surveys with an average error of 5.2%. In terms of electronic surveys, according to Kiesler and Sproull (1986) (also Parker, 1992), response rates of

email surveys are about 65%, which is significantly higher than the rates of conventional postal mail surveys of about 20-50% (Frankfort-Nachmias & Nachmias, 1996). By contrast, Schuldt and Totten (1994) and Sheehan (2001) assert that response rates to email surveys have declined since 1986 while Mehta and Sivadas (1995) have found that there is no difference between the two modes. In my own view, the different conclusions withdrawn by these authors probably originate from the various natures of the contexts where they conducted their studies with different kinds of participants and Internet facilities that the targeted sample could have access to. In fact, business people tend to respond to an email message more quickly than others mostly because many of them work with computers and ADSL access, and they are required to keep themselves up-to-date by reading and responding email more often. In addition, according to Solomon (2001), web congestion is another factor which lowers response rates when the sampled participants cannot retain their patience any longer to download a PDF document or to load a beautifully-designed, fancy survey compared to a relatively plain web survey. Besides, people of different ages do not have the same way of reacting to computers and email services. In other words, it is participants' culture and research contexts that make the difference.

Another benefit is concerned with the possibility for researchers to keep track of participants. Senders (namely researchers) can know and identify undeliverable messages thanks to the "Delivery Failure" notice after clicking the "Send" button. When reading a reply, senders can also realize the date and time the email version was replied. This is convenient for further sampling processes. Furthermore, this tool can encourage participants who are interested in a study to participate alongside with the researchers by simply clicking the reply button for further contacts. Email can also provide an informal forum for targeted subjects to express their personal concerns when they are asked open-ended questions (Paolo et al., 2000). In fact, email enables "non-coercive and anti-hierarchical dialogues" (Boshier, 1990, p.51) in which some interlocutors tend to express themselves in a candid and open atmosphere without necessarily knowing or facing their partners. This kind of electronic communication forms a "democratization of exchange" (Selwyn & Robson, 1998, p. 2) in ideas and beliefs, which is of importance in qualitative research.

The last advantage is the flexibility resulting from email usages. Having sent a survey, which is not satisfactory, researchers can make changes and adaptations for a new version and then send it again. The fact that email is in forms of text documents on computers helps survey designers sort out and copy from one material to another and from one computer to another in a less time- and effort- consuming manner. In addition, in some institutions, staff members are given email addresses with the second parts being the same such as s4077324@student.uq.edu.au and s4068285@student.uq.edu.au, or dthai@ctu.edu.vn and nanh@ctu.edu.vn. Some researchers who wish to maximize chances to gain data within the same institution can send messages to different people by adding their names (the first part) to the second part to make up a long list of subjects although in so doing, researchers may violate the ethical code when sending SPAM mail. Also, receivers can answer at their best time without being controlled by face-to-face contacts like interviews, or having to go to a post office to send the reply like postal mail surveys.

Ethical and Net-Cultural Concerns with Email Surveys

Email surveys are not without problems, which arise from technology and nature of this electronic device. However, the underlying challenges of these difficulties root in the issues of ethics and net users' culture. The first part of this section is concerned with the discussion on the conceptualization of ethics in educational research, and the rest will address the dilemmas and possible suggestions to educational researchers and school leaders.

An Overview of Ethics in Educational Research

The early ethical codes mentioned in the Belmont Report (1979), which are concerned with three central aspects: respect for people, beneficence, and justice, have given way for more discussions on the issue. For example, Gay and Airasian (2003) propose that researchers' responsibility is to maintain participants' well-being, and research studies must be based on trust between the two parties. Principle E of the American Psychological Association (1992), which focuses on respect for people' rights and dignity and requires researchers to respect participants' confidentiality, autonomy and self-determination in their own decision-making, fully reads as follows.

> Psychologists respect the dignity and worth of all people, and the rights of individuals to privacy, confidentiality, and self-determination. Psychologists are aware that special safeguards may be necessary to protect the rights and welfare of persons or communities whose vulnerabilities impair autonomous decision making. Psychologists are aware of and respect cultural, individual, and role differences, including those based on age, gender, gender identity, race, ethnicity, culture, national origin, religion, sexual orientation, disability, language, and socioeconomic status and consider these factors when working with members of such groups. Psychologists try to eliminate the effect on their work of biases based on those factors, and they do not knowingly participate in or condone activities of others based upon such prejudices.
>
> (Retrieved March 9, 2007 from http://www.apa.org/ethics/code2002.html#principle_d)

Moreover, Babbie (1998) points out three important ethical aspects in social science research including voluntary participation of subjects, avoidance of doing harm to them, and protection of participants' privacy. What is more, Sharf (1999, p. 253) suggests that research should practice "respectful sensitivity". Respondents in social science research should not be used as a means to an end but respect of persons must always be insisted (Evans & Jakupec, 1996). It must also be acknowledged the conflict between respondents' rights to their privacy and the public's rights to know which should be negotiated for common goods in the sense that the findings withdrawn from the respondents would be beneficial to the public's gain. In many universities, guidelines for

ethical practices are seriously institutionalized into the process of assessing research proposals in consideration for how the subject would feel and what harm may cause physically and mentally to the researched. In other words, according to Bogdan and Biklen (1992), ethics in educational research should be involved with the issues of participants' informed consent and protection of the subject from any harm in the sense that the participants enter the research process voluntarily and they are not exposed to more risks than gains that they may enjoy later. These ethical concerns are aimed to enhance the nature of research, which is scientific in itself and humanistic to the well-being of humans.

Challenges of Email Surveys with Regard to Ethics

First, technical difficulties in designing email surveys and potential problems with the hardware and software are inevitable. Survey designers as well as participants need to be computer-literate. Web-based surveys, in general, require programming ability (Couper, 2000) although email surveys can take the simplest form as ordinary email messages. Due to this technological requirement, those with background in computer sciences become the more dominant group using email surveys in comparison to other professionals (Shannon et al., 2002). Also, respondents' lack of computer knowledge can be a source of error or non-response (Zanutto, 2001) although the latter can also be caused by respondents, who have not received any email invitations or covering letters to the study or have not been informed in advance (Couper, 2000). Briefly, the degree of participants and researchers' computer literacy should be taken into account prior to an email survey to prevent the act of disturbing the two parties which may lead to indirect discrimination when the advantaged group with computer literacy is targeted while the other disadvantaged ethnic or socioeconomic cohort has to be neglected.

Another challenge is that with the humble percentage of people who have access to the Internet, being 11.33% of the whole world's population (Global Internet Statistics by December of 2003), researchers must be cautious when sending surveys to certain groups of people who must be able to get access to and to know how to use the Internet. This sample demographic limitation obviously leads to a group of people who are likely to differ from a random sample of the larger population. Additionally, people from disadvantaged groups like those in rural areas, the elderly, the poor and busy mothers may have less chance to carry out and participate in email surveys. In fact, this population is constrained along lines of class, gender, age, income, and race. Old people from previous generations tend to be *scared* of using the Internet, and this fact poses difficulties for research involving electronic methods to collect data. Other methods to obtain information should be employed instead of forcing participants with limited computer expertise to respond to the email surveys as a social trend.

Third, there are researchers who try to send a survey to too many email users with the hope to get as much information as possible while selecting interviewees purposively is still an appropriate technique in qualitative research because these key interviewees can offer researchers striking insights of the issues under investigation (Babbie, 1998; Johnson & Joslyn, 1991; Merriam, 1988). Sending an email survey to a non-specified population is considered as sending SPAM mail, which is annoying and irritating. In fact,

a recent survey done in London has found that more than 75% email sent to pupils is SPAM mail weekly, half of which advertises drugs and Viagra (Vietnam Net, 11/8/2004) which is also a disturbing experience with the author's Yahoo mail! Besides, many uninterested people become *victims* of unknown email messages containing viruses, which endanger and damage programs in their computers and the local networks. In other words, email users are harmed in this indirect manner, and trust between Internet users and other researchers may decline or may even be destroyed. As a result, some people who were once such a *victim* may no longer be voluntary or willing to join any more research projects done via electronic devices. It is, therefore, suggested that researchers be ethically required to guard the safety of their computer programs before sending out an email version to others, and to respect participants' privacy on the Net by always asking for permission before sending a survey. They have to assure participants that they will do so by contacting respondents via a covering letter or a phone call requiring the informants' consent, which takes a central place in terms of ethics in educational research (Burgess, 1989). What is more, Cook and colleagues (2000) find that follow-up contacts with non-respondents, personalized contacts, and contacting sampled people are the three factors positively influencing response rates. Finally, researchers are expected to know that violating national laws on SPAM email results in great costs which may culminate in a severe fine of 1.1 million Australian dollars in Australia (Vietnam Net, 23/7/2004).

Fourth, due to the open nature of email, it is difficult to guarantee anonymity and confidentiality. According to Gay and Airasian (2003), anonymity means that researchers do not know participants' identities, and confidentiality means that researchers must not release participants' identities and information provided to another party. However, respondents' names (even though many are alias and pseudonyms) and addresses including user-names always appear in email versions, and researchers can almost identify respondents. This turns to be serious in research, which asks participants for their personal ideas, comments and attitudes towards political policies, leadership roles, etc. This "democratization of idea exchange" (Selwyn & Robson, 1998, p. 2), once revealed by powerful people via respondents' email addresses, may impinge on their present political status quo. Also, Jeavons (1998, cited in Solomon, 2001) asserts that a number of potential respondents may choose to stop completing an electronic survey when they have to encounter the first question with a complex question grid, and when they are asked to provide their addresses. Consequently, the fact that respondents do not trust researchers and choose not to answer their questions candidly may generate external invalidity while validity refers the appropriateness of interpretations from a test or survey result (Gay & Airasian, 2003). Messick (1989) goes further and defines that validity refers to the degree in which a test result is transferable and generalizable within the specified construct; i.e., the findings from this test can be generalized appropriately to the population at large or to the degree of community generalizability (Miklowitz & Clarkin, 1999). To put it simply, one's findings are valid only if they match reality (Merriam, 1988). The respondents' lack of candor could not be interpreted as the representative sampling for the whole group, but it may be challenging for researchers to realize the degree of honesty in email. In addition, instead of generating the most accurate answers, respondents may tend to settle for merely satisfactory answers because they may feel uneasy with some questions that may indirectly harm their personal or political status.

This response behavior is termed as "weak satisficing" while "strong satisficing" (Simon, 1957, cited in Krosnic, 1999, p. 540) is seen as the process where some respondents who are not given sufficient time or are not interested in the questions choose to offer an arbitrary answer. Hence, researchers should try to be aware of participants' culture and to predict hindrances that respondents may face. One way for researchers to do this is to immerse themselves in the research context prior to and during the study period, and they must be truly aware of the issue of bias when designing surveys.

Fifth, design issues such as the length of a questionnaire and the format of an email version, can influence response rates. The longer a questionnaire, the less likely people tend to answer (Steele, Schwendig, & Kilpatrick, 1992). Some long surveys should not be too plain or fancy because people seem to like reading Internet documents, which are attractive enough and not too colourful to be downloaded or moved between files. Furthermore, email senders' addresses may have an impact on respondents' answers. A sender's email address with the username of a well-known organization may create a safe and reliable feeling to participants to fill in the requirements. Otherwise, a letter of cover should be sent prior to a study in order to gain participants' permission and to minimize doubt that may arise from a strange email message.

Challenges of Email Surveys with Regard to the Net Culture

Not only do email surveyors need to be aware of the ethical concerns discussed above, they also have to take into account the issues of net-users' culture. "The way we do things around here" is an efficient and frequently cited definition of culture which can be viewed as the total sum of assumptions, beliefs, and values that most members in an organization share and express through "what is done, how it is done, and who is doing it" (Farmer, 1990, p. 8). Schein (1992) also assumes that culture is something that most people can feel it, but it is too difficult to define clearly because it is formed by groups of people who create shared basic assumptions and beliefs. Therefore, individuals with their own cultures have to adjust theirs into the group's culture which may sometimes result in cultural clashes. It is especially harder for outsiders to step into or to deal with a "cultural mix" comprising different sub-cultures (Law & Glover, 2000, p. 116). North (1994) finds that Internet users often form a society with its own culture, which comprises of a diverse group of people of various religions, nationalities, genders and experiences. They tend to call themselves "netizens" - network citizens (Rinaldi, 1995). The most remarkable and visible feature of the Internet culture is net-language. Net-users, especially young chatters, have the tendency to insert symbols in their messages to express their present feelings such as :-) meaning the writer is happy, or :-o meaning "Surprise!". Their written language seems to be different from the mainstream language with many abbreviations like T2UL (talk to you later), IMHO (in my humble opinion), GF (girlfriend), to name but a few*. Raymond (1993) states that the original usage of this new language belongs to hackers' communities. Furthermore, some groups of young people have recently created their own net languages by deviating the standard languages in terms of vocabulary, spelling, and grammar.

* This web-page, which provides a full list of chat symbols and meanings, may be an interesting reference: http://www.thechatspot.net/chatsymbols.htm

With regard to email surveys, this phenomenon poses three concerns for educational researchers. First, they need to be conscious of this culture to gain permission to enter. Ember and Ember (1990) emphasize that two different societies rarely have the same culture. Therefore, educational researchers many of whom are adult academics may find it too difficult to join young netizens' culture. In a multicultural environment, in general, it is ethically imperative for researchers to know who they are and who they are going to contact before they actually go into the field (Weis, 1992). Failing to do this may lead to a refusal of a strange email message which does not belong to netizens' culture. Therefore, as Hollingsworth (1991) recommends in classroom-based research, researchers should establish a collaborative rapport with netizens to gain gate permission and to have regular contact with them, or as in Bogdan and Biklen's words, this rapport should be built around the interest of friendship rather than a contract. Second, hackers now view themselves as the "elites" in computer science (Raymond, 1993, p.191), whose computer expertise is sometimes better than researchers'. Therefore, it should be noted that potential participants in email surveys may form their own cultures, which become either benign or malign to researchers' email survey content and research processes. Third, the inaccurate language in terms of spelling and grammar is sometimes corrected before being inserted into formal articles and documents. In so doing, researchers may violate the research principles of keeping the evidence unchanged. As a result, it is recommended that researchers using email surveys have a good grasp of knowledge of netizens' culture and possess a certain level of computer competence. Also, enclosing a transcription of respondents' email language in the research report may become helpful.

Conclusion

Email surveys have profound influences on the process of data collection despite their unavoidable weaknesses. As I have argued, the two significant issues relating to ethics and netizens' culture are the core problems of this technique. In my own view, being highly aware of them can help researchers with good computer literacy devise effective ways to obtain valid data without causing mental or physical harm to the researched.

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