Online Surveys: Issues impacting their Success

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Abstract

Surveys play a significant role in supporting informed decision making within and between educational institutions as well as by governing bodies. It is critical that survey practitioners develop contemporaneous approaches to undertaking surveys that are cost effective and methodologically informed. Online surveys, generally fulfil these requirements, for both small and large scale surveys, if planned and organise appropriately.

This paper will examine relevant issues in implementing an Online Survey for students or graduates, including an overview of software genres, design issues and response rate management strategies. As will be shown, conversion to Online from paper-based or originating an Online survey, requires a fusion of information technology as well as survey management expertise and knowledge, and that the software selection is critical in determining whether the survey is successful in terms of cost and response rate.

How is the success of a Survey determined?

The success of any survey, whether uni-modal (eg paper-based or Online) or multimodal (eg paper-based and Online), may be determined in reference to six types of potential error (Dillman, 2007; Umbach, 2005) –

Representation Errors

Coverage error – where each member of the population does not have an equal chance of selection

Sampling error – the sample achieved, is not representative of the total population

Non-response error – where either the survey or items within the survey, are not responded to

Adjustment error – where survey correction for say missing data or sample weights, introduces error or bias

Instrument Errors

Measurement error – where the question design is imperfect, resulting in uncertainty, inaccuracy or ambiguity

Processing error – where the processing of the survey data introduces coding, data entry and similar error

Representation Errors are to various degrees interrelated, with response rates being a general indicator of their potential materiality and relevance.

In general, higher response rates improve the inferential nature of the conclusions that may be drawn from the sample achieved. Notwithstanding, research exists that challenges the universality of associating non-response error with a low response rate (Curtin, Presser and Singer, 2000; Keeter, Miller, Kohut, Groves and Presser, 2000; Merkle and Edelman, 2002; Holbrook, Pfent, Krosnick, 2003; Voogt 2004). Conversely, a high response rate may also have issues of response error (Moore and Tarnai, 2002).

Even as a performance measure, response rates, whether 10% or 90%, does not per se reflect success or failure; resources, both time and financial affect the outcome, as well as the characteristics of the population, survey topic and methodology.
The continued acceptance of response rates as the key measure of a surveys success also reflects its availability during a survey campaign. In lieu of any other readily available metric, response rates have an unchallenged supremacy when it comes to both a manageable and accessible survey performance metric.

Instrument errors are also controllable and the advent of Online surveys, have raised a wide range of issues, many of which are new. Online surveys generally reduce the processing error, as no scanning is required, and reduced data entry and coding.

**Representation Issues and Online Surveys**

Higher education institutions have a unique and privileged relationship with students and eventually graduates. Upon successful admission, the relationship between institutions and students continues until withdrawal, discontinuation or completion. In the case of the latter, the relationship may transform into a continuing association by choice and not related to direct teaching or learning.

The higher education “product” is generally of high cost, perceived as an investment and reflects an opportunity cost to the students, who have preferred education to employment and associated immediate financial reward.

Even though there is some resistance to see students as customers, the outworking of most national Higher Education policies, is to effectively treat students as customers (Hodson and Thomas, 2001; Lawrence and Sharma, 2002). Equally, students in the prevailing milieu, see themselves as empowered and have demanding expectations (Joseph, Yakhou and Stone, 2005). The confluence of both student expectations and the need for feedback and quality control systems within Institutions provides a solid foundation upon which a Representation Model can be built; many students wish to provide feedback (Bickel and Brown, 2005) and surveys are a means of achieving this.

The assessment that students wish to provide feedback, needs to be contrasted with many findings that response rates are in decline due to a range of issues including finding potential respondents, preparedness once found to participate and general social change (Groves and Cooper, 1998). The observation of declining response rates whilst strong in general population surveys, has less certain evidence within Higher Education. Over time, significant change such as new student administration systems and address management issues; the number of surveys that students are invited to participate in, both within and outside the institution; stability of email account providers and internet usage patterns; how new technologies effect online surveying penetration; revised survey methodologies; all highlights the range of variables at play, besides the students or graduates propensity to participate, which may impact response rates.

At Edith Cowan University, the Australian Graduate Survey (AGS) conducted for Graduate Careers Australia (GCA) response rate over an eleven year period shows variability -

**Table 1. Australian Graduate Survey Response Rates**

<table>
<thead>
<tr>
<th>Year</th>
<th>Response Rate (Bachelor Pass)</th>
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<tbody>
<tr>
<td>1995</td>
<td>63%</td>
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<tr>
<td>1996</td>
<td>66%</td>
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<tr>
<td>1997</td>
<td>69%</td>
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<td>2003</td>
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<td>2004</td>
<td>47%</td>
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<tr>
<td>2005</td>
<td>54%</td>
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and reflects: fluctuations in survey staffing levels; a new Student Administration System being implemented with new rules on address management; the source of address management responsibility moving within the University from Student Administration to Alumni for graduates with changes in standards; occasional use of tele-surveying; continuous use of online response collection once sanctioned by GCA; revised survey content and methodology from GCA; use of prizes; survey population increasing 30% over the period; variation in mail-out timings and number; variation in the survey commencement and ends dates ie period; as well as many other factors. Therefore the causation for the variability in response rate is a complex issue. While ECU has particular characteristics, similar internal issues will apply to most other Institutions over the long term.

A further factor supporting a positive propensity for students to participate in a survey relates to generation changes. The current undergraduate population of most Australian Universities comprise the Millennial Generation/Generation Y (born around 1980 to 2000). This generation is potentially more amenable to effective surveying by Institutions by espousing characteristics supportive of higher response rates such as “confidence, civic duty, achievement, sociability, morality…” (Zemke, 2001, 47). They also “want constant feedback but [do] not want to be closely scrutinised” (Ricigliano, 1999, 124) and “are a generation who love to be involved” (Goldgehn 2004, 27); they “like – and expect – constant feedback” (Glass, 2007, 101).

Surveys to provide a high response rate/low Representation Error, need to leverage the relationship between students and the Institution and be integrated formally and fully into student relationship management. Too often, surveys are a tackled on after thought, which do not enable adequate planning and create conflicts with those surveys that have been planned and integrated. An example, in the Australian context, was the 2006 National Survey of University Student Finances which was formally advised to Institutions on 4th September 2006 with a survey mail out date of 27th September; the resulting response rate was estimated at 19.8% (James, Bexley, Devlin, Marginson, 2007, p. 8).

Commencing students, when they enter higher education, have a high propensity to adapt to new pedagogies, being a self evident characteristic of moving from secondary or vocational education systems. The Survey Relationship Model that is being proposed is integrated into the student lifecycle.

**Stage 1- Introduction of Surveys to Students (Climate Setting)**

As part of initial induction of commencing students, the following key elements need to be effectively related –

1. The Institution is committed to improvement
2. The Institution respects and practices trust
3. In gaining feedback, an independent group, removed from any teaching centre, collects, manages and reports information to relevant areas, in a confidential manner
4. Opportunity to participate in surveys will be conducted over the following relevant periods...
5. The feedback will be reported and available at the following websites...
6. The information obtained from your feedback is used in the following...

This stage can be seen as developing a feedback relationship based on the Institution’s value of the student’s perceptions, embodies the first principle of quality management and establishes a trust relationship (Adebanjo and Kehoe, 2001; Dillman, 2007). The figurehead of trust can be promoted and developed during this phase.

While many surveys that a student will complete over their lifecycle, will not relate to teaching but to other experiences related to the Institution, the overall perception of the role and function of surveys needs to be integrated with those surveys of a pedagogical nature.
Stage 2 - Institutional Survey Policy (Standard Setting)

A recent informal review of Australian Universities indicated that only a few had officially approved University wide Survey Policies. In the absence of such policies, a proliferation of surveys from non teaching sources may be possible and thus potentially conflicting with obligations and resulting expectations of student, listed in Stage 1. It is critical for survey management and minimising the impact of Representation Issues that institutions have survey governance and these are integrated with the overall student communication plan.

In an endeavour to manage response rates such plans may include –

1. Commencement events for surveys
2. “blackout periods” at relevant times, where no institutionally generated communications to students are permitted, other than those sanctioned
3. Co-ordinated, multi faceted advertising campaigns within Institutions
4. In-lecture announcements of surveys
5. Establish information lines or dedicated email addresses
6. Address management and maintenance
7. Closing event with prizes to participants
8. How surveys are to be conducted – online, paper-based, telephone survey, multi-modal, interactive voice response (IVR)

This Stage also addresses some of the fundamental issues that may impact Coverage Error with online surveys; recording and keeping current email details for Online Surveying.

Stage 3 - Feedback (Demonstration of Commitment)

Stage 1 created a commitment to the student from the Institution to provide feedback. Stage 3 should be seen as the reinforcer to continue participating in surveys.

This stage may either be passive or active. Passive merely provides say a website to peruse information, with the active approach, say having at the commencement of the relevant year or period, an announcement of the “lessons” learnt from the previous survey sent by email. Best practice being the wide publication of precisely how past survey results improved institutional policies and practices as soon as this information becomes available. For uniformity and consistency, this is best handled centrally, given the differing levels of analytically abilities within teaching areas (HEFCE 2003, 117).

Overall, having a clear and certain Survey Relationship Model fulfils an important precondition to effective surveying, irrespective of mode, and supports a higher response rate and potential minimisation of Representation Errors. Notwithstanding, good survey practices which transcends the survey mode, a range of issues particular to Online surveying need to be considered to ensure that the Representation Errors and in some cases also Measurement Errors, are minimised and that high response rates are realised -

Will Online surveying be effective for student or graduate populations?

To ensure coverage error is appropriately managed, each Institution should understand how their students and graduates use email. General research shows that email usage is predisposed to reflect education levels (Matanda, Jenvey and Phillips, 2004). When students access their email accounts generally reflects academic calendar events/issues and in the case of graduates is less certain, especially where there may have multiple
email accounts eg private or work. It is generally recommended for Online survey campaigns to run for around 4 weeks with weekly reminders to non respondents, to avoid coverage issues.

**Who should the Online survey invitation email be from?**

The email should be from the person or position designated as the key contact and continue for the longest possible duration. For quality assurance and promotion of confidentiality, the person of trust should be removed from the areas directly or indirectly surveyed.

**What should be in the email subject line?**

The objective here is to attract the attention of the potential respondent. Groves, Presser and Dipko (2004) show that interest in the survey topic is an important ingredient in gaining participation and thus improving response rates.

Research by Porter and Whitcomb (2005) recognised that the email subject line together with the senders detail need to considered. For example the student may consider that all email to them from a particular email address are important, reducing the relevancy of the Subject line.

**Personalised vs Impersonalised?**

A meta-analysis of research, showed a higher response rate where the emails associated with Online surveying were personalised (Cook, Heath, Thompson, 2000, 883).

In addition, invitations sent by more senior members of the organisational hierarchy, when personalised, assists in improved response rates (Joinson and Reips, 2005).

**Should the email be HTML or Plain Text?**

Plain Text was considered more secure that HTML due to the ability of embedded virus and spy-ware within the email. However with the improvement in antivirus software, HTML emails are now screened and accepted whereas previously, some packages would have excluded them by filtering.

**Embedded password or manual logon to Online survey?**

This is a complex area still in the infancy of research. Passwords increase the potential respondent’s burden, but may increase perceptions of confidentiality. Research at this stage indicates an improved response rate (4.6 percentage point – p<0.01) with an embedded password (Crawford, Couper, Lamias, 2001), but a reduction in quality when compared to a normal user enter password or semi automated (Heerwegh, Loosveldt, 2003).

Anonymity of responses has conflicting research findings with Couper (2000) suggesting that anonymity is not an issue impacting response rates, however earlier research suggesting otherwise (Kiesler and Sproull, 1986).

**What should the first survey question be?**

Arguably, the first question is the most important and the potential respondents can be either captured or lost (Dillman, 2007, p. 92). It needs to be simple and applicable to all potential respondents.

**How long before a response becomes unlikely and a follow-up should be initiated?**

Online surveys are returned in general at a faster rate and earlier than paper-based. Therefore, a follow-up can proceed after the daily change in responses received drop to a determined level, which can be monitored with most good quality online survey software.
How to ensure that your email with the Web Link arrives?

Preparation of the most methodically sound Online survey, is ineffective unless the survey reaches the members of the survey population or sample.

Anti-spam software may impact response rate by filtering the emails based on a range of filtering criteria. These criteria can not be predicted with certainty as anti-spam software is continuously changing to combat spammers and phishers. As a general rule, to avoid anti-spam software –

- Email-out rates should be conservative, say around a maximum of 500 per hour
- In the Email header, ensure that an easily distinguishable education sender address is apparent
- Monitor your email inbox, as some anti-spam companies may contact you to confirm identity or legitimacy
- Keep the contents of the email basic – no icons/logos or attachments
- Make sure that you use your institution’s standard domain name in the Email sender and reply address
- Don’t change your email account, once established

Incentives or no incentives?

A large number of experiments have been conducted considering the impact of incentives. The general conclusion reach by Goritz (2006, p. 67) is that “meta-analyses have demonstrated that material incentives increase response and decrease dropout. Therefore, it is generally recommended to use material incentives in Web surveys.”

It was also noted that ceteris paribus, the quantum of the incentive was not material and that the incentive was equally effective on different survey lengths.

Suggestions from students on material incentives to complete surveys via piloting include withholding early computer access to grades, until the survey was complete, and providing extra credits for completing (Johnson, 2003, 58).

In addition, an incentive most likely discourages the potential respondent from passing the online survey to another (Norman, 2006).

Instrument Issues and Online Surveys

Instrument issues significantly impact Online surveys and are only in their infancy of understanding. Their impact has an amplified relevance in multimodal surveys, which include Online surveying as one of the modes.

No general data exists detailing the change in proportionally of survey mode, however Online surveying, is by far the most cost effective approach and growing significantly. In ECU’s experience, including software amortisation, the cost per Online distribution per member of the survey population is around $0.05 compared to $2.00 for mail distribution, based on a survey population of 5000. A salient feature of Online surveying is that costs strongly reflect economies of scale, however a small positive effect is apparent with paper mail-outs, due to fixed nature of postage. The quantum of cost reduction, together with the controllability of Instrument issues, is heavily influenced by the software being used. A review of many cheaper software shows limited functionality in controlling both measurement and processing errors, especially in a multimodal survey methodology.
The growth of Online Surveys also reflects the growth of the Internet and the proliferation of survey packages which now exceed 300, based on active developers who list their software at a leading web survey methodology site (http://www.websm.org/).

Low cost and proliferation of packages has enabled a large number of non-survey professional to conduct and run surveys, impacting the number, quality and perception of surveys. Reflecting the change in skill sets required, Online surveys have seen IT knowledge overtake survey knowledge as the dominant background of Online Survey developers. For this reason, Instrument issues, predominantly measurement error introduced with Online surveying must be closely monitored.

**How is Online survey software classified?**

To appreciate the categories and differences in Online survey software, a classification of packages highlight the differences.

Traditionally, institutions tended to conduct surveys by using low cost packages purchase by the area responsible for conducting the survey. The Internet and adaptations of quality management practices and systems have seen a greater investment in this software genre, which sees a software expenditure growth rate of more 35% (Thompson, Kolsky, 2006).

The range of Survey Systems full into three categories –

*Enterprise Level* with such packages integrating surveying and feedback into the core activities and systems of the institution. These packages are most prevalent in high customer number organisations wishing to systematically manage feedback. The methodology is multimodal, including collecting responses via interactive voice response, web survey, paper survey, with trigger events being systematically determined or by planning. For example, if a student say withdraws, the software would generate an online survey invitation. The computing skills required to setup and maintain are high with specialist staff needed.

*Distribution Level* is where the survey tool is not integrated into a corporate transactional system such as a student administration system but is installed within a computer network and supports multiple users. Most interface with corporate systems to source the information needed for targeting the survey population. The range of contact modes are less than in the Enterprise level. The computing skills required involve specialised computer skills to set up, but once setup, may be maintainable by a users expert. Within the Distribution Level, the survey host may in fact reside with a third party, who manages the hardware and software aspects of the Online survey distribution. Based on the profile and number of companies offering hosting, this appears to be a growth industry with clients charged on the basis of responses received or invitation emails sent.

*Desktop Level* is where the survey software is limited to one or a few users with a limited range of functionality and controls. The computing skills of the user required are at the Desktop level.

**How to select the right software**

Criteria that need to be considered in selecting software would include –

- Population – what are the anticipated sizes of the survey populations?
- Sampling – are population sample capabilities required?
- Campaign/Response Rate Target Management – how automated is the survey campaign and response rate management to be?
- Mode – is a multi model plan required or say just Online?
- Construction – is there an objective to pre-populate information and to pipe (relevant questions based on demographics) and/or to branch (ask follow up questions based on prior answers)?
- Design – What level of design flexibility is needed?
- Time – how time efficient is the survey to be?
- Concurrency – are concurrent surveys campaigns planned?
Language – does the survey need to be multilingual?
Reports – are pre-designed standard reports required?
Platform – what Online platforms/browsers does the software support (Adobe PDF / HTML)?
Extensibility – can the software be customised and extended to meet specific requirements?
Research and Development – what level of R & D, is being undertaken by the vendors as the WWW evolves and differing standards emerge?

The three most decisive criteria’s are cost, compliance with externally imposed survey standards/practices and general functionality to manage and drive a survey campaign.

**Implications of multi modal survey campaigns**

Multimodal survey standards and best practices are well documented and discussed (Dillman, 2007; Fowler, 2002; Biemer and Lyberg, 2004), however the survey manager needs to ensure that any external standards specified that are outside their control, can also be adhered to within the Online survey software. In Australia, the only externally applied standards impacting Higher Education institutions via general national surveys is from GCA and does not differentiate between either paper-based or online, both of which are accepted methodologies. In the absence of any standards, that do not recognise the dissimilarity between paper-based and online, Institutions have a spectrum of choices of how to apply a paper-based survey into a Online format.

ECU, in considering the issues and wishing to adhere to the most rigorous standards, has used an Online Survey software format – eFORMs (Adobe Accelio Capture Form Flow), which is effectively a electronic hardcopy form version distributable by email or via a web server. That is, a hybridised hardcopy that is completed online. In the case of the software selection criteria where the modes are both paper and Online, the congruity/compatibility needs to be considered in light of evidence of the differences in multi modal surveys - paper-based versus online surveys. As Dillman (2007, p. 218) noted, “mixing modes raises many difficult issues, including the possibility that people may give different answers to each mode.” The evolution of the Internet, including its uses and users, requires ongoing exploration to explain variations being reported in multimodal surveys.

**Measurement Error and Online Survey**

To achieve an optimal outcome for Online surveys, a range of design and procedural issues need consideration. Foremost, should be the recognition that the use of Online Surveys are visual, capable of colourful formatting, dynamic features and unlike paper-based survey, not tactile or completely visible in the first instance. Schwartz (1996) concluded that survey participants seek to follow rules of normal communication such as being clear, understandable and have implied meaning read into form and structure of the survey. Consequently, the design of an Online survey may impact the respondents perception and understanding. Bosnjak and Tuten (2001) cited poor design and lack of clarity to the potential respondent as cause for survey non completion.

A body of research is developing that compares a range of modes, most often paper-based versus online surveys, from the perspective of experimentation to identify and observe differences. Such experiments demonstrate the range of “manipulations” such as images and positioning, which impact responses and in the case of multimodal surveys create measurement errors.

Some of findings from such research are -

**Should the survey be within the email and in HTML or Plain Text?**

Early online surveying was conducted by email ie the survey was completed within the body of the email. Later emails contain HTML, to enable its completion. Both these options are problematic in respect to Measurement Error because of the variability in presentation between different email client software. Embedding a URL in the email that opens the survey in a browser, overcomes some of this uncertainty.
Future consideration of mobile phone web browsing and surveying, will need to consider useability and consistency issues.

**Paging or Scrolling?**

Early Online surveys indicated that there may be variable response rates due to how the recipient navigates from beginning to end, however other research shows this to be immaterial (Peytchev, Couper, McCabe, Crawford, 2006).

**Progress rate for the Survey**

Detailing the progress rate towards completing the survey has been shown to influence the response rate (Dillman and Bowker, 2000). Therefore most survey packages now contain this functionality.

**Placement of Selection Boxes – Left or Right?**

Computer interaction, suggests that right aligned response/selection boxes are more easily navigated, thus reducing question skip patterns (Dillman and Bowker, 2000).

**Preview and Review?**

The ability to preview the Online survey that is scroll from beginning to end and to review, that is scroll from end to beginning, is a relevant consideration. This is especially so where a paper-based surveys is also being used and while research is still considering the impact, this functionality appear to be warranted (Crawford, Couper, Lamias 2001) to reduce non-response.

**Pre-populate or unpopulated?**

Pre-populating information, especially for piping is effective from the perspective of reducing time. However, in multimodal surveys, it raises measurement error issues where a standard form survey is being distributed.

In addition, it may create privacy and confidentiality issues from the perspective of the potential respondent. To date, limited relevant research is available, however creating a trust relationship helps manage this issues.

**Does the colour and labelling of scales impacts?**

Secondary visual features such a labels, numbers and shading of selection scales have a detectable impact (Tourangeau, Couper, Conrad, 2007). Therefore, it would seem reasonable to reduce the impact by minimising potential stimuli or in the case of multimodal surveys, ensure that the paper-based survey and Online survey are mirror images of each other.

**What is the maximum time to complete?**

Time to complete is both a Representation and Instrument issue. Length may impact coverage and response rate, due to the time management and time resources of the potential population. The length is also a salient design issue.

The longer the survey, the more important it is to provide clear upfront advice on its length. In addition, the longer the survey, the greater the likelihood that the potential respondent will need to plan their completion and also forget to complete, thus raising the importance of reminders (Trouteaud, 2004, p. 389). Also, the survey software, should enable “store and save” a partial response and allow the potential respondent to return to complete.
Consistency with look and feel of Online survey

Once a software package is selected, it is important to maintain a common “look and feel” especially if the population will be invited to participate over time. Familiarity and trust, can be developed for the survey software and Institution, based on general web loyalty and satisfaction research (Flavian, Guilaliu, Gurrea, 2006).

Online Surveys and comments

Relevant research is limited, however online student surveys have been assessed as yielding more commentary that is more useful (Hardy, 2003).

Selection Lists: “Tick all that apply” or “Indicate if applicable”

Research is still developing, however a recent study using a 16 item question showed (Smyth, Dillman, Christian, Stern, 2006) –

1.  *Tick all that apply* was endorsed more often than *Indicate if applicable*

2.  *Tick all that apply* selected more items than *Indicate if applicable*

3.  *Indicate if applicable* who answered in below average time, selected from the first half of the selection list

Grouping and order

Grouping and order will impact responses and Jenkins and Dillman (1997) argue that applying Gestalt Theory, that is, locating and positioning together will be seen as grouping. This has shown to produce variable results to the same Online survey items (Christian and Dillman, 2004).

Radio Buttons vs Drop Down Boxes vs Scrollable Drop Down Boxes

Scrollable Dropdown Boxes (where all options are not visible) should be avoided. Some evidence supports measurement differences between Radio Buttons and Drop Down Boxes, where the order of items being different. Where randomised order is logically available, it should be used (Couper, Tourgeau, Conrad and Scott 2004) and is a desirable software functionality.

Does the Web Browser matter?

Survey software needs to be compatible with different web browsers and computer operating environments. For example, Windows XP or Vista or Linux (OpenSource) operating systems; Mozilla-based or Internet Explorer (Microsoft) browser clients. Research on survey error due to technical issues is limited, however is relevant due to its material impact (MacIsaac, Cole, McCullough and Maxka, 2002).

Survey software should be backwardly compatible and the Research and Development capacity of the survey software developer is an important consideration in purchasing a product, especially given the convergence of mobile phone technology and the WWW.

Can Online Responses be consolidated with Paper-based?

If methodologically sound multimodal surveying is conducted, there is no reason why results can not be combined.

In 2007, ECU converted the Unit and Teaching Evaluation Instrument from paper base to Online, with the response rate and overall results being strikingly similar (Ward, Poon, Corbett forthcoming). The survey population was approximately 60,000 and achieved response rate, just over 50%.
This is similar to another study that found “other than the response bias attributable to selection bias, there was little difference in student responses to the items in paper and email surveys. This is certainly good news for those engaged in the administration of both online and standard mail questionnaires, since it suggests that we can safely aggregate data from both modes of administration” (Sax, Gilmartin, Shannon, Lee, Hagedorn, 2003, p. 17).

Conclusion

Research on Online surveys, including multimodal surveying, is still immature and will remain so as the WWW and the related technologies develop. Nonetheless, the recommended practices of general surveying apply to Online surveying, with the need for supplementation to address a range of specific issues.

From a Survey Manager’s perspective, awareness and willingness to ensure a methodologically sound survey, is potentially handicapped unless the Online Survey software is also methodologically sound. Where multimodal surveying is being conducted, Online surveying, should as a rule replicate the paper-based where used, and again this is a test of the suitability of any Online survey software package.

Overall, Online Surveying is an efficient and cost effective approach however, measurement error issues abound and require careful piloting and testing.

References


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