

# Recruitment of Participants using Facebook

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*In this presentation, the process of recruitment of survey participants through the social networking site, Facebook, is presented. It is part of a PhD study in which mathematics students' learning preferences and their ways of using graphics calculators and calculators with computer algebra systems are investigated. The participants were senior secondary students taking mathematics at years 11 and 12 level in Victoria, Australia. The issues, administrative procedures and success rates involved with this method of recruitment used in the study will be highlighted.*

## *Introduction*

Social network sites (SNS) such as Facebook have been gaining popularity worldwide. “As of March, 2010, Facebook is the second ranked site on the Internet traffic metrics on alexa.com, accounting for almost 5 percent of all global page views” (Hull, Lipford, & Latulipe, 2010, p.1). The alexa.com website listed Facebook as the second ranked site as of the time this paper was written (October 2010). There are increasing interests in research and scholarship about social network sites (SNS). Boyd & Ellison (2007) provided an insightful introduction to the history and definition of SNS, and discussed emerging research and directions related to SNS.

With the rapid advancement of internet technology, online surveys are becoming a viable method of data-collection in research (see e.g., Sue & Ritter, 2007). While there are studies on using online surveys, not many studies were found which used SNS as a method of recruiting participants. In one such study found, Howell, Rodzon, Kurai & Sanchez (2010) administered a well-being and happiness survey to participants recruited from a college and from the SNS, Craigslist; incentives were offered for both data gathering methods. The completion rate was lower for those recruited via SNS (68.5%) than from the college (93.6%). Interestingly, however, the quality of data obtained was comparable using both methods.

## *Background of the study*

Presented in this paper is part of a PhD study in which senior secondary mathematics students' learning preferences and ways of using graphics calculator and calculators with computer algebra systems were investigated. The participants were

Victorian Year 11 and 12 students. As part of the study, an anonymous online survey created using SurveyMonkey (<http://www.surveymonkey.com>) was used.

The push towards using Facebook for recruitment came from the poor response rate from government schools. The Australian Department of Education and Early Childhood Development (DEECD) required and insisted upon written and signed consent forms by students and their parents in order to permit the study to be conducted in government schools. Online participation was considered to be a form passive consent and unacceptable without written consent. This was despite the Monash University Human Ethics Committee giving approval based on the argument that 17 to 19 year-old students were able to consent for themselves to participate in the anonymous online survey, and that the submission of the survey implied consent. Thus, non-government schools participating in the study sent email invitations to their students that included the online survey web-link. Government schools had to distribute hard copies of the explanatory statements and consent forms, and then collect them from students and their parents. The additional administrative procedures hindered recruitment in government schools; none agreed to participate despite showing initial interest. To increase response rates to include government school students, the alternative method of recruitment using Facebook was explored.

### *Issues and Administrative Process*

Consultation with the Monash Human Ethics Committee revealed that Facebook has rights to data collected from any applications, including surveys, created within Facebook. Also, data might not be securely stored and thus lead to privacy and ethical issues (Hull, Lipford, & Latulipe, 2010). Since an online survey had already been developed for the study using SurveyMonkey, a link was created from Facebook that interested participants could click and be led externally to complete the survey.

After obtaining ethics approval and funding, a Facebook advertisement was set up to recruit participants. Setting up involved completing three sections:

#### *Section 1 (see Figure 1)*

1. creating a Facebook account;
2. designing a 110 pixels wide x 80 pixels tall image as part of the advertisement;
3. setting a destination URL when participants click on the advertisement;
4. creating a title and text (limited to 25 and 135 characters respectively). A possible way to include more information is to put the text into the image (see Figure 1);

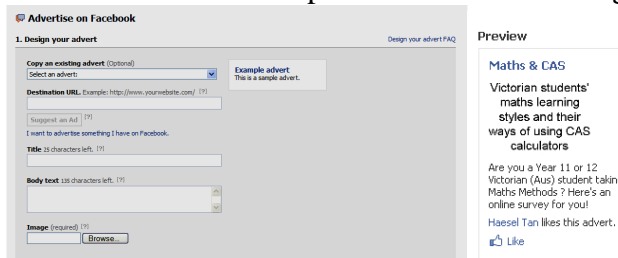


Figure 1. Section 1- designing a Facebook advertisement with a preview of the ad

#### *Section 2 (see Figure 2)*

5. deciding the target population (e.g., location, age). Facebook gives an estimated reach (sampling frame) based on the database of people who listed the targeted

characteristics (e.g., who said they were from Australia, Victoria) when they created their Facebook accounts;

*Section 3 (see Figure 3)*

6. deciding a name for the advertising campaign;
7. deciding a daily budget;
8. deciding the dates on which the advertising campaign will be run;
9. deciding on the pricing (Facebook has a bidding system and suggests a price range for maximum bid per click).

Figure 2. Section 2 – selecting the target for the advertisement

Figure 3. Section 3 – settings for the advertising campaign

Additional information will then be requested, such as currency and method of payment. Most of the information (e.g., target locations, dates, and maximum bid) can be changed once an advertising campaign starts. More information about Facebook and advertisements can be found in books on SNS (e.g., Kelsey, 2010).

The advertisement created had to be approved by the Facebook team before starting the campaign. The process took a few working days. Correspondence and notification of approval were via email. Daily reports and graphs were available via Facebook once the advertisement campaign started (see Figure 4).

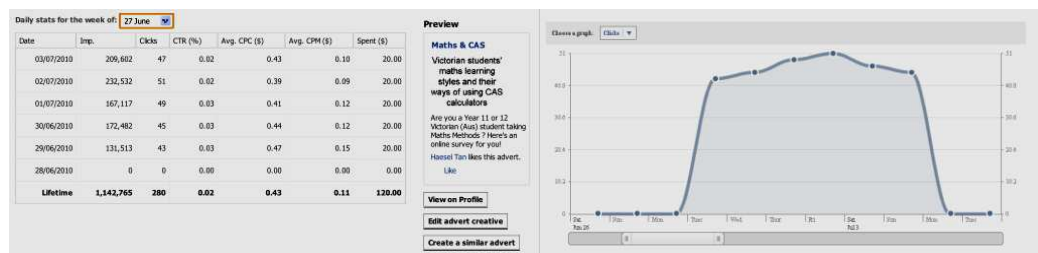


Figure 4. Daily reports and graph of clicks per day

## Responses

The advertisement ran for six days, with a daily budget of \$20 per day. There were 59 responses from 280 clicks on the advertisement, and 1,142,765 impressions. This meant that the advertisement was shown over a million times including repeated

viewings (e.g., when someone refreshes a Facebook page, or when a person browsed from one Facebook page to another). There was a total of 280 clicks which led to the online survey website. Out of the 280 clicks, 59 (21.1%) responded to the survey. Sue & Ritter (2007) reviewed online survey studies and summarised that “when compared to mail surveys, online survey response rates are lower, response speed is higher, and data quality is the same or better” (p. 7). They found that the response rates for e-mail surveys ranged between 24% and 76%, and for web-based surveys, approximately 30%. The response rate of 21.1% for the current study using Facebook was slightly lower than that given by Sue & Ritter (2007). Comparatively, the response speed for a survey using snail mail would take at least two weeks, whereas for an online survey with recruitment via Facebook the response speed was almost immediate. In this study, once the campaign had started the daily number of clicks ranged between 43 and 51. This number was limited by the daily budget set.

Of the 59 participants, 39 (66.1%) completed the survey, similar to the completion rate of 68.5% reported by Howell, Rodzon, Kurai & Sanchez (2010). The demography of the participants in the present study is shown on Table 1.

Table 1

*Demography of the participants who responded through Facebook recruitment*

Demography (N=59)	Gender		Year level		School Type		
	Male	Female	Year 11	Year 12	Gov	Catholic	Indep
Number	30	29	41	18	33	8	18
Percentage	50.8%	49.2%	69.5%	30.5%	55.9%	13.6%	30.5%

As seen in Table 1, approximately equal numbers of males (30) and females (29) responded, and there were more Year 11 (41) than Year 12 (18) students. In 2009, 59% of all Victorian full time Year 11 and 12 students attended government schools, 21.5% were at Catholic schools and 19.3% at Independent schools (Australian Bureau of Statistics [ABS], 2010). Thus the Facebook sample was not fully representative of Victorian school numbers by sectors; there was a higher representation from Independent schools (30.5% cf. 19.3%), slightly lower from government schools (55.9% cf. 59%) and considerably lower from Catholic schools (13.6% cf. 21.5%).

### *Limitations*

In general, one limitation of recruitment via Facebook is associated with the sampling frame, which contains only students who: have access to the Internet; have an account in Facebook; had signed up to Facebook and their self-reported characteristics (e.g., location, age) matched those set by the researchers in their targeted advertisement; and had logged into Facebook during the time that the advertisement was run. For this particular study, the participants were those who had indicated their location as Victoria, and the appropriate year of birth when they signed up for Facebook accounts. This excludes a number of students, for example those who do not have Facebook accounts, or if they have an account, do not indicate their location or provide inaccurate information about their locations or ages. Hence the representativeness of the Facebook sampling frame to the whole population is an

issue for further exploration. Alexa.com provides audience demographics for Facebook. It is claimed that “relative to the general internet population, people browsing from school are over-represented at facebook.com” (<http://www.alexa.com>, October 16, 2010). In the USA, Hargittai (2007) found that young adults’ gender, ethnicity, and parental educational background are associated with their SNS usage (use/non-use, and types of SNS used). Perhaps school type, which is linked to socio-economic status, might also be a factor. The demographic profile of the current study in Table 1 suggests that there might be a higher proportion of students from independent schools with Facebook accounts, compared to students from government or Catholic schools.

In spite of the limitations, recruitment via Facebook has its advantages in terms of fast response speed and a wide reach, especially when the conduct of a study encounters difficulties that limit access to a particular population. In the current study, it yielded responses from a spread of students from government, Catholic and independent schools. The limited access to students from government schools using conventional recruitment processes was circumvented through Facebook recruitment. Hence although any findings in the current study from the Facebook responses have a limited generalisability to the Victorian senior secondary student population, they are still better than the findings obtained otherwise from students in non-government schools only. In conclusion, an exploration in using Facebook as a viable recruitment method to extend conventional methods of data-collection was presented in this paper. Future research is needed to compare and contrast using Facebook and other SNS with other methods (e.g. mail and e-mail) for data-collection.

## References

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