Digital democracy: giving ODL students in developing countries a voice

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1. Introduction

Information Technology has had a great but uneven impact on Open and Distance Learning (ODL). In the main it has led to greater efficiencies in the way that courses are written and produced; student registration; student assessment; and the logistics of distribution. Latterly, with the advent of e-learning and "technology enhanced learning", the teaching and learning process itself has changed. Learners can work collaboratively, they can take control of their own learning through Web 2.0 technologies, they can build e-portfolios, etc, etc. An area where IT is having an increasing impact is in those parts of institutional research that rely upon gathering feedback from the learners.

Postal surveys have been the mainstay of institutional researchers for collecting student feedback but these have not been very successful in developing countries where mail systems are often slow, costly or unreliable. However, as more and more development projects involve students being 'online', and hence the possibilities of electronic surveys become greater. The potential advantages of such an approach are:

- Low cost delivery mechanisms
- Ease of sampling, reminders etc
- Data cleaning done on entry
- Digital open-ended responses
- Automatic routing through the questionnaire
- Automatic data input
- Automatic analysis of data

However, there are also several potential disadvantages and we address these in this paper, using data from the UKOU's PRESTO project.

2. The PRESTO project

E-surveys at the UKOU were limited until fairly recently by two main factors:

- Learner access to computers - until recently, e-Surveys of OU students would have been biased because only a small proportion of students were on-line.
- Low response rates - even when students were taking on-line courses, the response to "pop-up" type feedback questionnaires was very poor.

However, because all new students are now expected to have on-line access and are issued with a FirstClass email address, the first problem has gone away. The second has been tackled by adopting a "panel" approach. A random sample of fifteen thousand students is drawn on an annual basis and they are invited to join the PRESTO panel for a year, during which time they will be expected to complete six fairly short e-questionnaires concerning University policy issues. There are no financial incentives but they are excluded from other surveys and they can choose to use their personal email provider rather than FirstClass.

The project has been running for four years and surveys have been carried out on a wide variety of topics ranging from e-books to health and safety, from fees to virtual volunteering. While much has been learned, little attention has been paid so far to their validity and reliability.
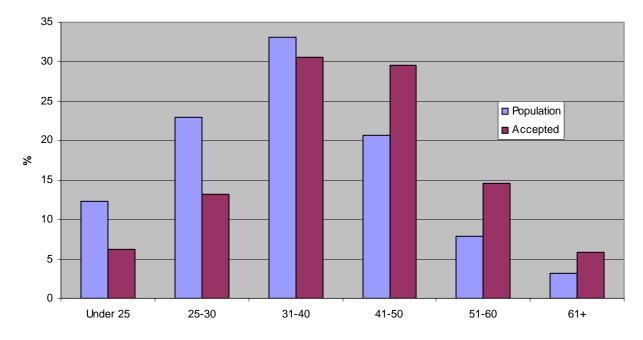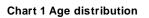
3. Results from PRESTO

Although results from the surveys are delivered to University policy-makers rapidly and regularly based on 1-2000 respondents, there is great scope for bias because only one in four of those invited opt to join the panel and each survey only generates a response from 40-50% of the panel.

3.1 Joining the panel

It is possible that the people who opt to join the panel are not representative of the whole student population. We can examine this by comparing the demographic characteristics of the student population and that of our panel.

One hypothesis might be that young people are more technology-aware and therefore they would be more likely to accept the invitation to join the PRESTO panel. However, analysis of the data for the 2007 panel revealed that it was older students who were more likely to accept. The panel contained a disproportionate number of people aged 41 and over as shown in Chart 1.

Chart 1 Age distribution

Other factors also appeared to be at work.
- An initial analysis showed that the longer the person had been a student, the more likely they were to accept the invitation. (24% for new students to 45% for those who had first registered over 10 years ago).
- Students with disabilities were more likely to accept (36% vs 26%).
- Those living outside the UK were more likely to accept (36% vs 26%).
- There was no difference in acceptance rates between men and women.

3.2 Responding

We now look at the results from a recent PRESTO survey that looked at students' attitudes to a government proposal to remove subsidies when a student is taking a course that leads to an Equivalent or Lower Qualification to one the student already holds. It is calculated that this so-called ELQ policy would have a large negative financial impact on the University.

Chart 2 shows that the age effect found when looking at who volunteers to join the panel is repeated when it comes to survey completion. Thus our results are doubly biased and will over-represent the opinions of older students.
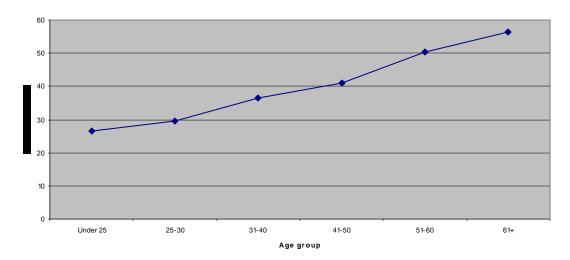
Chart 2 Response rates by age group

Response rates did not vary by gender, disability and UK residence. Those who had studied longer at the University responded more, varying from 32% for new students to 59% for those who had first registered over ten years ago.

3.3 Removing bias

One way to achieve this is to make the respondent population resemble the overall population by "weighting" the respondents appropriately. Thus, for example, we could weight up the number of young respondents and weight down older ones. (This assumes, of course, that the young ones who do respond are like the young ones who do not respond.)

To decide which are the key variables to use for weighting we carried out a step-wise logistic regression analysis on the fifteen thousand students who were invited to join the panel. The dependent variable was whether or not the student had completed the survey (ie they had volunteered for the panel **and** they had responded to the survey). The results are summarised in Fig 1. The length of time that a student had been registered with the University was the best predictor, suggesting some form of "loyalty" or "belonging" underpinned their volunteering. Age too was a positive factor, as was residence outside the UK. So the people most likely to volunteer were long-term, older students living outside the UK.

Fig 1 Logistic regression results

Step	Variable entered	Positive
1	First registered	Longer
2	Age	Older
3	Residence	Non-UK
Not entered	Disability	
	Gender	

A preliminary, fairly crude form of weighting was devised using a grid of four age groups and four registration periods. A weighting factor was calculated for each of the sixteen cells and

then comparisons were made between "weighted" and "unweighted" results. As an example, Chart 3 shows that if we had used the unweighted data we would have over-estimated the proportion of students studying purely for personal reasons. The general point is that response bias can have different effects depending upon the nature of the bias and the subject matter of the question.
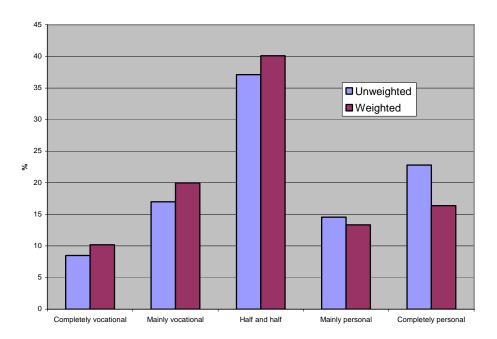
Chart 3 Motivation for study

4. Digital democracy

After years of being distant, invisible and silent participants, digital technology can give ODL students a powerful voice. For example:

- Students can be consulted about teaching methods, course offerings, policy issues, etc
- Students can help shape the research agenda
- Students can discuss these matters with fellow students
- Students can form pressure groups or student unions to make their collective voices heard.

However, for this to be a democratic voice, all learners will have to have access to digital technology - ie they own or have easy access to the appropriate equipment, they have the appropriate software for the transmission and reception of messages, they can afford to use it and the system is reliable.

In developing countries this might seem to be a pipe dream but the answer might lay with the humble cell phone rather than the PC. A study in South Africa (Brown, 2003) revealed that whereas only 0.4% of distance students at the University of Pretoria had access to the internet, 99% had access to a cell phone. Now these were all teachers, but it might point the way forward. At the moment it seems that a lot of cell phones are owned collectively rather than by individuals and so there would be problems of linking individuals to questions. There are also problems with the length of text messages for questions and answers, and possibly the costs involved. However, there will be technical solutions to these problems and costs are likely to

fall. Just as we are learning how to adapt email and web technology to make PRESTO work more effectively, so will researchers in developing countries have to find their own creative solutions.

At the UKOU we are learning that access to technology is not enough. Although we can take steps to minimise the effects of bias, at the moment we really don't know why some students volunteer and others do not, and why some of the volunteers default on their promises. It could be that most students see the University as a mere provider, like a shop or a business, rather than something they belong to and want to improve. Or they may feel, with some justification, that their one voice or questionnaire will have minimal impact on decision-makers. We as researchers are trying to make the learners more involved by feeding back to them the survey results and related policy outcomes.

As things stand, technically we could hold electronic referenda on a myriad of issues, great and small. However, there is probably a limit to how much learners should, could or would want to be involved in the running of their institution. Perhaps, as with general elections, we should offer everybody to chance to add their voice on big issues from time to time, but perhaps we should not be too disappointed when the turn out is less than 100%. The big difference with surveys is that one is allowed to "guess" what the non-respondents might have said!

Reference

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