Who's asking? An alternative methodology for engaging students in evaluation exercises

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Abstract and Summary

This paper explores the application of a 'students as partners' approach within a project undertaking an evaluation of the learning experiences with technology of students within one institution. The full outcomes of this study are written up in a separate paper; discussed here are the practicalities and outcomes of adopting this method of student engagement to undertake an evaluative exercise. When presenting our study, we explore the issues surrounding student engagement in evaluating their own learning experiences in higher education. We examine the shortcomings of conventional forms of evaluation, and how these prompted us to seek alternative methods of investigation. We detail the method undertaken in this study of adopting students as co-researchers. The paper concludes with a discussion of the resulting data, and comments upon the depth and representativeness achieved using this method. The specific context of the inquiry was the digital learning of students, how they experience the use of online tools provided by the institution and how these practices interacted and contrasted with their own self-determined and self-selected practices of technology

Introduction

Higher Education Providers typically use a number of software platforms to facilitate education. These tools are an integral part of the university learning experience, governing how students access learning materials, determine the shape and format of staff and student communication, the means by which assessments are submitted and feedback is received. The student experience, whether face to face or online, is to a large extent facilitated by the use of these technologies (Cornford and Pollock, 2003). The institutionally provided tools such as desktop packages and virtual learning environments can come at hefty sums; the virtual learning environment (VLE) in particular being expensive and lacking a clear pricing model (Wright, Lopes, Montgomerie, Reju, & Schmoller, 2014). Provision of services such as lecture capture requiring huge amounts of investment, and subscriptions to online materials also carry a significant cost (Gray and Lawson, 2016). In addition to these expenses are those tools associated with discipline specific and specialized platforms; simulation packages, databases and additional online systems to manage the student learning experience. Staff and students are both obliged to engage with and use these tools as part of their interactions. However, the overall experience of technology use for students is one that is jointly constructed, only partially visible, diverse and individually determined (Corrin, Lockyer, & Bennett, 2010). The problem with this description is that the "tools" that are used by both groups are ill-defined and constantly emergent (Conole, Laat, Dillon, & Darby ,2008). Personal practices of students integrating their self-selected technologies into their learning experiences

are widely varying and elusive (Selwyn, 2007). The use of technology by both staff and students is broad, yet assumptions of its use shape the very fabric of the university (Jones, Sutcliffe, Bragg, & Harris, 2016); from the design of learning spaces in view of the practices with technology that take place in these spaces (Baepler, Walker,& Driessen, 2014), to the allocation of budgets to fund the tools and platforms. What, however, is rarely seen are the realities of practice and technology adoption, as a picture across an institution; the evaluation methods (discussed later) falling short or being able to provide this information. What is offered by this research is a report on an attempt to gather an understanding of the student learning experience using technology, working with students as co-researchers to gather data from a localised and informed perspective.

Evaluations of the e-learning experience: what exactly are we evaluating?
The learning experience of all students is wide and varied across the institution. Practices and use of technology are determined by their local context, culture, and requirements. The tools themselves do not sit in isolation as Conole et al (2008) point out the learning experience or "LX" as they term it, is part of a landscape of integrated tools and technologies, all forming the basis of the student learning experience. Ellis and Goodyear (2010) similarly offer "ecology" as a term of the learning experience describing the tools themselves as "novel, complex slippery and likely to present [themselves] in surprising ways" (p. 2).

In this study, we sought to uncover how these tools were presenting themselves and understand two issues:
1. To what extent were the institutionally provided tools being used with and experienced by students in reality?
2. What were the personal practices of student using technology, and how did these personal practices influence and interact with their experiences and use of institutionally owned tools?

Undertaking an evaluation of the use of technology within the learning experience does little to uncover the local contexts for students. Evaluations of the use of technology occur on a small scale and are frequently on a module basis (Sharpe, Benfield, Lessner, & DeCicco, 2005) and with little attention paid to the varied technological contexts in which they sit. Similarly, the personal use of technologies by students as a complimentary part of the learning experience is frequently overlooked and divorced from the full consideration of technology's role in the learning experience. Student engagement or rejection of institutional technology provision in favour of self-selected alternatives is an issue that is frequently ignored in the literature and conveniently glossed over in evaluation exercises (Conole et al. ,2008). The interaction between institutional and personal tools is complex. These practices have been described by Flavin (2015) as having the potential to be disruptive, presenting difficulties in "monitoring learning…" and to "challenge, implicitly the role of the lecturer" (p.11) or indeed to subvert the intentions of teaching staff (Beckman, Bennett & Lockyer, 2014). Such practices of students are shared, exchanged; formally and informally, openly and covertly, and evolve as their communities (Wenger, 2002) develop new ways of working and collaborating.

Current Evaluation methods

Exploration of the use of technology in student learning has been the subject of a lot of research using a variety of approaches and methods (Paechter, Maier & Macher, 2010; Conole et al., 2008; Ozkan and Koseler, 2009; Biasutti, 2011). However, in part due to the emergence of large scale national surveys such as the national students survey (NSS) in the UK, many institutional based explorations of the student experiences have gradually aligned themselves to this model. An examination of the questions of the NSS survey, presents a
(necessarily) broad evaluation with only two questions pertaining to the use of technology:
"18. The IT resources and facilities provided have supported my learning well.
19. The library resources (e.g. books, online services and learning spaces) have supported my learning well." (NSS, 2018).
These questions, though focussed on technology in the learning experience, are in the broadest sense and provide little actionable information for institutions wishing to understand or evaluate their current provision.   The broad application of questions suggests the use of such surveys, as the NSS and those similar to it, to evaluate the student learning experience may be ineffectual in providing students with a meaningful way of providing feedback on their learning experiences with regard to specific areas of interest.

Therefore activities to gather information of technology use in education, can result in low levels of engagement with students suffering from survey fatigue (Porter et. al, 2004) and fail to gain an accurate picture. Similarly, the use of standardised questions within surveys can mean that students may be unable to interpret or relate these to their local context. Yorke (2009) when discussing Krosnick's (1999) 4 stage model of survey question response (1. Interpret the question, 2. Search memory for relevant information, 3. Interpret information retrieved 4. Make a judgement) suggests that respondents frequently 'skip lightly' through the first two stages of this model. This for the evaluation of e-learning at an institution level presents an issue, not in so far as the use of standard questions to gather information itself rather the process by which students interpret and respond to these questions. Lacking in context, interpretation for local departments, and prompts to support retrieval of relevant information, surveys for such data collection are far from ideal. Alternative methods of data collection such as interviews and focus groups conducted by staff, also present problems. Firstly, in the challenge of scale required for any meaningful or representative data collection across an institution. Secondly, in that the staff conducting such data collection are seldom well informed about the intricacies of the local departments in which data collection is occurring.

The findings of student evaluation of their learning experiences, can also be unhelpful and there is the potential for quantitative and qualitative data to be contradictory (Milsom et al. 2011) which can hamper interpretation and trust in the findings. Staff and students may interpret some questions differently (Leman, 2012) and it is often difficult to find answers to specific concerns (such as technology enhanced learning (TEL) provision) from a sector-wide survey (Leman, 2012). Data provided from student surveys may help highlight areas for exploration, but provides little in the way of actionable activity to address the most pressing of concerns or implement effective improvements. There are also few opportunities provided by this mechanism for staff to revisit the ideas and suggestions put forward, as the respondents are in their final year of studies and thus are not available for further

discussion, or to ensure that their concerns are shared with the students in subsequent years.

As an alternative to these 'top-down' approaches, some researchers have tried to focus on the 'student-voice' in particular aspects of their learning experience. Examples of practitioners who have adopted such methods seeking deep rather than broad insight and as a method of establishing active partnerships include Cook-Sather & Luz (2015), Bovill, Cook-Sather, Felten, Millard, & Moore-Cherry, N. (2016), Robinson (2012), Orner (1992) and Mitra (2004). Some, for instance Gosper, Malfroy, McKenzie & Rankine (2011) and Russell et al. (2014) have specifically focused on the use of technology as part of the learning experience. 'Radical collegiality' offered by Fielding (1999) proposes a framework where hierarchies existing within higher education are exposed and attempts are made to try and address how these may interfere with any research undertaken. The role of students in this methodology attempts to guide the exchanges between the various groups and pay due consideration to how they will interact. Fielding offers notes such as, paying particular attention to who is talking and who is asking the questions. In proposing this method, Fielding suggests that it is an effective way for students to have a greater stake and partnership in the research process than simply being considered as the respondents to the questions posed. Here there is a collegiality of the research process, students are no longer restricted as the subject of the research, but are actively involved in the evaluation of their own experiences; engaged in identifying solutions and means of improvement. Such an approach enables students to 'learn from and with the staff' (Fielding, 2001 p.131). Students when using this method take on ownership and responsibility for running developmental days, workshops and interact on an equal basis with the staff members involved. As such, this approach goes further than simply ascertaining or hearing the student voice in that it empowers those students involved to ask and determine the shape of the questions as active and engaged participants. This method however is not without problems, as to give students greater control in the evaluation process challenges existing power relationships. Cook-Sather & Luz (2015) draw attention to the need to support students through the 'threshold of student-faculty partnership' (p.1099) if the process is to be successful. Cook-Sather and Luz, report that both students and staff find the process 'threatening, disappointing or productively disruptive 'yet they conclude also 'ultimately transformative' (p. 1098-9).

There have been criticisms of the authenticity and honesty of reporting of the student voice. Orner (1992) questions how empowering such an activity really is for students, and whether this approach merits inclusion within the practices of emancipatory pedagogy. For instance, as is the case with normal student engagement activities, a continuing problem is that certain groups of students are overrepresented and others are overlooked. Can this methodology address issues of privileging certain voices at the expense of others (typically the quieter, less forward students)? There may be a way of attempting to ensure greater representativeness of typically marginalised students. The recruitment process for participation in student engagement research activity is normally undertaken in two ways either by an open call, thus creating a self-selecting group or by invitation by faculty member (Felten et al. 2013). These actions mean that the students involved in the staff student research tend to be

those already engaged, the marginalized individuals are not well represented and their voices are not heard.

In this study, in an attempt to address the challenges presented by localisation within departments, staff worked with students to conduct this inquiry. We detail the method undertaken working with students in the role of co-researchers alongside staff to gather qualitative data from 152 participants. Students in the role of co-researchers were involved in the inquiry; collecting data in their local departments, and were instructed to frame a series of standard questions appropriately for their context, probing or rephrasing as they saw appropriate. Co-researchers were also responsible for generating final reports and data to be collated by the project team. In this research, whilst the initial call for co-researchers was undertaken by an open call, the recruitment of the final participants was undertaken by the student researchers in attempt to include more marginalised peers. The reach of students within their social and peer groups within the organization is wider and deeper than that normally gathered by central drives for recruitment. Students were also given instructions to ensure that the groups they interviewed were representative of their cohorts.

Methods
The project was conducted in a series of steps:

Step	Description
Project scoping and rough question design	Initial project design was put together by the project team. Here we discussed the methodology, method and secured internal funding for the process.
Participant recruitment	Students were recruited for the positions of co-research
Training and questions refinement	Training in interview technique, data handling, and ethics was provided for participants
Student led research	The co-researchers recruited 5-6 participants and interviews were conducted
Collation of the reports by staff members	The students submitted recordings and reports
Checking of the findings with the student researchers	Student reports were collated and a final report produced by the project team which was then sent to co-researchers for verification
Final report released to the institution	With the co-researchers' sign off, the final report was released to the institution and received by various committees.

The following questions were created by the project team and refined with students during the training sessions. We took as our starting point the questions suggested by Gosper et al (2011), creating categorization of tools into the following: i) institutionally supported technology provision, academic-led, and ii) technology provision and student-led technology provision.

As the purpose of this investigation was to determine the student experience of technology in learning practices the questions focused on this area. We sought to explore, in collaboration with students which technologies were of benefit, those which were less effective and those that they wished to see introduced. The following suggested questions were provided for the co-researchers:

1. What tools do staff use with you in your course teaching?
2. What devices do you use and own yourself?
3. Do you have any preferences for your way of learning?
4. What methods do you use when working with your peers?
5. What tools /methods do you use when thinking about your pdp (professional development planning)?

Recruitment

For all participants involved in this study, informed consent was obtained. Current students were recruited to the project, employed as co-researchers. Adverts for these positions were placed on the University website and in central emails targeted at all students. The recruitment process was formal, using existing institutional placement mechanisms, requiring the submission of a CV, covering letter and two referees. It was important that during this process we regarded the students as partners and equals. We believed that by employing them it would have the benefits of firstly ensuring the completion of work and secondly that it demonstrated the value that we attached to their work. We were keen to stress their position as experts in the process, in their insider knowledge of what questions were important, how they should be asked to the respondents, and to draw upon their personal experience when generating the reports. We were also aware that in answer to Bovill et al's (2016) concerns regarding inclusion of frequently overlooked groups, peers may present a more effective way of engaging these individuals through their ability to recruit friends and less willing participants.

Applicants were selected on their previous experience and allocated a department from which to recruit focus group participants. In all but one case we were able to allocate students a department where they were currently studying. This was important in order to ensure that the students had an understanding of the local context and practices, on which they could draw to shape their questions. In the one situation that occurred where all possible departments available to a student already had already been allocated to co-researchers, we decided to permit the candidate to recruit participants from their college (accommodation) instead, providing they applied the same criteria of representativeness that they would have used in a departmental group. The co-researchers were asked to consider the demographics in their recruitment of individuals for their focus group. Instructions were provided to ensure that the group of students that they included in their focus group should be as representative of their cohort as possible. The student co-researchers were provided with training. Each member went through a sample focus group as a participant, run by a member of the project team. They were then tasked with recruiting 5-6 volunteers for their own focus group

Suggested questions/topics for discussion were provided, but deviation and contextualisation of the questions from this list was strongly encouraged depending on the direction taken by their focus groups. The students were required to produce a formal written report based on the focus group based on an agreed template. Recordings of the focus group proceedings were submitted along with the report. This was done so that if necessary we could ensure that the text submitted reflected the group discussion.

Sampling

In this initial year of the project, the decision was made to restrict it to undergraduate students. A stratified sampling approach was adopted, allocating researchers to each of the 25 departments that make up the University. It also had implications for the likely diversity of experiences considered. In a study of NSS results (Cheng & Marsh, 2010) and CEQ results (Marsh et al., 2011) researchers found more variation between disciplines than between institutions, often as a result of extreme results for one or two departments.

Co-researchers were provided with instructions to ensure that all data from the project was securely stored and participants' identities were anonymised. Participants were asked to sign consent forms indicating their agreement to take part. This form outlined the details of the research project and reminded participants of their right to withdraw from the project at any time. Permission was sought prior to recording the focus groups, and in all but one case this was granted. Ethical approval for the project was sought and granted through an internal ethics committee.

Representativeness

Student co-researchers were asked to construct a focus group that represents the students on their course (within the limitations of a sample size of 5-6). This was one of the items they were asked to comment upon in their submitted report to the project team. In order to measure representativeness across the project as a whole, the student co-researchers and the individual respondents in each focus group were asked to complete a separate anonymous paper-based demographic survey. This included questions relating to their gender, ethnic origin and declared disabilities. One additional question was to indicate their faculty. Data collected in this manner were then compared with figures gathered by the University from all students at the time of registration and published annually online.

Training

Students were provided with training covering research methods and data handling. This session began by familiarizing the students with the aims of the project and the different roles. Participants were then split into focus groups led by the project team - giving them a demonstration of the research methodology and first-hand experience of participating in a focus group. The data gathered in these sessions was presented back to the participants as a way of checking validity and also contributed to the final report. Training was provided in issues relating to research methodologies and ethics, stressing the importance of differentiating between opinions voiced by individuals in the session and their own reflections and conclusions in the written report. Discussions drew on their recent experience as a focus group participant, providing a common baseline for all. The project team were also keen to stress the position of students as experts– that it was the student co-researchers and their focus group participants, not the project team, who held the expert knowledge in this

area. It was their experiences that were required and if that meant deviating from the suggested questions then that was the correct course of action to take. The students should own the topics discussed in the focus groups as only they knew which parts of their TEL experience were effective and which were not. The training provided also covered approaches to protecting respondents' anonymity and secure data handling. To ensure the validity of the report – in the sense that it accurately reflected the opinions of the participants – the co-researchers were asked to record the focus group proceedings, if the groups were amenable. This recording was to be submitted along with the final report and then all student-held copies of the data were to be destroyed. A sample of these recordings were used to check that the reports submitted reflected the conversations (n=3) that had taken place, as a way of ensuring that the training provided had been effective. In one instance it was used to uncover more information where a report submitted by a student co-researcher had lacked detail. The recordings were later destroyed by project team members after these validity checks were carried out.

Analysis
The student reports were read by members of the project team. Each report was read at least once, with 12 of the 24 being read by a second member as a form of control. In the first phase of analysis, a scheme of coding was developed, negotiated amongst the project team based upon emergent themes identified from their reading. The codes from each reader were collated, with duplicate categorisations removed. The second phase of analysis involved re-reading the reports and applying the agreed categorisations. A close reading of the texts with the themes in place was then conducted, resulting in an initial report for internal dissemination, which drew out what were perceived to be the main themes. It was felt important that members of the project team were seen to contribute some content at this stage too. This initial report was then circulated amongst the student co-researchers for comment and a follow-up session was held where the students and the project team could challenge any of the findings. Although not all co-researchers were able to attend this final session, those who did confirmed (via anonymous polling) that the findings at the end of the meeting were a fair representation of the issues discussed in their focus groups.

Results
The students submitted their final reports and these were collated by the project team. The reports were analysed and the data attached to each of these reports was explored to ascertain the efficacy of working with students as co-researchers. The student co-researchers in total recruited 152 participants in this inquiry.

Response and representativeness
24 of the 26 co-researchers (93%) managed to recruit participants, run a focus group and submit their final report. Of the two students that did not, one was unable to recruit enough participants and the other withdrew for personal reasons. All but one of the focus groups agreed to the proceedings being recorded. Regarding representativeness 21 of the 24 focus groups (88%) submitted the anonymous demographic analysis forms.
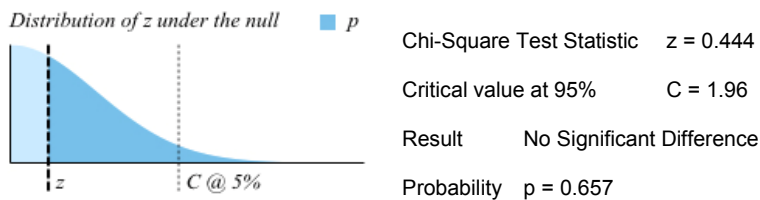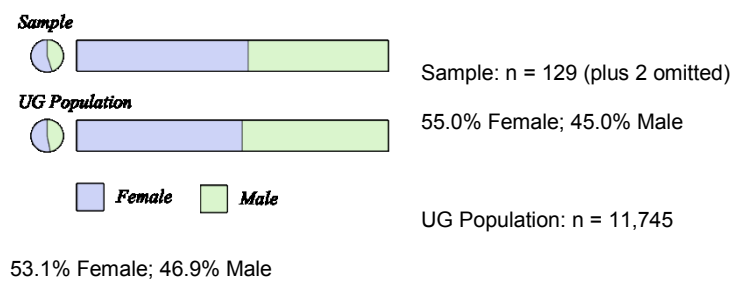
Representativeness
To establish whether the sample data from the focus groups can be considered representative, the accompanying demographic data provided by the respondents

was compared with data for the entire full-time undergraduate cohort. A Chi-Square analysis was performed using a 95% confidence interval to see if the null hypothesis was true; that the survey results could be considered to have been drawn from the same total population - i.e. the sample was representative of the wider university population.

Gender

The 2012/13 sample data provided by the University reports only two categories – *Male* and *Female*. Our demographic survey represents the latest categorisations used by the University and incorporates a third option – *Not Disclosed*. Two members of the survey group chose this response. These entries have been treated as missing data for the purpose of the analysis shown, otherwise the presence of this third category in only the sample group would result in the null hypothesis being rejected.

Sample: n = 129 (plus 2 omitted)

55.0% Female; 45.0% Male

UG Population: n = 11,745

53.1% Female; 46.9% Male

Chi-Square Test Statistic   z = 0.444

Critical value at 95%   C = 1.96

Result   No Significant Difference
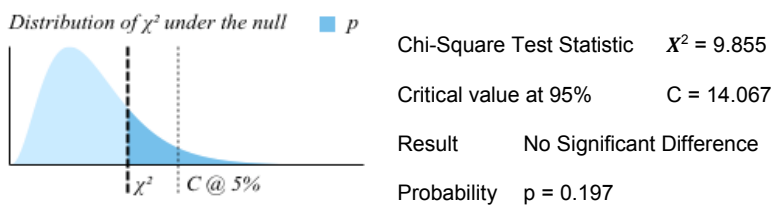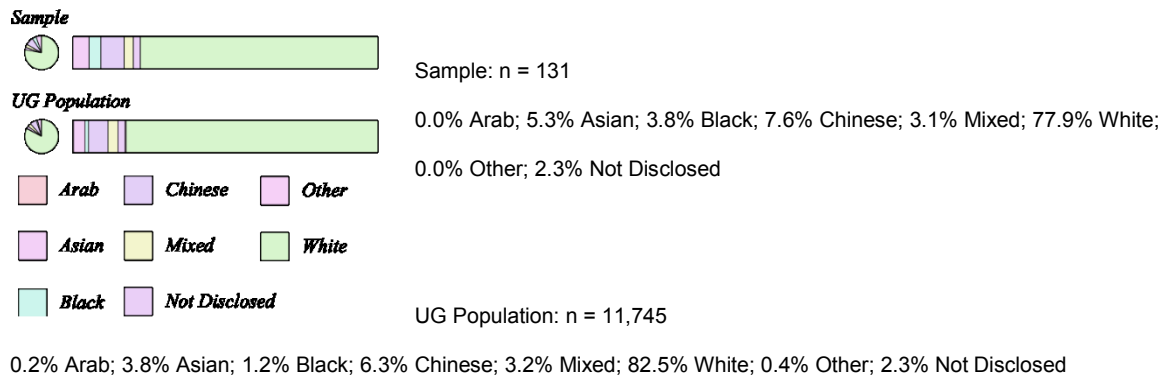
Probability   p = 0.657

The analysis allows us to accept the null hypothesis – that with respect to gender, we can consider the sample as representative of the wider undergraduate population.

Ethnicity

This analysis combines some of the categories used in the demographics questionnaire, because of the small sample size. In the analysis presented below, *Asian* includes respondents who reported their ethnicity as one of Asian, Asian or Asian British-Bangladesh, Asian or Asian British-Indian, Asian or Asian British-Pakistani or Other Asian Background; *Black* includes Black or Black British-Caribbean, Black or Black British-African; *Mixed* includes Mixed-White & Asian,
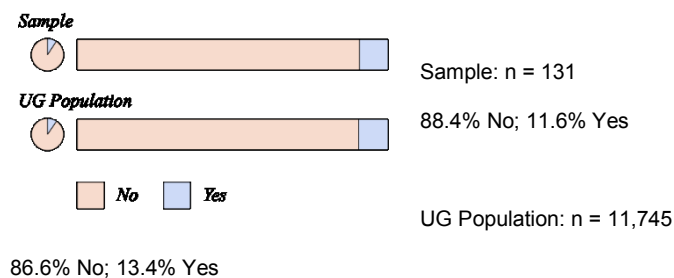
Mixed-White & Black African, Mixed-White & Black Caribbean, Other Mixed background;

Sample

Sample: n = 131

UG Population

0.0% Arab; 5.3% Asian; 3.8% Black; 7.6% Chinese; 3.1% Mixed; 77.9% White;

0.0% Other; 2.3% Not Disclosed

Arab	Chinese	Other
Asian	Mixed	White
Black	Not Disclosed	

UG Population: n = 11,745

0.2% Arab; 3.8% Asian; 1.2% Black; 6.3% Chinese; 3.2% Mixed; 82.5% White; 0.4% Other; 2.3% Not Disclosed

Chi-Square Test Statistic X^2 = 9.855

Critical value at 95% C = 14.067

Result No Significant Difference
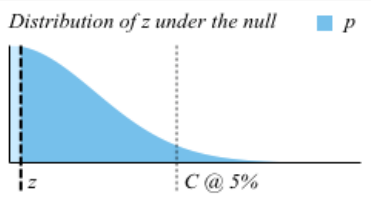
Probability p = 0.197

The analysis allows us to accept the null hypothesis – that with respect to declared ethnicity, we can consider the sample as representative of the wider undergraduate population.

Declared Disability

This analysis only compares the number of students who did not declare any disability, with those who declared at least one. Declared disabilities included learning difficulties, mental health conditions, long standing health conditions and physical impairment. By confining the test of significance to this binary position, it avoids issues relating to the small number of students in the population with certain conditions and those reporting multiple conditions.
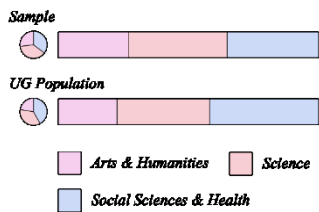
Sample

Sample: n = 131

UG Population

88.4% No; 11.6% Yes

| No | Yes |

UG Population: n = 11,745

86.6% No; 13.4% Yes

Distribution of z under the null ■ P

z   C @ 5%

Chi-Square Test Statistic   z = 0.133

Critical value at 95%   C = 1.96

Result   No Significant Difference

Probability   p = 0.894

The analysis allows us to accept the null hypothesis – that with respect to declared disability, we can consider the sample as representative of the wider undergraduate population.

Faculty

The number of respondents unable or unwilling to indicate their faculty is higher than for the other measures. In all 23 respondents did not answer this question. This has been noted in previous institutional surveys and may reflect a low student awareness of the faculty structure within the University.
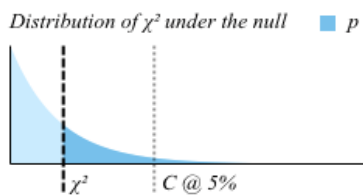

Sample

UG Population

☐ Arts & Humanities   ☐ Science

☐ Social Sciences & Health

Sample: n = 108 (plus 23 no data)

26.9% Arts & Humanities; 40.0% Science; 33.1% Social Sciences & Health

UG Population: n = 11,745

22.5% Arts & Humanities; 35.6% Science; 41.9% Social Sciences & Health

Distribution of χ^2 under the null ■ P

χ^2 C @ 5%

Chi-Square Test Statistic X^2 = 2.209

Critical value at 95%   C = 5.991

Result   No Significant Difference

Probability   p = 0.331

The analysis allows us to accept the null hypothesis – that with respect to distribution across the three faculties, we can consider the sample as representative of the wider undergraduate population.

Quality and depth

As an attempt to ensure the reports reflected the comments raised, members of the project team listened to the recording provided by the co-researcher and compared this with the final report. In all cases (n=3) the report and the quotations it contained were deemed fair and accurate. As such we were satisfied that the reports are valid representations of the focus groups. Statements gathered by the researchers were wide and varied, some groups had followed the structure of the questions negotiated and provided whilst many others had veered off into areas that they found most important and of interest. The deviation from the standard list of questions suggests that when gathering data, students were able to implement local knowledge and select areas that were of particular relevance to the students interviewed.

Transitions in report focus

This list of topics covered in the reports submitted by students greatly diversifies the list of suggested questions provided. It is also notable that the questions regarding personal development planning (pdp) were entirely disregarded by students, this would indicate that seeing little value in this question, they simply elected to not use this as a point of discussion. From analysis of the reports and recordings, it became evident which were the factors and issues that were of real concern to the students. Many of these topics were outside of the original remit of the research to review the e-learning experience however as a way of gathering concerns and information about expectations it was an effective method. Comments that were gathered were devoid of staff influence as the focus group had been entirely conducted by students and thus afforded room for exploration.

What became clear from the variety of responses and range of reports was that the use of technology within departments did indeed range as widely as we expected. What was notable was that there were differing levels of satisfaction between departments regarding technology use. Interestingly many departments which had a more extensive use of technology in teaching reported by student researchers had a greater number of negative comments from participants regarding staff practices. Negative comments made regarding inconsistent or inept use of technology during teaching time, calling for 'some staff [to] have training' or integration of tools that students viewed as 'for technology's sake'. Where uptake of technology in departments was low, students did call for greater integration, for tasks such as assessment submission and publishing of learning materials online.

Discussion

In order to undertake an evaluation of the use of learning technology in practice, the involvement of students as collaborators not simply respondents proved fruitful. As co- investigators we were able to learn from how they approached and interpreted the research questions. Those that they posed and those they discarded; the reports that submitted covered a wide range of topics outside our original inquiry to include services provided by library, colleges and exploring differences in departmental provision of resources. In line with Cook-Sather and Luz's (2015) assertions we were able to gather depth of responses, not simply just uncover a range of topics for discussion. Reports and recordings submitted by students included comparing of

practices within local contexts and provided examples of students sharing information and practice even with the research setting with comments such as "you have to show me that" and "I'll show you later" being included.

Gosper et al (2011) when designing their work, included an exhaustive list of technologies to be included in their gathering of the student voice, here we instead encouraging student participants to deviate from this list of suggested questions. Combined with using focus groups instead of surveys this approach generated a rich, context specific discussion. Students were able to bring their own locally informed understandings of community practices to their shaping and steering of the conversation and as Fielding (2001) advocates an opportunity to determine the questions that were asked. The shaping of the research for some was problematic and support for students was in some cases necessary, of the 26 participants 2 did not submit a final report due to problems encountered during the process.
The removal of any staff presence from the inquiry also lent an authenticity to the responses of students involved. Students were not reluctant to criticise staff practices and various reports returned used shorthand to refer to individuals known to both the researcher and the participant, drawing on shared experiences to illustrate their critique. We can speculate that students may have been more reluctant to offer these viewpoints had additional explanation been required but using such an approach may provide a mechanism by which it would be more likely that the questions were interpreted by the researcher and the participants in the same way (Leman, 2002).

Personal practices were also discussed by students in depth, in this area the findings were confirm work by Conole et al. (2008) and Flavin (2015) that students when undertaking private or collaborative study, opted for tools outside of the institutionally provided set. Of the tools that the students listed Facebook featured heavily as the collaboration and organisation tool of choice. Practices surrounding access to information were discussed by students, with a heavy reliance on online tools such as Google scholar. A few students still stated a preference for paper based resources, however many now saw making a physical trip to the library an unnecessary task as "everything is now online".
The initial intent of the research was to examine the tools that the students were asked to engage with as part of their studies. Rather, what the research uncovered were the practices surrounding these tools. This is a point of importance, as by providing an opportunity for students to explore the real issues that concerned them without staff influence meant that a simple evaluation of the tools in terms of the benefits they provided, evolved into a more nuanced discussion regarding a discrepancy between student expectations and staff and institutional practices. Whilst students in some incidences did make requests for enhanced provision for example "there should be lecture capture", in the majority their comments, being directed to a peer, focussed more on the shared experiences of using the tools already provided in practice.

The methodology seems to be effective in engaging students in the research process, perhaps in answer to Bovill et al's (2016) concern of overlooking certain groups, comparison to overall institutional demographic was consistent. Students were invested in the process and were supported throughout by staff. From the

results a colourful and multifaceted view of learning technology use in the institution emerged. Several reports from departments demonstrated the range of use and applications from different approaches to education were evident.

The success of this approach was based on the co-researchers' ability to engage with their peers in a way that is more approachable and accessible then if the research activity is conducted by staff. As the more knowable party in the research act, drawing on their local knowledge and experience to determine the areas of interest yields a focus and in-depth response. The quotes provided in the reports offered a candour and depth perhaps not normally available through staff-led focus groups or through surveys unearthing activities, practice and beliefs.

Limitations

The use of this methodology as we considered during this study does present several limitations. Being based on student involvement and engagement it is formed on the notion of trust and faith in the ability of inexperienced student researchers. Whilst recordings as a way of addressing the potential for any falsification of results this is not wholly guaranteed to be sufficient. Secondly it is dependent upon the student researchers' ability to engage and involve others within their designated cohort and wider than their established friendship groups. Third, the use of snowball sampling techniques, can have the potential of like recruiting like and producing homogenous and closely related results. In our experience the concerns regarding a narrow unrepresentative demographic were not realised however, issues regarding the impact of inexperienced researchers reporting and depth of response should be considered by anyone considering this method.

Conclusions

For us the process was the first step in an ongoing evaluation of the student learning experience. Issues have been raised by students in a way that has allowed their voices to be heard clearly and without influence of staff. As a method it was successful in gathering a wide range and variety of views, practices and evaluations from across the institution. Questions posed by the students and direction of discussions were varied and clearly represented the variance in practices and local understandings of technology use.

The data that was gathered from the report uncovered a range of issues and considerations surrounding the role that technology plays in shaping and influencing the student learning experience. The diversity of the responses from students was notable, with some disciplines making extensive use of tools, whilst others did very little. For many students, technology was seen as a critical part of their learning experience both in formal and informal ways. The methodology was useful in undertaking an evaluation of what were termed 'institutional' tools providing depth of response and granularity. For many students, these institutional tools fell short of their expectations, not only in their provision but also the practices and policies that surrounded them. Staff practices surrounding technologies which were universally provided varied widely, with the students reporting a lack of a consistent approach and underuse of certain tools, such as online assessment by comparing and contrasting their experiences to students in other departments.

For the students asking them to reflect on their own learning practices and use of the technology they used made them reflect on their own learning to higher degree – for

staff, and from personal reflection, the use of this process highlighted for us the potential and role that students should play within the institution to shape and improve the experience for all. This work formed one small part of an ongoing attempt to reshape and improve the institution in light of student feedback. The honesty of the student voice that we gathered, highlighted for us how staff should at times sit back and let the evaluation be student driven. The extent to which students answered the questions they posed themselves resulted in depth and breadth of topics that as inquirers we would normally exclude from a study as delimitations. How a question is posed and asked and by whom is far more important to determining the answers than the question itself. Ensuring that a question is fit and suitable when placed in the hands of students can be a powerful thing indeed.

References

Beckman, K., Bennett, S., & Lockyer, L. (2014). Understanding students' use and value of technology for learning. Learning, Media and Technology, 39(3), 346-367. *http://dx.doi.org/10.1080/17439884.2013.878353*

Baepler, P., Walker, J. D., & Driessen, M. (2014). It's not about seat time: Blending, flipping, and efficiency in active learning classrooms. Computers & Education, 78, 227-236. *https://doi.org/10.1016/j.compedu.2014.06.006*

Biasutti, M. (2011). The student experience of a collaborative e-learning university module. Computers & Education, 57(3), 1865-1875. *https://doi.org/10.1016/j.compedu.2011.04.006*

Bovill, C., Cook-Sather, A., Felten, P., Millard, L., & Moore-Cherry, N. (2016). Addressing potential challenges in co-creating learning and teaching: overcoming resistance, navigating institutional norms and ensuring inclusivity in student–staff partnerships. Higher Education, 71(2), 195-208. h p://dx.doi.org/10.1007/s10734-015-9896-4

Cheng J. & Marsh H.W. (2010) "UK National Student Survey: Are differences between universities and courses reliable and meaningful?" Oxford Review of Education 36 (6) pp 693-712. DOI:10.1080/03054985.2010.491179

Conole, G., De Laat, M., Dillon, T., & Darby, J. (2008). 'Disruptive technologies', 'pedagogical innovation': What's new? Findings from an in-depth study of students' use and perception of technology. Computers & Education, 50(2), 511-524. DOI/10.1.1.466.587

Cook-Sather, A., & Luz, A. (2015). Greater engagement in and responsibility for learning: what happens when students cross the threshold of student–faculty partnership?. Higher Education Research & Development, 34(6), 1097-1109 doi/abs/10.1080/07294360.2014.911263

Cornford, J., & Pollock, N. (2003). *Putting the University Online: Information, Technology and Organizational Change*. Routledge

Corrin, L., Lockyer, L., & Bennett, S. (2010). Technological diversity: An investigation of students' technology use in everyday life and academic study. *Learning, Media and Technology*, *35*(4), 387-401. *https://doi.org/10.1080/17439884.2010.531024*

Ellis, R., & Goodyear, P. (2013). Students' experiences of e-learning in higher education: the ecology of sustainable innovation. Routledge. **doi**:10.1002/rev3.3056

Felten, P., Bagg, J., Bumbry, M., Hill, J., Hornsby, K., Pratt, M., & Weller, S. (2013). A call for expanding inclusive student engagement in SoTL. Teaching and Learning Inquiry: The ISSOTL Journal, 1(2), 63-74 DOI: 10.2979/teachlearninqu.1.2.63

Fielding, M. (1999). Radical collegiality: Affirming teaching as an inclusive professional practice. The Australian Educational Researcher, 26(2), 1-34 DOI: 10.1007/BF03219692

Fielding, M. (2001). Students as radical agents of change. Journal of educational change, 2(2), 123-141.

Fielding A., Charlton C., Kounali, D & Leckie G. (2008) Degree attainment, ethnicity and gender: Interactions and the modification of effects. A quantitative analysis. A report for the Higher Education Academy. Retrieved from *http://www.bristol.ac.uk/cmm/team/degree-eth-gender.pdf* .

Flavin, M. (2015). Home and away: the use of institutional and non-institutional technologies to support learning and teaching. Interactive Learning Environments, 1-9. *https://doi.org/10.1080/10494820.2015.1041404*

Garrison, D. R., & Kanuka, H. (2004). Blended learning: Uncovering its transformative potential in higher education. The internet and higher education, 7(2), 95-105 *https://doi.org/10.1016/j.iheduc.2004.02.001*

Flavin, M. (2016). Disruptive conduct: the impact of disruptive technologies on social relations in higher education. Innovations in Education and Teaching International, 53(1), 3-15. *https://doi.org/10.1080/14703297.2013.866330*

Gosper, M., Malfroy, J., McKenzie, J., & Rankine, L. (2011). Students' engagement with technologies: Implications for university practice. Retrieved from *http://www.ascilite.org/conferences/hobart11/downloads/papers/Gosper-concise.pdf*

Gray, J. and Lawson S. (2016, April 18). It's time to stand up to greedy academic publishers. The Guardian. Retrieved from *https://www.theguardian.com/higher-education-network/2016/apr/18/why-academic-journals-expensive*

Healey, M., Flint, A., & Harrington, K. (2014). Engagement through partnership: students as partners in learning and teaching in higher education. York: Higher Education Academy. Retrieved from: https://www.heacademy.ac.uk/engagement- through-partnership-students-partners-learning-and-teaching-higher-education.

Jones, S., Sutcliffe, M. J., Bragg, J., & Harris, D. (2016). To what extent is capital expenditure in UK higher education meeting the pedagogical needs of staff and students? Journal of Higher Education Policy and Management, 1-13. *https://doi.org/10.1080/1360080X.2016.1181881*

Leman J. (2012) "A life in 22 clicks – How students interpret the NSS" Conference presentation: Higher Education Academy Surveys for Enhancement, National College for School Leadership, Nottingham. 17 May 2012. Retreived from:*https://www.heacademy.ac.uk/resources/detail/resources/detail/events/Surveys_For_Enhacement_2012/a_life_in_22_clicks*

Marsh H.W., Ginns P., Morin A.J.S., Nagengast B. & Martin A.J. (2011) "The Course Evaluation Questionnaire (CEQ): Use of student ratings to benchmark Australian universities." Journal of Educational Psychology 103(3) pp 733-748. *http://dx.doi.org/10.1037/a0024221*

Miller E. (no date) Wizard – statistics, visualization, data analysis, predictive modelling. Version 1.5.2 Retrieved from: *http://www.wizardmac.com/*.

Milsom C., Stewart M. & Zaitseva E (2011) "Can't get no satisfaction: discrepancies between NSS qualitative and quantitative data and implications for quality enhancement." HEA Surveys for Enhancement Conference. Retrieved from: *https://www.heacademy.ac.uk/node/2947*.

Mitra, D. (2004). The significance of students: can increasing" student voice" in schools lead to gains in youth development?. The Teachers College Record, 106(4), 651-688. Retrieved from: *http://curriculumstudies.pbworks.com/w/file/fetch/52018177/Mitra2004TheSignificanceofChildrensVoice_TCRecord.pdf*

Orner, M. (1992). Interrupting the calls for student voice in "liberatory" education: A feminist poststructuralist perspective. Feminisms and critical pedagogy, 74-89.

Ozkan, S., & Koseler, R. (2009). Multi-dimensional students' evaluation of e-learning systems in the higher education context: An empirical investigation. Computers & Education, 53(4), 1285-1296 doi:10.1016/j.compedu.2009.06.011

Paechter, M., Maier, B., & Macher, D. (2010). Students' expectations of, and experiences in e-learning: Their relation to learning achievements and course satisfaction. Computers & education, 54(1), 222-229. doi:10.1016/j.compedu.2009.08.005

Porter, S. R., Whitcomb, M. E., & Weitzer, W. H. (2004). Multiple surveys of students and survey fatigue. New Directions for Institutional Research, 2004(121), 63-73. Retrieved from *https://oia.unm.edu/surveys/survey-fatigue.pdf*

Robinson, C. (2012). Student engagement: What does this mean in practice in the context of higher education institutions? Journal of Applied Research in Higher Education, 4, 94-108 *https://doi.org/10.1108/17581181211273039*

Russell, C., Malfroy, J., Gosper, M., & McKenzie, J. (2014). Using research to inform learning technology practice and policy: a qualitative analysis of student perspectives. Australasian Journal of Educational Technology. Retrieved from *http://ascilite.org.au/ajet/submission/index.php/AJET/article/viewFile/629/854*

Selwyn, N. (2007). The use of computer technology in university teaching and learning: a critical perspective. *Journal of computer assisted learning*, *23*(2), 83-94. *https://doi.org/10.1111/j.1365-2729.2006.00204.x*

Sharpe, R., Benfield, G., Lessner, E., & DeCicco, E. (2005). Final report: Scoping study for the pedagogy strand of the JISC learning programme. Unpublished internal report, 4(1).Retrieved from: *http://www.academia.edu/2978206/Scoping_Study_for_the_Pedagogy_strand_of_the_JISC_e-Learning_Programme*

Wright, C. R., Lopes, V., Montgomerie, T. C., Reju, S. A., & Schmoller, S. (2014). Selecting a learning management system: Advice from an Academic Perspective. Educause Review. Retrieved from: *https://er.educause.edu/articles/2014/4/selecting-a-learning-management-system-advice-from-an-academic-perspective*

Yorke, M. (2009). 'Student experience surveys: some methodological considerations and an empirical investigation. Assessment & Evaluation in Higher Education, 34(6), 721-739. *https://doi.org/10.1080/02602930802474219*

Zineldin, M., Akdag, H. C., & Vasicheva, V. (2011). Assessing quality in higher education: New criteria for evaluating students' satisfaction. Quality in Higher Education, 17(2), 231-243. *https://doi.org/10.1080/13538322.2011.582796*