IMPROVING UNDERGRADUATE STUDENT EXPERIENCE AND RETENTION: DEVELOPMENT OF AN ACTIVITY-BASED RESEARCH TEACHING PACKAGE

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Abstract

How to enhance a positive student experience and encourage student retention are key issues in quality post compulsory education delivery today. Modules identified as having higher refer and attrition rates undergo a review of teaching and assessment methods. This can be the case with research methods studies and reasons reported include reticence about a new subject area and a reluctance to engage with the research process. This is often a subject area that might have not been studied by students progressing on from Foundation Degrees to a top-up degree. A review of perceptions of top-up degree students as part of a learning review within their programme of study identified that they did not feel that knowledge of research methods was integral to the value of their course. This paper reports on an action research project regarding an intervention with students studying research methods at levels 3 and 4. Its aim was to enhance the student learning experience about research methods. The intervention was a tutor–led activity-based model for teaching research methods. The findings were that students found activity-led sessions supported a sense of learning progression and a better engagement with the learning outcomes and also earlier engagement with the assessment process.

Introduction

Consideration of the student experience is a key priority in the formulation, delivery and evaluation of modules in higher education. This is partly due to the emphasis the Higher Education Funding Council for England (HEFCE) places on student retention, but also because it reflects the pursuit of excellence in teaching and learning as well as how high levels of student achievement are often rewarding for staff.

The HEFCE agenda has placed student support and retention high on the list of Higher Education Institution (HEI) priorities: 'today's students have high expectations. They want suitably qualified teachers who are effective communicators, to be supported in their studies, to enjoy their experiences, to complete their courses successfully and then to get a good job' (HEFCE, 2009). This has resulted in an emphasis in the local strategic plan on the student experience and the positive impact this exerts on retention figures. A number of measures have been instituted including sharing of good practice between module and course leaders, but there also exists a focus on seeking out effective ways of capturing student feedback in relation to teaching and learning. An analysis of summative module evaluation evidence suggests that there is a tendency for students to focus on the latter part of the module and the assessment rather than reflecting on the experience as a whole. There is also an argument that a broad range of other factors impinges on module evaluations potentially affecting their validity (Shevlin et al. 2000) such as student characteristics and the physical environment.

It could be argued that students enrolled on a top up degree face a different set of learning challenges to some other students within an institution. They do not have the shared experience, as a cohort, of having all studied the same modules at level 4 and level 5. The Foundation Degree programmes have a specific emphasis and attract students that may not have the necessary experience or qualifications to enrol directly onto an honours degree programme. Furthermore, the students in this study were taught on a different campus with their lectures being timetabled in a block each week, which affected the amount of time available for consolidation of learning.

Previously students on level 4 and 5 in health research modules had reported difficulties engaging with research methods ('the topic doesn't seem as relevant to us as other modules'), deeming it to be an unfamiliar subject area ('the language and concepts are so unfamiliar, we have never done anything like this before'), whilst others had questioned its relevance to their programme of study ('it is not what I have come into health to do - I don't want to be a researcher'). It had been noted in the assessment boards that many students achieved notably lower scores on level 5 research modules than on other modules linked to their degree. This was reviewed by the course team resulting in the decision that lower expectations of staff and students with regard to student performance on the research modules should be challenged and addressed. This had resulted in the development of an activity-led model of research teaching based on weekly classroom tasks requiring the students to examine an aspect of the research process and it was this model which was utilized for the top up degree cohort and evaluated in this context.

Employability is a high profile feature of HE programmes at present, predicated on the rising costs of tuition and the scarcity of graduate jobs: 'There is no debating that a major responsibility for the smooth integration of graduates into professional life, and hence into society, lies with higher education institutions (HEIs)' (Pukelis et al. 2007), therefore the drive to ensure that students are engaging with research methods and have confidence to progress onto competent use of research in the healthcare context, is important in the current economic climate.

The rationale for the choice of an activity-led module included a means of stimulating intellectual curiosity regarding research. It also offered a tool which facilitates the capture and utilization of moments of disconcertion and instability in the teaching and learning of a new skill (see Verran, 1999). Furthermore it was important to select an approach which encouraged students to engage with the process (learning about research) as well as the eventual outcome (successfully completing the project).

The challenge of engaging students in research has been an issue for some time. Winn (1995) outlined a strategy which involved using external 'real world' research projects to encourage students to see the relevance of research methods study. This was a feature of this programme as students were required to apply their learning about research to a practice based health initiative.

Edwards and Thatcher (2004) identified the benefits of a student centred study package written by tutors which enabled students to engage with the practicalities of research alongside more traditional teaching methods. This approach resonates with the need for practical engagement with research issues in a way which is both cost effective for the institution and time effective for the student, who may work around study and not have the flexibility required for external engagement.

Methodology

The aim was to utilise an action learning approach to enhance the student learning experience of research methods. The initiative included three stages:

(a) Exploring perceptions of research and research methods. It was decided that it would be useful to explore students' perceptions of the research methods module at the outset, to identify any prior learning relating to research methods and to establish any perceived anxieties about the module. The purpose of this was to diagnose problems and issues so as to inform the subsequent action learning and to acknowledge student-generated issues as a priority. This was achieved by utilising elements of 'scaling' engaging students with exercises designed to determine how they would rate their current knowledge and expectations about the module. This helped to ascertain students' perceived learning needs and identify particular challenges for teaching staff.

(b) Using an activity based teaching package to facilitate learning, and group discussions at the end of teaching sessions to evaluate progress and identify emerging issues.

(c) Undertake an end of module evaluation. The method used was an evaluation of the whole module to explore effects of the changes relating to learning, confidence and anxiety as well as retention and student achievement. This paper reports on the mid stage of development.

Initial perceptions of research and research methods

Data from a previous evaluation with level 5 (Undergraduate year two) students was used to model the workshop delivery and to address areas which were described as difficult or problematic by other students on research modules. This initially was a response in part to a wider engagement within UCLan based on consideration of 'transitions' and particularly seeking to identify the issues inherent for students in moving from level 4 (undergraduate year 1) to level 5 (undergraduate year two). There was also consideration of whether approaches used in other HEIs would be of benefit in this setting (see STAR project www.ulster.ac.uk/star). Their approach included the need to identify that students need to '*learn how to learn*' as well as being exposed to new information.

Using approaches borrowed from coaching (Jackson and McKergow, 2007) students on the module were asked to anonymously scale their learning of particular issues on a scale of one to ten. This gave some insights into which areas of research teaching might require specific emphasis.

The use of 'scaling' was received well by the students. One application of this was to assess student perceptions of confidence with research as well as specific learning elements. The tutor had already described their own journey using the scale from 'novice' to becoming more confident in relation to understanding and utilizing research methods. A continuum line was identified within the classroom and students were asked to stand at one end if they felt confident with learning research and at the other if they felt that this was an area of learning which was increasing their levels of anxiety. This proved a good icebreaker tool – particularly when one student moved outside the room – to indicate how anxious they felt. Using this as benchmark relating to confidence, a paper-based scaling tool was used for students to rate their learning in different areas (on a scale of 1-10) and help them to identify confidentially where they felt they might be in relation to knowledge and previous levels of research teaching. This was used in tutorials to establish individual student learning needs. Based on this evidence and utilising approaches adapted from coaching, the tutor focused attention on how to take small steps forward in knowledge and skills development – e.g. asking 'what would help you to move forward one step – from 3-4?'

Activity based sessional teaching packages to facilitate learning

It was important initially to ascertain how the students felt about the subject area, the module content and the assessment criteria. Students seemed to be keen to engage with a practice-based initiative or intervention, but were less able to identify links to the research process underpinning this and in particular the relevance of some steps of the research process.

Students were invited to comment on their perceptions of the research methods module as part of the initial session. This followed a discussion on what they expected to get out of the module and what they already felt they knew about research. Flip charts were situated around the room containing key questions about 'research' e.g. 'what is research?' or 'how do you feel about the research methods aspects of the workshops?' Students were also given post-it notes and invited to post comments / responses anonymously.

Each workshop comprised some activity based learning and students were expected to work on particular aspects of their research in groups and also individually – guided by the tutor. This was a central feature of the teaching method, the students were focused on making small steps which linked directly to the assessed project on a weekly basis. There were also some research methods lectures and the module was supported by the eLearn virtual learning environment (VLE) and by guided learning resources.

The teaching schedule followed a sequence based around designing a research study and included: identifying a research question within a chosen topic area; refining the question; devising aims and objectives; thinking SMART; identifying key words; conducting a literature review; samples and sampling; data generation; data analysis; ethical and practical considerations; and presenting findings.

Following each session and at the conclusion of the module students were invited to comment on their learning experience using anonymous postings as well as a written module evaluation.

Data analysis

The data (notes) from each session were kept in envelopes, coded and sorted into categories to identify emergent themes. This process was peer-reviewed by another academic.

Initial perceptions of research and research methods

An analysis of the initial session generated four categories: (i) understanding research as a concept, (ii) issues relating to the module/project, (iii) developing research skills and (iv) identifying learning needs. A sample of indicative comments for each category is summarized in Table 1, which indicated that responses reflected the two trigger questions and also two other areas.

Table 1: Initial session: Generating data relating to intervention

(i) What is research?

'*I'm not sure what research is – I am not sure I need to know either*'

'*it is about using search engines, Discovery – all that stuff and being able to find things online and in the library*'

'*getting articles and knowing what they mean*'

'*science and experiments…medical research*'

'*finding out in a structured way*'

'*market research – what people want*'

'*knowing the right questions and how to ask them*' '*high level stuff – analysing what people say*'

'*I know about research – we studied it before*'

(ii) Feelings about the module

'*I don't see why we need to learn research methods to do the project*'

'*I don't understand it*'

'*this is the bit that is worrying me – it is such a big piece of work and I don't know where to start*'

'*I am not sure it is relevant – when will I use this?*'

'*I don't like this kind of work*'

'*I would like a good degree at the end – but our grade is based on just one year and then this is a big part of it and it is all new – I think it will affect my degree*'

(iii) Attitudes to research skills

'*I am not looking forward to this*'

'*I'm a practical person – I don't like all this theory*'

'*I think I will be okay*'

'*I don't even know what they mean by literature review*'

'*why does it all have to be so complex? None of it is in plain English*'

(iv) Identifying learning needs

'*I can get it if we go through it in class*'

'*just want to be told clearly – more than once*'

'*asking questions and getting lots of feedback*'

'*we need tutorials – I need to be able to ask the questions which relate to my own work*'

'*I don't mind lectures … but sometimes they are too long to take it all in*'

'*it is good when it links to work*'

'*I need time to take it all in*'

End of Module Evaluation

The end of module analysis (written evaluation and discussion with students) identified categories of student feelings about the content, the teaching process, perceptions of achievement and confidence relating to research methods and the way in which the workshops contributed to completion of the project, the results are presented in Table 2.

Table 2: Student end of module evaluation

Student feelings about the content
'*I felt I learned a lot and the exercises we did in class helped*'
'*I didn't really engage with the written stuff we did in class – I kept changing my mind on what to do - but people who did made some progress*'
The teaching process
'*it was okay and I felt I was doing ok right up until the point where the teaching ended and we were on our own*'
'*I never go to grips with meeting with my supervisor*'
'*it is too hard to do this on your own*'
'*I couldn't get started on this until I had finished all my other work and then there was too much to do*'
Perceptions of achievement
'*I am really worried about whether I learned what I needed to learn*'
'*I have never done such a big piece of work*'
'*I felt more confident after the presentations of our work – but I don't know how I will do with the project*'
'*there were all sorts of things going on [in life} which just affected me at the wrong time*'
Confidence relating to research methods
'*I know more than I did, but I am not sure it is enough*'
'*we needed more time for the information to sink in*'
'*it was a really hard year and I felt I was having to rush to fit everything in*'
'*I have learnt how to search literature and I think I have more idea of what I am looking for and why*'
'*I am not sure what I have learned really*'
Workshops
'*it would have been better if we had had them every week all year, rather than just semester 2*'

Discussion

Sessional teaching package analysis

The findings of the analysis of each session can be divided into two parts: those linked directly to a review of content and methods used during different stages of the module delivery; and those which related to particular sessions.

Mid-point analysis

The activity-based learning exercises were implemented taking into account the feedback from the initial sessions.

As the module progressed the comments tended to be more specific (see Table 3 which provides a summary of these).

Table 3: Implementing change: Feedback following introduction of the activities

Progressing with content learning
'*I like the fact that we are getting to grips with what we need to do for the assignment*'
'*I found the session on identifying a question really useful – I thought it was straight forward at first, then it seemed too hard, and now I think I have got my question sorted*'
'*the penny is beginning to drop I think*'
'*I think I am beginning to see that I am making progress*'
'*I am moving forwards slowly but surely*'
Satisfaction with learning experience
'*I like it when we work through examples*'
'*I liked the fact that we actually wrote the introduction in class – I felt I had really achieved something – even if I need to revise it later*'
'*I find it easier to ask questions working like this*'
'*It does make me think and I find I can pick up the strands from week to week*'
Perception of learning intensity
'*I feel it is a bit pressured – you have to focus on this, but you also have other work to do too for other modules*'
'*we have so much to do and this as well – it is a lot to take in*
'*sometimes you can't take any more in ... it is a long da*y'
Preference of module delivery
'*I would rather work by myself, but it seems to help other people*'
'*I would rather have a lecture*'

Students could reflect on their progress and identify that progress was being achieved. The mode of delivery indicated that interaction, group exercises and dialogue were valued. However a minority did prefer independent working, although this might have been shaped by their occupational time demands. The module retained its characteristic of demanding learning, however in the light of students reporting a sense of progression it suggested that these demands were manageable rather than overwhelming. Overall the evidence suggested that the activity-led intervention in each session contributed to enhanced student satisfaction and perception of achievement. Some comments made direct links between the activity and its relevance to the final assessment which was a project. Even at the mid-point students had begun to report levels of confidence in using their research methods learning to inform how they would develop their project.

Conclusion

There are some issues which have emerged which relate to the particular student cohort reported in this action research study including: the pattern of study, delivery off the main campus and the educational background and experience of the cohort group. The students also referred to the pressures of other work which impacts on the learning experience in this module.

It was interesting to reflect on the grades achieved. A number of students had extenuating circumstances accepted - of the students who submitted the research project one was referred and the others achieved marks which were similar to those achieved in their other modules.

Although there is considerable scope for overall improvement of grades, it can be argued that the research element of their programme did not generally reflect lower marks than those on other modules within the programme of study. There is work to be done with project supervisors reviewing feedback to identify particular areas where students have required additional support in relation to understanding and using research knowledge.

It is hoped that the continued impact will be similar to the use of these approaches with other students on a similar level 5 module in that it will result in fewer students referred on the module and higher student achievement which is more in line with the academic profiles of students taking the course.

Overall students' responses about the intervention (on a level 5 module) demonstrated that whilst the module content proved to be a demanding learning experience it was none the less recognised as one in which learning was taking place. The end of module evaluation showed an increased successful completion rate and higher overall average module score (with the same staff team). This suggests that the intervention had some effect on outcomes, and that structuring content delivery to make clear links about its relevance to the project assignment contributed to this.

However when comparing this current data to that of the earlier study, the top-up degree students described a higher level of anxiety in relation to the project than did other students. Additionally the comments about the pressure of learning seem to reflect a lack of opportunity for consolidation of learning in the present timetabling of the course

This module was delivered via a series of weekly sessions but not all provision is scheduled in this way. When considering the specific needs of both top-up degree students and students taught on other campuses consideration needs to be given to any adjustments that might need to be made regarding the type and frequency of learning support offered.

This is particularly relevant in cases where the timetabled delivery is on a 'whole day block' basis and where the staff supervising the research project are based on another campus. It would also be of interest to determine the extent to which activity-led learning could transformed into blended learning using the eLearn VLE. This might facilitate students continuing a learning dialogue outside of the classroom and revisit learning at a time, place and pace that fits their occupational and domestic time pressures.

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