

Re-thinking Student Induction

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ABSTRACT

The paper will report on a two year project to radically re-design our approach to student induction. While we recognise that student induction is a process that occurs throughout the student life-cycle, our original approach to the early induction of new undergraduate students was largely lecture-based and involved key staff giving presentations on our expectations of the student cohort in terms of diligence, work ethic and time keeping etc. Student feedback on this approach tended to be poor. Worse we found it to be ineffective in preparing our students for the work ahead and we believe contributed to poor retention figures in the first year.

We believe, a key short coming was that we wasted the high levels of enthusiasm and motivation most students have directly prior to arriving at university and this lowered their expectations not only of the content of the degree but also of what we expected them to achieve in their first year. Therefore we redesigned our early induction to consist of a full week prior to the start of term (week 0) which we called "Welcome Week." This week consisted of a series of intensive activities centred around teamwork and enquiry-based learning. Student feedback after the first year of "Welcome Week" was extremely positive.

Our approach to Welcome Week has been widely disseminated across campus and is now the "standard model" for facilitating the early academic and social engagement of students at our institution. In particular it has been adopted by other science and engineering disciplines. Therefore we will also discuss some issues concerning adapting our programme of computer science-based activities to other disciplines.

Keywords

Induction, Student engagement, First year experience, Retention.

1. INTRODUCTION

The transition from school/college to university life is one of the most challenging events in a student's life and can often mean the difference between successful completion of their studies and early withdrawal from studies. Therefore we must take student induction seriously and where possible improve on current practice. Many students withdraw from higher education during the first few weeks of study. This suggests the importance of starting to build institutional and disciplinary engagement and commitment as early as possible. This can be achieved by helping students to understand the programme they are able to participate in, developing communities of learners and encouraging the formation of friendships and social networks' (Crosling, 2007:173). This paper will consequently report on work we have done over two years to redesign how we approach the early induction process for Computer Science students at Birmingham.

Induction is a time and resource consuming activity. However, the advantages of good student induction should not be underestimated. If we can scaffold and facilitate the transition from school/college to university approaches to learning (e.g. independent and enquiry based) at the very start of the degree then not only will the first year experience be improved but learning and teaching will be facilitated throughout the degree. We argue therefore that time and effort spent during early induction is very worthwhile.

2. BACKGROUND

Much of the research on improving student retention suggests that students are more likely to continue and succeed if they are engaged in their studies and have been encouraged to develop networks and relationships with their fellow students (eg Crosling et al, 2008). It suggests that this is more likely to happen where the curriculum is innovative, responsive to the diversity of students' needs, and promotes academic and social engagement as well as active learning.

This is done by:

- Considering alternative and innovative approaches to learning, teaching and assessment

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- Integrating and embedding 'study skills' into core learning and teaching activities
- Personalising the First Year Experience

Wingate and others have argued that discipline-based pre-induction and early induction activities need to prepare students for the transition to learning in HE. '*A holistic, subject-specific approach is needed to support all students in the complex process of learning to learn in higher education*' (Wingate 2007:391). This is further confirmed by Shaw et al (2007) who argue that '*embedding academic development in mainstream teaching and learning*' is likely to '*enhance student retention, progress and achievement*' (Shaw 2007:50). We therefore need to:

- make our expectations explicit
- fill the gaps that many students have about studying in HE
- encourage students to '*start engaging with discipline specific material at an earlier date*'
- help students to understand the programme they will be participating in
- begin to develop a community of learners
- encourage the formation of friendships and social networks (peer support and personalisation)

QAA advice (QAA, 2008a) on the first year experience is to take a longitudinal and multi-layered approach to enhancing the academic and social transition of students through facilitating the following key features:

- early understanding of HE-level learning
- formative assessment and feedback
- engaging and challenging learning experience
- enquiry-based, collaborative, small-group work, project-based learning model
- embedding progressive skills development
- reflective skills within a subject context (PDP)
- social networking and peer support
- early staff/peer interaction – e.g. personal tutoring
- introducing employability skills from the beginning of first year
- students understand the value of their degree programme in terms of their potential future careers
- discipline-based support for transition
- co-ordinated, responsive, and resourced
- involves collaboration between academic and administrative staff, and central services

Three key recommendations of the QAA report on enhancing the first year experience through the personalisation of the first year experience are (QAA, 2008b pp83 – 86):

- Staff should give proactive support to first year students at an early stage and acknowledge that, regardless of their backgrounds, they need time to adjust to the university learning environment. Steps should be taken to treat students as individuals and to personalise their experience in small but significant ways, for example by getting to know their names, taking attendance in large classes or encouraging small group discussions. The importance of socialisation within this adjustment process should not be underestimated.
- Students need time to learn how to learn, particularly if they are first generation entrants into HE and have little social and cultural capital resource. Staff should make space in the curriculum to teach students how to learn, for example to address issues of meta-learning, even though this is perceived to take time away from discipline-based tuition. The beneficial consequences are seen in the empowerment of students, the creation of autonomous and independent learners and the facilitation of learning communities and systems of peer support.
- HEIs should develop and implement policies on, for example, attendance monitoring, PDP, buddy systems and personal tutoring, in order to help students personalise their first year experience.

3. OUR INTAKE

Our first year cohort is typically around one hundred students over four different degree programmes and a small number of half degree programmes (typically shared with Maths). 80% of our intake will take either our standard Computer Science degree with the rest evenly split between more specialised degrees in Artificial Intelligence and a major/minor degree involving Business Management. Like most computer science degrees, we have relatively few female students compared to other subjects and approximately 25% of our students will be from the local area.

Our previous approach to the early Induction process was accomplished through the use of several lectures which focussed on delivering the essential information required for study at Birmingham such as degree programme information, progression, mitigations and plagiarism. We also invited a talk from the careers and library services.

At the time we did not evaluate our induction procedure but there was unease as to its effectiveness. While we cannot attribute a single cause, our drop rate for the first year (and in particular the autumn term) was

high compared to other computer science departments nationally. In addition, our experience was that there was a significant minority of our first year cohort who were unmotivated and often relatively disconnected from the School's culture.

At the same time, we received funding for a "Learner Independence" Project from the University of Birmingham's Learning Development Unit. The focus of the project was the "first year experience" and therefore we made student induction a focus. Our first step was analysing how our current first year viewed their induction experience. We discuss the student voice in the next section.

4. THE STUDENT VOICE

Student feedback on the 'Welcome' they received at discipline level suggested that the following factors were useful and others were a concern

- Students would like their induction session to include a social element
- Student would like the teaching/learning style of their programme, contact hours and the required workload to be explained.
- Student would like the required standard of their assignments to be explained with specific examples where possible. Consistent guidelines on how to format work for submission would be useful.
- Student mentors would like to be more involved in the planning of Welcome activities for new UGs
- Students would like the role of the personal tutor (and other staff) roles to be explained and to have standard regular meetings with them.
- Complicated timetables can be a source of stress for students.
- Students like their welcome to include some motivational/ enthusiastic presentations about their chosen subject, give an outline of their course
- Students would like to hear from successful alumni during their induction.
- Some induction activities are not helpful for students at the beginning of their course – library talks when they have not been to the library, plagiarism talks when they don't have any assignments to relate it to.

4.1 Welcome Issues

From our evaluation, we identified several key areas and challenges to successful induction.

Enthusiasm and raising expectations

We believe that most students have a high degree of motivation and enthusiasm at the start of their studies which can be wasted by a poor approach to induction. We wanted an induction which would maintain and increase the enthusiasm the students have for the rest of their studies.

In addition, the induction should set a standard of work which challenges and engages all students and sets a standard for the rest of the first year. Accomplishing this is difficult due to the differences in ability, experience, motivation and learning styles among the student cohort upon arrival.

Pre-arrival

Our questionnaires reveal that students often spend an anxious summer vacation waiting for the beginning of their university career. Moreover students often have questions about university life which are not necessarily covered by the usual information we send. Despite this students also report that they feel swamped by the amount of generic information sent to them over the vacation from central services and increasingly take summer jobs prior to University. Therefore we felt the need to facilitate the opportunity for students to both social network and find out information but in a manner which was not intrusive or time consuming.

Student Inclusion

All induction activities should be as inclusive as possible. However, students have a diverse range of individual needs. For example, the following groups may have specific needs that should be addressed:

- International students (especially students without strong English language skills)
- Students with learning difficulties or disabilities
- Local students
- Mature students (and parents/carers)
- Black and Minority Ethnic (BME) groups
- Religious groups

- Other widening participation groups (eg those with no previous family involvement in HE)

Often it is difficult to predict some students' specific requirements/needs until the student has arrived, but 'what is evident is that changes stimulated or necessitated by a particular group of students benefit all students, and thus have a positive impact on the achievement and retention of the whole cohort' (Crosling,2008: 182)

A particular area of concern is local or "stay at home" students. Approximately 25% of Birmingham students are from the local area and decide to stay at their family home or live locally during at least their first year. We believe the current financial situation will result in increasing numbers of students staying at home for at least part of their studies. Our internal data and experience confirms that students who live locally are at higher risk of withdrawal compared to those students who live in halls. Our evidence also suggests that some of this cohort are less likely to engage with the School. Holdsworth and Patiniotis (2004) '*highlight the difference in experience between halls and home students. Home students see university as an extension of college – just a change of bus route – and have little interest in university life beyond attending lectures*' (Gorard,2007:90) Moreover our previous induction activities overlook the needs of these students and indeed campus wide activities often unintentionally exclude local students (for instance organised by the Guild of Students during the evening).

Inclusion is also an issue for students of different cohorts within the same School. Ideally, we want to limit the duplication of information but if there are differences in the curriculum this runs the danger of making some content redundant for different degree cohorts. In the School, this has become less of an issue with the implementation of a "common first year" for all single honour students in the School. However, this still leaves a small group of students (those taking Business Management as a minor and students on the half degrees) with a different timetable and programme requirements than the main cohort.

5. REDESIGNING OUR INDUCTION

We designed our Induction Week within the following framework:

Academic contact is restricted to half days throughout the Week

This allows for activities from the rest of campus - notably the Guild of Students and the Careers Service to schedule events.

Each day to focus on the actual doing of a particular learning activity

For example, the intention was to schedule an actual computer programming laboratory session rather than just give a lecture-based talk on the rights and wrongs of computer use.

Extensive use of student led activities via the use of student mentors

Our intention is that every formal session is followed by a student-led activity where the freshers are encouraged to reflect on the session.

5.1 Scheduled Sessions

We scheduled the following activities during the week:

Local Students Session

We arranged a Local Students event on the first day of Welcome Week which we publicised by sending information about the event only to students living in the West Midlands area. This event involved an introduction to the School and key staff and some group activities (based on writing pseudocode for a recursive solution to the Towers of Hanoi problem).

Treasure Hunt

Welcome Week is started off for all students with a treasure hunt across campus. We arranged the students into groups and then gave them a series of riddles which described various parts of the campus. The intention was that students would then discover key locations such as the library and main lecture theatres. At the same time we were able to process student registrations.

Computer Lab session

We arranged a session in the first year labs. This was a challenge since we cannot assume that all students have done any prior programming and we did not want to introduce our key programming language (Java) since that would be repeated in Week 1. In the end we used Logo & turtle graphics. In future we might try another programming language or environment such as Greenfoot.

Industry Talk

In the first year of running Welcome Week, we invited an industry speaker to talk to our students taking a minor degree in Business Management since our straight honours students need to attend a module fair on the same day. However, this is only a small number of students and we encouraged our straight honours to attend if they wished. To our surprise the entire year attended. This year we invited all students.

Introductory lecture on Computer Science

This lecture was designed to be both challenging yet not part of the programme curriculum. The intention was to stretch the students but also allow for discussion of any difficulties the students faced. This session was followed by a social reception in the School where students were encouraged to meet the rest of the

teaching staff and assistants.

5.2 Other Activities

In addition to the activities above, we arranged the following as student-led activities.

Web-based social networking

We invited all freshers to join a "CS Freshers" facebook group during the summer vacation which was run by our student mentors (current second years). 95% of our first year joined this group and the group proved useful in providing both an initial point of information and an opportunity for social networking.

Timetabling

Rather than give our students a timetable for the Autumn Term we give them a blank timetable and with the help of student mentors allow them to construct their own timetable with the explicit instructions that they should block out spare time for coursework. This approach has shown a marked improvement on our previous practices.

5.3 Evaluation

During the two iterations of Welcome Week we collected feedback from the students. In all aspects the students rated our Welcome Week extremely highly. In particular we achieved 90% agreement that the Welcome Week both motivated students for further study and prepared students for lecture-based and laboratory-based teaching. The students were also extremely positive about the role of the student mentors. Our approach to Welcome Week has been widely disseminated across campus and is now recognised as best practice. In addition, it has been adopted by at least four other academic units on campus.

6. CONCLUSIONS

Students have moved from being passive 'recipients' of our design for early induction to being partners in planning and organising the process. By being inclusive and building on student's strengths and motivation the changes have facilitated early student academic and social engagement. Setting high standards from the start of the course and challenging our students is not incompatible with scaffolding the transition to learning in a research-intensive university.

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