

Making the Most of Intro Week

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Abstract: *This paper will showcase and evaluate the revamped Intro Week used in Systems Engineering (ACSE) for 2007 entrants. The new Intro Week was designed to meet several aims: (i) to make students feel part of the department; (ii) to introduce an independent learning style, such as problem based learning (PBL); (iii) to provide a supportive transition and begin the process of managing expectations; (iv) to help students make friends; (v) to provide key information.*

INTRODUCTION

Induction of new undergraduate students typically takes the form of a week (Intro Week) of planned activities aimed at getting students used to a new academic and social environment. Typically, and certainly in the authors' department (Automatic Control and Systems Engineering or ACSE), this week spans Monday to Friday.

Many issues surround induction, for example: diverse undergraduate intakes, criteria for admission, demand for and uptake of higher education, social-economic groupings, and changing standards in pre-university education (HEPI 2007). Bearing in mind the diversity of backgrounds of new undergraduates, academic departments need to have a clear grasp of their own strategies for undergraduate learning. Intro Week should be the beginning of the inculcation of a sound approach to learning, allowing new students to adapt to practices in their academic department. In addition, Intro Week provides an opportunity for the student to integrate with peers and to gain an understanding of the university infrastructure: in other words, Intro Week should give a holistic induction of undergraduates into their new mode of existence.

Generic principles (Cook et al 2005) applied to the design of induction programmes typically include the need to familiarise students with the university campus, the academic department and academic obligations. It is also important to encourage students to establish new study habits, to learn new modes of communicating and interacting within their academic department, and to explore new social interactions. Certainly within the University of Sheffield (UoS) there was a realisation that organisation and delivery of intro week was very variable across different departments and consequently there has been significant work of late to help guide departments in best practise. One such example is a series of 'open to all' lunch time 'Spotlight' sessions, which highlight best practise in specific areas; these have been used recently to disseminate experiences and ideas for Intro Week.

Following reflection on the recent UoS projects and guidelines on induction, ACSE staff felt their existing programme did not adequately serve the needs of students. Specific weaknesses were the lack of sufficient contact with departmental staff, each other and the discipline and also a missed opportunity to manage student

expectations when they were most easily influenced. In parallel, department student questionnaires showed that existing students had an antipathy for independent or problem-based learning (IBL/PBL) and had unrealistic expectations of university learning and teaching; consequently many expressed this as dissatisfaction. One other notable programme weakness was staff reluctance to provide a full timetable as they believed new students needed lots of free time to 'settle in', whereas in fact best practise suggested the exact opposite; a well structured sequence of activities helped students through the transition, as well as providing comfortable ways to integrate with their new peer group.

ACSE therefore took a two-pronged approach. First, we used the recently publicised ideas of other departments on induction to consider what type of activities would be beneficial for inducting ACSE students into the department, the discipline, each other and University rules and regulations. Second, we applied for support from the Centre for Inquiry-based Learning in the Arts and Social Sciences (CILASS), to look at how we could manage the transition into University learning and teaching and in particular, begin the process of getting students to be both inquisitive and independent learners. Early evaluation of the new Intro Week has identified many positive benefits for both students and staff.

So, in summary, this paper looks at a new approach to Intro Week in an engineering department (ACSE), making use of PBL to capture students' interest and to set the scene for future PBL in the curriculum, and applying generic principles for induction in an innovative way. Specifically section 2 discusses the impetus for change, Section 3 presents the revamped Intro Week, and Section 4 is an evaluation of the new design.

2. IMPETUS FOR CHANGE

2.1 Past Practice in ACSE

In past years, ACSE followed generic principles in deciding the content of Intro Week. There were many sessions of delivered material: a welcome talk from the head of department, an introductory talk on module choices and department rules and regulations from the first year tutor, further talks about safe working practices, the student portal, the virtual learning environment, time management and study skills, library resources, the staff/student committee and personal development planning.

New students do need all this information, but there was a clear case of information overload and far too much for students to absorb when delivered in a didactic fashion, as was previous practice. There was a clear need to revise the way this material was presented to make the sessions more interesting and to help students take on board what they needed to know.

ACSE Intro Week did contain some active sessions, as opposed to the passive learning described above; these comprised a session to meet ACSE staff and personal tutors, and a session to meet other students and gain awareness of the University VLE using an on-line discussion board exercise. These activities were considered successful and would fit well into any new Intro Week design.

However, apart from the discussion board exercise, there were no activities to help ACSE students bond with each other or to engage them in the subject area of the department and thus start forming their identity. In fact, staff had been nervous to put more activities into intro week, believing that students needed time to socialise freely.

Nevertheless, despite the weaknesses, some impetus was needed to give staff confidence in initiating change. These are discussed next.

2.2 Problems in the first year

It became clear in 2006-07 (and in fact earlier on reflection) that students had not learnt from or engaged in Intro Week as required. For instance attendance tailed off even during Intro Week; we might expect this from about week 6 in semester, but not so early! Students later in the year reflected that they had found Intro Week “too serious” so they stopped attending sessions. But the problems in student engagement and performance across the board were more serious than attendance in Intro Week. Student performance indicated that a substantial number of the first year cohort were disengaged, highly dependent students who struggled to make the transition from a school to a University style of learning.

Evidence of lack of student engagement and poor performance included:

- A high failure rate in level one modules,
- Poor attendance at lectures, labs and tutorials,
- Students not knowing about or not using the resources provided for their learning.

2.3 Student and Staff observations

It is possible to get some insight into the students thinking from their feedback through module and year questionnaires and it becomes clear that their expectations of ‘how to learn’ are often immature; they expect the lecturer to tell them everything they need to know.

Sample student feedback illustrating student attitudes to learning was as follows:

“I think xxxxxx should give more detail in class”

“Basically I just need to know how to solve problems, but he talked too much about ... things we don’t really need to know. Those things might be useful... but not in our current level.”

“...I feel the self learning approach also did not work as too much of the learning was put on our shoulders.”

It was apparent that there was student resistance to independent learning and/or a lack of ability to learn independently.

Sample staff feedback showing their perceptions of the problem was:

“...The intention is that the students should work through the problem sheets in their own time and then come along and seek help if they are struggling. Unfortunately over recent years the students are seeing these sessions as the times when they actually work through the sheets, and don’t seem to do much outside the classes, which is a growing problem.”

“I suspect that these people are not putting in the required self study and then bringing the problems to myself or the demonstrators at the tutorial.”

Of course these observations about students are not new and are repeated in institutions across the country. Nevertheless, staff in ACSE decided that more could be done to help the students develop a more mature and responsible attitude to learning. In particular, it was felt that we could combine several objectives by looking at a redesign of intro week whereby students found this more fun and relevant but also to begin the process of managing their expectations or ‘to educate’ them.

2.4 University initiatives to improve induction

UoS has become increasingly proactive in recent years in sharing and disseminating good practice; in fact we have support staff with a specific remit of helping to achieve this, annual L&T conferences, dedicated websites, frequent lunch time sessions and more. Consequently, staff in ACSE became aware of successful projects that had been run using innovative approaches to induction, for example the Learning to Learn project in the Department of Human Communication Sciences [Freeman 2006], initiatives in Biomedical Sciences and Chemical Engineering; these three intro week projects were summarised together in a lunch time session. Each project contained some areas of good practise that could be imported to ACSE. For instance,

- the Learning to Learn project introduced an IBL approach in Intro Week, supported by the University's CILASS, which had been raising the profile of inquiry/problem-based learning as part of its remit.
- The chemical engineering project looking at the introduction of group based engineering case study tasks.
- Biomedical sciences, amongst other things, had explored the potential of pre-arrival activities.
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Following reflection on these, the authors felt that some IBL based activities would achieve the main aims of helping students adjust to an environment where independent working is expected and also to give opportunities for meaningful but fun group work within the departmental context. Hence, after a successful bid from ACSE, CILASS awarded a grant to provide expertise and funding to support the redesign of the ACSE Intro Week with the introduction of IBL as one main thrust.

2.5 The Engineering Focus

Implicit in engineering education is the need to equip engineering students to be problem solvers. Many real engineering problems may be as yet unsolved, or may benefit from improved solutions. Engineering departments can equip students to be problem solvers by providing a sound theoretical framework linked to an understanding of the processes for applying theoretical knowledge. Problem Based Learning (PBL) and inquiry based learning (IBL) are such processes, involving defining the problem, reflecting on current knowledge, acquiring new knowledge to meet the needs of the problem, applying knowledge to solve the problem and evaluating the results (Kiley et al 2000). Because of the rapidly changing nature of engineering problems, PBL is a highly suitable methodology for engineering students to learn as it encourages them to take personal responsibility for identifying and learning what they need for each task.

However, as mentioned earlier, such approaches may not be so common place in a results based school system which rewards text book answers. Many students, as evidenced by their comments, seem to demand 'ideal' solutions for everything which can be memorised and then reproduced to ensure a high mark. Consequently, these students are often uncomfortable with a PBL approach because there is no single right answer and no notes to tell them exactly what to do. Yet, such a scenario replicates the problems they will face in employment and hence engineering departments need to help students embrace PBL techniques, especially where previous experience is dominated by a learning style in which knowledge is predominantly classroom delivered.

2.6 Summary

Intro Week in its old form did deliver the information necessary to new students, but in a rather didactic way which did not engage students sufficiently. More worryingly, an apparent lack of both independence and a spirit of inquiry persisted throughout the academic year and in fact also into year 2.

The ACSE vision was to introduce some collaborative PBL into Intro week to motivate students to take more initiative and inspire enthusiasm for the subject, in contrast to the former more passive learning approach which appeared to lead to disengagement in our students, and in others as documented by Kahn and O'Rourke (Kahn, P. and O'Rourke, K. 2004). Choosing to make the PBL collaborative would also help with early socialisation within the year group, an important aspect of Intro Week in the published guidelines. In addition, the peer support in the groups would help to make the transition to a new learning style more palatable.

It should also be mentioned that changes in Intro week would have little benefit in isolation and although this paper focuses only on that, a parallel, embracing and more holistic project (Rossiter et al, 2006), is the first year team project. As part of this larger project, which considers the curriculum as a whole, this team of first year tutors is considering how to reinforce and build on the momentum gained from Intro week and specifically, to continue the task of convincing students that independent learning is an essential part of life and thus University education. Currently, the plan is to ensure that a number of assignments, spread through different 1st year modules, will have some IBL or PBL characteristics.

3. REVAMPED INTRO WEEK

This section gives more detail of the timetable and activities used in the intro week programme.

3.1 Multi-faceted programme

Firstly, this section outlines the requirements for the new Intro Week before subsequent sessions discuss the activities in more detail. This summary is based on reflection on previous Intro Weeks and the vision to emphasise socialisation and to introduce independent learning.

- Material that previously had been delivered in a solely didactic lecture (e.g. regs, safety, ...), except for the department head's welcome, would be removed. The head of department's welcome would be retained as a significant marker of the start of the degree programme.
- A pre-arrival task would be added to set the scene for independent learning. New delivered material containing reflections on a pre-arrival task would be added, to reinforce the importance and relevance of this assignment.
- The meet the staff and personal tutor session would be retained because of the socialisation opportunities provided.
- The discussion board exercise (cave rescue) in the virtual learning environment would be retained because it provided socialisation opportunities mixed with hands-on experience with an e-learning tool.
- A robot project would be added to allow new students to work in groups to find and use a wide variety of resources to solve a problem.
- A "learning trail" was added to require the students to discover everything new students were previously told via Intro Week lectures.

ACSE activities		
Monday 9.30-10	Meet HOD and 1 st year tutor.	
Tuesday 10-1	Introduction to mathematics needs, University computing and the VLE. Groups formed and PBL tasks briefing.	Groups undertake learning trail in times of their choosing.
Wed 9-1	Laboratory based PBL task.	
Thurs 10-1	Staff and current students available to answer queries on learning trial.	
Friday 10-12	Prize giving and meeting personal tutors	

This timetable leaves ample time for centrally organised activities and registration as well as group discussions on the two major tasks.

3.2 Pre-arrival task

There is some evidence, certainly from the Biomedical Sciences experience, that students appreciate being made part of the department before arrival and do not resent being asked to carry out some preparation. Thus, in a letter sent at the end of August 2007, the new students were instructed to “Find out three things that a Systems Engineer needs to know about. For each of the three things, write a brief description (a short paragraph) and provide a reference saying where you found the information.

You might like to look at these websites as a starting point for this task:

- <http://www.raeng.org.uk/default.htm> (Royal Academy of Engineering)
- <http://www.incose.org/> (International Council on Systems Engineering)

You can find more websites with a Google search.” Instructions on how to submit this information were provided.

A brief session on the first day of Intro Week summarised the material the students had submitted, identifying common and prevalent themes. The material was then anonymized and made available for all new students to view. The combined reference list was also made available for all to view and to illustrate both the wide variety of resources available, and more significantly students existing abilities to work independently and with inquiry.

3.3 Robot project

One major benefit of the CILASS funding was that it enabled ACSE to employ a talented third year undergraduate to design a robot exercise for one of the collaborative PBL projects. A robot was chosen because it is a good example of “systems engineering” which is the core theme within all ACSE degree programmes. Lego Mindstorms kit was adopted because it allows complex functionality while being very straightforward (quick) to learn, thus allowed interesting tasks within the relatively short time available.

In the robot project, the students were required to program a robot to do a series of tasks:

- Collect/release a ball
- Follow a line
- Find the way through a maze
- Avoid collisions with walls

Points were awarded for completing each part and there was a bonus for the fastest to complete the entire circuit. To add an extra competitive edge and include the possibility for strategy, hints and answers for sub tasks could be purchased by sacrificing some points; the time saved could allow a team to complete a task worth many more points than sacrificed.

There was an advance briefing on the Tuesday of Intro Week following the exercises on the VLE. At this point, students were placed into groups and given both group assignments. Groups were encouraged to plan their approach to both tasks and share contact information before leaving.

One key aspect of the robot challenge was to manage student expectations of University learning and teaching and specifically to encourage a spirit of enquiry. Thus the briefing encouraged students to search for resources in advance of the session, which was the following day. This was to help them develop confidence in how to find useful resources for assignments they would meet later. Also, there was the hidden agenda of encouraging them to be self reliant rather than expecting all the answers to be provided in the handouts. Some resources had been planted on the VLE and in the library and the handouts gave strong hints to this effect.

- In fact, observant students would have seen the folder of web resources during the VLE exercise they had just completed; this was to engender in the students the message that key resources would be placed on the VLE (a surprising number of students don't seem to browse the VLE sites for their modules and never realise what has been provided for them).
- The library resources could be found following a simple library search (using the computer search system) of Lego Mindstorms to identify the correct shelf, where a relevant book was also stored. Again the intent was to give students confidence in searching the library.

As it happened, most student groups seem to have missed the heavy hints in the handouts altogether and so this aspect will need revising for the future.

The programming task was done on the Wednesday morning of Intro Week and groups were allowed four hours to program their robots, during which time if they had not prepared in advance they also needed to find and use resources to help them complete the set tasks. Although this seems a long session, the authors' impression was that the students did not find it so and worked hard up to the last minute to get the best score possible. Groups were given two computers each so that team members could work on different aspects of the challenge in parallel.

After a final competition between robots, points were totalled. Each member of the winning group was awarded a £10 book voucher, which was funded by the CILASS grant. The winning group was also asked to reflect on why they were successful.

3.4 Learning trail

The learning trail was designed to replace a number of didactic lectures giving students basic information about the University, the department, their programme and so on. The basic idea was to make the students find out the key information by themselves because, by being active, they were more likely to retain the most important information and also would be confident to find, independently, any important information they may need in the future. Also, there was a marking/answer session, as in a pub quiz, where students found out answers to all the questions. Again, the hope was that new information given in this format would stick better because students would be saying, 'so that was the answer!'

The basic format of the learning trail was like a quiz or rather a set of numerous questions (67 in all which in retrospect may have been too many) to be completed in groups – again this was to encourage peer bonding and to reduce the load somewhat by allowing groups to divide the questions between them. The question categories were chosen to cover all material previously delivered in lectures, for instance:

- People and places in the University of Sheffield and in ACSE
- Getting involved
- Personal development planning
- Things to do with academic work and with rules and regulations
- Using library resources
- Safety
- The ACSE staff/student committee

The students were given the quiz on Tuesday after the VLE exercise and the marking session was on Friday morning, immediately prior to meeting their personal tutors (a topic of conversation to start their relationship!). Expert resources were made available, in the form of staff and students acting as guides and experts on topics for specified times on the Thursday. The student guides/experts were funded through the CILASS grant. In addition to the staff and students as expert resources, pointers were given about other places to find information.

As with the robot project, each member of the winning group was given a £10 book voucher (funded by the CILASS grant), and the winning group was asked to reflect on its success.

4. EVALUATION

This section considers evaluation of the project, reflections and thus plans for the future. As the project was funded by CILASS, they were able to offer support in evaluation. CILASS, along with Learning and Teaching Services in UoS, have been piloting a Theory of Change (ToC) [e.g. Connell et al 1988, Rossiter et al 2007] model to project evaluation. In brief summary, this involves:

- Tracing the project long term aims or desired outcomes back to immediate and intermediate actions, i.e. looking at how change will come about.
- Looking at student feedback and staff observations on Intro Week.
- Analysing engagement, retention and performance of the student cohort.

To some extent, the ToC model is intended to be used for project planning and then subsequently in evaluation. In this case, due to timescales, the planning had to be completed before a full ToC model was ready so ToC will be used for evaluation only.

4.1 Theory of Change (ToC)

The Theory of Change (ToC) methodology uses a structured approach to examine the current situation and the need for change, to analyse the methods appropriate to bring about change, and to state the desired outcomes of change from a long, mid and short-term perspective. The ToC information is recorded in tabular form, thus providing traceability between goals and outcomes. The ToC table for the ACSE Intro Week project is shown in Figure 1.

In summary, what ACSE wanted from the new Intro Week was as follows:

Students would:

- Have fun and get to know each other.

- Identify with Systems Engineering (their discipline), with ACSE, and with the University of Sheffield.
- Expect to seek out and use a wide variety of resources in order to learn.
- Have an idea of the expectations staff have of them at University.
- Take responsibility for their own learning.

Staff would:

- Feel that they have improved the student experience.
- Be able to expect more of the students in terms of creativity and independence.
- Have more 1-to-1 contact with students during Intro Week, rather than 1-to-many in lectures.
- See an established IBL/PBL platform from which they can embed IBL/PBL in their own teaching.

4.2 Student feedback

Student feedback was sought via a brief questionnaire on Friday in Intro Week, and by Focus Groups conducted by CILASS six weeks later.

Typical student feedback on the robot project on Friday of Intro Week was as follows:

- *“Useful. It made me know more about how to cooperate with others.”*
- *“It was very challenging but great fun.”*
- *“It was fun to experiment with new equipment to see how it works and make it perform different tasks.”*
- *“Was a good opportunity to adjust to new ways.”*
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Typical student feedback on the learning trail was *“Very good way of learning the way around different places while having fun”*, and on the pre-arrival task: *“Good way of getting an insight into Systems Engineering”*.

The outcome of the focus groups on Intro Week conducted six weeks into the semester can be summarised as follows:

- The learning trail helped students find their way around, both in the physical and the virtual environment
- Teamwork helped with building relationships
- The robot project was a good taster for future lab work

The focus groups found that nearly all the students identified benefits to their independent learning from the activities in Intro Week. For about half of them, the activities were very different to their experiences of learning at school or college. Most felt that the Intro Week activities required independent, unguided effort. As a result of Intro Week, they felt more confident about finding resources and learning for themselves. Interestingly, a significant number of students felt they had already developed independent learning skills at school or college. Many students felt that they enjoyed and felt motivated by independent learning, and that independent learning skills would add to their employability.

Another interesting point raised by students was related to the time cost of IBL. They stated that they had discovered that IBL requires effective time management, and queried whether the time cost of independent learning might outweigh the benefits.

Clearly, the students found Intro Week fun and beneficial, but challenging.

4.3 Staff observations

Staff have not been formally surveyed, but have provided observations and anecdotal evidence. Staff have observed that, while not perfect, attendance at tutorials is marginally better than in 2006-07. There is a perception that students are more receptive to open-ended assignments and being told they have to solve some problems by themselves. There is anecdotal evidence that an already established poster group project had fewer problems with group dynamics than in the past. There is also a perception that staff-student relationships are working well this year. Students are very willing, certainly more so than in the past, to ask questions and respond during lectures.

4.5 Student Retention/Performance and the future

One final metric that will be considered at the end of the year is student retention and performance. ACSE hopes to see an improvement in retention and performance, and would like to conclude that Intro Week has been one factor in that improvement.

Nevertheless, it would be very difficult to make an explicit correlation between intro week and student retention/performance due to the variability in the cohort from one year to the next, especially given the relative small numbers from a statistical point of view (about 55 attended intro week from a total cohort later in semester of about 70). Consequently, at some point academics have to be confident to follow what they believe to be good practise, even where statistical data is hard to collect. The 'Theories of Change' approach to evaluation provides a means of producing useable data and knowledge on the impact of new teaching methods on student learning.

In this case, the UoS learning teaching and assessment strategy clearly requires students to develop professional skills and attitudes, which includes independent learning. Thus it is important to plan a curriculum which gives students a series of assignments, building in challenge, which give them opportunities to develop their skills. This project is one component of a bigger project [Rossiter et al, 2006] looking at the coherence of the whole curriculum and ultimately will be judged as part of overall student satisfaction. Such an evaluation will be done over a longer time scale.

For the authors' part, one clear marker of project success will be student quotes and attitude towards PBL assignments, for instance in semester 2 of year 1. Previously several have been quite negative and one hope is that we will have achieved greater buy in and confidence in PBL assignments before these are given out. We should have this data for the current cohort in time for the conference. Some anonymous feedback from students in Jan. 2008 about what they really liked during semester 1 include: *'A lot emphasis is put on independent learning', 'Students are given chance to work as a group to finish the project given to them independently',*

5 CONCLUSIONS

ACSE recognised and reflected upon inadequacies in its Intro Week provision which may have had an effect upon students attitudes and approach to learning throughout their first undergraduate year. A decision was made to improve the support of new students in peer bonding and in acquiring an independent, inquiry-based approach to learning. The new strategy was implemented with the help of a grant from the University CILASS, making use of the experience and skills of current ACSE undergraduates. The project evaluation to date indicates that the main goals of the project have been achieved; further evaluations and reflection will be carried out as information becomes available.

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Individual TOC for IBL – Name of Department: ACSE Induction Week
Names of TOC contributors: Anthony Rossiter, Linda Gray

Current situation <i>What is the current situation</i>	Enabling factors / Resources	Processes / Activities	Desired outcomes	Longer-term impact <i>What long-term changes will your IBL project achieve?</i>
<p>Students</p> <p>Some students resist 'the move to a more adult learning style.'</p> <p>Some students expect to be told everything.</p> <p>Some students come with the attitude 'I want a degree certificate', not very interested in the route of learning.</p> <p>Some students don't know how to go about being independent, finding and evaluating resources.</p> <p>Students need more systematic guidance and help to acquire and adopt a more independent approach to learning.</p> <p>Staff</p> <p>Staff are working hard, but not necessarily effectively or joined-up enough.</p> <p>Some staff have less regular contact with students than others.</p>	<p>Presence of a good student to design the project.</p> <p>Past issues based on student feedback necessitate finding new solutions.</p> <p>The previous LDMU-funded project for first-year staff gives good foundations to build on.</p> <p>The library bought copies of relevant books.</p> <p>CILASS has raised the profile of IBL within the institution.</p> <p>There is an emerging international interest in and drive towards problems and processes in engineering education.</p> <p>IBL as an approach reflects professional skills needs in engineering.</p> <p>Curriculum review in department opens up discussion and possibilities for change.</p> <p>Funding enabled buy-out for initial task development, departmental buy-in to the project facilitates sustainability.</p> <p>Time commitment from project leaders towards task development.</p>	<p>A multi-faceted plan for the project encourages students to experience their discipline hands-on as part of group work.</p> <p>Winning groups are asked to reflect on their success.</p> <p>All activities well scheduled throughout intro week.</p> <p>1) Robot Project</p> <p>The activity is competitive and fun, suitable for students in their first week at university.</p> <p>Students are given resources rather than instructions (ideas instead of answers).</p> <p>Students have to think independently and creatively to find solutions.</p> <p>'Real world' experience is brought into project through possibility of 'buying in' expertise'.</p> <p>Resources are located in variety of spaces (library and web), encouraging students to explore these spaces to find them.</p>	<p>Student outcomes</p> <p>Students will have a good time and get the most out of induction.</p> <p>Students will identify with their discipline and are part of the department.</p> <p>Students will interact with their peers more effectively.</p> <p>Students will manage the transition between school and university better and will gain independence.</p> <p>Students will be better aware of what is expected of them at university.</p> <p>Students will have a step-change in attitude towards university, which will be reinforced after intro-week.</p> <p>Students will take responsibility for their own learning and have better informed expectations of L&T at University.</p> <p>Staff/teaching outcomes</p> <p>Staff feel they are improving the student experience.</p> <p>Staff have more personal contact with students.</p> <p>Year 1 staff disseminate their findings to feed into developments</p>	<p>Summary of planned impact</p> <p>Inquiry-based learning becomes a more staple process in ACSE, possibly reinforced by the departmental curriculum review.</p> <p>Key questions to ask:</p> <p>Have we been successful in making a change to student expectations?</p> <p>Is the project being followed through after intro week?</p> <p>Do students like open-endedness as part of their degree?</p> <p>Have the students managed the transition between school and studying an academic discipline at University?</p> <p>Do the students feel a part of the department and interact with their peers effectively?</p>

Because of SFQs, some staff take the path of least resistance, not pushing students enough towards independence and creativity.

Department

There has been some poor student feedback due, at least in part, to misinformed student expectations.

Issues surrounding a disjointed modularised curriculum.

Department is in the middle of a curriculum review, making it timely to look at new ideas and proposals.

This project leads on from an LDMU-funded project which sought to get Year1 staff to communicate, and seeks to build on the project's positive outcomes.

PBL is already embedded in the discipline, but mainly at project-level.

There is an institutional impetus and drive to explore IBL ('putting it on the agenda')

A university project about induction helped create communication channels through spotlight presentations, good practice week and meetings with other departments.

Existing intro-week activity (cave-rescue exercise) encourages active engagement with MUSE & MOLE.

Activity requires students to develop their skills regarding use of library and web.

2) Learning Trail

'Learning trail' replaces delivered material, meaning students don't have to sit in a lecture theatre for three hours, but still find out a lot of information about the department and the university.

3) Pre-arrival Task

A pre-arrival task (three things a systems engineer has to know about) sets the scene for independent learning.

in Year 2 and 3.

Staff expect more of students with regards to creativity and independence.

Staff have more influence on student expectations.

Departmental Outcomes

The project has the opportunity to fit in with PDP development.

The department becomes better at managing student expectations.

A report to LTC has opportunity to feed project findings into departmental developments and beyond.

Figure 1. The Theory of Change (ToC) table for the ACSE Intro Week Project