

Developing students' academic and professional skills through skills development exercises and project planning on a 'Field and Enterprise Skills' module.

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Subject Area: Field and Enterprise Skills, Civil Engineering

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This case study has been developed from data gathered through observations of the teaching component; interviews with the tutor; and a student focus groups.

Background

Field and Enterprise Skills is a first year module at Coventry University for approximately 35 students from Civil Engineering degrees. The module runs in parallel with a Surveying module in which students complete a number of practical exercises and tests.

The Field and Enterprise Skills module is divided into 3 teaching components. During the first 11 weeks students complete a number of preparation workshops including skills auditing and using RAPID¹, identify team roles and working in teams. In week 12 students are put into teams and given a field-work specification, this includes preparation tasks which are to be completed in the 11 weeks leading up to the Field Course and tasks which should be completed during the residential week in early May. After the team project is submitted, students are asked to reflect on the team project and their experiences from the Field Course, and given an opportunity to update their skills audit.

At the beginning of the module students are given a course booklet that outlines the activities within the module and assessment procedures. The preparation workshops comprise of tutor inputs and short focused activities aiming to highlight and develop important key skills that will benefit the students during their team project and hopefully throughout their degree. The team project is outlined in the field-work specification and asks the students to undertake surveying and setting out exercises on an area of land on which a field activity centre wishes to expand. After the field-work specification has been distributed the teams attend weekly client / team meetings with the tutor acting as the client and offering feedback on aspects of the team's plan of action. The Field Course is attended by all students from the module. Architectural Design Technology and Construction Management students and during the Field Course students from the Field and Enterprise Skills module are asked to liaise with, and complete additional linked tasks, for them.

Reasons for introducing this teaching method

Previously key skills such as communications and team work were introduced through an independent skills module with limited links to the core civil engineering aspects of the course. The skills module was seen as boring and dry and students often struggled to pull these key skills together to complete projects set. The tutor commented "*Students were benefiting greatly from going on a field course ... [their maturity progressed over the course of the week] ... so I wanted to enhance that even further by trying to allow them to see behind what they were doing and to appreciate their own development as part of that project*"

Students' perspective

Overall the students were happy that the module content was at an appropriate level, helping to '*learn and understand the fundamentals of this topic*' and '*starting to pull together some of the fundamental knowledge and skills*'. The module guide helped to provide an overview of what they would be doing for a year and the specification communicated what would be expected of teams from the project and

¹ The RAPID progress file is the result of an FDTL Project 34/99 to Promote Skill Development on Undergraduate Programmes in Civil and Building Engineering.

residential field trip. Students felt that the module, especially the residential field trip had helped them to learn valuable leadership, communication, planning, organisation and time management skills.

Students from the focus group had found the preparation exercises useful and agreed that they would have found the planning stages of the project harder without the input. However, they could see more relevance in the activities that related directly to the project rather than those which supported them in highlighting and logging their key skills development. The tutor / client meetings were seen as a good approach to tutorials and students welcomed the feedback they gained during these sessions and felt that the meetings were an opportunity for the tutor to assess individuals contributions, effort and understanding.

Issues

The dynamics of each team were very different across the group and students seemed to have had very mixed experiences, with some teams working effectively and others initially finding communication and motivation more difficult. Students in the focus group felt that the use of Belbin Perception tests had helped to highlight strong leaders. However this did not test other characteristics such as level of skill in the subject area and motivation to work, which were factors that had affected some teams. Preparation tasks had often been completed individually and as students had not been working in similar teams in their surveying module some had found it difficult to know that team members would be able to complete allocated tasks. Students saw surveying as a fundamental element to the success of the field trip project and therefore would have preferred more feedback regarding attainment in that module before coming on the trip. One student felt strongly enough to question if those who had failed the surveying module should be allowed to attend the field trip.

Some of the key skills materials were modified from the original independent module but adoption of these materials and other materials from the Careers Centre on team working and project management was '*time consuming*' for the tutor. Timing was also an issue especially when integrating skills, such as practical surveying skills which are taught in a different module. As the tutor is keen for this module to not be seen as a '*bolt-on*' subject, modifications will be made to the module scheme following student feedback.

Benefits

Students had previously found the provision of evidence in skills auditing difficult. This is now part of the assessment and is structured so that credit is now given for planning and development. The tutor hopes this will overcome tendency to '*tick lots of boxes*'. Students who took part in the focus group commented on the benefit of auditing their skills base for Continued Professional Development and becoming a Chartered Engineer.

Both the tutor and the students felt that combining the project on site with architecture and construction management student projects added '*real world*' value to the experience. The students felt that '*the experience was very important*' and that the module gave '*context to everything*'.

Reflections

In this module most of the work is completed in small groups and this is very different to how the other elements of the course are run. There is no '*spoon feeding*' and '*students have to generate ideas which will be discussed*'. The tutor hoped that the students would see the independence rewarding. Whilst some students preferred the traditional lecture style many saw this module as a valuable learning experience, forcing them to '*think about what you are being asked to do*'.
'*We have definitely learnt a lot about ourselves and how we can work in the future*'.