Student Transitions: Example of transitions practice

Title: Student-Led Virtual Guides of Mechanical & Chemical Engineering

Transition(s) the practice supports:

i. 2nd Level students as they go through the application process to tertiary education through to registration, induction and semester 1 courses
ii. Undergraduate Engineering students as they take on new research project as part of a Cross-Campus Collaboration Research Group
iii. Prepare students for MSc Level degree programmes

Abstract: a brief outline of the practice – this will allow all your institutional examples to appear on the one page of the website, linking to further information. This should be no longer than 120 words.

Virtual Guided Tours in the form of interactive podcasts will be developed to aid student transitions in a number of key areas in Mechanical and Chemical Engineering. The project will be student led and develop virtual guides of the Engineering facilities (Labs, Lecture Theatres etc.) and crucially, embedded in the podcast, would be relevant links to course notes, web resources or even to further podcasts of a lab demonstration etc. Virtual Tours will also be created of existing research project work. Annotated podcasts with interactive links to design documents, presentations slides, literature repository, numerical models and computer code etc. will be created. This would be an invaluable resource for the incoming student to get "up to speed" with the project.

Description:

What is proposed is a virtual tour in a podcast form that will be produced by existing undergraduate students and assisted by co-applicants to meet the respective demands of the three transitional areas identified above. This is best explained by example:

In scenario (i) above, to aid the transition from School to University, the first virtual guided tour to be produced would be of the Mechanical and Chemical Engineering Workshop, Labs, Main Lecture Theatres, Crush Area etc. We would aim to condense this into a 10 minute walking tour and use the existing University Open Day tours format as a template. A key benefit of this approach is the opportunity for the "audience" to link to new areas as they "walk" around the department. For example, this podcast would point out the lab facilities for Mechanical Engineering Science subjects such as Fluid Mechanics, Thermodynamics, Statics and Dynamic and Strength of Materials etc, but crucially, embedded in the podcast, would be relevant links to course notes, web resources or even to further podcasts of a lab demonstration etc.

Scenario (ii) would help to embed an existing Enhancement Theme Project into the curriculum. A Cross-Campus Undergraduate Research Group has been formed as part of previously funded project between Edinburgh and Dubai campuses. This research-led approach to UG Student Project work has developed better communication between campuses on both a student and staff level and has helped to promote research activities on both campuses. The proposed project will help to transition students from 3rd year undergraduate courses which are predominately lecture and tutorial based, into research project work. Students in the current cohort will produce short, annotated podcasts of their research projects with interactive links to their design documents, presentations slides, literature repository, numerical models, computer code, final project report/paper that has been developed as part of their UG Individual Project. This would be an invaluable resource for the incoming student to get "up to speed" with the project that they will take over. It will also help the transition by demonstrating the level of achievement that required to excel at the project work and to learn about research approaches and methodologies.

Finally scenario (iii) will borrow from both scenario 1 and 2 and add a selection of short online lectures/tutorials including self-assessment. As in the previous scenarios, short, annotated podcasts of their MSc projects with interactive links will provide a valuable resource to students. A large component of the MSc in Energy and Renewable Energy degree programmes is project work. MSc students are required to deliver a research dissertation worth 60 credits or 1/3 of their degree. Typically, as MSc programmes at EPS recruit heavily from overseas, MSc project students come from a wide range of academic and cultural backgrounds. Their transition can be made more complicated by cultural and procedural difficulties. Therefore transitional support for postgraduate students requires more focus. "Virtually" enhanced short online lectures will be developed to aid student transitions, focussing on helping students to prepare for the "next" level in their education and to give them a clear example of what to expect. Short videos covering a portion of the curriculum with links to literature will be produced, each ending with an online self-assessment. The problems to solve should provide a good representation of what is expected within the Scottish higher education system. The material will reduce the time and efforts spent on the transition and demonstrate the approach required to working collaboratively within a research group and delivering an individual research project. Potential MSc students have reported that they are unsure about what is expected and how the teaching and learning will differ from their undergraduate study.[1] Tours of the department will also showcase the facilities that are on offer at the Edinburgh and Dubai campuses; this material can also serve as a valuable marketing and recruitment resource.

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[1] http://www.enhancementthemes.ac.uk/sheec/learning-from-international-practice/taught-postgraduate-student-experience/case-studies/case-study-23-transition-into-postgraduate-study-university-of-greenwich-london