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Transitioning from passive learner to active researcher

Relevant element of European Standards and Guidelines: Approval, monitoring and periodic review of programmes and awards

Abstract:

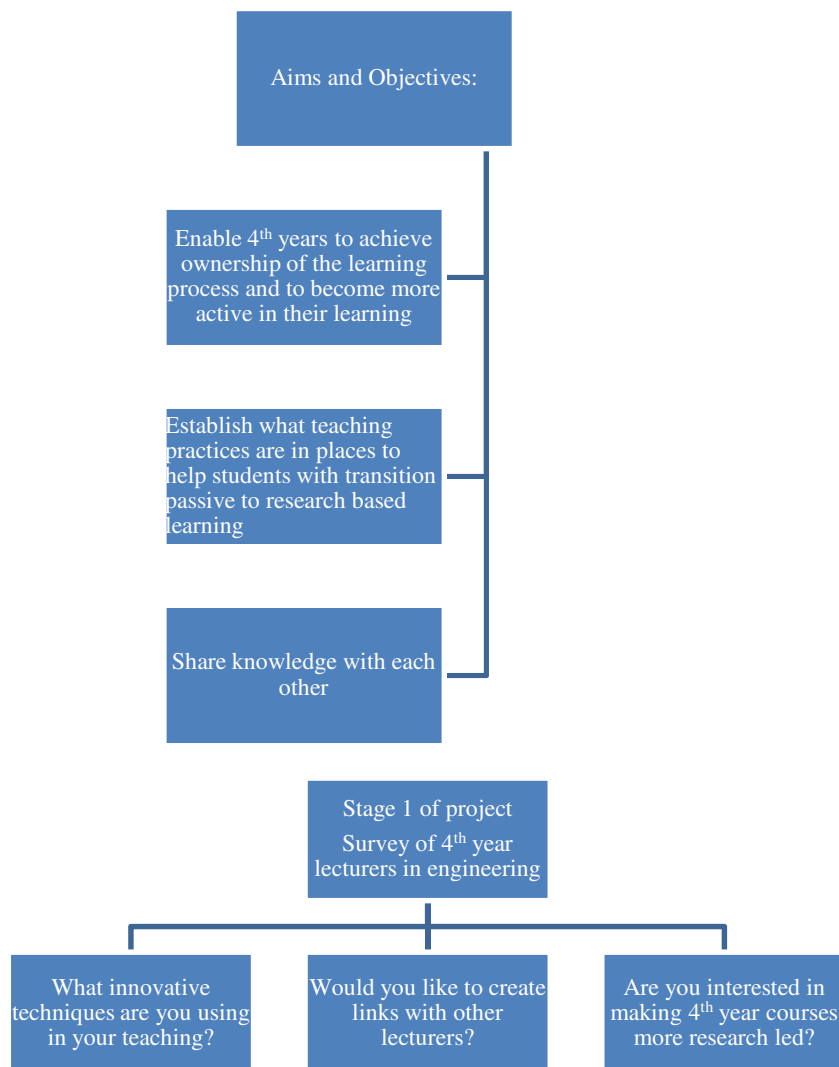
This project examines how students can move from being passive learners to being active learners through various techniques. Using traditional lecturing techniques, students have a tendency to be passive note-takers. However, we have a responsibility to help students engage in deep learning and to become lifelong learners. This project examines how well our students are currently being prepared by our programs to become lifelong learners.

Therefore this project seeks to do the following:

1. Establish what innovative teaching practices are in place to help students transition from passive to active learners and examine how successful those practices have been.
2. Encourage the sharing of knowledge regarding innovative teaching practices in the university.
3. Establish what techniques are not being used in the university to help students with the transition from passive to research based learning.
4. Pilot some of these techniques in engineering courses.

In the initial stages a survey of lecturers involved in teaching 4th year engineering students in UCD will be carried out to discover the existing methods of teaching that are used. In particular, this part of the project will identify if any lecturers are already using innovative techniques. If so, links will be created between those lecturers to set up special interest groups amongst engineering lecturers so that they may share their experiences. The next stage of the project will be to construct a database of innovative teaching techniques that can be used to encourage more active learning and to build research capability in final year students. This database will identify which techniques are currently used in UCD and by whom and will identify those techniques which are not being used.

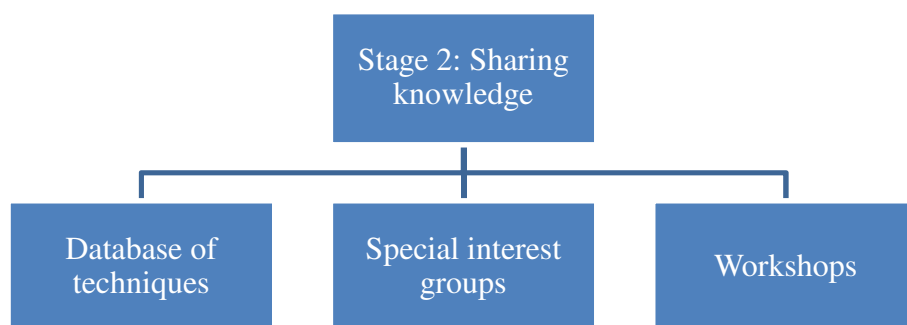




This project will examine how students in their final year can transition from passive to active learners.

In the initial stages a survey of lecturers involved in teaching 4th year engineering students in UCD will be carried out to discover the existing methods of teaching that are used with these students. In particular, this part of the project will identify if any lecturers are already using innovative techniques such as problem based learning or cooperative learning. If so, links will be created between those lecturers to set up special interest groups amongst engineering lecturers so that they may share their experiences of PBL and other methods. Workshops for those already involved in innovative techniques and for those who wish to learn how to use those techniques will be conducted.

This survey of 4th year engineering lecturers will also establish what level of interest exists for introducing new techniques of teaching and for making 4th year courses more research led. Problems that lecturers feel may be encountered in trying to do this will be identified.



The next stage of the project will be to construct a database of innovative teaching techniques that can be used to encourage more active learning and to build research capability in final year students. This database will identify which techniques are currently used in UCD and by whom and will identify those techniques which are not being used. This will incorporate a literature review of teaching techniques. This database will be made available to all 4th year lecturers in engineering courses in UCD and lecturers will be asked to express an interest in techniques, with a view to establishing special interest groups. These groups would then be helped in introducing new techniques into courses on a pilot basis and will be asked to report on their success in using these techniques in terms of increasing students' research capabilities.

The objective here is to improve teaching and the student experience. In addition, forming these groups will bring about an active teaching network within the engineering disciplines where lectures are communicating about their experiences and are helping each other. Colleagues will thus be participating in this research project through the special interest groups and in trying out innovative techniques. Lecturers will be attempting these new techniques with the help and support of colleagues and, through the special interest groups, will be able to discuss and find help with problems encountered.

