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Group Peer Review of Engineering Lecturing

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Peer observation is a voluntary system of professional support that can help lecturers gain valuable insights about their lecturing performance in a confidential, trusting and formative climate. It involves inviting a colleague into a lecture or tutorial and asking them to give their insights about the delivery of material, the student experience, and other important teaching related factors such as clarity, pace and learning outcomes; and they are invited to offer ideas and suggestions.

The process in the University of Limerick is managed by the Centre for Teaching and Learning (CTL). The CTL's aims are to encourage and facilitate excellence in teaching and learning through helping to ensure that effective teaching is valued, supported and developed; that the learning and development experience is enhanced for both teachers and students; and encouraging scholarship, research and innovation in teaching and learning. The CTL supports the evidencing of teaching through a range of services, such as Student Evaluation of Teaching Process, Teaching Analysis, Portfolio Development; and Peer Observation.

The Mechanical, Aeronautical & Biomedical Engineering Department (MA&BE) of the University of Limerick (UL) delivers four engineering courses: Aeronautical, Biomedical & Mechanical Engineering and Computer Aided Engineering and Design. The courses are four years in duration, and each year the combined number of students is 100-120. The majority of students enter the courses directly from second-level education through the Irish Central Applications Office (CAO) system.

In Spring 2007 a pilot study of Peer Observation of Teaching was undertaken in UL, and was funded by the Higher Education Authority and the CTL as part of the UL President's Teaching Innovation Award. The model used was a peer review model (1), where interested faculty were invited to participate, which involved selecting a peer or colleague of their choice with whom they conducted reciprocal peer observation and acted as both observer and observed. Carroll and O'Loughlin (2) developed a peer observation framework including peer observation guidelines and supporting documentation. This was tested on five separate self-selected peer observation pairs, across a range of disciplines within UL. An integral part of the peer observation process and evaluation involved the provision of peer observation training and conducting of pre- and post-observation interviews. The conducted a series of in-depth interviews with the 10 participants (5 pairs), which explored participants' attitudes, insights and behaviours in relation to the peer observation process during the pre, during and post phases of the peer observation pilot. Two of the current authors participated in this pilot process. A number of key themes emerged from the pilot, these are barriers to participation, selection of peer, nature of the peer observation process and participation outcomes.

Carroll and O'Loughlin concluded by recommending the adoption of a peer observation framework based upon a voluntary system, involving peer self-selection and mutual trust and collaboration between participants. A three stage system is required for a successful framework involving an initial pre-observation meeting, the observed session and a post observation de-brief/discussion. They recommended that the session chosen to be observed should be an accurate reflection of a normal teaching and learning session.

The recommendations were taken on board and an institute wide three stage process, managed by the CTL, was initiated in Autumn 2007, of which the original pair again participated, this time with different modules. The documentation was finalised to list areas under which the observer could write notes during the observation, based on what was discussed in the pre-observation meeting. This was then feedback verbally during the post-observation meeting which happened as soon as possible following the observation. A written report was then finalised and sent to the observer and the CTL. The report lists the details of the observed class, listing the observer and observe, the date and time, the module code and title, the number in the class. It then has a section summarising the pre-observation meeting where any issues requiring particular focus or feedback can be listed. The main part of the document discusses the observation under the titles 'Beginning of the session', 'Style and approach', 'Student participation' and 'Close of lecture', the form is concluded with a section for 'Summary, Suggestions and Recommendations'.

In Spring 2009 two further colleagues were invited to participate, making the first peer observation group in UL. To complement the process a member of CTL staff also partook. The process was the same in terms of pre- and post-observation meetings, with all members of the group attending these and the observation. For one observe one member of the group could not attend at the last minute, so that observer and the CTL member attended another lecture. Following the post-observation meeting each participant wrote a reflection on the process and then a separate session was facilitated by the CTL member, focussing on the process rather than on the observation of teaching. From this it was decided to repeat the process in Autumn 2009.

This study found that a group review process was significantly more beneficial, due to a more balanced and accurate conclusion generated by the group feedback sessions. The study also found that a two-stage review process was necessary in order to assess any improvement in lecturing style and delivery of content. When compared to student feedback, it was found that peer review feedback provides a valuable in-depth critical review of lecturing style; it is harder to determine the value of peer feedback on delivery of content. Finally, it was found that it is possible to develop the skills necessary to provide honest feedback to one's peers with professional courtesy and respect.