

# Incorporating international exposure into road engineers' training

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It is vital to expose students, specifically at postgraduate level, to international viewpoints and opinions about their subject. This is typically done by incorporating international literature into the curriculum, as well as through case studies comparing local and international practice.

The presence of an international specialist on a subject is probably the first prize in this teaching environment, as students then not only obtain their own lecturer's interpretation of international practice, but also get the opportunity to ask specific questions that may not form a part of the existing curriculum. However, the cost and logistics of incorporating a visiting international lecturer into a postgraduate course are quite high, and include travel, accommodation and time costs (current estimates start at R25 000 per week). The dates for the course also need to coincide with the dates when the lecturer can be away from his or her own office for at least a week, and often such dates are not convenient to students who, for instance, attend block weeks.

One way of circumventing this problem is to make use of Internet-based technology. The University of Pretoria has access to the Elluminate system, which enables interactive presentations to be made via the Internet. This includes the simultaneous presentation of a lecture through slides or whiteboards, video and sound while being recorded. The only requirement is an Internet location and a suitable computer. Early in 2010, this system was used to present an international lecture from Seattle, Washington, USA to the Pavement Design postgraduate class. In the process, Prof Joe Mahoney of the University of Washington lectured from his office in Seattle to students at the University of Pretoria on the American Association of State Highway Transportation Officials (AASHTO) Pavement Design method. Prof Mahoney has often visited South Africa and knows the local environment well. However, his visits seldom coincided with postgraduate block weeks, so his input in international lectures could not be used.

The bottom-line benefit of the Elluminate system is financial. Everything that is done with Elluminate can be done with students and a lecturer physically in class. However, Elluminate offers the opportunity to save travel and accommodation costs in the process. There is also a major convenience benefit. With Elluminate, Prof Mahoney could conduct his lecture to students in Pretoria without leaving his office in Seattle. The ten-hour time difference meant that he could start his 90-minute lecture at 05:00 on a Monday morning and finish at 06:30 USA time, and then continue with his normal day of lectures and meetings, with almost no inconvenience.

The system makes provision for four important factors: the presentation itself (by means of PowerPoint), audio feed from the lecturer, video feed between the two locations and discussion by the students, without the lecturer actually being physically present. This makes for a very real experience. The benefit of recording the lecture for later use also gives students the option to replay the whole lecture or even parts of the lecture in their own time to ensure that key concepts are reinforced. This can obviously include discussions and additional examples provided in class, which is not possible if the lecture is not recorded.

The main limitations of the system are Internet access in the venue used for the lecture, the possible time difference and possible technical problems. A moderator is required in the classroom where the students attend the lecture if it takes place in a group environment. As personal contact is important, it should not be used to replace a physical lecturer for a full block week.

Feedback from the group of students through a questionnaire that was distributed to them after the lecture is summarised in Table 1. The feedback

from Prof Mahoney after the lecture was positive, especially regarding the interaction that had taken place. Three professionals linked into the lecture from their home or office computers and provided positive feedback.

Figure 1 shows a potential model for using the technology in short courses, where national and international lecturers can be incorporated into

the University of Pretoria's offering. It illustrates how lecturers in different time zones may be incorporated into a teaching programme to ensure that students are exposed to international viewpoints.

The exercise proved worthwhile in incorporating international viewpoints into a postgraduate lecture, and exposed students to a wider viewpoint

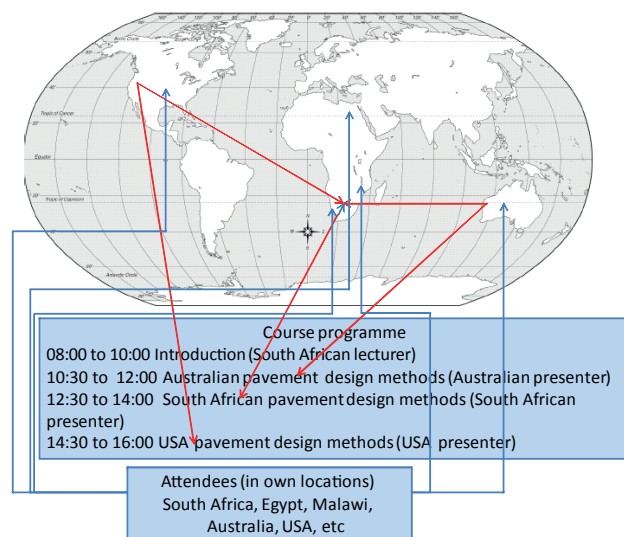
and more lecturers during their course. Further engagements are currently being planned for other subjects in the postgraduate programme. 📍

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*Table 1: Typical student feedback after an Elluminate lecture (12 out of 24 responses received)*

Question	Response count
Do you think that the use of international lecturers in postgraduate courses is important?	Yes: 100%
Did you enjoy the international lecture?	Yes: 90%; Possibly: 10%
Did the international lecture benefit you on a technical or academic level?	Yes: 83%; Possibly: 17%
Would you like more of these lectures in the remainder of the postgraduate lectures?	Yes: 83%; Possibly: 17%
Did the Elluminate system that was used to transmit the international lecture work well, in your opinion?	Yes: 90%; Possibly: 10%
Was the choice of lecturer for the lecture appropriate for the course?	Yes: 100%
Any other comments on the international lecture?	<ul style="list-style-type: none"> <li>• It was related to required knowledge</li> <li>• The international lecture definitely gives one more confidence in dealings and communication with international counterparts</li> <li>• The lecture was very informative and interesting, especially the comments delivered about advancements in pavement design in South Africa</li> <li>• It was a good experience to hear from international experts as part of the classes</li> </ul>



➔ 1. Model for the incorporation of international lecturers (and attendees) through courses offered using Elluminate