Output 1: PRLT – preparatory reflection

Name: Vincent Knight

Module Title: OR Methods   **Level/Year of Study: MSc**

Focus of PRLT: A Lecture on Game Theory

Number of Students present: 31

What are the aims of the session?
What I intend to do, how it relates to the rest of the course. Are there opportunities in this session / learning activity to explore any of CU's key strategic themes / explicitly consider employability issues etc?

I will be teaching game theory using a combination of methods presented through a classic lecture interrupted by various activities that require student participation. This session will ensure students gain understanding of game theoretical concepts through all stages of the Kolb Cycle. Issues relevant to employability are touched upon as students need to negotiate amongst themselves so as play certain role playing games.

What are the learning outcomes for this session? How am I going to help the students achieve them? Are the learning opportunities I'm creating inclusive?

See attached lesson plan.

Output 2: Dialogue summary / feedback on PRLT activity

Name: Paul Harper

Module Title: OR Methods   **Level/Year of study: MSc**

Focus of PRLT: A Lecture on Game Theory

Date: 02/10/2012

Session summary:
This session was on the topic of Game Theory, and was taught over a one half-day (3.5 hours) session. Vince had already been teaching to the same cohort all morning (albeit on a different topic) so it was an intensive day for him (and them)!   Also one might expect a dip in energy levels and attentiveness immediately after lunch. However Vince captured the student's attention fully and kept their engagement in a manner that was a pleasure to observe. He should be applauded for the content and range of teaching methods and resources employed to suit different learning styles amongst the student cohort. The stated intended learning outcomes (ILOs) were completely met.

Clarity of outcomes:
Clear overview of session initially provided.

Planning and organisation:
It was evident that a huge amount of effort had gone into planning the entire session. An impressive range of learning resources and methods were used, including traditional lecture notes (slides), use of whiteboard, provision of handouts to students, showing videos, role-play games, computer labs etc. Furthermore Vince had given thought to the planning of tutorial assistance both during the lecture and in the computer-labs/tutorial sessions.

Methods/approaches:
The session was well introduced. Got students immediately to think for themselves by asking 'what is a game?' The different methods employed emphasised the key points to help meet the ILOs. The different elements of the session linked back neatly to these ILOs.

Delivery and pace:
Maintained a good pace. Dealt appropriately with students arriving late so as not to cause disruption Audible and clear voice. Good eye-contact.   Slides were entirely suitable and readable. Handouts helped. Good rapport with students. Humour on occasions (especially early on) which actually worked well. Breaks were well timed.   Recapped nicely at end of lecture session. Offered students the possibility of a tutorial session after the

computer lab but suggested they instead reflect on the day and work on the exercise sheet in their own time.

Content:
Entirely suitable for the level and introductory material to the subject. Numerical examples supported the theoretical workings. Computer session reinforced the lecture materials.

Student participation:
Ample opportunity was provided (e.g. by playing actual games; inviting responses from the students etc).   Vince was interrupted on numerous for clarification, but dealt with this well and responded in an appropriate helpful manner i.e. one which reinforced the material but without sounding condescending. Actually having the students so evidently engaging and feeling comfortable asking questions demonstrated an environment entirely appropriate for an M-level course but one which can be very tricky to encourage in a Mathematics-based degree. (particularly noteworthy as this was day 1!). Clearly the Prisoner's Dilemma tournament and ⅔ game were good fun and well received by the students, and reinforced the learning but in a 'hands-on' way.   Asked students to work in pairs in the computer lab; partly because of potential problems with the server but also as a way to learn together - neat.

Use of learning resources:
Simply stated, superb! In fact I would recommend the majority of other lecturers in the School (including those far more experienced) come observe and learn from Vince about e-learning technologies.   He demonstrates a thorough understanding of a range of appropriate and up-to-date resources and technologies, both for use within the session and for the students outside the classroom (such as creating video resources, on-line tools using Sage, materials available on personal website, use of Google+ for pre-session information etc.)

Reviewer's comments and suggestions

Commitment to the Professional Values of the UKHE:

1. An understanding of how students learn.
    a. Varied type of learning materials that moved students through the Kolb Cycle.
    b. VK can expand on this and explore further learning models.
2. A commitment to reflection and evaluation and consequent improvement of professional practice.
    a. Spent a while planning.
    b. Various discussions with colleagues and others.
    c. VK can continue to expand on this.
3. A respect for individual learners and for their development and empowerment, no matter what their circumstances.

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      a. Welcome questions.
      b. Use of open source resources.
      c. Multiple stages of the Kolb cycle.
      d. Videos that catered to non English speakers.
      e. VK can further explore different learning and styles to ensure he caters to them.

4. A commitment to scholarship in teaching, both generally and within their own discipline.
      a. Doing PCUTL.
      b. Has read some literature but VK can build a further knowledge of the education literature.

5. A commitment to the development of learning communities, including students, teachers and those engaged in learning support.
      a. Interaction with other member of staff.
      b. Sharing of resources.
      c. VK will benefit from further PCUTL module where he'll share teaching and learning techniques with other lecturers from CU.

6. A commitment to encouraging participation in higher education with respect to the issues of equality and diversity. In this regard, professional practice should be informed by equal opportunities legislation, policy and best practice.
      a. Use of notes that can be read on any system.
      b. Videos that cater to non English speakers.
      c. VK can explore further ways in which his notes can be made adaptable to a wider audience (further use of html).

7. Use evidence-informed approaches and the outcomes from research, scholarship and CPD.
      a. VK can certainly evidence his approaches, he will benefit from the rest of PCUTL to justify his methodologies.

8. Acknowledge the wider context in which HE operates recognising the implications for professional practice.
      a. VK has demonstrated this on multiple occasions through his journals and discussion.
      b. After discussions it is apparent that VK is keen to further explore this.

Overall thoughts/considerations/reflections for Vince:

You worked really hard to deliver an outstanding session, enabling students to meet the ILOs whilst recognising different learning styles. The thoroughness in your planning paid off. You employed a range of resources that worked well for the format of the session (4-hours) as well as benefitting the students outside the classroom (case-studies, exercises, videos etc) Student's were kept engaged and at the same time challenged by an appropriate content. Your enthusiasm was tangible. You did run over time (against your lesson plan) but this didn't matter in the slightest given the flexibility in the day's teaching and overall module. It was entirely appropriate to stay with the plan (and in fact you added a break and spent time reinforcing some material) rather than speed-up, especially as the room was getting stuffy and students were getting tired. I spoke to several

students at the end of the day, and no one had a bad word to say about you. They really enjoyed the range of resources and came away from the day enthused. Congratulations!

Some areas for potential improvement/reflection:

Context: there was no mention at all in the session about the wider application of game theory. For example why is it taught within the module/programme and how is game theory used in practice and by whom?

A couple of errors in the slides crept in (spotted by students) - a couple of sighs from the back (mostly because they were initially struggling to understand the equations and the error didn't help) - of course it is tricky to have completely error-free slides but worth double checking slides beforehand.

Consider use of skeletal notes for handouts: just a personal preference, but I find use of skeletal notes with gaps in notes at important points stresses to students main results and helps with concentration. In your case though you used the whiteboard extensively to expand on the notes, but often does no harm for them to write something (from where I sat I actually observed (surprisingly) very few people writing anything...some were highlighting key equations but it might have done no harm for them have written them out for the first time themselves)

Be careful if appearing to 'pick-on' a student(s), even if you know them well and anticipate they won't mind. You only did this twice early on, and I appreciate for humour, but might make them feel awkward and moreover others in the class wondering why you have picked them out and yet no-one else.

Signed:_____   **Date:_____**
Capacity of reviewer: Mentor

Output 3: Reviewer /Reviewee Post PRLT Reflection

<u>Reviewee's response:</u>

What have I learned about my teaching /learning support practice?

This peer review was quite positive and in particular highlighted certain aspect of my teaching that I should continue and in particular try and to stream across the majority of my teaching:

- Use of learning resources.
- Pace of delivery.
- Student participation

There are however certain aspects that I must improve. In particular I will try and emphasise further the context within which the subject sits. After the class I had shared state of the art research materials on the topic of Game Theory with students. The hope of this was to ensure that students would understand the applicability of the work and how it fitted in to the MSc course. After discussions with my mentor however I don't feel that I emphasised this enough.

Other aspects include errors in my notes. This is certainly something that I need to endeavour to remove from my teaching.

With regards to the use of skeletal notes. I have given this some thought and feel that I will continue to use distribute "full" notes to the students. At the beginning of my teaching I emphasise that I want the students to "take responsibility" for their learning and as such I ensure that my entire set of teaching resources is available to them before every lecture. The fact that few students were writing is however something that needs to be addressed.

Finally with respect to the single student whose interaction with could have been understood as "picking on". This particular student is quite a popular student and I happen to know him quite well. When I was a PhD student he would often come and ask me for help and he did his final year project under my supervision. As such I have perhaps gained a little bit too much familiarity with him and teased him slightly during the lecture. Interestingly, I myself thought that this was inappropriate almost immediately. After the lecture I had a brief chat with the student in particular who assured me that he did not feel at all aggrieved and had in fact thought it was funny. Despite that, I completely agree with my Mentor and I should not tease students in any situation.

After some further discussion with my Mentor, we discussed that despite some of the students saying they had enjoyed my lesson this was of course a small sample. I will attempt to collect some general feedback from the students to see the overall consensus.

What I may do differently, think about next time? Is there anyone / a resource I can work with on this?

There are three aspects that I will modify in future teaching. Firstly I need to emphasise the context of the particular subject at the beginning of the teaching session. I will be sure to spend some time doing this and place the subject in the context of the module and the MSc program in general. It will be helpful to have the MSc program documents to base this on (these have been given to me).

I will continue to ensure that typos and mistakes are removed from my notes. I will also be sure to not give the appearance of "picking on" any student.

What would be a useful focus for my next PRLT?
(Think perhaps both about using PRLT to develop ideas raised above further, and also as a resource to support your evidencing of the PCUTL ILOs and elements of the UKPSF)

The main aspect that should be focused on in my next PRLT are to ensure that the positive aspects from this PRLT are transferred to other subjects. The particular subject area can be taught in an interactive and dynamic way. It would be beneficial to ensure that my next PRLT is for a different type of subject and in particular evaluate that I am able to mainstream my methodologies.

Signed (Participant) _____   **Date:_____**

Mentor sign off:

> **Module 1:**

- **I confirm that we have framed our discussion in the context of discipline-specific pedagogy and the PVs outlined in Output 4.**
- **I also confirm that the participant has satisfactorily achieved Module 1 ILO4** (*Use PRLT to explore the impact of their teaching and/or support for learning on students' learning, and plan modifications accordingly.*)

Signed (Mentor) _____   **Date:_____**

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