LEARNING AND TEACHING CONFERENCE 2O12: POSTER PRESENTATIONS AND ABSTRACTS

Anna Hammond and Janine Henderson, HYMS - Clinical Reasoning in Medicine: Developing students' meta-cognitive skills

Abstract:
This poster outlines the progress of the authors' project in introducing formal Clinical Reasoning Skills sessions.

This project was instituted on the basis of observations of students' performances in live examinations in years 4 / 5 of our five year course and from feedback from students. Despite having excellent core communication skills students struggled with effective analytical thinking when faced with complex diagnostic challenges.

Using research evidence a three week SSC was designed introducing concepts underpinning the clinical reasoning process. This is founded on experiential practice in practical sessions where students analyse their thought processes and hypothetico-deductive reasoning governing the choices and conclusions reached whilst interviewing patients.

All sessions are conducted in small interactive groups with experienced simulated patients and academic clinician tutors.

Feedback from students was overwhelmingly positive:

"These sessions were very useful and could benefit all students, particularly if they were incorporated into the curriculum at the start of the year, rather than as an optional SSC"

"I have learnt a lot which I can use in future to make a more thorough and educated diagnosis"

All students felt that sessions such as these should become a core part of the undergraduate curriculum rather than an SSC.

The second year curriculum has now been altered to include two formal sessions that focus on Clinical Reasoning for all students.

The SSC continues to be offered and is oversubscribed each time.

We are now conducting a pilot research project recording these sessions to analyse as an initial exploration of how diagnostic reasoning and meta-cognitive skills develop in undergraduate students.

This poster relates to the conference themes –
-planning a challenging curriculum that is deliverable within constraints

-research linked teaching
-developing positive communication with students.

Delegates will take away an example of iterative process for developing higher order thinking skills in students, applicable to students in any practical discipline.

Iain Barr/Alex Brown/Lizzi Linkater, Centre for Lifelong Learning - Connect to Science

Abstract:
Too many adults in our community are disengaged from science. Numerous regional and national programmes are aimed at progressing adults into degree level courses; for many learners however, the step towards a Foundation Degree is too great and there is a need to invest in programmes which provide disengaged learners with pathways into this provision. Connect to Science is such a pathway.

Connect to Science aims to re-engage adults with science and is a free eight week course where science subjects are introduced and made more accessible to those without prior science education by using creative writing techniques. The project is a collaboration between The Centre for Lifelong Learning, Department of Physics and National Science Learning Centre at the University of York, and is supported by funding from HE STEM. The National Science Learning Centre on the University of York campus hosts the class-based activities and the course is delivered jointly by a physics tutor and a creative writing tutor. Class-based activities are supplemented by visits to practical science locations such as Drax power station and the National Railway Museum.

The course represents an imaginative combining of cultures, as identified by CP Snow 50 years ago, and aimed to make students aware of the commonalities that both approaches share. Delegates will hopefully leave with a new awareness of the fact that the disciplines are perhaps not as far divorced as they may have originally perceived.

Dave Pearce, Electronics - Initial experience with an automated help request system for laboratories

Abstract:
The poster reports on the introduction of an on-line system for requesting help from demonstrators, currently being trialled in the Department of Electronics. This replaces the previous scheme where students requested help by raising their hands.

The system maintains an ordered queue of requests, and allows students to continue to work while waiting for help to arrive. A simple priority system is also provided, with students allowed to rate their query with one of three priorities.

The system has proven popular, with over 80% of students expressing a preference for the new system; the main disadvantage mentioned being that it is no longer possible to get help from the students' preferred demonstrator. An unexpected side-

effect of the system is that the demonstrators are kept busier as more questions are being asked.

The system automatically collects statistics about the number of times help is requested by each student, the time taken to respond to the help requests, and the rate of help requests during the lab sessions. Analysis of this data has revealed wide variations in the rate of help requests from different students, as well as at different times, and in different labs. This provides data that is being used to manage a reduction in demonstrator numbers.

The poster will address issues in the design of the interactive system (now in its third revision), show the system in use, discuss how it can help reduce demonstrator requirements, and present the results of a student survey concerning the system.

Paul Galdas (Senior Lecturer), Lorna Davies (BSc (hons) Nursing student), Alex Moore (BSc (hons) Nursing student), Health Sciences - Reflections on the Development of an Undergraduate Nursing Society to Improve Academic Representation and Empower the Student Voice

Abstract:
Academic departments at the University of York are required to have clear and sufficient mechanisms in place to allow for the full representation of student views and ensure these systems provide for assurance and enhancement of quality in teaching and learning. Core principles include the fostering of a collaborative culture and shared responsibility; promoting inclusivity of the diversity of student voices; and providing students with opportunities for personal development. To this end, in November 2011 senior academics in the Department of Health Sciences began working in partnership with students to develop a student-led nursing society (NurSoc) that would bring about enhancements in the quality of teaching and learning through improvements in academic representation and positive student communication.

This poster will present reflections drawn from staff and student testimony and feedback on the benefits and challenges of developing and implementing a student-led society to foster a Departmental environment of involvement and empowerment for the student voice. Delegates will take away examples of effective strategies to enhance positive student communication and mechanisms for improving opportunities for staff-student collaborative working.

Ellen Roberts, SPSW - Flexible study skills support for an international and diverse student community

Abstract:
This poster reports on project designed to develop flexible study skills support for distance-based postgraduate students in the Department of Social Policy and Social Work. The work has had four main strands: the development of a Welcome site for pre-programme orientation; an 'embedded' approach, where activities in modules contribute to skills development and provide opportunities for formative feedback;

the ongoing role of the supervisor managed via an eFolio space; and self-study resources including short courses on assignment-writing and on using the e Library.

The work has been designed to meet several objectives that are relevant to this conference theme: meeting students' expectations and enabling them to fulfil their potential; recognising the needs of a diverse and international study body; and using resources in an efficient and targeted way.

Key lessons from the project include the benefits of an integrated approach in which several strands of study skills support are planned together, the value of a targeted approach which combines self-development with supervisor support, and the role that some simple tools and techniques can play in making this a more efficient and effective process.

Christine Skinner & Matt Cornock, SPSW – Punctuated feedback and student engagement in long-thin modules

Abstract:
This poster directly addresses 'commitment under pressure' by offering a way for colleagues to balance an increased provision of feedback whilst encouraging students' independent learning activities.

We explain how our approaches within a second-year, long-thin, undergraduate module involved a blend of online and face-to-face feedback mechanisms on the formative work students had submitted via assignment submission points and blog spaces on Yorkshare.

The online formative tasks themselves were designed to support the final assessment and group presentation activities. This link between online work and assessment provided sustained and meaningful activity for students in periods where no face-to-face seminars were scheduled.

Our approaches are transferable to different disciplines, and provide options for colleagues to try out on their own modules. We will present our key learning points to help colleagues avoid common pitfalls, including: the management of online groups, signposting techniques to guide students through online activities and an awareness of the planning required for the blended approach.

Our poster is supported by statistical data to show usage of the VLE space, and students' views of the different feedback mechanisms used in the module.

There are clear links to the conference themes looking at the delivery of feedback, use of tools to support learning and how this balances against other commitments.

Merran Toerien & Paul Drew, Sociology - Using wikis through the VLE to support student research based learning

Abstract:

In an effort to:

- enhance students' motivation and engagement in a 'long thin' 30-credit module taught over 3 terms,
- help develop their research skills,
- provide opportunities to work collaboratively,

we've devised tasks requiring working together in small groups, through the medium of wikis accessed through the VLE.

In collaboration with the E-Learning Team, we have constructed assignments completed in stages through 'virtual' collaboration with other members of their small group; completion requires each member to have contributed. As they proceed students can assess the accuracy and cogency of one another's contributions. We (the teachers) can monitor the progress each pair/group is making, and whether they have completed the assignment. Students give a brief workshop presentation of their findings.

There is plainly 'pressure' on teachers to deliver high quality research based teaching, and to "develop students as researchers" (e.g. *UC* Talking Point October 2008) – without unduly increasing time spent in the classroom. So there's pressure to teach more efficiently and effectively. At the same time, the University's new modular system has generated long thin modules, with the concomitant 'pressure' for students – staying engaged with a subject or area that is taught over such a long period of time. Moreover their schedules (including time in paid employment) are such that getting together physically is increasingly difficult; wikis are an ideal solution to that pressure, facilitating collaborative work in periods between fortnightly workshops in a way that is flexible and convenient.

This poster, together with computer-based access to an example of our wiki-based exercise, should give participants a clear understanding of how they might adapt our approach to their own teaching. The poster will also summarise some of the pros and cons, in our experience, of taking this approach.

Ned Potter, Library - Using Prezi in learning and teaching to increase student engagement

Abstract:

Prezi (www.prezi.com) is a 'zooming presentation software' which is fast eclipsing PowerPoint as the medium of choice for engaging presentations. It is new and aesthetically pleasing, and engages the students in a way which slides will not.

The library is using Prezi in a particularly innovative way, to provide interactive maps of the premises for students during induction. They take the form of a top-

down view of the three main library buildings, with the presenter then able to zoom in on specific areas to talk about how they work. The presentations also work as stand-alone web-objects, with students able to access them online and zoom in on the area of the library they need more information about. The presentations can also be expanded and extended to form the basis of teaching in information-skills workshops.

In particular, this poster will pick up on the theme of 'Using resources/tools thoughtfully to provide suitable support for modules.' Prezi is popular in the academic community with those who know about it, and many academics at York have wanted to know more about the platform once they've seen a library presentation which uses it (in fact one department has sought Prezi training from the library). Feedback from the students has been excellent, and all library trainers who've used the medium have noticed a much higher level of engagement within the lectures and teaching sessions.

The poster will be accompanied by laptops displaying various Prezi presentations in order for people to see it for themselves, and will give delegates a better understanding of a potentially useful teaching tool.

Yvonna Lavis, Psychology - Mini projects: an innovative way to teach research skills

Abstract:
During the summer term of 2011, the Department of Psychology trialled a new way of teaching Research Methods to 1st Year Undergraduates. In groups of 5 – 6, the students completed a full research project, from research question to dissemination. These mini projects reflect an on-going commitment to providing our students with high quality research training, whilst responding to the increased pressure caused by less time and fewer resources. The new course structure and term calendar means that there are fewer research skills practical classes and less face-to-face teaching time. The mini projects take a problem-based learning approach, in which students have a clear goal and are provided with semi-structured support as they work toward that goal. This means they get help when they need it, but are otherwise given the freedom to determine for themselves what they need to do in order to achieve their goal. Thus, teaching is more efficient and students become more experienced and independent as researchers.
This poster will present the outcomes of the mini projects, in terms of student learning experiences and feedback. It will discuss the advantages and pitfalls of this type of teaching, using the mini projects as a case study.

Peter O'Brien and Philip Craven (postgraduate student), Chemistry - Back to Basics with "The LDA Experiment" – Development of a Research-based Experiment for the Chemistry Practical Course in Year 2

Abstract:
This poster describes the development of a new experiment that uses research-style practical techniques (used on a daily basis in the O'Brien research laboratory) and

features LDA (lithium diisopropylamide!), a key reagent in one of the Year 2 lecture courses. The experiment involves the preparation and use of the strong base, LDA, and the undergraduates use dry ice (to reach a reaction temperature of –78 °C), n-butyllithium (a very reactive and water-sensitive reagent), syringe/needle techniques and balloons of nitrogen gas!

Key features of the development process:

- In order to test the practical, we utilised two undergraduates over the summer vacation to optimise the experimental procedure.
- An additional undergraduate was employed to record some videos of key practical techniques used in the experiment (now available via the VLE).
- The script was written in collaboration with the teaching laboratory staff.
- Postgraduate demonstrators were involved in developing and implementing in-lab demonstrating and marks schemes.

In summary, an innovative, research-like experiment was developed for use on the Year 2 practical course in chemistry. It proved particularly popular with the undergraduates. The success was due to a dedicated and enthusiastic team of postgraduate demonstrators who really enjoyed teaching the undergraduates skills/techniques based on what they use on a day-to-day basis in the research labs.

Take-home message: a new research-based practical experiment has been developed in which the development workload was shared between the experiment leader (Professor Peter O'Brien), undergraduate summer students, teaching laboratory staff and postgraduate demonstrators (Philip Craven).

David Roberts, James Taylor, Isabelle Winder, Steven Ashby, Sara Perry, Stephanie Wynne-Jones, Nicky Milner, Archaeology - Perfect Pitch? Improving Student Performance and Developing Transferrable Skills through the Use of Digital Media

Abstract:
As part of new assessment arrangements introduced under modularisation, Y2 archaeology students at York undertake a 'pitch' exercise, in which they describe and justify their proposed dissertation project to a panel of academic staff. In 2010-11, a number of students took the opportunity to practise their presentations, view a video of their performance, and receive feedback from PGWTs. This poster explores (1) the impact of this innovative teaching method on the students' assessment results, and (2) implications for the use of technology in the development of transferable skills. The delivery of additional feedback media via a Virtual Learning Environment had a significant positive effect on student results in this assessment, and the application of similar techniques may be both beneficial and cost-efficient for university teaching of transferable skills

Tim Clarke, Electronics - The University as a Laboratory

Abstract:
The Department of Electronics offers a one-year MSc in Engineering Management. As part of this programme, students carry out an extended group project. The chosen

topic should encompass the wide technical expertise base specific to the group and provide the focus for a business innovation problem task. The project aims to develop good engineering managers using as a realistic a learning scenario as possible.

Last year, groups worked with the City of York Council on diverse aspects of enhancing the public experience (e.g. road traffic management, tourism and waste management).

Working with Estates and Campus Services, this year, the focus of the author's group is on supporting an aspect of the University's Estates Strategy, the Carbon Management Plan.

There are several dimensions to this project which will be developed in the poster.
The poster will outline the latest developments of this novel approach to project work, discuss how the idea is being developed and the all-round benefits accrued.

As a department, we frequently send undergraduate students on industrial projects, working as individuals to solve real engineering problems for companies. This novel extension will embed a project group into the inner workings of the University. And just like the conventional industry project, we hope that all parties will benefit from the experience.

What will the delegates, from all disciplines, take away from this presentation? Ideas!

We have a virtually untapped resource within our own environs: knowledgeable people, considerable physical and social infrastructure and weighty challenges. How could they use this laboratory?

Paul Scott, HYMS - Can *Blackboard Mobile Learn* deliver the promise of anytime, anyplace learning?

Abstract:
The Hull York Medical School (HYMS) courses rely heavily on Blackboard to support teaching and learning. Undergraduate students spend the majority of their course rotating around placements at disparate locations across Yorkshire and Humberside, where they are taught by clinicians who are employed either by the NHS or by GP surgeries. Consequently the context in which most staff and students will need to access Blackboard is from an NHS or GP surgery site, where access to online resources is often not possible.

To address this issue HYMS are currently piloting the use of 'Blackboard Mobile Learn' for the 2011/12 academic year. This software makes use of specially designed 'apps' that work on a number of different technology platforms and provide a simple and intuitive user interface that allows smartphone and tablet device users to access Blackboard content, post to discussion boards and interact with a number of Blackboard tools. As well as offering increased flexibility in terms of access this also

offers opportunities for innovative learning and teaching methods to be explored.

This interactive session will give the opportunity for a hands-on demonstration of Blackboard Mobile Learn and will also present the findings of our six month evaluation of the pilot project by looking at usage data and the results of staff and student surveys. This shows widespread smartphone ownership and indicates a strong interest from students, both on and off campus, for access to Blackboard resources via Mobile Learn.

Michael Rogers and David Pugh, Chemistry - Integrated Chemistry Projects - "The chemistry of a night out"

Abstract:
The Integrated Chemistry Projects (ICP) course was introduced last summer term, with the theme "The chemistry of a night out".

Students were presented with samples of drinks, foodstuffs and tobacco products that might represent components of a night out in York. Many of the samples were sourced from local outlets. Laboratory tests were carried out for; sugar and alcohol content of drinks, fat and protein content of foodstuffs, nicotine content of tobacco products.

The project ran as a group exercise and was topped off with a summary lecture which compared student accuracies with available data. To minimise the impact on staff time, the assessment of the module was built into the course and there were no laboratory reports to be submitted and marked.

This course ran on a relatively low budget for four days of practical chemistry (below £1,000 for 200 students), making good use of limited resources to deliver an exciting end to Year 1 chemistry. The content of this course supports both practical and analytical chemistry modules undertaken earlier in the academic year.

This poster presentation showcases a low-budget course that fills an otherwise empty time slot (weeks 8/9 of summer term) and minimises staff time, but allows for positive communication with students (via in lab demonstrating and in group presentations) in a relaxed atmosphere.

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Nicholas McGuinn and Amanda Taylor, Education – King Lear in Siberia

Abstract:
This poster describes an inter-disciplinary, international learning and teaching initiative shared by staff at the Department of Education in the University of York and colleagues at the Foreign Languages School of the state university, Ulan Ude, Republic of Buryatia in the Russian Federation.

In August 2011, five Second Year York students from different departments travelled to Buryatia to undertake a series of interactive workshops with fifteen of their peers from the state university. Together, they explored cultural issues arising from three classic texts: Shakespeare's *King Lear,* Turgenev's *A Lear of the Steppes* and Kalashnikov's *Cruel Century.* The workshops culminated in a dramatised performance of excerpts from the three texts performed in Buryat, English and Russian and presented, under the direction of professional theatre director Marina Safonova, to an audience of university staff and students.

The poster presentation relates to the themes of the conference by suggesting that some of the most important learning experiences students can gain at university take place outside the formal curriculum and outside the parameters of formal academic disciplines. In this instance, Chemistry, Economics, English, History and Philosophy students from York worked with Language students from Buryatia to share their engagement with three canonical literary texts. The life skills experienced by the York students were considerable: they travelled to Ulan Ude on the Trans Siberian Express; they worked outside their subject disciplines by contributing to, and occasionally leading, workshops on literature; they lived with host families; they gave interviews to Buryat national television and they performed on stage in Russian. *Commitment under pressure* indeed!

Participants will have the opportunity to discuss the opportunities and challenges posed by organising and undertaking an international project of this nature.

Martin Robinson, Electronics - An electromagnetic wave demonstrator for enhancing electronics lectures

Abstract:

Introduction. A grant from the Rapid Response Fund (RRF) has enabled me to build equipment for demonstrating principles of electromagnetic waves (EMW) in lectures. Practical live demonstrations are a very good way of communicating difficult physical concepts to students. The EMW Demonstrator is being used for teaching at undergraduate and master's levels.

The EMW Demonstrator. The kit comprises two microwave antennas, which are mounted horizontally on brackets so that they can be pointed in various directions, and the audio-visual unit, which is about the size of a shoe box and includes the speaker and the indicator lights. I can show various effects, such as placing sheet materials in the microwave beam (plastic is transparent but metal opaque), reflecting the beam off a flat surface, and showing that dry cardboard is non-attenuating but when soaked in brine it becomes a good absorber. The equipment is quick and easy to set up, can be seen and heard well even in a large lecture theatre, and the components and materials are convenient to store and transport.

Teaching. Seeing these effects helps to convince observers that the otherwise 'dry' EM theory does have practical applications. In their end-of-term feedback forms, many students say that they 'like the demonstrations.' A lecture using the new equipment was appraised by a colleague who wrote 'The Lecture finishes by a fascinating and very instructive practical demo using a microwave kit, demonstrating EM properties of various materials. There is quite a bit of audience interaction at this stage. The objectives of the lecture are achieved quite impressively.'

Conclusion. The RRF grant has allowed this equipment to be constructed at a cost of around £2k. The effort in developing the kit has certainly been worthwhile, because it enables difficult concepts to be put across, and also, I hope, makes the lectures more interesting and memorable for the students.

Richard Walker, David Barrett, Simon Davis, Wayne Britcliffe, E-Learning Development Team (Academic Support Office) – Demonstration of the Yorkshare virtual learning environment (VLE)

Abstract:

This interactive poster will demonstrate some of the new features and tools that will become available in July after our summer upgrade of the Yorkshare VLE platform.

The upgrade will bring with it further improvements to the user interface; a cleaner, more modern look and a much less cluttered staff Edit view. Students can also

navigate between any modules they are enrolled on without having to go back to their Home tab.

There will also be additional new assessment features among which are tests which record how long students take to complete them, and interactive rubrics for marking coursework. The rubrics feature will enable staff to set up multiple criteria for marking student assignments electronically.

There will also be a section on the proposed Google Sites workflow for Personal Development Portfolios used within learning and teaching scenarios.

The poster and accompanying presence of E-Learning Development Team members (with laptop access to Yorkshare) will provide staff with an update on what to expect in the coming upgrade and an opportunity to question the team on any aspect of their use of E-learning Tools and Resources (both currently and in future).

Ben Fitzpatrick, Law - Developing academic practice and academic identities in a Problem-Based Learning Curriculum

Abstract:

York Law School (YLS) runs the only LLB (undergraduate law programme) in the UK which is built on a significant core component of problem-based learning (PBL). PBL scenarios are designed to be messy and authentic and they often cut across conventional modular boundaries.

The roles of staff in this type of curriculum are significantly different from those in conventional curricula. PBL sessions are facilitated by PBL tutors, who are part-time colleagues and who may have practitioner and / or educational experience. The roles of 'conventional' academic staff include the design of learning resources, including problem scenarios and other written materials; facilitating plenary sessions.

Pressures

The implementation of the YLS LLB has demonstrated that there are number of challenges and pressures associated with this type of curriculum:

1. The need to cut across modular boundaries requires colleagues to relinquish 'territoriality' in relation to modules
2. The fact that different colleagues are associated with the 'design' and 'delivery' ends of the curriculum, and the different skill-sets associated with (i) facilitative PBL tutoring, (ii) 'conventional' academic work, (iii) academic work in a PBL curriculum, create issues around communication, and role expectations.

3. The fact that PBL tutors are not involved in the day to day life of the department means that it is desirable to foster a tutor community identity to encourage buy in and the sharing of good practice.

Why visit this poster?
Colleagues visiting this poster will have the opportunity to discuss ideas for developing effective academic practice in functionally diverse teams; and the challenges associated with developing innovative curricula.