The PAVE Study

Inactivity is a significant public health problem associated with a range of preventable diseases. Current government recommendations suggest that individuals should be engaging in at least 30 minutes of moderate intensity physical activity on most days of the week. However, it is thought that less than 20% of adults in most developed countries are active enough for health or fitness benefit.

Whilst health promotion is evident in the pre-registration nursing curriculum, this may not be enough to impact on health behaviours of student nurses. Despite being educated to promote active lifestyles to patients, student nurses lack knowledge about the level of physical activity required for health benefit and how to achieve this during the course of the day - only a small percentage report engaging in incidental activities through the working day including active travel, stair-use and walking. There is still a clear need amongst our nursing students to increase awareness about WHY people need to increase their activity levels and HOW they might achieve this, in order to educate these health care providers of the future and encourage them to look after their own health.

We conceived the PAVE - Physical Activity Virtual Education - Project to help address this chronic problem, by creating online learning resources on healthy living, particularly emphasising the role of physical activity in keeping physically and mentally healthy. With funding from the Centre for Integrative Learning, based in the Hallward Library on Park campus, we developed two Reusable Learning Objects (RLOs): Physical activity and health and Keeping physically active. These interactive and visually engaging resources are available on the SONET website (sonet.nottingham.ac.uk/rlos/), and have been delivered so far to 64 Masters in Nursing Science students in year one. Feedback from peer reviewers and students has been overwhelmingly positive, eg:

"Great, really liked it, clear and engaging, well organised and very current!"
"Narration clear and audible – very professional"
"I am pleased to see people being active in a variety of ways, alone AND together"
"I particularly liked the ‘scoring a goal’ for the correct answer, I found the applause really gratifying!"
"...very accessible and the learning objective is shared across many disciplines and courses"
"...approachable, friendly and informative"

We will evaluate the impact of the RLOs on learning continued overleaf...
Continued from the March newsletter:

With regard to podcasts (basically, recorded lectures available online to listen to or to download), my Midwifery students asked me for some to help them remember their biology. I attended Jo Lymn's podcast training and followed her guidance (she was always available if I’d needed her). It seemed easy at the time so I had a go. For me the experience was not initially positive as the students didn’t respond as they normally do in class and didn’t ask a lot of questions as they usually do. This could have been my apprehension and their worry about asking “silly” questions and being recorded, despite me reassuring them it could be edited out. I have to admit to being defeated by the editing process and found it arduous and tiresome - but again this was only my first attempt.

I did ask my students what they thought of my attempt and they said they didn’t like the background noise of chatter and general classroom noises. So I came to a compromise - rather than do a true live podcast I used the podcast recording equipment to record me talking over my Powerpoints. The first time I did this seemed to go fine when OMG I had forgotten how to download the recording of my voice onto the computer! Not to worry, the digital recording kit comes with idiot’s guide of how to do it.

Now podcasts of all the biology modules in midwifery are on webCT. I’d heard a nasty rumour that webCT doesn’t like facilitating podcasts/digital recordings being downloaded onto MP3 players or iPods. It doesn’t! But with talking to Yvonne Hood, the webCT officer, we devised a separate webpage that she downloaded all my recordings on to. The students access this page now from webCT as a link, so they can either listen to the recording direct from webCT or they can go to the webpage via the link and download onto their little iPod/Mp3 player. Some of my students go to sleep with my dulcet tones ringing in their ears! In fact one of the students’ husbands now listens...not sure of his reasons and haven’t asked!

Jenny Prior
Midwife Teacher and e-Mentor, Nottingham Centre
sonet.nottingham.ac.uk/projects/podcasting/
Students will no doubt be aware of podcasts from the entertainment perspective, many radio stations utilise this technology to allow listeners to download programmes to portable devices such as MP3 players and iPods. While the benefits of ‘learning through listening’ have long been recognised, their use has been limited to the Open University and foreign language teaching. The portability of these new formats however could have profound implications in an educational context allowing students to access lecture material almost anywhere.

Non Medical Prescribing

The government push to improve patient access to medicines has seen the expansion of prescribing rights to nurses and other health professionals. Indeed following completion of a non-medical prescribing course nurses have similar independent prescribing rights to doctors. The need for these professionals to have an understanding of drug actions and interactions is therefore clear. This, coupled with the move away from biological science in pre-registration nursing curricula, means that although pharmacology is only one of eight areas of content in prescribing courses it is the area which students struggle with most.

Podcasts and Pharmacology

In order to try and overcome these issues and promote student understanding of pharmacology we decided to utilise this mobile technology to support pharmacology teaching & learning. Seven pharmacology lectures were recorded using an MP3 recording kit, uploaded to the University streaming server, and linked to the virtual learning environment WebCT for students to access directly or download to mobile devices. Evaluation of the usefulness of pharmacology podcasts was undertaken using a number of methods. Students were asked to complete a questionnaire describing their perception of the podcasts as learning tools. The actual use of podcasts by students was tracked through WebCT and their impact on pharmacology knowledge was determined by comparing exam performance with historical cohorts of students who received the same course material but without access to podcasts.

<table>
<thead>
<tr>
<th>Reason for podcast use</th>
<th>Students accessing podcast for this reason (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revisiting lecture</td>
<td>88</td>
</tr>
<tr>
<td>Revision purposes</td>
<td>77</td>
</tr>
<tr>
<td>Specific question</td>
<td>59</td>
</tr>
<tr>
<td>Missed session</td>
<td>18</td>
</tr>
</tbody>
</table>

Positive Impact

Although only 42% of students rated their comfort levels with internet technology as good, tracking systems determined that 91% students had accessed at least one podcast. Individual podcasts were accessed by between 32% and 78% of all students. Students used podcasts for a variety of reasons (see table) and were overwhelmingly positive about the benefits of these tools.

"I used it as a repetitive tool to familiarise myself with terminology I hadn’t heard before – to promote my comfort – to then go on and digest the subject."

"Podcasts were a great way to learn and revisit! Excellent learning tool!! Thank you."

This positive view of podcasts as an aid to learning was supported by an improvement in exam scores in areas with associated podcasts. Perhaps just as importantly students viewed podcasts as supplementary learning tools and student attendance at lectures was not affected by their availability. Following the tremendous success of these tools podcasting is now being extended to all pharmacology lectures and to other areas of the non-medical prescribing curriculum. Indeed podcasts may prove to be valuable supplementary learning tools across nurse education in its widest context.


References

RLO Showcase

Injection techniques

There are three visually-engaging interactive resources on the SONET site on injection techniques which colleagues could use in Clinical Skills teaching.

**Intramuscular injection by the Z-Track technique** explains and demonstrates a safe technique for administering an intramuscular injection. It includes video clips, photos and diagrams demonstrating correct technique, and interactive exercises to reinforce learning.

[sonet.nottingham.ac.uk/rlos/placs/nctl176_ztrack/](sonet.nottingham.ac.uk/rlos/placs/nctl176_ztrack/)

**Intramuscular injection sites for adults** is designed to help students correctly identify which muscles may be used to safely administer intramuscular injections. Animations and diagrams illustrate suitable injection sites.

[sonet.nottingham.ac.uk/rlos/placs/nctl178-injection-sites/](sonet.nottingham.ac.uk/rlos/placs/nctl178-injection-sites/)

**Skin preparation prior to intramuscular and subcutaneous injections** aims to help students gain an understanding of the issues associated with skin preparation for intramuscular and subcutaneous injections, and explores the merits of site cleansing and the maintenance of strict asepsis by the healthcare workers.

[http://sonet.nottingham.ac.uk/rlos/placs/skin-prep/](http://sonet.nottingham.ac.uk/rlos/placs/skin-prep/)

The content of these resources was written by a team of School colleagues, facilitated by Julia Williams who also provided the voiceovers.

These resources are part of an expanding suite of School-produced Clinical Skills resources, which are listed on the SONET site under Subject Resources | Clinical Skills.
**Videoconferencing tips**

**Before the session**

- Book the videoconferencing equipment by completing a videoconferencing request form online at [www.nottingham.ac.uk/nursing/internal/video/](http://www.nottingham.ac.uk/nursing/internal/video/). This can also be accessed through the Portal - Division of Nursing - forms and documents.
- Discuss your needs such as Powerpoint, roving microphones etc. with the technician at your centre and check what your involvement in the technology will be.
- Think of ways in which you can gain rapport with the remote audience and make the session as interactive as possible so that it doesn’t become a passive television watching experience.
- Decide who you will ask to be site facilitators (students or co-lecturers) to help things run smoothly at the remote sites and to be available to channel questions and comments.
- Send out handouts or other documentation that will be used in the session.
- Ten minutes in advance of the session start time, check that multiple sites are present and transmitting and check camera angles.

**During the session**

Acknowledge to the audience that this is not like a normal lecture but will provide different opportunities. The way students perceive videoconferencing is influenced greatly by the quality and clarity of the sound:

- Speak clearly and try to maintain a constant volume.
- Use pauses in speaking to accommodate any time delays to remote sites.
- Clearly indicate when you are expecting a reply.
- Make students at remote sites feel included by referring to them during the session.
- If using Powerpoint be clear about which slide you are referring to, and when you are moving on to the next slide. There may be a slight delay on slides being received by the remote centre, so allow for this when speaking about the information on the slide.
- When asking questions or making comments speakers should state their name and location.
- Try to avoid background noise, such as paper rustling that can be magnified for remote audiences.
- Encourage students to give feedback during the session if they can’t hear the speakers.
- Remind locations to turn off microphones so only the speaker can be heard.
- Try to be the only person on camera when presenting a lecture as it can be distracting for remote audiences to see other people in the background fidgeting, eating or worse!
- To give the impression that you are making eye contact with the remote audience, look into the lens of the camera, not the screen.

**At the end of the session**

- Make sure that the session finishes on time or the videoconferencing link may be lost.
- Make the ending of the transmission clear and allow time to ‘say goodbye’.
- Give feedback to technical staff if necessary.

**If things go wrong**

The technology supporting videoconferencing is becoming increasingly stable. However, just in case there are problems:

- Have a contingency plan, such as reading or an activity for the students until transmission is resumed.
- Allow the technicians to sort out problems behind the scenes rather than disrupting your session to deal with it yourself.

*Brenda Rush*  
*Associate Professor, Lincoln Centre*
“Should we just...?”

I’m not a usual suspect to be involved in a ‘technology’ project; I can switch my computer on; handle email; use the tools of the trade, but when it comes to anything that has a lot of abbreviations and .com I usually switch off. I’m far more of a ‘people person’! So when approached by Richard Windle with the idea of developing Reusable Learning Objects (RLOs) to support learning disability education, I was slightly cynical(!). ‘Why me?’, ‘I don’t know enough about the technology’ and ‘I haven’t got the time!’ were the excuses I tried to use to block this out! Then it was sold to me differently! ‘We want to explore if there is any difference between student generated content and teacher generated content’ I was told. ‘Could you help us gain access to student nurses from across the 5 nations through the POSITIVE CHOICES (www.positivechoices.org.uk) network?’ But of course that wasn’t just it! ‘Should we just’ really came into play and more importantly I got hooked!

This project - Supporting Health Occupations Understanding of Learning / intellectual Disabilities (SHOULD) - aimed to develop a series of RLOs to support and challenge students from a range of health care occupations about their professional interactions with individuals with learning disabilities. There were 37 student nurses from 7 different higher education establishments from across the 4 year undergraduate spectrum and us, learning together, and being led by the student nurses to develop amazing resources that have had a huge impact across the learning disability world of the United Kingdom. Now I’d like you to have a play!

sonet.nottingham.ac.uk/rlos/learndis/littlethings/
sonet.nottingham.ac.uk/rlos/learndis/myhouse/
sonet.nottingham.ac.uk/rlos/learndis/sexuality/

It has been a huge learning journey as a teacher to work with these students and learn not only with them but from them. Together we have had tremendous support from the SONET team in particular the media developers, and I believe those guys have learnt about learning disabilities too! I hadn’t appreciated the passion these students have to constantly strive to improve lifestyles of people with a learning disability globally; their willingness to share with each other is a lesson we could learn.

Has the project finished? No way! Look out in the future for ‘Tom’ and our baby Misty who was conceived in collaboration with midwifery students, and nursing students in the republic of Ireland! Am I still not the usual suspect? No! Guilty as charged!

Helen Laverty, Health Lecturer, Lincoln Centre
FAQ

Q Where can I find copyright-free images online which I can use in my teaching materials?

A There's a surprising amount of high-quality freely-usable imagery (photos and Clip Art) online these days available as Public Domain - which you can use as you want - or under Creative Commons licences - which you can use under specified conditions. A good start for photography is the 'meta-search engine' everystockphoto.com which indexes many PD and CC archives, with metadata and thumbnails. For Clip Art, try openclipart.org. For healthcare-related images, HEAL (www.healcentral.org) and Wellcome Images (images.wellcome.ac.uk) are good first ports of call.

Copyright Caveat

The vast majority of images online, including those licenced under Creative Commons, are copyrighted, and to use any copyrighted image you must obtain explicit written permission from the copyright holder. CC-licenced images often specify usage conditions (eg 'non-commercial', 'attribution') which you should check before usage. If you use images from a website, look for a copyright or Terms of Use statement. Avoid using Google Images basic search - if you decide to use Google Images, make sure to use the Advanced Search and under "Usage rights" choose "labeled for reuse".

The School's Web & Media Team has published clear and concise copyright guidelines on the School Intranet which you should look at before using third-party materials. Go to the School website, login to the Intranet Portal, then click My School >> Staff Guidelines >> Copyright Guidelines

There's an annotated reference on the SONET site to usable image archives - choose "Image repositories for e-learning" from the Quick Start menu on the home page.

Resource showcase: clinical skills

Leeds University Healthcare

www.healthcarelearning.leeds.ac.uk

The Leeds University School of Healthcare has placed a large number of high-quality video-based clinical skills resources online and available for all to use. Current topics include:

» Life Support
» Emergency Transfer
» Equipment
» Moving and Handling
» Infection Control
» 2nd stage of labour

with more topics in the pipeline. There's a large section of videos for playback on mobile devices, such as iPhones.

Clinical & Communication Skills

www.cetl.org.uk/learning/

This CETL provides a number of multimedia e-learning resources in infection control and clinical observations, including Disposal of Sharps, Hand Hygiene, Blood Transfusion, Blood Glucose Monitoring and many more.

The resources are Powerpoint presentations, with voiceovers, which have been converted to web presentations with the Articulate Presenter tool. Also provided are presentation printouts in PDF for offline reference.

Rapid E-Learning

Multimedia learning resources are highly effective for web-based learning, but are often expensive and time-consuming to produce by technical professionals. Rapid e-learning tools are software applications that allow non-technical people to create simple on-line multimedia learning materials directly, without the need for skilled software developers. Most often such tools convert content produced using office applications (eg Word, Powerpoint) into formats suitable for the WWW, and thus allow you to use your existing expertise in these applications to quickly and (relatively) easily develop learning materials which you can upload to a website or a WebCT course, or just give to students on CD or memory stick.

Types of tools include:

» Powerpoint to Web: ‘web-enable’ your Powerpoint presentations and add multimedia and interactivity
» Interaction: create simple interactive e-learning features, such as assessments, crosswords, and drag and drop exercises
» Screen movie recorders: ‘shoot’ screen actions (eg doing a literature search) to video formats
» Web editing tools: create web pages and sites with little or no technical expertise

For details of such tools, and examples of their use (‘here are some we made earlier’), have a look on the SONET site under “E-Learning Resources | Rapid E-Learning”, or go to the link:

sonet.nottingham.ac.uk/resources/rapid/

(If you’re experiencing a sense of déjà vu reading this, such tools used to be known as ‘authoring tools’, but that term is now out of fashion, just sooooooo 1990s, my dear.)
Events

Jun 3
HEA E-Assessment Seminar
Kingston University, London

Jun 16-17
SOLSTICE 2010: Technology-Enhanced Learning & the Student Experience
Edge Hill University
http://www.edgehill.ac.uk/solstice/Conference2010/

Jun 5th International Blended Learning Conference
University of Hertfordshire
http://bit.ly/cXmIR5

Jun 7
e-learning@greenwich 2010
University of Greenwich, London
http://web-dev-csc.gre.ac.uk/conference/conf62/

Jul 15-16
2010 European LAMS & Learning Design Conference
Wolfson College, Oxford University
http://lams2010.lamsfoundation.org/

Jul 20-21
2010 Computer-Aided Assessment Conference
University of Southampton
http://caa.ecs.soton.ac.uk/

Sep 7-9
ALT-C 2010
University of Nottingham
http://www.alt.ac.uk/altc2010/

For a full listing of events related to e-learning in healthcare, see the Events Calendar on the SONET site:

sonet.nottingham.ac.uk/events/

SONET-ARC contacts

Education & Research
Dr Heather Wharrad, Dr Richard Windle

Learning Technologists
Lucrezia Herman, Fred Riley, Mike Taylor

Details: sonet.nottingham.ac.uk/about/people.html

We very much welcome articles from colleagues for this newsletter. If you’d like to contribute please contact the newsletter editor, Fred Riley (fred.riley@nottingham.ac.uk), for information.