Think '*on*' the box: delivering engaging library database training to first year undergraduate students

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INTRODUCTION

Continually looking to refresh, adapt and update teaching practices, the library learning support team in Waterford Institute of Technology (WIT) is committed to providing a comprehensive information-literacy training programme. This programme offers a suite of training sessions for all library users, with particular emphasis on first-year and final-year undergraduates, as well as postgraduate students and institute staff. This article discusses the changes made to the teaching practices employed for library database training for first-year undergraduate students in WIT. These changes were made to ensure that new students are introduced to the idea of searching for academic research from reliable sources in a fun, engaging and memorable way. This is largely facilitated by using short, specially designed and themed worksheets that are intended to place the student firmly in the driving seat within the learning environment. Although this article discusses

the changes made to database training within the context of an overall programme, this active-learning, student-centred model could be applied to all facets of database training within information-literacy instruction: either stand-alone or as part of a programme, attended on a voluntary basis or fully embedded into the student's course.

First-year library learning-support programme

The library learning-support team was initially established in the late 1990s. Over the years, particularly with the database element of the programme, the delivery had very much taken a 'point-and-click' approach. The librarian would be found at the top of the classroom, demonstrating the workings of multiple relevant databases, all displayed on the overhead projectors within the computer lab. The student would play a largely passive role in the learning, (mostly) observing silently. This would be followed by a short section allowing the students the opportunity to try each database out by themselves. Students seemed to enjoy the chance to become more involved with the resources, even if some of the usage of these resources was less than ideal, particularly in the first semester of their first year when students aren't overly familiar with the research topics in their subject areas.

Since 2004, all first-year WIT students are required to take a mandatory module entitled 'Learning to learn' in semester one. This module aims to assist new students in beginning their transition into third-level education by developing key skills such as communication and writing skills, critical thinking and reflective practice. This module offered a unique opportunity to the library to encourage the development of information-literacy skills through a carefully planned two-hour programme marketed to teaching staff as a supplementary support service to the module. The programme covers an induction into the library and the library's catalogue, as well as introducing the student to a range of research resources, such as library databases and other web resources. This programme is now widely established, and has a high take-up rate.

In recent years, consciously moving away from the largely lecture-type method of instruction delivery, the library's learning-support team devised a number of significant changes to the teaching methods used within the training programme. In an effort to fully engage the students, and to provide them with a much more active role within the learning environment, the team

also made a conscious decision to make training materials engaging and entertaining as much as possible.

CHANGE AGENTS

The move to an active-learning, student-centred teaching approach was influenced by a number of key factors. The strategic plan published by WIT made very clear the commitment the institute has to a similar approach: 'Learning is an active process and the Institute is committed to ensuring that the learner is at the centre of the learning experience.'[1]

Mirroring this, the single biggest influencing factor on the change to the library's learning-support programme was the students themselves. While the older method of instruction was effective in showcasing multiple resources and common search techniques, the learning-support team called for more interactivity and involvement from the students to better facilitate learning. This required a bit of thought as to the exact nature of the first-year student demographic.

Indeed, from the library's perspective, WIT's first-year undergraduate students can be broadly categorised as follows:
- those starting third-level education having just or very recently finished second-level education; aged between 17 and 20 years of age, this group is often referred to as 'millennials' within the literature
- those returning to fulltime education after a lengthy absence ('mature students')
- those arriving from overseas ('international students').

The 'millennial' students are a very interesting student group. According to Smith, they have a low threshold for boredom and short attention spans.[2] They appreciate engagement and involvement within their environments, and this includes within an academic setting. They are the blogging and gaming generation, who make extensive use of social networking sites such as Facebook and YouTube, amongst others. They demand software interfaces and media outlets that can be customised and tailored to their needs and interests. They have high expectations when it comes to education and their prospects afterwards. They are the 'net generation' who grew up with online information, and trust it implicitly.

But, according to Bell,[3] they are most likely to have 'I Already Know That (IAKT) syndrome',

signifying that the millennial students are prone to assumptions that they have nothing to learn from librarians and an information-literacy programme. These students do not become aware of the gaps in their knowledge until they find themselves actively challenged with an information need. According to Bell, once the student has been challenged, he or she then becomes enthused and engaged during the learning process.

On the other hand, research has shown that, for mature and international students, practical hands-on sessions combined with group discussions are the preferred methods within their learning environment. It is very clear that the traditional lecture-based method is being replaced by a more active, social and student-centred approach, leading to a productive learning environment for all first-year students.

The Worksheet Approach

In an effort to introduce stimulating elements of activity and fun into the training, we developed a number of learning materials, or worksheets, for teaching database-searching skills. All of the paper-based worksheets are designed to be user-friendly and visually appealing. Designed and produced in-house, they contain text, graphics and screen captures, as well as 'Top tip' boxes emphasising important features and techniques. Once completed, we invite students to keep their worksheets so that they can refer back when applying the search techniques in their own database usage.

These learning materials are created for core database resources that the library subscribes to, such as Science Direct, Emerald, ABI/Inform and Wiley Online Library, amongst others. The worksheets are based on the main subject areas taught within WIT, in an effort to tailor and customise them to the students themselves.

As a method of captivating students' interest, we decided to create learning materials that emulate popular television programmes. 'The Apprentice', 'CSI' and 'Dragons' Den' have all helped us teach students how to search for scholarly research articles on the library databases. In the case of business and management students, they find themselves completing a worksheet that sees them depicted as contestants on *The Apprentice*, and in order to secure the job, they need to hone their research skills. With the 'CSI' worksheet (as illustrated), the science student is a forensic scientist trying to solve a tough crime case. If students succeed in completing the worksheet, they solve the case! Drawing on TV shows allows us to create fun, innovative worksheets, with a narrative throughout. Although they are often set in whimsical and fantastic scenarios, the worksheet themes can help showcase the use of research skills and scholarly research outside of a purely academic, essay-led environment. Our brief when designing any database worksheet is to make it fun, engaging and inventive.
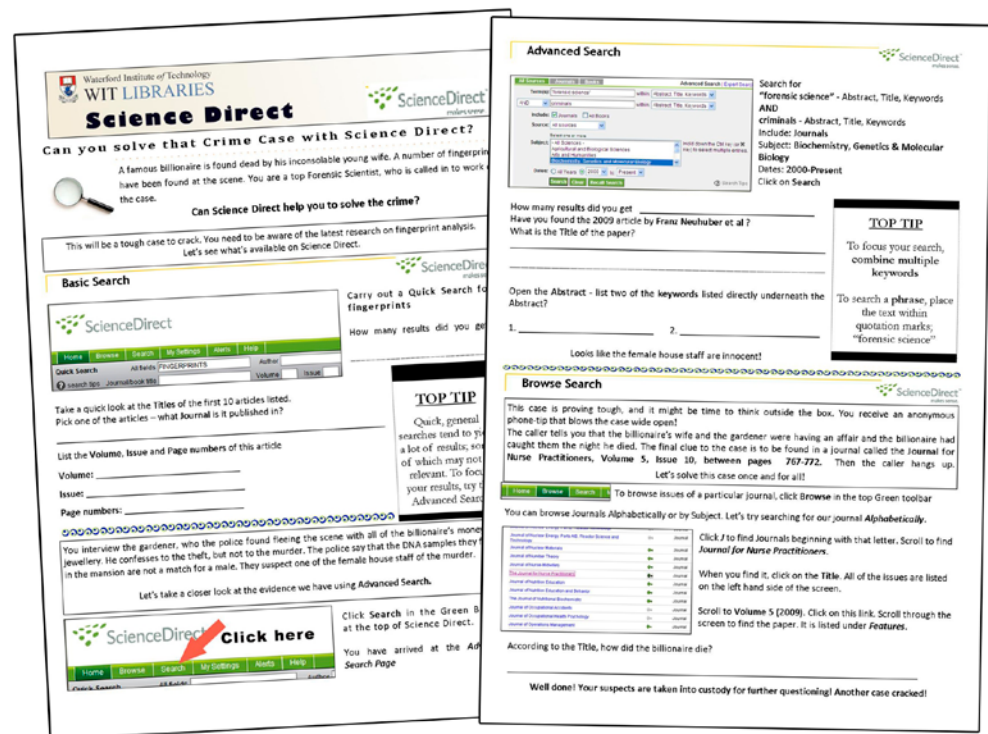
Regardless of the TV show or database chosen, all of the worksheets follow a consistent pattern, covering the following sections:

- basic keyword search
- advanced keyword search (including Boolean searching and other search options)
- browsing for publications.

The 'basic keyword' section is demonstrated to students as a starting point for database research. This section allows us to discuss common prob-

lems such as lengthy, often irrelevant result lists. To combat this, the advanced search screen is shown, combining keywords using Boolean search techniques, and utilising other search options. The final browse search allows users to navigate to individual online journal titles and to browse back issues.

The worksheets fill one A4 sheet, front and back, and are intended to be completed within 15–20 minutes during library instruction time. They contain short-bite questions, intended to maintain the levels of engagement and focus the student.

DELIVERING SESSIONS

The newly designed learning materials are an integral part of the library's database training. It is, however, unfeasible to move away entirely from the demonstration methods previously adopted. In a 30–35 minute block allocated to teaching database searching, the librarian will spend approximately 10 minutes demonstrating a single database resource at the top of the classroom, using the overhead projector. Instead of showcasing multiple databases, and all their individual bells and whistles, database-search techniques become the main focus. Common search types such as basic and advanced keyword searching, as well as browsing publications, are highlighted. The use of phrase searching, search limits and access options is also discussed. The librarian introduces the idea of searching databases before providing students with the opportunity for hands-on practice. This practice allows for more in-depth analysis to be carried out by the students themselves.

Students are then invited to break into small groups; usually around 2–3 per group, and the learning materials are used. Students are encouraged to complete the worksheets as part of their group, actively participating with their peers in the learning process. Throughout this time, the librarian takes on the role of 'facilitator', walking around the classroom, observing the progress, providing hints and answering any questions. This provides 'point of need' assistance, which proves very useful and supportive to the learning environment. It also allows the librarian to pinpoint any particular areas of difficulty that the overall group might be experiencing with the searches, or the database, which can then be addressed as a group using the instructor's PC and the overhead projector.

The final 5–10 minutes of the database session is spent addressing, as a group, any issues that arose from either the worksheets or the librarian's observations. It also allows time to recap on the main search techniques and to highlight other relevant library databases.

FEEDBACK

Informal observations from library teaching staff provided a great initial indication as to the success of the changes that were made. It was noted that the students showed greater levels of response and enthusiasm towards the newly designed sessions. Incidents of glazed eyes and stifled yawns were noticeably fewer than when the students' role in the learning was largely passive. Students also often reacted very positively to the TV themes found within the worksheets.

In addition to our own observations, we also asked students to provide their feedback on the methods we were using in our training sessions. A number of students took the opportunity to provide us with their thoughts. As one student commented, 'Doing group worksheets helps you to remember – well done.' Feedback like this was particularly encouraging, as it reinforces our reasons for change, including providing more engaging training and equipping the students with a range of research skills for utilising within their own study and research needs.

Another student noted that 'The handouts are easy to follow, and will assist me if I need help with databases in the future.' This shows a need to create worksheets or learning materials that can go beyond simple tasks for completing in-class. Designing learning materials that can be used as reference points long after the training session has ended is a useful and worthwhile exercise.

Finally, when we asked students to rate their enjoyment of completing the group-based worksheets, 63% of the 190 respondents who completed the survey either strongly agreed or agreed that they had enjoyed participating in the group-based worksheet activities.

CONCLUSION

Adopting elements of active, student-centred learning through specially designed, interactive learning materials has been a success for us in WIT libraries. By designing worksheets based on popular television programmes, we aim to teach database searching and other research skills in a fun, memorable way.

These initiatives don't need to be restricted to database searching: designing and creating similar worksheets for other (or all) aspects of a library information-literacy training programme is very feasible, as is also evidenced in WIT libraries.[4] Being creative and using accessible themes places the student firmly in the centre of the learning environment and learning is facilitated in a light-hearted and fun manner.

The library learning-support team has begun to adopt active learning: student-led, in-class exercise sheets for all other undergraduate years. We began this overall transformation with our nursing students, and the entire undergraduate information literacy programme for this student group follows the active learning model.[5] We hope to continue adopting these changes across the entire suite of programmes we offer at WIT libraries.

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