**Easing the transition: Threshold concepts and IL workshops for visiting Y13 students**

**Abstract**

This paper describes a method by which incoming Level 4 (First-Year) students might be supported by academic librarians in their transition into Higher Education in the area of research and academic standards.

Previous research indicated that students transitioning into higher education found it difficult to narrow down topics, were uncertain about the expectations of their lecturers, were overwhelmed by the breath of resources available and were confused over how to conduct university level research. In order to address these issues, the idea of threshold concepts needed to be addressed as part of a redesigned programme.

The “backward design process” outlined in Understanding by Design (Wiggins and McTighe 2006) formed the basis for changes to the workshops. This method of design means that one can move the process along from experiences which merely focus on knowledge that is worth being familiar with (which is what is happening in our research workshops at the moment) to experiences which promote enduring knowledge, skills and understanding.

Whereas previous workshops for Y13 students focussed on the “how”, the new workshops centred on a genuine Level 4 assignment which students were asked to complete in small groups. We moved the session away from computer based searching for the first session to a brainstorming session covering three aspects of the search. Feedback was then sought both in written format (“3-2-1” technique) and informally to gauge students engagement with the exercise.

Initial findings indicated that students left the sessions with a better understanding of the expectations of university level work. Students indicated surprise over the variety of sources which they might use (in particular, primary research) and some indicated an understanding of how research skills could be transferred into everyday life

**Keywords**

transition, threshold concepts, research, teaching

**1. Issues Surrounding Current Practice**

Currently, the majority of first year contact consists of what might be defined as traditional “library instruction”, where students have instruction in the use of databases, e-journal searching and referencing skills which are removed from a concrete assessment. This creates a disconnect between how information seeking skills integrate with scholarship, as students aren’t always aware of how the use of information can impact upon their success in assessment.

Over the past number of years, the sessions were largely lecture-based and had few opportunities for active learning, which further exacerbated the issue of applying the session to their coursework. Furthermore, these sessions lacked a prior discussion of the work that comes before undertaking a search which meant that students, despite being told about scholarly resources, had a tendency to fall back on internet search engines and thus missed out on developing key skills which would assist them in completing their coursework. As such, it became clear that a change in practice was needed in order for students to learn effective research techniques early on in their academic careers in order that they were confident in conducting research when it was time to prepare for dissertations in their final year.

It was clear that there was a need to take a much less mechanical approach to approaching research skills teaching. The existing workshops, although allowing for a “hands on” approach, were too focussed on the “how” and not enough of the “why”. Furthermore, by having students come into computer labs without having completed a session on choosing key words or a discussion about the type of resources which might be needed made it more difficult to direct the sessions in a manner by which students would get the best of out of the session. These factors, combined with the knowledge that there is an information skills gap for students entering Level 4 courses meant that changes needed to be made to make these sessions more effective.

One of the major problems with the current sessions was a lack of discussion about the mechanics of searching in advance of the workshop. This meant that students had not had time to think about the questions they wanted to answer in advance of the session and so, despite the fact that we talked about good search techniques (for databases as well as internet search engines), they often fell back on how they traditionally searched the net (i.e. by putting in a phrasal question, such as “What are the causes of reading difficulties in children?”). This meant that students were not learning the skills required to effectively conduct research, thus negating the main learning objectives of the lesson. As such, a major redesign of the learning programme was needed in order to ensure that students understood why and how research is conducted and how these skills might be transferred to increase employability in the future.

The other major challenge to overcome was the lack of confidence in students to conduct research in higher education and in the expectations of lecturers that incoming students already have research skills due to their assumed proficiency in using ICT. Indeed, research undertaken at Saint Mary’s College of California (Head 2007) indicated that students found it difficult to narrow down topics, were uncertain about the expectations of their lecturers, were overwhelmed by the breath of resources available and were confused over how to conduct university level research. In addition, there is a growing volume of work that outlines the difficulties students have in making the transition from school to university (Quarton 2003, Fitzgerald 2004, Waters 2004, Hounsell et al. 2005, Head 2007, Gourlay 2009, Michie, Glachan and Bray 2011, Bussell and Mulcahy 2011), with students expressing a desire for more support in academic orientation and expressed a lack of self-confidence in their academic ability due to a lack of knowledge of lecturers’ expectations. In order to address these issues, the idea of threshold concepts (Meyer and Land 2003, 2005) needed to be addressed as part of a redesigned programme.

**2. Threshold Concepts and Information Literacy**

Meyer and Land (2003, p.1) describe threshold concepts as “a transformed way of understanding, or interpreting, or viewing something without which the learner cannot progress.” These concepts are likely to have the following characteristics: change the way a student thinks or feels about a subject (transformative); are difficult to unlearn (irreversible); show how ideas link together (integrative); may be associated with a discipline’s special language (bounded); and are likely to be problematic (troublesome) for the student (Meyer and Land, 2003). Without understanding threshold concepts, students do not achieve deep understanding of a subject and are instead merely mimicking knowledge acquisition instead of mastery of a subject.

Many students entering higher education from school or college are used to assessments which are designed to produce a “right” answer. In search of the “right” answer, students may be tempted to “cut and paste”, rely overly on internet search engines or plagiarise in their attempt to pass the assignment. This manner of working then encourages students to only look at the surface of resources and means that they often continue to misunderstand or lack knowledge in an area which, as measured by their ability to pass the assessment, may appear that they have mastered. In light of this, information literacy (the ability to locate, evaluate and use information and resources effectively) can be seen as a threshold concept for students who are transitioning from school or college into higher education. As such, one of the major aims of any research skills sessions for new undergraduates should be designed to allow students to pass from using resources in an indiscreet way to become a confident researcher who is able to use information in to expand upon their own understanding in their chosen subject area.

**3. Redesign of Existing Workshops**

The “backward design process” outlined in *Understanding by Design* (Wiggins and McTighe 2006) formed the basis for changes to the programme of study. In this model, Wiggins and McTighe (2006) advocate a design process by which the desired results are first identified before determining the acceptable evidence to test for learning. This method of design means that one can move the process along from experiences which merely focus on knowledge that is worth being familiar with (which is what is happening in our research workshops at the moment) to experiences which promote enduring knowledge, skills and understanding. This method of design would stem from the idea of “information presenting itself through patterns” (Blackmore 2010) as the means of enduring knowledge that students need to learn in order to transform their learning in higher education.

The first change was to split the existing workshop into two discrete parts: first, to discuss and map out key terms and search strategies before beginning research; and second, to use the work from the first session to feed forward into the computer-based workshop where students could attempt search strategies under the guidance of a librarian. In the session where we would discuss key words and search strategies, we would change locations so that it no longer took place in a computer lab but instead would take place in a meeting room in the library. The change to a meeting room/classroom meant that it was easier to rearrange furniture to allow for ease in group discussions as the fixed benching in the computer labs prevented easy formation of groups. Additionally, the removal of access to computers at this stage was necessary to prevent any slide back to existing search habits as the students found using the computers too tempting not to use in these sessions and formed a roadblock to group discussion. The students would instead work with flip chart paper and markers to form an agreed strategy with their group and then would present their mind map to the rest of the class, after which there would be a discussion (facilitated by the librarian) about the pros and cons of selected key words and suggestions to refine their search strategies in advance of the next session.

The second major change was to build in a feedback/self-assessment mechanism to the workshops as this has not typically be done in the past. The “3-2-1 Assessment” (also known as “3-2-1 Reflection”) model was selected as it is a useful tool by which students can “focus their ideas and synthesise large amounts of information” (TMSTEC n.d) and is used by multiple libraries in gathering workshop feedback. This would allow for reflection about the content of the session as well as providing feedback to the instructor about what information students still felt uncomfortable and/or unsure and would be collected by asking each student to fill in a feedback form with the following questions:

What three things did you learn today about using a library/university-level research?

What two things are you still unsure about doing research?

What one thing might you do differently as a result of this session?

The feedback forms would then be collected at the end of the session and evaluated by the librarian. The second workshop (database searching) would be modified in response to the feedback collected and any outstanding areas of confusion would be addressed at the beginning of the next session. This feedback would also feed into the design of future workshops for students in other courses/levels of study, as research indicates that students experience similar “troublesome concepts” across courses and years (Meyer and Land 2003, 2005), with goal of improving the learning experience for all students.

**4. Pilot with Year 13 Students**

A group of visiting Year 13 students from a local high school served as an ideal pilot group for the proposed changes to our research sessions. The teaching staff had requested a session which would introduce these students to the variety of resources that might be used in university-level research as well as a brief explanation of the importance of referencing and a brief tour of the library’s facilities. As these students all intended to attend university from September, an assumption was made that they would be experiencing the session in a similar manner to first-year undergraduates entering Higher Education. In the past, we would have given a lecture (generally using PowerPoint) about what sort of resources they would find at a university library and then finish with a tour of the facilities. This type of session was never as useful as the high school teaching staff felt it might be, as it was not relevant to the audience as it did not adequately show what might be expected by lecturers at university, nor did it demonstrate how they would be expected to use a variety of resources to complete their coursework.

Instead of undertaking the regular “tour and talk”, the approach of the session was changed to make it more active and relevant to the students. This was done by introducing an activity which was based around an existing first assessment for incoming first year (level 4) undergraduates which would get them thinking about the variety of resources available and how they might use them in undertaking research.

The session began with a very quick (15 minute) explanation of the library webpages where the variety of resources available for use was highlighted and an explanation of when and where they might be used. Students were then given a copy of *The Little Book of Information Skills* (Carver, Fisher and Park 2008)*,* a publication based on the Seven Pillars of Information Literacy which outlines the steps of conducting a research project in order to help them with the activity that followed. The group was then split in half, with one half staying to complete the activity while the other half had a tour of the facilities with another colleague from Libraries and Learning Innovation (LLI). The students who remained were told that they would be undertaking a brief activity which was based around a genuine first year assessment and that would introduce them to some of the first steps in conducting research and to the expectations of University-level work.

As part of the activity, the students were asked to consider three questions (the key ideas/terms needed to the question, how they would search for these ideas, and what sort of resources they might use) based on the assignment and to record these on the flip-chart paper. The students were then asked to form smaller groups of three to four students (self-selected) and were directed to five tables which had been set up with flip-chart paper, markers and a copy of the assessment brief. They were given half an hour to answer the questions, during with the librarian circulated around the room, prompting discussion and answering questions about the task. At the end of 30 minutes, group members presented their method to the group. A discussion of the types of resources selected was discussed amongst the students and they were shown the grading matrix to see if their answers (in terms of variety and choice of resources) met the guidelines of the assignment so that they might see how this activity might contribute to their success at University. At the end of the activity, feedback would be sought by having students self-assess by using the “3-2-1 Assessment” technique so that we could evaluate if students were able to meet the learning objectives for the session.

**5. Discussion and Results**

The students responded positively to the activity, with most of the groups settling down into useful discussions from the start. A few students were overwhelmed and confused due to a focus on the content of the question (as this was a genuine first year assignment, the question they were being asked to answer was not necessarily in an area that they felt familiar with) but this was solved by a few prompts from the librarian about different aspects of the subject and where, if they were researching this topic “for real”, they might look for general information to guide their searches. The work produced was of high quality and, in the discussion that followed, all groups identified a number of sources beyond books and the internet. Of particular note was the number of groups who identified primary sources (e.g. interviews, surveys, etc.) as useful resources for the assignment at hand.

By asking the students to map out their strategy on paper and then discuss it with the class as a whole, students appeared to grasp the necessity of breaking down the task into individual steps when undertaking research and would be better prepared to begin using electronic databases in search of resources. Interesting conversations took place around the room as they wrestled with the ins and outs of the questions involvement. Some students recognised fairly early on that skills that they used in everyday life (such as the process by which they might research the purchase of a new mobile phone) could be applied to the research process at university.

All expressed surprise that some of the ways of gathering information that they had initially thought were misguided (e.g. asking someone) were valid forms of beginning research and a useful discussion about interviews as a primary source followed. There was also surprise from the students when we discussed the appropriate use of Wikipedia in academic work (i.e. as a means to gather background information and to form key words for searches as opposed to a resource which would be cited in one’s work) as students had been used to using Wikipedia as a source in itself in their academic work. This prompted further discussion on what sort of resources were acceptable to use in university level research and students seemed relieved that they had found out about this in advance of their first assignment.

Evaluation of the “3-2-1 Assessment” feedback forms indicated that, in advance of the session, students had not been aware of the variety of resources they would be expected to use at university (43%), nor had they been aware of how best to form key words for their searches or analyse a question (30.5%). All students indicated that they had learned a great deal about how to begin breaking down a question before starting to search for resources and felt more confident about what might be expected from them in their work at university. In terms of the areas that they felt less certain of, the majority (63%) of them expressed concern about issues not related to using the library or conducting research (e.g. getting lost, meeting new people). For those few that did express uncertainty about research at university (36%), the feedback related to issues not covered by the session, such as using the library catalogue or finding the correct database to search for their topic. It was gratifying to read that all of the students indicated that the session stressed the need for analysing a question to determine key words in advance of conducting a search and that they were much more aware of the different types of resources that they would be expected to use in their coursework in September, which indicated that the session had been successful in meeting its learning outcomes.

In addition to the feedback gathered from the “3-2-1”, additional feedback about the session was gathered through discussions with individual students (and the teaching staff who accompanied them) at the end of the session and through conversations overheard by the colleague who was conducting the library tours. There were a number of comments to the effect that students had not understood how different the expectations of university lecturers might be and there was some concern on what might happen if they did not achieve as well as they hoped (or, in some instances, what might happen if they failed). This allowed for reassurances to be made that there were mechanisms in place to ensure that students were able to achieve at university, as well as assurances that university lecturers were not looking to fail students but instead were wanting to help them learn. This led to some impromptu discussions with small groups of students on why assessment takes place (i.e. in order to both test for understanding as well as to promote understanding) and how there were many mechanisms in place at Leeds Met (as well as other universities) to help students achieve. This allowed for us to stress the importance to students that they should seek assistance as soon as they encounter any problems, as the sooner they sought help, the better their experience would be. These unexpected conversations proved to be extremely useful for all involved and gave additional insight into the concerns that students new to higher education might be dealing with.

**6. Conclusion**

From feedback collected (both in written form and by observation), it appeared that students in the session had begun to understand the reasons behind how we research and the benefits of planning a search in advance. It seemed as though they were taking steps toward transforming their own practice, as all students indicated changes would be made to their research process in the future as a result of the session. Although it would be unrealistic to think that they had breached the threshold of how one might conduct research, it did appear that most students had started to understand why we approach research in a particular way and had begun to make the link between preparation, understanding and increased changes of success at university.

Even though there is some issue that feedback could be falsely positive (as students may have wished to be kind to the instructor or may have felt compelled to be polite), observation of the session did indicate changes to their way of working through a problem throughout the session and there were some obvious insights in the discussions that followed. As such, it was felt that the change in approach had been successful in increasing student awareness in how the research process works and, with a few minor changes (such as a slightly altered feedback form and some prompts/hints projected on the whiteboard), would be a beneficial change to approaching initial teaching sessions with incoming first-year students.

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