Developing First Year Student Information Literacy: Reflections On The Learning Process

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Abstract

This article evaluates first year student's engagement with information literacy as they make the transition to third level education. For part of their assessment for a core module, students maintained reflective journals. These journals have provided the data for a qualitative, grounded theory study which has been analysed by the academic and librarian who delivered the module.

Results demonstrate that students find transition problematic and spend their first semester in a state of uncertainty but the reflective journals aid them in thinking about their achievements in relation to their developing academic skills, including information literacy, during their first semester.

Keywords: academic skills, first year, information literacy, reflection, transition

1. Introduction: Conceptualising Information Literacy

The development of information literacy is a crucial part of transition from school to learning at higher level where there are expectations that students develop into self-directed learners. Recent conceptualisations of information literacy (Andretta, Pope and Walton 2008; Bruce, Edwards and Lupton 2006; Edwards, Bruce, McAllister 2004; Johnston and Webber 2004; Limberg et al. 2008; Lloyd 2005; Lupton 2008) also present challenges to academics and students who may view it with a more restricted lens (McGuinness 2006; Webber 2006). Information literacy is not simply retrieval of material which is dependent on IT skills; there is a more complex engagement between an individual and information content, both of which are situated in changing sociocultural contexts. For a first year undergraduate information literacy involves the analysis and evaluation of information content in the context of transition from secondary school to higher education. The Chartered Institute of Library and Information Professionals (CILIP 2004) define information literacy as:

knowing when and why you need information, where to find it, and how to evaluate, use and communicate it in an ethical manner.

For a first year undergraduate student unaccustomed to this process, the application of information in this manner often proves problematic.

This definition also embodies the use of information to support the development of an academic argument in written or spoken form. This development can be challenging to school leavers who may have come from a more focused and directed learning environment. Additionally, an ethical dimension to the use of information tests first year students in relation to intellectual property and separating the acknowledgment of specific sources of information or ideas from general knowledge.

These recent conceptualisations of information literacy also impinge on the relationship between librarian and academic (Johnston and Webber 2003; Webber 2006), and accountability for its teaching (Owusu-Ansah 2003). The Academic Forum Report (2009: 6) noted that:

In the early 1990s academics were seen to have unquestioned authority vested in them by students. But as students gain more access to information the academic is no longer the ‘gate keeper of knowledge’ but is moving to be a ‘facilitator of learning’. Academics were seen as to need to collaborate with this change and to help students gather and assess information rather than reacting defensively with cries of plagiarism etc. In this way learning has become more of a collective endeavour between academics and students.

Such ‘collective endeavour’ should draw on the skills of the university librarian (as is the case in this study) so that the process of accountability for the teaching of information literacy develops into a collaborative approach between academic and librarian.
While acknowledging the debate around embedding information literacy in the curriculum, (Lupton 2008; Wingate 2006), the following study focuses on a stand-alone module. This study also answers the call for qualitative research in this area (Lebbin 2006) as well as taking a reflective approach to student learning (Webber and Johnston 2000) to discover the depth of student engagement with information literacy and its development in a higher education environment.

2. Contextualising The Study: Transition To Learning At University In Ireland

The challenge for first year students in higher education is arriving at university with study habits learnt at second level, where learning can be directed (Lowe and Cook 2003), and where the ‘tradition of school’ (Limberg et al 2008: 90) contrasts with making sense of information available on a global scale (Dunne 2008). Not all secondary school teachers will have a thorough understanding of information literacy (Limberg et al 2008; Probert 2009) just as academics conceptions vary (McGuinness 2006; Webber, Boon, Johnston 2005). This variation in knowledge is in contrast to higher education perspectives, either explicit or assumed (McGuinness 2006), of engaging with independent learners (Andretta, Pope and Walton 2008) who are also responsible for other aspects of their lives while at university. In this mix a university may also be expected to create graduates who will leave university with skills for employment and who will become lifelong learners in their communities where information literacy is a key component (Bond, Fevyer and Pitt 2006; Lloyd 2005). As students make the transition from second level to university they encounter these inter-related strands of previous engagement with information literacy and how to develop it further at higher level. This engagement is alluded to in the context of debate relating to the development of a national higher education strategy in Ireland which was published in 2011. Submissions were made by schools, university students and academics to the Higher Education Authority in 2009. The Report on 2nd Level Consultation (2009: 2) stated that the Leaving Certificate examination, the focus for university entry, ‘supports the focus of rote learning’ and that a university should aid students ‘in the early time in third level’ in the development of their learning. The Student Forum Report (2009) also echoed this view.

The use of a reflective journal can provide such aid for first years as they develop and deepen their engagement with information literacy in first year and Webber and Johnston (2000) advocate the inclusion of reflection in written reports. Consequently, for the purposes of this study reflection is defined as thinking which leads to insight (Moon 2006: 37). Introducing first year students to reflection provides them with a challenge in relation to their plans. Reflection provides a route towards thinking, by thinking about plans and their outcomes, and why, or how, these plans did or did not come to fruition. Students can be invited to reflect on such descriptions and can produce critical reflections on their learning as part of their transition process to higher level education. Hatton and Smith (1995) created a taxonomy of reflection: descriptive writing (reporting events); descriptive reflection (based on personal judgments); dialogic reflection (a dialogue with the self which explores possibilities), and, at its deepest
level, critical reflection. This final form of reflection involves “reason giving for decisions or events which takes account of the broader historical, social, and/or political contexts (1995: 41). First year students may have moments of insight in their journals but it can be expected that their reflections may remain rooted in descriptive approaches. Such description may initially disappoint researchers in the quality of reflection received (Clegg and Bufton 2008) until the focus is turned back to what is of concern to the student however trivial it may appear from an academic perspective. Overall, reflection in a journal provides a first year student with the personal space, and a voice, to see the development of their transition to learning at higher level in their developing engagement with information literacy.

3. Developing An Information Literacy Module

A compulsory module was developed as part of an interdisciplinary programme offered by the Faculty of Humanities and Social Sciences in the university, partly in recognition of the challenges faced by students as they make the transition to higher level education and partly because of the nature of the undergraduate programme. Apart from one core module each semester, students are constantly separated across the faculty depending on their chosen modules. A stand-alone compulsory module was created to provide students an opportunity to acknowledge with, not to mention, learn from, their peers, the academic aspects of their transition to learning in higher education. Helping students to develop their information literacy skills was key to understanding the transition process. Discussion with the librarian led to close collaboration over aspects of the course content such as in-class collaborative exercises, assessment content, and timing the introduction of new concepts such as citing and referencing.

On completion of the module, students are expected to achieve the following learning outcomes: how to utilise library resources and facilities; be able to plan a search strategy to locate relevant journal articles; know how to evaluate information sources (scholarly versus popular); know what a bibliography is; compile a list of references and understand plagiarism; have an understanding of, and practice in, the type of academic discourse found in essays. Finally, students reflect on the development of their engagement with information literacy in the context of their learning at higher level.

There were three assessments relating to learning outcomes:

1. a reflective journal.
2. an annotated bibliography containing a brief summary of how each source is useful to an author in constructing a paper or argument.
3. the analysis of an assignment question from any other module; firstly by deconstructing the question and then by discussing the resources that were used for the assignment.

Overall, these three assignments test first year students understanding of information literacy from different perspectives. Information literacy is a set of skills encountered in situated contexts (Lupton 2008) which requires a deeper level of engagement such as the evaluation
and analysis of information content.

4. Methodology

The proposed qualitative study on the student assessment data was submitted to the University's Ethics Committee for approval. As the journals formed the basis of the study, and the annotated bibliography, particular care was taken regarding potential student involvement. It was outlined at the end of the semester following the completion of assignments so students would not feel pressurised to become participants. The study was supported by a plain language statement and a consent form to be signed by the 36 students genuinely interested in giving permission for their work to be used for the study. It was made clear that the results would be published and that they would not be identified individually.

5. Instrument: The Reflective Journals

The form of the journal draws on McGuinness (2007) who used a reflective journal for first year assessment of information literacy. The journal in this study could either take a free form or adhere to these criteria:

1. provide a weekly synopsis of goals, resources used and activities undertaken in relation to learning. Include plans and what you actually manage to do.

2. outline difficulties encountered with research; include feelings about learning with particular emphasis on differences with previous learning.

3. Two sets of reflection:
   (a) a general reflection on your experiences, so how did you resolve a problem? What did you learn?
   (b) an occasional but significant reflection on the reflective process itself called reflection on reflection as follows: how is this journal helping you to discover new things about yourself in relation to finding out information at an academic level, and the development of your learning? You may not always use this but it should be there sometimes.

Students were given the choice of handwriting the journal and virtually all of them did so. This gave the added feeling of a personal piece of writing rather than an assessment only, and students were quite candid in their writings.

6. Data Analysis

Charmaz (2006) provides a constructivist perspective on the construction of knowledge which also informs the view of student learning in this study. Charmaz's (2006) approach to grounded theory was used for analysis with the final creation of 15 categories following initial coding of
the data (see forthcoming article in Innovations in Education and Teaching International). The coding process involves meticulous examination of the text of each reflective journal and making a decision on the activity encountered in the text on a line by line basis. This analysis was a collaborative endeavour between academic and librarian and led to some lively discussion. For example one code was called being proactive where it was evident that the text referred to solving a particular academic problem. Each time this activity occurred across the texts it would be coded as an instance of being proactive. Codes are then further refined by being bundled into a category which conceptualises the range of activity presented in the codes. For example, the category of researching/preparing for assignments included a series of codes and the number of times each code was counted - See Appendix A.

The discussion in this paper draws on six of the fifteen categories as they relate to student engagement with aspects of information literacy: Transition, Using the library, Navigating the campus, Issues with citing and referencing, Researching/preparing for assignments, Academic writing. Each of these categories is discussed in the following section

7. Results

7.1 Transition to Higher Education

One of the strongest themes evident from the students’ reflective journals is the experience of the transition from second to third level education and that the third level education process differs from previous engagement with learning:

I spent the last year being fed information and my biggest problem has been adjusting to the third level way of thinking.

First year students in this study attend their first library session with the intention of simply learning how to search for and access information sources on their reading lists. In contrast, they are introduced to the concept of engaging with information sources in different ways and are asked to question their authority, objectiveness and accuracy; this opens the door to a different way of thinking and working.

8. Using The Library: Space For Learning To Happen

A university library is also different to other libraries students had used in the past:

I went to the library and had a wander around in it. It’s so big, I located where most of the books for social studies are, however I don’t really know how to use the library yet, maybe I’ll do one of the workshops.
Transition to using a university library represents an initial significant commitment on the part of the first year student, even where students are familiar with the tools and processes required to borrow material:

I do know how to look for a book and check it out & everything but I just don't know what books I really need.

Any assumption that students in this study will automatically know what material is appropriate to their needs is immediately challenged by these findings.

9. Navigating The Campus

As well as the traditional role of the library to provide access to information resources, the students' reflective journals revealed that many of them also use the library as a space for: pair work, revising, carrying out research, group meetings in collaborative study rooms, working on assignments and for goal specific reading. Students cited the library as a place for helping them to focus on what was needed to be achieved for their learning to progress:

I went to the library and made my list of assessments. I know what I need to do for each subject which makes my mind a lot clearer so now I can make a start soon.

The library itself becomes a place where a student can take the time to reflect and become proactive.

10. Issues With Citing And Referencing

Citing and referencing presents a challenge to first year students:

I’m also very worried about referencing because I’ve never really had to do it before.

It is evident from the reflective journals that referencing remains an area of substantial concern for some students.

A class discussion with the librarian on the pros and cons of Wikipedia, a familiar reference point for most first year students, invites debate around the authority of sources and illustrates the need for greater critical thinking skills to assess the authority, objectivity and accuracy of information sources rather than the value of a source remaining purely aspirational:

This source will be of great value to my assignment because it will give me a better understanding of the ________. Hopefully it will give me examples of the different types of ________so I will be able to give examples in my assignment which means I will have evidence to back up my points.
When asked to provide an example of a popular source in the assessment focusing on the annotated bibliography, many students used exactly the same example provided in the library session (Time Magazine). Only a few students cited a scholarly source such as a subscribed library database.

In contrast, there were students who were extremely confident about applying the relevance of their sources:

The book had a big influence on the essay as it easily and accurately let me understand the key aspects involved in __________. This source helped with my research in the area of _____as it gave multiple definitions, perspectives, concepts, views and theories. All of this information was exactly what I was looking for to complete my essay.

Others displayed an ability to contextualise their sources with previous research and assign value to them based on this relationship:

This chapter offered me the psychological aspect for my research. In comparison to other sources I had been accessing, this particular chapter presented more scientific based facts about the role of __________. In particular, I found the _____ theory of importance and interest. It backed up some theories found in other articles I had read and were a concrete source to follow them up.

Referencing, however, remains problematic for some students at all levels of their academic careers. Understanding the ‘why’ and not just the ‘how’ is a necessary part of their transition to academia (or rejection of its conventions).

11. Researching/preparing For Writing: Information Literacy As Transition To Independent Learning

Students in this study focus a great deal of activity around reading without necessarily being effective in applying their reading to their assignments:

So I went to the library and read a few chapters in different books relating to my course. Now I feel a lot better, as if I have accomplished something, even though the prospect of writing papers is hanging heavy on my head.

Students also refer to their own notes and course material posted on the Moodle site (virtual learning environment) for clarification:

I started by looking back over the lecture slides and my own notes on the lecture that covered _______ hoping to be inspired but these merely glossed over the concept and gave a few vague definitions. I then looked at the lecturer's suggested reading list and went to the library.
Engagement with the library follows once these known sites are exhausted. It takes time for students to realise they have to do their own research from reading lists as at second level, students are usually prescribed one set text. Consequently, the nature of the third level reading process is different.

The following student had a clearer idea of what searching for information involves:

The first resource I went to was the internet just to get some general concepts and ideas. As I went along I just took note of websites which I found of particular interest. Some of these websites included sources from Google Scholar, Wikipedia, free online dictionary, 1RTE1 and the European diversity website. While using the internet I had to bear in mind that not everything I was going to find would be from a reliable source. Wikipedia would be an example of such a source. However, it was useful in terms of giving me a basic understanding.

This student demonstrates an understanding of the authority, accuracy and objectivity of an information source. Such sophistication is also evident in a sound grasp of research principles by the same student:

Next I decided to look through the _____ library catalogue. While doing a search I used keywords such as ____________ and ____________ and even (keywords combined). When I found a book of particular interest I would look through the contents and index first and have a brief look at the first and last paragraphs of the related chapters. I also found that through reading some books would lead you to look through other books by looking at the authors references.

However, others revealed an inability to make such a leap and continued to consult prescribed texts or, in exceptional cases, reverted to the familiarity of their school notes, the local library or using their reference resources such as an encyclopedia, at home. A small number of students disengaged from ‘difficult’ academic material which they considered ‘tedious’ in their reflective journals.

12. Academic Writing: Information Resources As Preparation For Writing

One third of the issues surrounding academic writing relate to the importance of planning but this can be hedged with uncertainty.

I find it hard to just sit down and write because I’m afraid I don’t have enough information on the topic, so I have to read books, and look it up on the internet. However, I then worry that the information I have is irrelevant to the essay.

1RTE is Radio Teilifis Éireann, the Public Service Broadcaster of Ireland
Students recognise that academic writing is different to their previous writing practices:

Learning how to write academically is very important. Writing a college essay is so different to school essays I had to write.

and are concerned with finding a line of argument for their essays. First year students in this study also availed of student support activities such as a writing workshop offered approximately half-way through the first semester.

Finally, some students are more confident in their approach to academic writing:

This week I also started the actual writing process of my essay for ______. First of all I drew up a structure plan based around my findings in my readings. This has helped me with what I am going to base each paragraph around. The writing process is quite tough as sometimes I find I hit a brick wall and when I do that I go back to reading.

Few students mention editing their work on completion but there is one detailed account focusing on the writing process itself:

In terms of problems I encountered with planning my essay there were only a few. One of which being my tendency to drift off the point. I would find after reading through it that some of my points were irrelevant or over expanded. To resolve this I had to critically analyse the essay and restructure it. Further examinations of my essay led me to see that it was not overly coherent. I needed to re-write some sections to address this. Other than that the essay went reasonably well and I felt that I greatly benefited from this analysis.

Here the value of reflection to the student is evident as it describes transition to a more structured approach to academic activity.

13. Reflective Discussion

In Ireland the National Strategy for Higher Education to 2030 (2011: 55) proposes that:

higher education providers should address identified shortfalls in students' skills during their first year in higher education …

including information literacy skills; the strategy also suggests partnerships involving students and academics in relation to curriculum design (2011: 53). The following section reflects on our collaboration as lecturer and librarian and on engaging with ‘the student voice’ to overcome obstacles in the transition process to higher education.
Firstly, the reflective journals are a revelation for both the librarian and lecturer, as they provide evidence of students working and making efforts in their transition to third level. However, this effort often lacks focus as students struggle to engage with new forms of learning. Academics are not always aware of these efforts and the reflective journals are valuable evidence of this. Academics may assume a certain level of understanding when in fact this can be at variance with the students they are teaching, some of whom are quite utilitarian in their approach to education. Many of the journal entries alluded to uncertainty about what to do in relation to assignments. This can also relate to misunderstanding of what information literacy entails in a modern university library (McGuinness 2006; Limburg et al 2008).

Secondly, from our collaborative teaching, an area of important learning for us is our observations of students’ work in completing the annotated bibliography. Initially we were deeply disappointed with what students had written. On the whole, there was very little application of critical thinking skills in their evaluations of why a particular source was important for their assignments. Following this result, we dropped this assessment for the following year. However, on reflection, we misjudged its value and now realise how indicative it is of first year students’ difficulties in assessing the value of academic sources. This is more than likely the first time these first year students have had to carry out their own evaluation of sources as opposed to previous learning at school.

Thirdly, the module introduces students to citing and referencing early on in the module in a lecture which includes a practical exercise. Students also have a library session quite late in the semester at a time when they are working on assignments. This timing of an early introduction and a later reinforcement is a conscious decision by these authors. Initially students treated the concepts of citing and referencing as a subject of study rather than the practical application of techniques. Though the initial practical exercise and the discussion it generated was designed to bridge this gap, citing and referencing only made ‘sense’ when needed for assessments.

14. Conclusion

Owusu-Anseh’s (2003) concerns around the teaching of information literacy reinforces the case for a dedicated teaching module which allows for collaboration between academic and librarian. However, if academics are facilitators as outlined in the submission to the Higher Education Authority then this would also presuppose the explicit integration of and responsibility for information literacy across all teaching. However, amalgamating both transferable skills and embedded skills approaches in the teaching of information literacy could enhance it beyond the first semester of first year. Such an approach combines the strength of an explicitly identifiable skills approach which is of value to first years with an embedded skills approach for its further development. Dublin City University, for example, has a ‘Graduate Attributes’ programme identifying six attributes every graduate will have upon leaving DCU. Underpinning these attributes are seven proficiencies and aptitudes, one of which is information literacy:
Students will be encouraged to develop a high level of information literacy that encompasses a sophisticated, considered and critical approach to sourcing, organising, evaluating and using information.\(^2\)

Whilst this is a move in the right direction, it would presuppose such a long-term, fully identifiable and also integrated view of information literacy in the curriculum.

Overall, as this research demonstrates, the ability to find, then critically evaluate sources and effectively utilise information to support the development of an academic argument in written or spoken form can be challenging to school leavers. The development of study skills modules, such as the one in this study, which fully embeds information literacy in the curriculum, recognises such deep-rooted challenges. Asking students to maintain a reflective journal not only helps them to process an awareness of their new environment, it also helps inform academic and support staff about how they can recognise and remedy transition issues including information literacy.

As the academic submission to the national strategy highlighted, higher level institutions are realising the role information literacy plays in producing graduates that are equipped with a portable set of attributes that they can call on throughout their career. However, the library alone cannot foster the process of developing information literacy. Integrating information literacy is about creating a curriculum which enables students to develop ways to learn independently and to carry on learning, throughout their employment and throughout life. Higher education lecturers and librarians need to work closely to develop a curriculum that fosters the development of students' information literacy skills through each year of university.

15. References

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16. Appendix A: Series Of Codes For Category ‘Researching & Preparing For Assignments

98 Reading for assignments
10 Difficulty applying reading to assignment
18 Use of internet
4 Use of YouTube
2 Use of Wikipedia
8 Sourcing articles (including difficulty finding recommended reading)
2 Internet supports primary reading (including finding definitions)
3 Internet clarifying lecture notes
4 Critical reading
3 Anxiety with essay material not yet covered in lecture
1 Amazon books
3 Buying books for course
1 Using Leaving Cert notes
3 Difficulty finding relevant info for assignment
1 Excitement with regard to assignment
2 Reading for pleasure
3 Reading to support lecture
1 Benefit of brainstorming for generating ideas
1 Problems finding information for presentation
1 Awareness that research requires use of various sources
1 Frustration with limitation of prescribed reading
1 Frustration with lecturer not putting notes on Moodle.