

## **A collaborative approach to student scholarship skills: embedding information literacy skills in the flipped classroom**

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Students arrive at university to study their chosen subject and courses are designed to facilitate acquisition of subject knowledge. However, becoming a successful student also requires development of good academic skills enabling students to learn how to learn. These 'soft' skills are relevant for study but are also transferable to the workplace and wider lifelong learning.

Knowing how to find, select, evaluate and use appropriate and reliable information sources are key academic skills. They help ensure coursework is based on the best possible evidence, mitigate against academic misconduct and plagiarism and improve student outcomes. Collectively termed information literacy (IL) skills, they are particularly relevant to navigating today's complex information landscape and are crucial for courses involving an element of research. However, new students may not possess these skills and may miss out on developing them while at university (Humrickhouse, 2021).

University libraries employ professional librarians in a teaching role who are information literacy specialists. However, librarian teaching is often limited to short, 'one-shot' information sessions (Mery, 2012) unaligned with student learning outcomes or assessments. Information literacy teaching has been shown to be more effective when embedded within students' courses where it is more easily accessed at point of need and is aligned with subject teaching (Fields, 2020).

This project implemented and evaluated an embedded approach to IL skills development for a mandatory 3<sup>rd</sup> year Business Research Methods course based on course leader and librarian collaboration. This collaborative approach has been shown to be key to effective embedding of IL skills teaching (Fields, 2020).

Using a 'flipped classroom' approach, videos and online guides were provided with particular attention given to information literacy threshold concepts, as described by Humrickhouse (2021). Formative quizzes were used to monitor progress with 1-2-1 librarian consultations available for students with consistently low scores. A librarian-monitored online discussion forum was set up to offer ongoing, point of need support or 'immediacy' as described by Fields (2020) and a librarian led Q&A provided opportunity for students to get formative feedback and extend their learning. These features help normalise contact with the librarian and build 'relationality' or continued connection between students and the librarian (Fields, 2020).

Course assessments were aligned with IL content with marks assigned for evidence of information literacy skills acquisition. A critical review of two journal articles, assessed students' ability to find, understand and write about good quality empirical research and a research project proposal assessed students' ability to cite and reference suitable academic sources.

Data were gathered using a sequential explanatory design (Ivankova, Creswell & Stick, 2006). A 28 question, self-assessment IL questionnaire (Serap Kurbanoglu, 2006) was administered on course entry (Q1) and exit (Q2). Planned focus groups to capture qualitative data were replaced with student interview due to recruitment limitations, with one student agreeing to interview. 133 valid responses were received for Q1 and 73 for Q2. Questionnaire data were analysed using descriptive and inferential statistics, including the T-test for independent samples, to determine if the differences between the means in the first and the second questionnaire were statistically significant and if we could infer that our findings are reliable. Our null hypothesis was that the means of the first and the second questionnaire were the same, and our alternative hypothesis was that they were different. Statistically significant improvements in mean scores were found for 26 of the 28 questions. Questions relating to defining the need for information and preparing a bibliography/reference list showed no significant improvement in scores. Interview data is still to be analysed.

Without robust qualitative data, we are unable to rule out external factors which may have led to the improved mean scores. For example, students may have attended skills workshops outside the course which led to improved self-assessment of IL skills. Future iterations of the study will address limitations experienced and course review will present opportunities to target areas where scores showed no statistically significant improvement. Working with the course over time may also allow us to investigate any correlations between course outcomes and increased IL skills e.g. if students gain more marks for the IL elements of coursework, does this significantly affect the overall course grades.

**See poster for references.**