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Confidence as an indicator of research students' abilities in information literacy: a mismatch

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1. Introduction

In the UK, the Researcher Development Framework (RDF) (Vitae 2011) describes the knowledge, behaviour and attributes of successful researchers, enabling researchers at all levels to identify their development needs. For personal development planning, research students at Cardiff University are expected to identify their strengths and weaknesses in relation to the RDF and plan for development during their doctoral studies. The efficacy of this depends on whether the students, with the help of their supervisors, can accurately assess their own abilities. This report outlines the results of a diagnostic test of research students' information literacy (IL) which suggests a mismatch between the students' self-assessment of their IL and how they performed in an objective test.

2. The self-assessment tool

Students start their PhD with varying levels of experience and confidence with IL, and diagnostic testing allows them to test their own knowledge and skills to see their strengths and weaknesses. In 2010, Cardiff University took out a two-year licence to the *Research Readiness Self-Assessment* (RRSA) tool, developed and hosted by Central Michigan University (Ivanitskaya 2011), in order to determine potential demand by students for opportunities to objectively assess their knowledge and skills. The test utilises a variety of question styles including multiple choice, multiple response, problem-based and self assessment. The test used was formative and gave students context-sensitive feedback and remedial advice. Cardiff University was able to tailor the questions and student feedback including direction to training sessions and e-learning materials where the scores suggested they were needed.

The IL team in the libraries at Cardiff University works very closely with the University Graduate College (UGC) to ensure IL sessions for research students are integrated into the UGC Programme (Gray and Jackson 2010, RILADS 2013). The self-assessment test was funded through the University's Early Stage Researchers steering group and was advertised as part of the UGC programme and on their website.

Over a two-year period to April 2012, 130 research students undertook the test. Eighty-four students accessed the test in librarian-led workshops within Schools. Twenty-six chose to do the test in a supported environment immediately after the UGC's Starting Out conference for

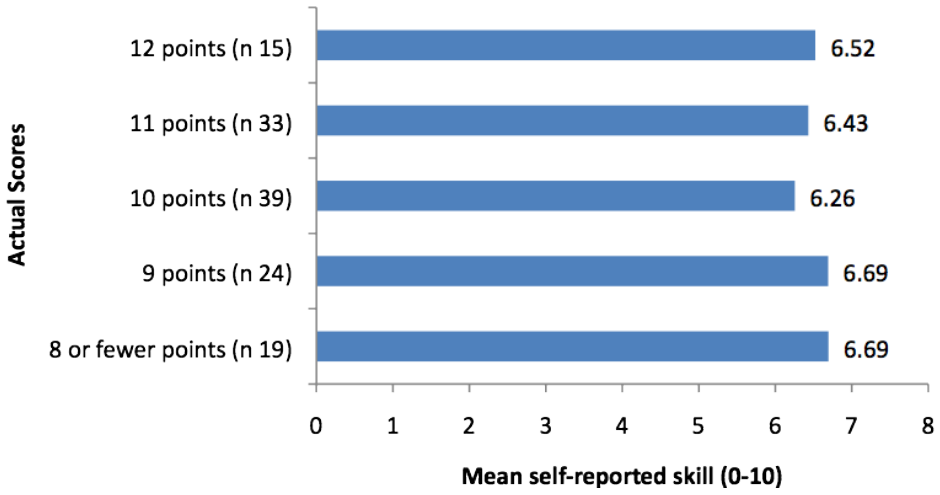
new students. A further 20 students accessed the test directly from the UGC programme web page.

3. Student self-assessment of skills

The purpose of the diagnostic test was to help students assess their own skills and to guide them to appropriate courses where needed. The diagnostic test used objective questions which could be marked to produce a score, as well as self-report questions where students could rate their skills. The feedback to the student immediately after the test gave both a score for each area of IL and their self-assessment as a reflective tool. The anonymised grouped data, however, also provided an interesting picture for library staff to compare students' perception of their skills and their actual scores in the test.

Figure 1 shows the scores from 12 questions on identifying where or how to find information and on judging the quality of information. These are compared to the students' own rating, from 1 (very poor) to 10 (excellent), of their skills in finding high quality information on narrow topics and their ability to judge the quality of information from print or electronic sources.

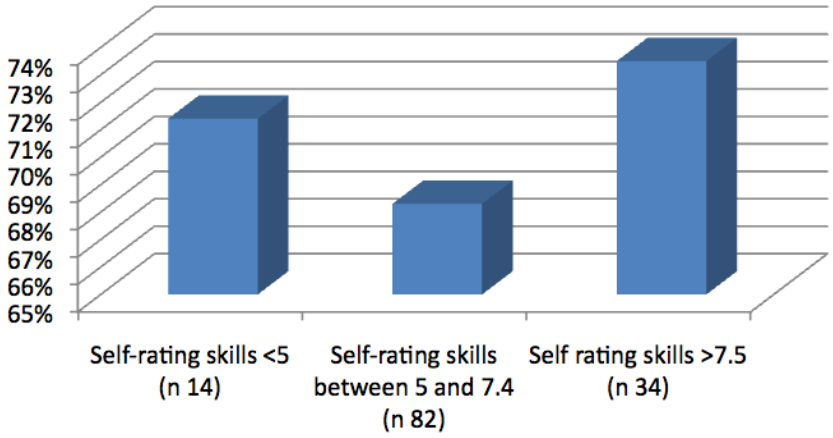
Figure 1: Perceived skills and actual scores



As Figure 1 highlights, there is little variance in the average self-rating among those with different scores. Students who earned higher scores in the test had not rated their skills any higher than those who did less well. Finding and managing information is an area where a lack of awareness may lead to over-confidence, for example a lack of understanding of the way in which scholarly literature is organised and accessed may lead to over-confidence in the sufficiency of simple internet searches. This underlines the importance of assessing skills objectively.

This lack of correlation between proficiency and self-confidence can be illustrated again by comparing the results of those with a lower self-rating to those with higher self-ratings. There is no consistent pattern between questions. For example, student success in identifying that a website was written for commercial purposes was not related to their confidence in their skills in being able to judge websites, shown in Figure 2.

Figure 2: % of students correctly identifying the web-based article likely to serve commercial purposes



A previous study at Swansea University similarly compared perceived skills and scores against this question in the RRSA test (Boucher et al. 2009). Their results showed a different but equally unpredictable pattern, highlighting the lack of any correlation between confidence and competence.

4. Conclusion

An analysis of the anonymised results of the 130 completed tests showed that there was a mismatch between students' perceived IL and the scores achieved in the objective questions asked by the RRSA test.

The RIN report on supervisors' roles in developing students' IL encourages supervisors to support and discuss their students' skills (2009). The importance of this support from supervisors, and finding ways to objectively assess students' skills, is highlighted by the findings of our diagnostic skills assessment, suggesting that students lack the awareness to assess their skills level without guidance.

These findings also raise questions over IL tests that use confidence as a predictor of IL ability, suggesting such methodology needs reconsideration.

Acknowledgements

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