Summaries of institutional case studies to support an investigation into

The role of research supervisors in information literacy
# Document history

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<tr>
<th>Version</th>
<th>Date</th>
<th>Description of Revision</th>
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<tr>
<td>0.1</td>
<td>21 June 2011</td>
<td>Internal draft</td>
</tr>
<tr>
<td>0.2</td>
<td>13 July 2011</td>
<td>Draft for review by institutional representatives</td>
</tr>
<tr>
<td>0.3</td>
<td>13 July 2011</td>
<td>Draft for internal review</td>
</tr>
<tr>
<td>0.4</td>
<td>22 July 2011</td>
<td>Draft for proof-reading</td>
</tr>
<tr>
<td>0.5</td>
<td>22 July 2011</td>
<td>Draft for approval by RIN</td>
</tr>
<tr>
<td>1.0</td>
<td>5 September 2011</td>
<td>Version for publishing following approval by RIN and Expert Panel</td>
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<tr>
<td>CILIP</td>
<td>Chartered Institute of Library and Information Professionals</td>
</tr>
<tr>
<td>CROS</td>
<td>Careers in Research Online Survey</td>
</tr>
<tr>
<td>CSV</td>
<td>Comma Separated Values</td>
</tr>
<tr>
<td>DCC</td>
<td>Digital Curation Centre</td>
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<td>DTC</td>
<td>Doctoral Training Centre</td>
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<td>JISC</td>
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<td>JSS</td>
<td>Joint Skills Statement</td>
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<td>PDP</td>
<td>Personal Development Plan</td>
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<tr>
<td>PG Cert</td>
<td>Post Graduate Certificate</td>
</tr>
<tr>
<td>PINOTA</td>
<td>Postgraduate Information Needs and Online Tool Awareness</td>
</tr>
<tr>
<td>PIRLS</td>
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</tr>
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<td>PRES</td>
<td>Postgraduate Research Experience Survey</td>
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<tr>
<td>RCUK</td>
<td>Research Councils UK</td>
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<td>RDF</td>
<td>Researcher Development Framework</td>
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<td>RIN</td>
<td>Research Information Network</td>
</tr>
<tr>
<td>SCONUL</td>
<td>Society of Colleges, National and University Libraries</td>
</tr>
<tr>
<td>UKCGE</td>
<td>UK Council for Graduate Education</td>
</tr>
<tr>
<td>UUK</td>
<td>Universities UK</td>
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1 Introduction

1.1 Purpose

1.1.1 This report is a deliverable from a project commissioned by the RIN to investigate the place and role of PhD supervisors in the drive to ensure that research students possess the necessary level of information literacy to pursue their careers successfully in academia and beyond. The project was undertaken by Curtis+Cartwright Consulting in partnership with Cardiff University. The project started in January 2011 and ran until June 2011.

1.1.2 The purpose of this report is to document the institutional case studies which were developed during the project; the data and evidence from these case studies is used in the main report. The case studies have been built on a series of visits undertaken as one of the evidence gathering activities within the investigation. Each case study visit comprised interviews and focus groups.

1.1.3 This version of the report (V1.0) is for publication on the RIN website.

1.2 Acknowledgements

1.2.1 The project team would like to acknowledge and thank the institutional representatives who arranged our visits. Without their generous help and excellent organisation the case studies would not have been possible. The project team would also like to thank all those research students, academics and other staff who kindly attended the interviews and focus groups.

1.3 Objectives

1.3.1 The objectives of the project were to:

1) investigate and analyse the current attitudes and practices of PhD supervisors across a range of institutions and disciplines, on how they support the development of their research students’ skills in, and knowledge and understanding of, information literacy;

2) investigate the relationship between PhD supervisors and other relevant players, including graduate schools and university libraries, in the development of their research students’ information literacy;

3) describe and analyse variations in these practices in relation to the differences in:
   – disciplinary settings;
   – institutional environments;

4) relate these practices to the expectations and competencies outlined in Vitae’s Researcher Development Framework (RDF) and in SCONUL’s Seven Pillars of Information Literacy;

5) identify and set out exemplars of these practices;

6) gauge the ability of PhD supervisors to impart relevant skills and provide appropriate advice, paying attention to:
   – their own competencies in this area;
   – the training and support that they themselves receive;
7) identify areas where improvement in supervisors’ practices would be beneficial (for instance, through better training and support for them), with particular regard to relevant competencies set out in the RDF and the Seven Pillars;

8) investigate how such improvements might be effected, in the context of different disciplinary settings and institutional environments;

9) make recommendations regarding:
   – the development and promotion of best supervisory practice, with reference to the use of the RDF and the Seven Pillars as instruments to help achieve best practice in information literacy;
   – the provision of support mechanisms, training and, if appropriate, incentives for supervisors to enable them to play their role in developing the information literacy of their research students;

10) set out courses of action, geared to different stakeholders, for the above recommendations, in the form of a short dissemination and advocacy strategy.

1.3.2 The objectives of this project report are to:
   – describe the case study element of the project;
   – provide both the context and key points of each case study institution that are relevant to the main report’s findings and recommendations.

1.4 Scope

1.4.1 A conventional definition of information literacy is provided by CILIP: “Information literacy is knowing when and why you need information, where to find it, and how to evaluate, use and communicate it in an ethical manner”.\(^1\) However, for the purposes of RIN’s approach to the issue, it is important to adopt a broader interpretation of information literacy, which (i) recognises that ‘information’ must be taken to include research data; and (ii) clearly also encompasses the ability to manage, and where appropriate preserve and curate one’s own information and data.\(^2\)

1.4.2 Generic information technology and communication skills (eg use of Microsoft Office and presentation skills) are not strictly included in this definition but these skills may support other skills that are in scope. To focus questioning in the projects a specific set of skills was chosen. These are a broad mix of skills that encompass both traditional elements of information literacy as well as newer elements. These are the skills to:\(^3\)
   – conduct effective and comprehensive information searches;
   – critically analyse and evaluate others’ findings and arguments;
   – record, manage and handle references using bibliographic tools (eg EndNote);
   – use IT to help keep up-to-date with relevant research (eg email alerts and RSS feeds);
   – organise, share and archive my/their research data for use beyond my/their project;

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\(^3\) Note that the research lens for SCONUL’s Seven Pillars of Information Literacy had not been published at the time of the survey. The elements were agreed by the project governance, and do map to the Seven Pillars and the RDF.

\(^4\) Depending on whether this refers to the respondent or the respondent’s research student.
– identify where best to present and publish my/their\textsuperscript{\textdagger} work;
– understand the role of open access in making my/their\textsuperscript{\textdagger} research available;
– develop my/their\textsuperscript{\textdagger} research profile and professional networks using social media (\textit{eg} blogs and LinkedIn);
– understand relevant legal frameworks (\textit{eg} copyright and data protection).

1.4.3 It should be noted that there is a core of information literacy skills/competencies/understanding that the RDF directs all research students should have or gain\textsuperscript{\textdagger}\textsuperscript{\textdagger}, but not all research students will require all advanced skills in equal measure.

1.4.4 All research disciplines are in scope. The primary focus of the project is PhD (and DPhil) supervisors in UK academic institutions. Other types of doctoral degrees that research supervisors support are included. These include professional doctorates (EdD, EngD, etc), the NewRoutePhD and PhD by practice. PhD by publication is excluded due to the difference in the way this PhD is obtained and its comparative rarity. Both primary and secondary supervisors are included within the scope. Masters-level research students and their supervisors are excluded from this project.

1.5 Intended audience

1.5.1 The intended audience for this document is those researchers and practitioners in information literacy keen to understand further the case studies. Anyone wanting the findings from the project should read the main document\textsuperscript{\textdagger} which is available on the RIN web site.

1.6 Approach

1.6.1 This project complements the 2008 RIN report, ‘Mind the skills gap’, which focused on information-handling training for researchers. This report called for further work to ensure that training provision is more closely aligned with research strategies and agendas, and concluded that there was a widespread perception that some research supervisors do not recognise the need for the types of training on offer to their research students. However, prior to the project to which this report belongs there was very little published material on the views of supervisors themselves. There was, therefore, a need to collect primary evidence on the attitudes and practices of supervisors. This sub-section sets out the approach to the project.

\textit{Initial information gathering}

1.6.2 The project started with a short desk research exercise to identify existing sources of evidence and to help set the context for the rest of the project. We also undertook a round of strategic interviews with key players in the area in order to:

– ensure that all pertinent pre-existing work is covered;
– ensure early buy-in from these organisations, and;
– inform the dissemination and advocacy strategy.

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\textsuperscript{5} This core corresponds to the first two phases of the RDF.

\textsuperscript{6} \textit{The role of research supervisors in information literacy}, Curtis+Cartwright, CC465D005-0.7, 5 September 2011.
Surveys

1.6.3 We surveyed PhD supervisors using a broad online questionnaire in order to elicit an evidence base covering the roles and perceptions of supervisors with respect to information literacy. A number of respondents offered to arrange follow-up telephone interviews to explore their views outside the constraints of the survey format.

1.6.4 In tandem with the survey of supervisors, we surveyed research students using a shorter online survey. The primary purpose of this survey is to identify any gaps in perceived provision from the supervisor and that received by the research student. The intent was not to replicate or update existing research centred on research students, though the survey data do offer significant new evidence on the research student.

Case studies

1.6.5 Five case studies visits to UK institutions were undertaken. Three of the institutions are Russell Group members; one is part of the 1994 Group and the other a Million+ member. Each case study was informed by two focus groups: one with supervisors and one with research students. Supplementary interviews for each case study were held with those with responsibilities for research, academic staff development, library services and postgraduate development. These were to gather properly contextualised information for both exemplar practice and quotes/vignettes. The case studies try to link together the various stakeholders, as they relate to supervisors, in particular institutions. They are not intended to be comprehensive in their coverage, but simply to illustrate points that are relevant to the main report’s findings and recommendations. There are no conclusions or recommendations arising from the case studies themselves.

Reporting

1.6.6 Following data analysis and synthesis the findings and recommendations were written up, as follows:

– **final report**: the main report provides a write-up from the project. A draft was reviewed by members of the RIN Information Handling Working Group, before being revised and then edited and published by the RIN;

– **summary of surveys**: describes the provenance of the survey data and provides an overview of the data collected;

– **case study report (this document)**: summarising the key findings from the focus groups and interviews that took place on the case study visits;

– **dissemination and advocacy strategy**: derived from the main report and more generally the project, a strategy for disseminating the evidence was presented to the RIN as an internal document.

1.7 Overview of this document

1.7.1 The rest of this report is set out as follows:

– Section 2 contains an introduction to the case studies;

– Sections 3 through 7 provides the case studies themselves.

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7 The choice of institutions was informed by the Expert Panel convened for the project.
2 Introduction to the case studies

2.1 General

2.1.1 This section introduces the five institutional case studies in more detail, including their selection and key characteristics.

2.2 How the case study institutions were selected

2.2.1 The two aims of the case studies were to:
- obtain a deeper and richer understanding of the research topic (than would be obtained through the other information gathering activities such as the surveys);
- document exemplar practice within a particular institutional setting and supervisory relationships.\(^8\)

2.2.2 The following selected criteria were proposed to the Expert Panel supporting the project:
- known to have willing institutional champions able to help out with logistics;
- known to have examples of good practice;
- known to have different approaches to achieving good practice;
- good range of institutions (eg ideally covering the main mission groups\(^9\)).

2.2.3 The Expert Panel recommended a number of institutions, and from those that were willing and able to participate in the project timeframe, six were selected. One was later unable to meet the timeframe, and so five case study visits were planned and undertaken.

2.3 How the case studies are reported

2.3.1 Much of the qualitative data from the case studies have already been used in the main report as a key source of evidence and a useful means of presenting findings (eg the views of, and direct quotes from, supervisors and research students). This report does not aim to duplicate this information, nor does it aim to be comprehensive. Instead it simply illustrates the salient points reported by participants, in a case study format, that are relevant to the main report’s findings and recommendations. It is therefore subjective by definition. Due to the nature of the case study investigation (looking for good practices, interesting vignettes and rich detail, and understanding the general context, rather than an exhaustive audit or evaluation) there may also be omissions and biases. It should also be noted that there are no conclusions or recommendations arising from the case studies themselves.

2.3.2 As each institution involved was offered anonymisation, none of the real institutional names are revealed and the case studies have been anonymised as far as possible.\(^10\)

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\(^8\) In reality there turned out to be little quantitative or empirical evidence on its efficiency, effectiveness or impact of different practices. Descriptions of practices are offered as ‘exemplar’ good practice rather than ‘exemplary’ practice. Statements regarding what constitutes good practice come from views of participants.

\(^9\) Mission groups are collections of institutions that share common aims. They are the Russell Group, the 1994 Group, Million+, and the University Alliance. Some institutions choose not to be part of a mission group, and are described in this report as non-affiliated.

\(^10\) For example, by standardising the names of institutional structures and services.
2.3.3 The rest of this section sets out summary tables of the varying institutional characteristics for the case studies. The rest of this document sets out the case studies in full, each with an initial summary of the key points as selected by the project team.

2.3.4 Table 2-1, below, introduces the institutions via a description of their characteristics. The case studies are presented in the order in which the visits were undertaken.

Table 2-1: Overall institutional characteristics

<table>
<thead>
<tr>
<th>Case study</th>
<th>Mission group</th>
<th>Brief description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A (§3, p12)</td>
<td>Russell Group</td>
<td>Expert in research and research-led teaching, this university spans the disciplines and has three cutting edge research institutes, a Doctoral Training Centre (DTC) and more than twenty academic schools. Although not built as a single campus, the majority of this institution’s departments are located a short distance from each other within the city’s civic centre.</td>
</tr>
<tr>
<td>B (§4, p16)</td>
<td>Russell Group</td>
<td>A more specialised university with a small city centre campus and a large international student population. It has over twenty academic departments and a similar number of research centres.</td>
</tr>
<tr>
<td>C (§5, p19)</td>
<td>1994 Group</td>
<td>This university has an international reputation for excellence in research and teaching, and has three faculties, two DTCs and five interdisciplinary research schools. It takes pride in its strong links with industry and business.</td>
</tr>
<tr>
<td>D (§6, p22)</td>
<td>Million+</td>
<td>This university has ten research centres and an excellent reputation for multidisciplinary applied research in its areas of expertise. The University has worked hard to provide specialist business training and support to its research students and staff. The university has two main campuses and two smaller ones with links to local colleges.</td>
</tr>
<tr>
<td>E (§7, p24)</td>
<td>Russell Group</td>
<td>This university is strong across all subjects. Its advanced study institute works to promote collaborative research projects across the university’s four faculties. The cosmopolitan university campus is located on the outskirts of the city, set over several adjacent sites.</td>
</tr>
</tbody>
</table>
Table 2-2, below, sets out some of the supervisory characteristics pertinent to the project for each case study.

**Table 2-2: Supervisory characteristics**

<table>
<thead>
<tr>
<th>Case study</th>
<th>Supervisor policy</th>
<th>Supervisory development</th>
</tr>
</thead>
<tbody>
<tr>
<td>A (§3, p12)</td>
<td>Devolved: Each school has a policy on supervision, covering supervision arrangements, assignation of duties, training and development of supervisors, etc. The Head of School is responsible for appointing academics to supervise. Each school provides research students with opportunities to give feedback on supervision received.</td>
<td>New PhD supervisors complete a PG Cert in University Learning and Teaching and co-supervise students before becoming a primary supervisor. The graduate school also offers short briefing sessions to new supervisors six times a year. Specific training for established supervisors is organised by each Head of School.</td>
</tr>
<tr>
<td>B (§4, p16)</td>
<td>Devolved: Each Head of Department is responsible for ensuring that there is a research student director appointed. This director is responsible for the research student’s induction, allocating and training supervisors, progress monitoring, offering research training, etc.</td>
<td>There is compulsory training for new supervisors run by the institution. Additional specialist training is designed and run by individual departments. Breakfast/lunchtime/evening professional development training sessions are run by one of the university’s support centres.</td>
</tr>
<tr>
<td>C (§5, p19)</td>
<td>Devolved: Each Head of Department appoints supervisors, and is responsible for career development, assessing training needs, reviewing probationary period, etc.</td>
<td>There is an established probationary training programme for new supervisors. Additional courses are available to staff on a voluntary basis.</td>
</tr>
<tr>
<td>D (§6, p22)</td>
<td>Centralised: The university is responsible for ensuring supervision arrangements are in place. Supervisors must be experienced or have completed training.</td>
<td>There is compulsory training for new supervisors. Information on additional courses is available on Blackboard and the library regularly advertises workshops for academics. A course and certificate in Continuous Professional Development for supervision is available.</td>
</tr>
<tr>
<td>E (§7, p24)</td>
<td>Devolved but supported by graduate school: Departments are responsible for allocating and managing supervisors. The graduate school is responsible for providing departments with advice (eg on codes of practice for supervision), research students with opportunities to comment on supervision, and supervisors with training and development opportunities (in partnership with the staff development centre).</td>
<td>All new supervisors attend a course on supervision and co-supervise for five years prior to becoming a primary supervisor. Established supervisors are encouraged to continue their development through the staff development centre.</td>
</tr>
</tbody>
</table>
2.3.6 Table 2-3, below, introduces some of the research student characteristics pertinent to the project for each case study.

<table>
<thead>
<tr>
<th>Case study</th>
<th>No. of research students</th>
<th>Graduate school?</th>
<th>Research student development training and support</th>
<th>Training policy</th>
</tr>
</thead>
<tbody>
<tr>
<td>A (§3, p12)</td>
<td>~1500</td>
<td>✓</td>
<td><strong>Centralised / portfolio approach:</strong> Centralised skills programme, with single brochure, delivered through a variety of providers. Schools can organise additional training for discipline specific skills but the scale of additional training is variable.</td>
<td>Voluntary</td>
</tr>
<tr>
<td>B (§4, p16)</td>
<td>~1200</td>
<td>✗</td>
<td><strong>Distributed:</strong> Training courses and support provided via separate skills centres, the library and research centres. Some coordination, but not centralised.</td>
<td>Voluntary</td>
</tr>
<tr>
<td>C (§5, p19)</td>
<td>~1200</td>
<td>✓</td>
<td><strong>Distributed:</strong> The graduate school runs university-wide induction and some additional training. Training also provided by departments, library, etc. Some coordination, but not centralised.</td>
<td>Compulsory - minimum of 30 days training</td>
</tr>
<tr>
<td>D (§6, p22)</td>
<td>~200</td>
<td>✗</td>
<td><strong>Centralised:</strong> Single programme run by university, including a research student and supervisor co-designed skills module. Additional sources of support offered by library.</td>
<td>Compulsory completion of PG Cert in Research Skills</td>
</tr>
<tr>
<td>E (§7, p24)</td>
<td>~1700</td>
<td>✓</td>
<td><strong>Centralised moving to devolved/portfolio:</strong> The current centralised skills programme model is moving to a more devolved and portfolio model, driven by the need for a more “integrated” approach with the faculties to improve relevance.</td>
<td>Voluntary</td>
</tr>
</tbody>
</table>

2.3.7 Whilst much material on information literacy was included in training and support provision for research students and supervisors in an indirect way, there was some specific information literacy training and support for each case study. Table 2-4, below, sets out these examples.

<table>
<thead>
<tr>
<th>Case study</th>
<th>Information literacy specific training and support</th>
</tr>
</thead>
<tbody>
<tr>
<td>A (§3, p12)</td>
<td>Dedicated information literacy consultant within the library, a number of information literacy specific courses within the centralised skills programme and an online skills assessment for information literacy.</td>
</tr>
<tr>
<td>B (§4, p16)</td>
<td>A six week, part-time information literacy skills course, other skills courses run throughout the year and a number of library-run information literacy courses.</td>
</tr>
<tr>
<td>C (§5, p19)</td>
<td>Use of a skills matrix (based on the JSS) to assess research student’s information literacy skills needs and a number of information literacy courses run by library.</td>
</tr>
<tr>
<td>D (§6, p22)</td>
<td>PG Certificate in research skills covers information literacy, online information (Blackboard) on information literacy and information literacy skills courses run by study skills centres and library.</td>
</tr>
<tr>
<td>E (§7, p24)</td>
<td>Use of an online research skills assessment tool and a number of information literacy courses within the skills programme, typically run by the library.</td>
</tr>
</tbody>
</table>
3 Case study A

3.1 Key points

1) The university took a strategic decision seven years ago to centralise, via the graduate school, the promotion of its support to research students.

2) The graduate school now coordinates an extensive range of courses, both generic and specialist, catering for full and part-time research students.

3) The graduate school promotes the courses via a single listing which is distributed to all research students and all academics. This approach receives very positive feedback from both supervisors and research students.

4) The university employs a specialist information literacy consultant within the library.

5) Attendance at courses is voluntary, based on a needs assessment. Take-up has been increasing over time, and a culture of attendance is building up, with over 90% of research students participating; the median number of courses attended being ten.

6) Much data are gathered on participation and satisfaction of courses. Research is also being undertaken into research student abilities in information literacy.

3.2 Information literacy

3.2.1 The university has a proactive approach to information literacy. It employs a dedicated information literacy consultant, in addition to subject librarians, within the library staff.

3.2.2 All staff interviewed, both academic and non-academic, regard information literacy skills as very important, especially at the early stage where research students are first starting their project.

“Whatever the motivation [to do a PhD] it is critical to be able to analyse the literature”

PVC Research

3.2.3 Improving information literacy training has been a long-term investment for the university. In addition to regular staff training sessions, a teaching information literacy handbook provides a source of consistent guidance to subject librarians and others involved with achieving information literacy.

3.2.4 A number of information literacy skills training courses are available, at both introductory and advanced level, through the Human Resources department and as part of the well-established research student development programme. Topics for this academic year include Web 2.0, networking, and managing references with EndNote.

3.2.5 Both research students and academic staff in the focus groups believe that heightened awareness of these courses is essential for the continual learning process that they require as a researcher. Due to a large amount of content being available online, and research students’ increasing familiarity with simply downloading papers at their desk, some research students rarely visit the library.
3.2.6 Library staff meet regularly to keep on top of new ideas and are currently working on a new course on open access publishing. Most subject librarians are happy to help lead the courses. Each participant is given an evaluation form at the end of the course and these are returned to the graduate school staff for collation.

“The training is now much broader, developing the higher level skills involved with exploring, using, managing and sharing information, rather than having to concentrate on the more technical aspects of searching specific databases”

Information Literacy Consultant

3.2.7 The library seeks to embed all information literacy training into the curriculum or skills development programmes, as appropriate. In addition to the centralised skills programme, organised by the graduate school, subject librarians deliver subject-specific training within academic schools’ PhD training programmes where available, or on a one-to-one basis. The next step is to encourage the embedding of information literacy into other sessions not run by the library, for example considering where to find copyright-free images or how best to share files, during presentation skills courses.

### 3.3 Research student training and support

3.3.1 The graduate school aims to support the work of the schools and their supervisors to enhance the experience of research students at the university. It delivers a comprehensive programme of formal and evaluated training for postgraduate researchers. The programme offers workshops and courses in research skills and techniques, as well as broader areas of research management and professional development. A number of courses are delivered on-line and so are available to researchers whenever they wish to access them. Several academic schools offer research students access to modules at Master’s level that might benefit them in their research.

3.3.2 The graduate school runs an induction programme three or four times a year for new research students, which is very successful. Research students can then book (up to three months in advance) relevant generic or school-specific courses listed in the development programme over the academic year. Both research students and academic staff in the focus groups note that these skills courses not only allow the research students to learn vital skills for successful research but it also provides them with a chance to meet other research students outside of their group or department, which has its own social benefits. Subject librarians also get details of new staff and research students so they can write to them with details of services available.

3.3.3 Skills training is delivered in a variety of ways. The workshops offered as part of the development programme are run from a number of sources; including graduate school staff, academics, library staff, computing staff, research and commercial division staff (for topics such as technology transfer and funding grants), the careers department and outside consultants. There is a range of separate software tutorials, in addition to the workshops, run by information services.

3.3.4 Currently, the take up of the courses offered as part of the development programme is excellent, with over 90% of research students attending at least one of the courses available, with the median attendance of ten sessions. Research students complete a mix of generic courses from the development programme with direct project-related training from their supervisor. In general, research students and staff are proud of their “very strong and versatile” graduate school.
3.3.5 All research students are given a development needs analysis form, based on the Joint Skills Statement (JSS)\(^{11}\) to evaluate what types of research training they could benefit from. Although not centrally monitored, it is advised that research students complete this form together with their supervisor. The development needs analysis form gives research students targets and dates to complete by and acts as a framework for their personal development plan. If a research student finds that there is no course available for the training they require, they can approach the student skills development programme manager to see if one can be arranged.

3.3.6 The university has been vigilant not to neglect part-time research students training needs. As part-time research students often live a long way from campus and spend little to no time actually on site, the university runs a special programme in the first semester of each year, where relevant training courses are grouped together as part of a week long program. Part-time research students also get priority booking over full-time research students for the development programme courses and can take advantage of the online resources available such as modules developed via a collaboration led by Epigeum\(^{12}\).

3.3.7 In addition to courses, the graduate school runs a funding scheme for interdisciplinary activities organised by research students and research-only staff. This encourages researchers from different disciplines to come together to discuss shared research interests and develops researchers’ transferable skills by giving them an opportunity to work collaboratively to organise events. There are also a number of student run conferences that give research students an opportunity develop their presentation skills in a supportive environment. The development programme courses are run in parallel with these so that training comes at the right time for the research students.

3.3.8 Both the research students and staff in the focus groups are greatly impressed by the courses offered on the development programme. They appreciate that the information literacy skills they require as a researcher are often hard to develop without this kind of training and that if working in industry these courses would be extremely expensive. Unfortunately, even though these courses increase research students confidence and impart skills vital to completing their PhD, there are some departments where the courses are not looked upon quite so positively by supervisors (even though research students are encouraged to attend a set number of days training), and research students feel like they almost have to “sneak out” to attend. This is particularly frustrating for international research students who pay high fees to attend the university, want to get the best out of their time there and feel that “they should get everything they deserve”.

3.3.9 When looking at the reasons behind attending a training course as recorded in the data, the majority of research students went of their own accord, and not because they had been encouraged to by their supervisor or department. Research students and academic staff in the focus groups agree that there should be a greater expectation for research students to attend these courses, especially those who have not previously completed any research training.

3.4 Supervision of research students

3.4.1 The management and monitoring of PhD supervisors is devolved to the schools. The Head of School is responsible for a code of practice and for organising any specific supervisor training beyond that offered by the graduate school. The graduate school offers one hour briefing sessions to new lecturers six times a year, covering topics such as: regulations, the skills

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development framework, and resources available to research supervisors. Generally speaking these courses are attended on a voluntary basis but some schools have made it compulsory. In some schools there are also half day sessions on supervising research students, as well as occasional courses on ‘successful research’.

3.4.2 For the past five years all new lecturers have been required to complete a Post Graduate Certificate (PG Cert) in University Learning and Teaching. The University operates a supervisory model that requires two supervisors. This means there is an additional researcher who can offer the researcher students support when it would otherwise be unavailable. Given the comprehensive range of courses and high profile of the development programme, supervisors feel that they rarely have to do more than “signpost” their research students to the training they require. They can however offer help with the context of a student’s research and offer constructive advice on the direction they should take with their studies. In some special cases, for example training in a specific type of niche software, some supervisors will contact the company directly to arrange training, rather than designing a course themselves.

3.5 Supervisor development

3.5.1 Although supervisors do not attend the same courses as research students, the graduate school aims eventually to provide skills development activities which span the entirety of a researcher lifecycle. There is currently funding for research staff to organise interdisciplinary activities.

3.5.2 Subject librarians initiate and lead some of the information literacy sessions in the staff development programme, for example covering critical evaluation of academic papers, the role that citations play, keeping up-to-date, Endnote training, etc.

3.5.3 Supervisors in the focus groups made several relevant points regarding their development, including:

– They regularly receive email alerts and regular updates, including Vitae’s newsletter.

– Although viewed as useful for maintaining one’s research profile they tend to see blogs and web sites as too time consuming to run continually.

– They value the use of informal emails and presenting at conferences for networking, rather than relying on Facebook and LinkedIn.

– They have a more equivocal view on the subject of open access; while those who worked on highly collaborative projects highlighted its value, there were other supervisors who had been previously affected by, and were therefore strongly concerned, about plagiarism and lack of citation, and are less positive about publishing in less traditional means.

3.5.4 Both the research students and supervisors in the focus groups agree that there is a core of supervisors, often of the older generation, who are largely uninterested when it comes to information literacy. Some may be uncomfortable with what information literacy actually means, and therefore may find it rather difficult to talk to their research students about it. For others it may be a technological issue, where there are those who “don’t even use the internet, let alone social networking”. The supervisors in the focus group report higher than ever workloads and so consider it unlikely that the university will be able to engage all PhD supervisors in completing information literacy training.
4 Case study B

4.1 Key points

1) All research students start off as MPhil students – supervisors see that this gives them a head start in information literacy.

2) Training and support is available from a wide range of “support centres”. Whilst provision can come across as less coordinated and more fragmented, it does allow for a number of areas of expertise including some which are highly regarded in the institution and get senior institutional support.

3) There is a lot of information literacy relevant support built into research techniques courses. This includes a six week, part-time course on information skills for research students.

4) Many research students complete a teaching assessment and teach undergraduate students, often on behalf of their supervisor.

5) Academic staff development is being revamped to offer a range of relevant short courses (usually available as breakfast/lunch/evening sessions) with information literacy often playing an implicit part.

4.2 Information literacy

4.2.1 Research students in the focus group appreciate the need for acquiring different research skills as they progress through their PhD. They are particularly aware that keeping up to date with current literature is pivotal to their success as a researcher. As IT is frequently the first point of contact for new research students, rather than the traditional library, some of the research students are unaware of the facilities the library can offer in acquiring these research skills.

4.2.2 Research students that have previously studied at Masters-level are considered by the supervisors in the focus group to often have a more honed set of skills that those who have not previously completed any formal research, and may only need to update their skills in certain key areas (eg specific databases). However, even those who have these skills can have difficulty translating their research into a different language or style, so language training can feature heavily in these research students’ PhD programmes.

4.2.3 For the past four years the university has run a six week, part-time course for research students on information skills. This is often used as an induction course. The course has proved popular, and, following this success, one department now offers a similar, yet slightly shorter and more specialised version of the course to all its new research students.

4.3 Research student training and support

4.3.1 The university has a comprehensive selection of courses to support their research students. These courses are spread across a number of sources within the institution:

- **Support centre 1**: This centre provides specialist training in the design of social research and analysis. In partnership with the university library it runs a unique six week, part-time course for new research students, covering skills such a literature search planning and how best to keep on top of current research.
- **Support centre 2**: This centre is interested in the use of technology in teaching and provides training in digital literacy in partnership with the university library. Courses offered by the centre cover topics such as blogging and social networking for use in research.

- **Support centre 3**: This centre has a focus on research students’ personal development. It runs regular academic writing and presenting courses together with tailored one-to-one sessions. A number of courses provided are run in partnership with the careers service and the two centres work very closely in order to offer research students the best support possible, both during and after their research degree.

- **The library**: The library provides information skills courses on referencing, bibliometrics and literature search and offers individual training sessions for research students.

- **IT services**: In addition to generic training in Office, IT services run a PhD thesis workshop and offer one-to-one training sessions for research students looking at formatting issues and the use of images and tables in theses.

- **The language centre**: In addition to providing research students with language programs and support, the language centre also offers services for proofreading and translation. As this institution has a high proportion of international research students, the centre has a more prominent role than similar facilities at other institutions.

- **Careers service**: Although primarily focussing on professional skills and those associated with recruitment (CVs and mock interviews) the careers service also runs a number of courses associated with writing and developing a research profile.

4.3.2 Due to the size of, and investment made by, the university, the support centres have postgraduate specific advisors. The scale of investment, and degree of flexibility in support, is evident elsewhere – for example, small group training tailored for PhD students in different departments can be arranged via their liaison librarian.

4.3.3 The university is proud of its cosmopolitan student population and how the different backgrounds and traditions of its research students bring new sources of knowledge and information to the university. Supervisors aim to train research students so that they can write in a suitable academic style without losing any of their individualism.

4.3.4 The library staff appreciate that one student’s competency level in information literacy will be very different from the next and try to offer appropriate support throughout the PhD. There is also recognition that the challenge is as much about ensuring the trainers are able to teach, as providing specialist content.

4.3.5 In order to engage new research students, the library runs a “postcard” system where research students complete information about their research project on a postcard and the library sends research students relevant information that could be potentially useful to their research. Now in its second year this project has successfully reached over half of all new research students in their first few weeks.

4.3.6 Research students can attend research skills courses that are run throughout the year, as well as poster exhibitions, student run conferences, a research and development forum (run by research students) and any relevant courses offered outside of the institution.

4.3.7 For those interested, it is also possible for research students to gain teaching experience during their PhD once they have completed an assessment. In some cases, research students actually teach on behalf of their supervisor. For those research students in the focus group, this has been very rewarding and has enhanced their student-supervisor relationship.
4.4  Supervision of research students

4.4.1 Research students are directly supervised by at least one experienced academic. There is a code of practice for all supervisors which is provided by a research student director. There is compulsory training for all new supervisors and subsequent training is designed and run by individual departments.

4.4.2 Supervisors in the focus group acknowledge that although the traditional “apprentice” approach can work quite well for some research students, the supervisory role has changed from one-on-one training to training on a school or institutional level. Supervisors in the focus group see the need for good guidelines, above that of the code of practice, so that both research students and supervisors understand what is expected of them. Supervisors are very keen to direct their research students to the appropriate training courses and appreciate the efforts made by the university to keep them up to date via emails and talks.

4.4.3 Although their PhD supervisors are very helpful at directing research students to appropriate training, research students in the focus group expressed a general preference to discuss training with the support centres rather than their supervisors, so that they could spend supervisor meeting time discussing their research project.

4.5  Supervisor development

4.5.1 Although formal training is not enforced, some of the supervisors in the focus group are very keen to keep up to date with any skills that will aid their (or their research students’) research. As supervisors have little time to spare, they appreciate methods such as small online or email bulletins and short training courses that run over lunchtimes or outside academic hours.

4.5.2 This has been affirmed by the recent overhaul of academic training courses at the institution, where a long established program of half and full day courses was discontinued in favour of short breakfast, lunchtime and evening sessions on topics such as academic writing and publication strategy. Whilst not explicit in the session titles, the elements of information literacy are apparent in the more detailed syllabi.
5 Case study C

5.1 Key points

1) The library is the focal point for information literacy and extensive library outreach is enabled by the large number of academic liaison librarians.

2) Senior management have a strong emphasis on building a “research culture”.

3) A “skills matrix” is offered to research students to allow them to identify training needs.

4) The institution provides generic courses to many research students which they can then build on via one-to-one sessions and departmental-led courses.

5) The Graduate School has an audit function for supervision.

5.2 Information literacy

5.2.1 The library is the focal point for information literacy and extensive library outreach is enabled by the large number of academic liaison librarians. The library works closely with the Graduate School and Research Support Office to design courses covering a range of information literacy topics and ensure there is no duplication.

5.2.2 Senior institutional figures highlight the importance of building a strong research culture, and the role that this has in supporting and encouraging researcher development. A research culture does not have to be based on “ivory towers”, however, and at this institution the culture is geared towards applied research. They also report a tendency for a “grow your own tradition” with research talent, which again reinforces the importance of researcher development.

5.3 Research student training and support

5.3.1 To orientate new research students an Induction Day is run five times a year, together with an online course on skills development. Research students are also able to attend specialist training courses run by their department or school and take part in Vitae’s GRADschool events nationwide.

5.3.2 Although there is no fixed training programme, the university has used the JSS to develop a skills matrix for research students, which they can use to identify their training needs. The matrix also enables research students to record skills gained from employment or voluntary work as part of their personal development.

5.3.3 Academic liaison librarians are based in the library but spend a lot of time within their different academic departments providing assistance to research students and helping design skills courses. The aim of the library-based training is not to be a “one course solution” but to provide generic training to a large number of research students and to act as a baseline to which they can build on in more advanced one-to-one sessions. This also means that academic staff and liaison librarians can tailor materials from the generic courses to make them more specialised for individual departments.

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5.3.4 Research students are required to attend a total of 30 days skills training over the course of their PhD, but this is not limited to courses offered by the university. Many research students in the focus group find that attending subject specific conferences and workshops offered at other institutions is an excellent alternative for improving their research skills.

5.4 Supervision of research students

5.4.1 Most research students at the university have more than one supervisor, although this varies between different faculties and in some cases the second supervisor takes more of an advisory role. Academics must have successfully co-supervised two research students and satisfactorily completed the probationary training before they are allowed to be a primary supervisor.

5.4.2 The graduate school has an "audit function" for supervision, for example checking that each set of minutes of research students' monthly meets has been kept. This role is currently changing towards more of an "oversight" role - so that the auditing itself is done within departments and that the graduate school then periodically checks if the auditing process is working.

5.4.3 Newly qualified supervisors, especially those who attended the university as a postgraduate (or even undergraduate student), are thought (by the supervisor focus group) to be more knowledgeable about the courses available to current research students than their older counterparts. In contrast, the supervisors without a PhD described a steep learning curve in understanding their student’s needs, but that this made them particularly conscious and motivated to find suitable training for that student.

5.4.4 Research students in the focus group described particular encouragement by their supervisors to attend courses that will help directly with an upcoming event, such as presenting at a conference or writing a research paper.

5.4.5 In some research groups, it is usual for a new PhD student to be assigned a “buddy”, an older more experienced PhD student or post-doc, for support. As the buddy has recent experience of the training available at the institution, they can help the new student with their skills development and provide an extra point of contact if the supervisor is unavailable.

5.4.6 Supervisors in the focus group referred to notably different cultures within different schools. For example, the engineering school was compared favourably to the science school as being one where there is a culture of research students attending training sessions.

5.5 Supervisor development

5.5.1 All new academic staff are contacted by the library on their arrival at the university. This means library staff can have an informal meeting with the academics, introduce them to their liaison librarian and make them aware of the services available to them.

5.5.2 Beyond probationary training, academics are able to attend staff courses on topics such as publishing, and arrange training sessions with the academic librarians if they wish. Supervisors in the focus group reported little time to attend regular training courses in addition to other commitments, such as meeting their research students. They suggested that “refresh and knowledge update” sessions with their research students might be useful not only for learning new skills, but also for building on the relationship they have with their student in a less formal setting.

5.5.3 Supervisors can find updates on new services and courses on the library web site and receive regular emails from the library.
The supervisors in the focus group were keen for more practice-based training, perhaps even involving their student. They were also very keen to share their practices and issues with each other in a form of self-support.
6 Case study D

6.1 Key points

1) The university has a formal qualification for new research students – PG Cert in research skills – this covers many elements of information literacy skills.

2) As part of the PG Cert research students must design, with the help of their supervisor, a tailored course of formal study according to their needs.

3) Whilst there is no graduate school or research support office to assist development, there are regular research and professional seminars within research groups – with PhD students, supervisors and external colleagues presenting.

4) There is a compulsory induction programme for new supervisors, and supervisors are encouraged to use Blackboard for keeping up to date after they have completed the course.

6.2 Information literacy

6.2.1 The University has taken a strategic approach in integrating information literacy skills into the lives of its research students and academics. Information Services, which includes the library and study skills centres, work together with managers from student and staff development so that the university community is aware of information literacy training and support.

6.2.2 For the past seven years Information Services has run an information skills course, developed for first year research students but available to all. The course aims to teach the skills needed to exploit library and information resources effectively regardless of subject discipline.

6.2.3 Finally all research students are required to complete a postgraduate certificate in research methodology in parallel with their PhD research (explained further in paragraph 6.3.1, below).

6.3 Research student training and support

6.3.1 All first year research students (unless they can provide substantial evidence of their research skills) complete a formal qualification in research methodology. This formal method of qualification has been in place for over ten years and is reviewed frequently by the programme manager. The qualification is a PG Cert in Research Skills and is delivered in the style of a taught Masters degree with three main modules:

- Modules 1 and 2 contain both practical information on the research skills needed to do a PhD and the theory behind the nature of research. This includes topics on how to complete a literature search and review, how to work with your supervisor and how to use the university library (in coordination with library staff).

- Module 3 is an “empty” module where the student designs with their supervisor a skills course to bring them “up to speed” with the skills and knowledge required for their research project, both specific skills (eg how to use a particular statistics package), and generic research skills (eg referencing). Once discussed this becomes a formalised programme of study with targets, objectives and outputs (such as an exam or report). The programme manager describes the discussion with the supervisor at this point as “critical”.

6.3.2 Research students are given 36 months to finish the course, however in reality most finish within their first year of PhD study. Originally organised as a three day workshop (plus subsequent study for Module 3), this programme has been changed to accommodate part-time and distance learning research students and now only requires attendance for one day since the rest of the programme’s materials are available online. This one day compulsory element contains a mixture of the practical elements of the first two modules, including a Q&A session, details on literature reviews and topics on ethics and the PhD proposal. Once the qualification is completed the student is not required to complete any further compulsory training, although they can attend training sessions on an informal basis.

6.3.3 The library has eleven specialist subject librarians, as well as a helpdesk on site and an online help “chat” service during staffed hours. The library web site has links to sources of support for both academics and research students and also a key skills assessment tool. There are two study skills centres located within the libraries on the main campuses which provide training for research students wishing to improve their academic skills. They offer workshops, tutorials and one-to-one sessions.

6.4 Supervision of research students

6.4.1 All potential supervisors have to complete training. A supervisory module involves would-be supervisors attending six workshops and completing a reflective assignment, as well as spending six months observing or part supervising a PhD student. The training normally takes around 18 months. There is now an online option available on Blackboard to supervisors to complete the course in their own time - this helps to address the dilemma that many supervisors have of wanting to attend training but being unable to, due to lack of time and timetable clashes. The university understands the importance of the postgraduate research experience and ensures that the course is not simply a formality; those academics who do not adequately complete the course are not allowed to supervise.

6.5 Supervisor development

6.5.1 Although the supervisory module does not have a specific information literacy focus, and there is no formal qualification in information literacy for research supervisors, staff are encouraged by the library and staff development to keep up to date and are made aware of new resources and the support available. There are various links on the Blackboard site directing supervisors to appropriate training in information literacy. The library web site itself also promotes new resources and workshops that are available to the university community. A course and certificate in Continuous Professional Development for supervision is available, covering areas such as issues in PhD research, reflective practice and styles of supervision.

6.5.2 The supervisors in the focus group report that the institution has an established culture of peer-to-peer help, where colleagues share good practice at focus groups and regular research and professional seminars with research students, staff and external academics all in attendance.
7 Case study E

7.1 Key points

1) There is currently a centralised research student skills programme, though this is moving towards more of a devolved model in order to “contextualise” the courses within the faculties.

2) A researcher development tool based on the RDF is available to help highlight and prioritise skills that need developing and direct research students to appropriate support.

3) Peer support for research students plays an important role, and is encouraged by the university.

4) Similarly, academic staff development is moving towards a more devolved model, and also working hard to recognise what staff development already occurs and to emphasise networking and building communities of practice between academics. Building partnerships with other providers of expertise (eg the library) is key to minimising duplication.

7.2 Information literacy

7.2.1 The library is the focal point for information literacy and extensive library outreach is enabled by the large number of academic liaison librarians.

7.2.2 The focus on research skills is in line with the institution’s strategy and academics value their information literacy skills highly: evidence of this is apparent in the responses to a recent information skills survey which the library carried out amongst research staff. A high number of research staff responded to this survey and the evidence respondents provided is informing developments to the library’s information literacy programmes.

7.3 Research student training and support

7.3.1 The institution provides a comprehensive range of skills courses to research students, though attendance is not compulsory. Some faculties do run an induction programme for their research students; this is research-skills-focused but less generic than the central programmes. Many research students at this institution have progressed through a taught MA route and so have completed relevant skills training prior to commencing their PhD studies.

7.3.2 The institution currently has a core of centrally facilitated programmes linked to the RDF for its research students and has a development centre especially for its staff.

7.3.3 The university is revamping its approach to research development towards one that is:

- **more devolved and integrated**: whereby programmes are delivered at faculty level rather than centrally; this is driven by research students’ growing need for courses to be more contextualised and specific to their research; this then frees up the activity for the centre to oversee induction and all activity throughout the research students’ experience, in order to offer joined-up support.

- **portfolio managed**: whereby training programmes and the providers of elements therein are managed in order to minimise duplication wherever possible.
– **integrated with staff development**: whereby aspects of research students’ research skills training relevant to academics (ie assessing training needs, knowing what training courses are available at the university) are integrated into staff development training, especially for new supervisors; this is being achieved by close working with the staff development centre.

7.3.4 Research students can assess their research skills by accessing an online questionnaire. This tool then identifies which skills areas the student needs to focus on, prioritises them according to importance and timetables courses based on when they are taking place. Although currently only in its first year and only available to research students, the university is looking to promote the use of the tool to Masters and undergraduate students.

7.3.5 The core skills programme also offers academic coaching to complement its range of workshops. Research students can make appointments for one-to-one help on topics such as academic writing, preparing for their viva and time management.

7.3.6 PhD peer groups invite research students to join fortnightly sessions with other research students to discuss reports, thesis progress and give peer-to-peer feedback. Peer support is encouraged by the university; for instance, a new “community driven” centre has been opened up for all research students to offer opportunities for interdisciplinary support and also to act as a “social hub”.

7.3.7 The library, in addition to supporting the library-based core programmes, offers extensive one-to-one support to both research students and staff via its subject librarians, who often spend much of their time within faculty departments.

7.4 **Supervision of research students**

7.4.1 Research students frequently have two or more academics to look to for guidance through their PhD. A typical structure would be: main supervisor, co-supervisor and mentor. The supervisor and co-supervisor are predominantly involved with the student’s research and the mentor is often looked to for guidance on more pastoral and personal development issues. This means that the student can focus on their project in meetings with the supervisors but has a point of contact for questions unrelated to their research. Research students often have other mentors in the form of more experienced research students and postdocs.

7.4.2 Prior to becoming a main supervisor, academics have to attend a course in supervision and then co-supervise for five years as a probationary period. Academic staff are encouraged to continue their personal development after their induction course via the staff development centre.

7.5 **Supervisor development**

7.5.1 Following the induction course, the library is the main source of support in information literacy for supervisors. Library staff are available for help via email and drop-in sessions. Many of the academic librarians have an excellent relationship with their departments, often promoting new library resources through departmental mail outs and newsletters. There are also many informal groups within the institution that encourage reflection and development of the supervisory role.

7.5.2 The academic staff development centre is undergoing a significant revamp. It is (like the research student development programme) moving to a more devolved model where delivery happens in departments, and usually by senior academics. This is accompanied by an emphasis on networking and building communities of practice between academics. The centre is also working hard to recognise what staff development already occurs – so that existing development
activities (seminars, etc) count and do not need to be augmented by additional ‘official’ activity. The academic staff development manager considers it critical to building partnerships with other providers of expertise (eg the library) in order to minimise duplication of delivery. The centre is currently redesigning their career development plan for academics. New supervisors will complete a three part modular course covering information skills for research and the role of the tutor.