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Identifying and facilitating a community of practice in information literacy in higher education

Clare Joanne Dean

DInfSc 2020

Identifying and facilitating a community of practice in information literacy in higher education

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A thesis submitted towards the fulfilment of Robert Gordon University's requirements for the degree of Professional Doctorate in Information Science

This research was carried out in collaboration with York St John University

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Abstract

This research project focuses upon the role of the academic librarian in higher education. It explores the concept of communities of practice in information literacy in that sector via a study of a specific university in the United Kingdom, with an academic librarian investigating their own role as a practitioner in this context. It is founded on the assertion that information literacy practice is already evident and occurring in learning and teaching practice, but that it is often found in a traditional, skills-based form, owing to an absence of staff development opportunities for those involved in curriculum design and teaching (i.e. academic and professional staff), and that this, in turn, is impacting upon the student experience.

Through an exploration of the literature, the concept of information literacy is investigated, and it is shown that this has moved on from a traditional skills model to one which is rooted in social construction (Lloyd 2010) and influenced by societal and political structures (Elmborg 2012). This links to an exploration of social learning in education, especially the theory of communities of practice (Wenger 1998), and a literature gap of research covering staff development in information literacy in higher education via social learning is revealed. It is this gap this research addresses.

The research follows a pragmatic, action research approach, to allow for the investigation of a real-world issue, and employs mixed methods to explore the local situation. The outcomes reveal that there is shared practice in information literacy evident, that there is scope to move this from traditional forms to the emerging concepts in the curriculum, and that the community of practice model offers a chance for staff development whereby librarians, academics, and other professional staff, can learn from each other in linking pedagogy and information literacy, impacting curriculum design and delivery.

Keywords: information literacy, higher education, academic librarians, action research, curriculum design, staff development, social learning, community of practice

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List of abbreviations

ANCIL	A New Curriculum for Information Literacy
CILIP	Chartered Institute of Library and Information Professionals
CoP	Community of Practice
IL	Information literacy
ILG	Information Literacy Group
LILAC	Librarians' Information Literacy Annual Conference
RIPPLE	Research Into Professional Practice in Learning and Education group
SCONUL	Society of College National and University Libraries
YSJ	York St John University

Table of Contents

1 Introduction 1

1.1 Information literacy 3

1.2 Collaboration and communities of practice 5

1.3 The context for this study 6

1.4 The role of the academic librarian 7

1.5 Background to the study 9

1.6 Research objectives 10

1.7 Addressing the objectives 11

2 Literature Review 15

2.1 The concept of information literacy 17

2.2 Critical research approaches in subject areas 34

2.3 The theory of communities of practice 37

2.4 Social learning and learning communities in education 39

2.5 Overview of literature 46

3 Methodology 48

3.1 The pragmatic approach 49

3.2 Action research as the methodology 50

3.3 Data collection: mixed methods 55

3.4 The action: implementing a community of practice 78

3.5 Ethics 81

3.6 Overview of methodology 84

4 Results and analysis 86

4.1 Qualitative phase: interviews 87

4.2 Quantitative phase: survey 121

4.3 The action: facilitating the community of practice 146
4.4 Overview of results 170
5 Discussion of overall findings 173
5.1 Outcomes in terms of research objectives 174
5.2 Outcomes in terms of value and contribution 184
5.3 Key findings from the research and contribution to knowledge 195
6 Appendices 203
6.1 Literature review searches 203
6.2 Analysis of information literacy in subjects and programme areas at York St John 204
6.3 Pilot interviews IL analysis 217
6.4 Pilot interviews ANCIL analysis 223
6.5 List of interviews and interview schedule.....228
6.6 Initial coding themes: examples from the interview transcripts 231
6.7 Refined coding themes 241
6.8 Disseminated survey 245
6.9 Ethics form given to interviewees.....258
7 References..... 260

Table of tables

Table 1: Objectives and methods of addressing them 14

Table 2: Academic Schools and the learning outcome/aim linked to information literacy, identified through module specifications 70

Table 3: Overview of survey content with relevant themes addressed 75

Table 4: Total responses broken down by School/Dept 78

Table 5: Herr and Anderson's validity criteria 83

Table 6: Academic schools and the learning outcome/aim linked to information literacy, identified through module specifications. 89

Table 7: Refinement of themes 108

Table 8: Dominant value in each interview, by academic school 116

Table 9: Values from interviews linking to factors to measure in survey 119

Table 10: Total responses broken down by school/dept 123

Table 11: Length of time worked in higher education, broken down by school/dept. 124

Table 12: Length of time worked at York St John University, broken down by school/dept 125

Table 13: Number of responses to examples of learning outcomes/aims linked to information literacy recognised in respondents' experiences 127

Table 14: Information search tools considered 'key' by respondents 129

Table 15: Academics' view of the importance of understanding previous experiences of students 131

Table 16: Respondents' views of purpose of group work 132

Table 17: Statements linked to emerging information literacy in question 20, the factor each is measuring, and the original theme from the interviews to which each of these links 133

Table 18: Priorities for student information use.....134

Table 19: Overview of responses to question on using information in an academic context 136

Table 20: Respondents' view of importance of information literacy in assessment criteria.....137

Table 21: Responses to encouraging students to use a minimum number of sources, defined as 'academic'.....138

Table 22: Responses regarding agreement with concept of encouraging students to use 'recent' sources, and defining 'recent' for them 139

Table 23: Responses to question regarding what CoP should contain 148

Table 24: Hits counted on online community of practice, July 2018-Sept 2019 166

Table 25: Planned content of future community of practice meetings.....169

Table 26: Academic schools and the learning outcome/aim linked to information literacy, identified through module specifications.....174

Table 27: Dominant value in each interview, by academic school 176

Table of figures

Figure 1: The information literacy definition for this thesis 32

Figure 2: Proposed question to be asked at the beginning of each interview 64

Figure 3: Question asked at beginning of interview with pilot interviewee 1 65

Figure 4: Question asked at beginning of interview with pilot interviewee 2 65

Figure 5: Example of initial comments on interview transcript 90

Figure 6: Example of colour coding of key themes – sample from core list 91

Figure 7: Example of colour coding of initial themes 91

Figure 8: Example of analysis of initial codes obtained and number of times mentioned in each school 105

Figure 9: Example of second colour coding, with revised themes 107

Figure 10: Count of revised themes in each school, with most common in red 115

Figure 11: Mapping of process taken to design each question, example of question 12 126

Figure 12: Screenshot of online community of practice's homepage 151

Figure 13: Screenshot of online community of practice's models and theories section 152

Figure 14: Screenshot of online community of practice's share and discuss area, with submission form 153

Figure 15: Screenshot of online community of practice's share and discuss area, with examples of posts 154

Figure 16: Screenshot of online community of practice's face-to-face discussion section.....155

Figure 17: Tweet linking to post on community of practice, with 14 retweets..159

Figure 18: Twitter analytics for tweet linking to community of practice post ...159

Figure 19: Methods of sustaining community of practice 168

Figure 20: Mapping of critical information literacy to the interview and the survey, linking to the community of practice.....199

1 Introduction

This research project is concerned with the role of the academic librarian in higher education. Specifically, it investigates the concept of communities of practice in information literacy in higher education through a study of an English university, using an action research methodology, with an academic librarian exploring their role as a practitioner in this context. It begins with the assertion that there is already practice in information literacy happening in the curriculum in higher education, but that it is mainly in a traditional form, owing to a lack of staff development opportunities for those involved in curriculum design (i.e. academic and professional support staff), and that this is therefore impacting on student learning.

By taking one university as the research subject, existing examples of information literacy in the curriculum are discovered and analysed, with a view to providing staff development via a community of practice, thereby impacting on curriculum design. It provides a justification for shifting the academic librarian role from one which tends to be concerned primarily with student interactions and somewhat reactive, to one which facilitates staff development, and therefore the design of academic programme content and outcomes, in relation to information literacy.

The thesis includes a literature review which incorporates the concept of information literacy, traditionally outlined as a skills model for searching for and evaluating resources, but increasingly seen as a social construct and influenced by societal and political structures. Its expression in different subjects in higher education is explored via existing studies, as is the evidence linking it to social learning. The ideas linked to social learning in educational settings, especially in terms of communities of practice, are considered, before establishing a literature gap of staff development in information literacy in higher education, via these means. It is this gap that this thesis aims to address.

The use of a pragmatic approach to this research is explained and justified in the methodology section, especially in respect to the fact that this project is addressing a real-world problem. Within this pragmatic framework, the use of

action research is proffered as a methodology which also aligns with the practical nature of the research, and the position of the researcher as practitioner within the research setting. Using mixed methods within this methodology, along with validity criteria as outlined by Herr and Anderson (2015), issues of bias are addressed and it is asserted that the improvement of the practice of the researcher is a valid outcome of the process, and as such she cannot be placed outside of the project.

Along with the outcomes of the interviews and survey, which show shared practice and values in traditional information literacy and a strong thread of group, social learning linked to this, specific examples of changes in curriculum design and delivery resulting from the community of practice initiative are provided. These include workshops with students in two different subject areas which interrogate issues of dominant and marginalised voices in their subject areas and which will lead to changes in curriculum content.

The outcome of this research is not only a better understanding of information literacy and its place in the curriculum at the university at which the project takes place, but also a practical output in the form of an online community of practice which can be accessed and used by anyone in the university or beyond, as well as a survey which can be re-used by others working in academic libraries. This provides a relatable case for others dealing with information literacy in higher education or similar environments.

Further to this, this project aims to provide a bridge between library theory and practice. There has been much debate in recent times about the gap which exists between the theorising emerging from academic library schools and the practice of library workers (Hall 2019), and a possible resolution offered in empowering the latter group in theorising from their practice, "Simply put we all broadly agreed that practitioners being involved with theory and theorizing—that is, engaging with and creating research and scholarship—is highly beneficial to individuals and our organizations." (Preater 2019). It is the belief of this researcher that enabling and encouraging library workers to research their practice further democratises knowledge. The democratisation of knowledge is a concern of Wood, McAteer et al. (2019), who assert that a key part of knowledge democracy is the acknowledgement that different types of information hold

different values depending upon a person's cultural and social situation, and that various methods of sharing knowledge (e.g. spoken evidence as well as written, or online hosting as well as traditional print) should be understood as valid and powerful, and that as far as possible restriction to access and re-use should be avoided.

This thesis offers an output which not only contributes to the library research base, but also provides those working in libraries with evidence-based outputs which they can relate to their own working environment. To that end, this work, and its associated outputs of a survey and online community of practice, are available open access under Creative Commons, in line with the values of Wood, McAteer et al. (2019). Preater (2019) also highlights the issue of language use in that theoretical works are often referred to in different ways by theorists or practitioners. It is the aim in this thesis to use language which will be familiar to library workers, whilst applying concepts which are in line with academic research.

1.1 Information literacy

Information literacy is a core focus of most academic librarian roles, alongside other responsibilities such as collection development, and traditionally concerns the finding, evaluation and use of information (CILIP no date). A predominant model in higher education has for some time been that outlined by the Society of College National and University Libraries (SCONUL) (SCONUL Working Group on Information Literacy 2011) and looks at the academic research process from identifying an information need, through constructing a plan to obtain said information (including the terms used and the search tools to be employed), and then organising that information and conveying it in an appropriate manner (usually an academic assignment). In recent years, this has been expanded beyond this skills-based, academic-centred approach, especially in terms of being an informed, empowered citizen (Coonan, Geekie et al. 2018) and transferring these skills and competencies to other settings (Secker, Coonan 2014).

Two critiques of the skills-based approach in particular have led to emerging theories of information literacy in recent times. Firstly, information literacy is

now acknowledged as a socially constructed phenomenon, whereby the situation and setting for information needs and use (the landscape) are central to a person's access, understanding and use of relevant sources, and these sources include non-textual ones such as people and visual aids (Hicks, Lloyd 2018, Lloyd 2010). Lloyd (2010) investigated situations such as the workplace in order to show that skills models are academia-centric, and do not tend to consider the world beyond that particular sector. Indeed, even within the academic sector, students and staff will have a number of different situations at play in their individual lives, and ignoring these will affect their information literacy experience. This is something backed up in the literature on academic literacies, with Donovan and Erskine-Shaw (2019) arguing that, in a university setting, academic literacy (traditionally focused upon study skills) is as much an issue of identity and socialisation in the academic environment as it is about learning the skills to complete an assignment. This is especially true of students arriving at university from backgrounds where going into higher education is not the norm.

It is also an important development to understand that the way in which information is produced and published is dependent upon societal structures and restrictions; that it is not produced in a vacuum and inequalities in terms of race, class, gender, sexuality etc. in said societies will be reflected in the information produced, reinforcing the 'norm' and marginalising other voices further. This is the assertion of critical information literacy (Elmborg 2012), based upon the work of Freire (cited in Shor 1993) in education, asserting that teachers and students should question existing knowledge, rejecting the mechanical approach of reproducing existing arguments and skills, and putting the student at the heart of the process. In this, the key questions to be asked in relation to information literacy should be:

- Who is becoming information literate?
- What does becoming information literate mean?
- What can librarians do to help people become information literate?
- Who has a stake in what information literacy means? (Elmborg 2012, p.77)

Critical information literacy therefore acknowledges the impact of social influences on any research process and that no research takes place in a

vacuum. Gustafson (2017) relates this to the role of the academic librarian, stating that they should encourage academic staff and students to empower themselves and highlight systemic issues in the academic publishing system that they will encounter (either to their own advantage or disadvantage), rooting this in academic-librarian collaboration; this is a key influence on this project.

The concept of information literacy is explored in depth in chapter 2 of the thesis.

1.2 Collaboration and communities of practice

Having highlighted why working in partnership is key to effective information literacy learning, especially in regards to the social construction of information, the form of this collaboration must also be considered. The form of collaboration to be explored in this project is that of the community of practice, a theory predominantly associated with Wenger (1998).

Wenger (1998) asserts that communities of practice are found in every workplace and in multiple manifestations, and that the focus is on participation. According to Lave and Wenger (1991, p.53), learning can take place as a result of "legitimate peripheral participation", as well as from being an experienced participant in a community. Indeed, it is through the interaction of experience and new participation that knowledge develops, as conflict is negotiated. What binds the community together are shared values and beliefs, along with the community's particular setting. Generally, communities of practice cannot be forced into existence, rather it is the case that they develop and are then recognised, although they can be facilitated and cultivated (Wenger, McDermott et al. 2002). What is important, in addition to the shared values and beliefs and unique setting, is regular interaction, be that synchronous or asynchronous, in person or online (Wenger, White et al. 2009).

When it comes to exploring collaboration and communities of practice in education settings, there is evidence to indicate that such social learning approaches can be effective in navigating large organisations such as universities when staff development initiatives want to take in the whole institution (Addis, Quardokus et al. 2013, Butler, Christofili 2014, Furco, Moely 2012). There is also evidence that communities of practice specifically can be identified and nurtured in order to enable staff development on particular topics, across universities

(Cochrane 2010, Cochrane 2014, Laxton, Applebee 2010, Ness, George et al. 2010, Owen, Davis 2010). This is especially important in establishments where opportunities for face-to-face interaction may be scarce. As Wilson (2019) states:

> I can actually go some days without seeing a colleague at all, and offices are not always conducive for social interaction[…]There are no staff rooms and with everyone's teaching being slightly different, the opportunity to get together is not always possible[…]I do miss that social aspect of working as a community of practice.

A community of practice therefore is a situation-specific group whereby members have shared concerns and values, membership is fluid, and the sharing of expertise and information within this group helps to develop knowledge and further its aims. Once the existence of such shared concerns and values are established, it is possible to facilitate this community of practice in order to further knowledge and develop. It is this model which is explored in this thesis, based in an English university, and linked to the development of information literacy in the curriculum. The literature review (chapter 2) outlines this in more detail.

1.3 The context for this study

Focusing on a specific university in England the thesis outlines concerns about information literacy and its current form in higher education, whereby the academic librarian is seen as an adjunct, support service, rather than being at the centre of curriculum development (as advocated by Gustafson 2017), building upon previous work by the researcher of this project in this area (McCluskey 2011). It asserts that collaborative working across an institution, with the academic librarian facilitating this collaboration, provides a more sustainable, pedagogic-led approach to embedding information literacy in the curriculum, in line with the theory of communities of practice and situated learning espoused by Wenger (1998) and Lave and Wenger (1991). Further to this, it takes into account Lloyd's (2010) social-construction view of information literacy; the university is a place in which students learn, but it is a workplace too. It is a workplace landscape and an academic one. If it has been shown that the cause of information literacy is best served by members of a workplace learning from each other and sharing their expertise, then there should be some

way of facilitating this in a university. Research suggests that information literacy should be core to the student experience in higher education, be it linked to evidence-based practice in health subjects (Davies 2011, Forster 2015), reflective practice in professional education courses (Williams, Coles 2007) or knowledge management in business (Katz, Haras et al. 2010) and this study looks at how this may be facilitated via staff development and social learning, to influence curriculum design, in a university. This is investigated via an action research approach, with the researcher at the heart of the process.

It has been decided to name the university at the heart of the research, York St John University, in this thesis. The main reason for doing this is that the results, although providing a relatable case for others, will be in the context of this specific institution. Further to this, the online community of practice which is part of this thesis's outputs is hosted upon the York St John University institutional WordPress account. The researcher of this thesis is also easily located on its website and the university has been named in previous studies she has published. There is a precedent for naming an institution in similar studies (e.g. Farrell, Badke 2015, Moselen, Wang 2014, Torres, Jansen 2016) and the study passed ethics procedures at both the university through which this research is being assessed, and at York St John University itself.

1.4 The role of the academic librarian

A key part of the academic librarian role in higher education is to establish information literacy training and curriculum initiatives, to ensure students have a level of information skills appropriate to their academic studies (CILIP no date). Often this relies on the individual overcoming personal and institutional barriers and can result in short term projects with little lasting impact (McCluskey 2012). Barriers are sometimes evident due to the changing role of the academic librarian and the lack of training provided in librarianship courses to deal with these, especially when it comes to librarians as educators (Elmborg 2006, Jacobs 2008, Smith 2013). It also assumes that the responsibility and expertise for information literacy lie solely with the librarian, thus placing little value on the role of other colleagues in faculties and professional services in its delivery.

Given the important link to pedagogy in a learning environment such as a university, every member of the community is involved with learning (Khan, Law 2015, Lotz-Sisitka, Wals et al. 2015) and should be therefore given the opportunity to contribute to information literacy (Secker, Coonan 2014). This requires collaboration, as no one person, or group of people, can carry the mantel alone. Recent research from Hannon, Hocking et al. (2018) emphasises the importance of cross-disciplinary, collaborative working in curriculum design and Bruce (2004) reinforces that this concept of working in partnerships is vital in facilitating learning experiences in the particular instance of information literacy in educational contexts. More recently there has been work to understand academics' understandings of information literacy, via interviews, with a view to better embedding it in the curriculum (Stebbing, Shelley et al. 2019). It was also a conclusion of the author in previous studies, showing that an understanding of the expertise of different roles and their inhabitants in a higher education institution's learning community is a key part of furthering information literacy initiatives. These understandings can be gained by working in collaborative groups, on a partnership basis, with common goals and values underpinning the sharing of knowledge – i.e. learning from each other via social interaction. Through this, the librarian becomes embedded in the learning experience of academics, other staff and students (McCluskey 2011, 2013).

Research on the evolving role of the academic librarian reveals that it is still focused on individual, specific instruction; that course or programme design, when it takes place collaboratively between academics and librarians, is focused upon information literacy modules. A wide-ranging critical literature review by Johnson (2018) shows this to be the case, with design in the main restricted to library instruction modules, even when faculty-library collaboration is evident.

Researchers from sectors other than formal education settings have also promoted the importance of particular knowledge landscapes and the members of their communities in furthering information literacy's aims. A knowledge landscape is the situation in which a person works in some way, and how they obtain, evaluate and use relevant information in that situation, especially in regard to other people who co-exist in that particular context, be it a work context, social context, or academic (Lloyd 2010). For example, work has been done on refugee groups and how they locate and interact with information given

the intercultural nature of the situation in which they find themselves (Hicks, Lloyd 2016). Lloyd (2007, 2012, 2014) in particular theorises that a social-construction approach is the most applicable, as it acknowledges the importance of information sources such as colleagues in the workplace. As a higher education institution is both a formal educational environment and the workplace of academics, librarians and other professional staff, it is important to take the social learning aspect of information literacy into account when thinking about the role of the academic librarian in promoting its inclusion in the curriculum.

This project therefore considers the role of the academic librarian as a participant and facilitator of an information literacy community of practice amongst university staff, thereby developing sustainable partnerships with colleagues across an institution in relation to information literacy. It focuses on one institution in the United Kingdom, with the librarian inhabiting the role of a practitioner researcher.

1.5 Background to the study

The university in which the research takes place is a higher education institution, based in the North of England. Although it has been in existence as an educational establishment, under various names, since the mid-19th century, it is a young university. It was awarded taught degree awarding powers in 2005, and research degree awarding powers in 2015 (York St John University 2019c). As of the 2017/18 academic year, the institution had nine academic schools in the following subject areas:

- Art Design and Computer Science
- Business
- Education
- Health Sciences
- Humanities Religion and Philosophy
- Languages and Linguistics
- Performance and Media Production
- Psychology and Social Sciences
- Sport

  (York St John University 2018)

It is apparent from the literature on learning communities, outlined in the literature review, that shared values and aims must be identified for development to occur. If this is happening across a number of different academic areas, as diverse as those in evidence at this university, it is likely that different language is used to express similar concerns. In addition to this, libraries have a tendency to develop their own language, with glossaries of terms common (Keele University Library no date, University of Leeds Library 2015, Bristol University Library 2015). This could link to information literacy itself relying on language unique to the higher education library community which does not easily transfer to other areas of universities, and that information literacy is therefore evident without it being made explicit. If this is the case, opportunities for learning partnerships are being missed. This theory will be tested by looking at programmes across the institution, from each school, in investigating objective one.

It follows that, if common aims and learning outcomes are evident, with a community of practice in operation or the foundations for one apparent, one role of the academic librarian could be to draw these parties together. The literature review suggests the possibility that current staff development practices related to information literacy may not be effective, as they involve a traditional teaching model of 'experts' (i.e. the librarians) delivering to an audience (other members of university staff) rather than social learning.

The objectives of this research therefore focus on understanding information literacy in the context of the higher education environment and how the academic librarian could influence its embedding, in its emerging forms, in the curriculum.

1.6 Research objectives

1. To explore the terminology, meanings and values assigned to information literacy in different academic subject areas in year 1 (level 4) of undergraduate programmes at York St John University.

2. To establish whether there is already evidence of the emerging forms of information literacy (social construction of information literacy (Lloyd 2010) and critical information literacy (Elmborg 2012)) in the practice of academics

at York St John University, or if the foundations for their growth can be established.

3. To examine how academics experience and evaluate information literacy in their teaching practices and to ascertain whether there is common ground in information literacy provision already embedded in the curriculum in these programmes. i.e. the basis for a community of practice.

4. To implement and evaluate a platform for information literacy dialogue amongst staff at York St John University,

    a. to promote the evolution of collaborative information literacy provision in line with emerging theories,

    b. to improve the researcher's own practice.

In investigating this, the outcomes will potentially inform the practice of other librarians in relation to

    a. the promotion of the idea of a community of practice/community learning as a potential approach to information literacy issues in the academic sector and others,

    b. a collaborative approach (between librarians and academics) to the development of students' information literacy via curriculum development in the academic sector, with the academic librarian as an active participant in the process,

    c. encouraging a sustainable approach to information literacy via community learning.

1.7 Addressing the objectives

Taking a pragmatic approach, which aligns with the real-world nature of the issue to be investigated, the methodology of action research is employed. This examines the role of the researcher of this project as a practitioner in the area of librarianship, and also allows for investigation of the efficacy of the proposed intervention of the facilitation of a community of practice. Using the concept of positionality, put forward by Herr and Anderson (2015, p.67), validity will be

measured in terms of "the achievement of action-oriented outcomes", "the education of both researcher and participants", and "results that are relevant to the local setting".

Within the action research methodology, exploratory sequential mixed methods are used, and the critical incident technique (Flanagan 1954) implemented, to help mitigate the influence of the researcher and allow participants the chance to express their experiences in their own words and expressing their own values.

The participants in the interview stage of the mixed methods approach are identified using learning outcomes in module documentation, and teach on level 4 of undergraduate courses at the university at which the research takes place. This establishes that there is a possibility of facilitating a community of practice as there are common aims and experiences described by the participants. From the data collected, themes are drawn, and used to inform the survey design for the quantitative phase of the mixed methods approach.

In order to address issues of bias and validity, in accordance with the recommendations of Herr and Anderson (2015), the researcher of this project kept reflections throughout each stage, and sought peer review. The results of these reflections are interspersed throughout the thesis as quotes, and there is a longer overview of the key themes emerging from them in chapter 5 (section 5.2.3), where the education of the researcher as a result of the action research undertaken is considered.

Objective one is investigated with a review of literature linking information literacy to programme, professional and subject areas at the target institution, including those such as business, education and health. These are used to locate modules with learning outcomes and aims linked to information literacy, and academics who teach on these modules interviewed, in order to discover how they are expressed in those particular contexts.

Objective two is addressed by interviews with representatives of each academic subject area and an analysis of the resulting data in order to find expressions of values and practice linked to information literacy. This analysis then informs the content of a survey to all academics in the target population, in order to discover

if there is evidence of information literacy practice across the institution and in which forms this is apparent.

Objective three is covered by the survey data obtained, in terms of where there is already common practice in information literacy across the institution. There is a descriptive analysis of the data to locate shared concerns and views, and also to determine if there is any indication of practice specific to academic schools that can be used as a starting point for the content and membership of a community of practice.

The outcomes of the interviews and survey directly impact the initial focus of the community of practice, with those identified as being linked to teaching and curriculum design with emerging information literacy encouraged to provide content from which others can learn. This includes the researcher learning in terms of pedagogy as well as all members learning from each other on topics linked to information literacy. This addresses objective four. Table 1 outlines all objectives and how they are addressed.

Above all, this piece of research aims to shift the practice linked to information literacy in higher education away from simply a librarian-student focused initiative, with one shot workshops or specifically designed modules. Instead it provides evidence and possible interventions to address the information literacy learning of academics and other professional support staff (and indeed to facilitate the development of library workers' view of information literacy) in higher education; to provide staff development opportunities via collaborative learning which link pedagogy and information literacy. In doing this, it is asserted that information literacy will be designed into the curriculum and provide a more sustainable footing for its inclusion and development in the future, shifting the role of the academic librarian from one that is predominantly reactive to one that is proactive in contributing to curriculum design. In this the needs of students are addressed on a more institutional and systemic level.

Table 1: Objectives and methods of addressing them

No.	Key objective	Method of addressing objective
1	Explore terminology, meanings and values assigned to information literacy in different academic subject areas	Review of journal articles in subject areas linked to academic programmes
		Draw themes from interview data
2	Locate evidence of emerging forms of information literacy (social construction and critical information literacy) in the practice of academics	Align themes from interview data with emerging information literacy concepts
		Design survey questions from these themes
		Investigate survey responses to these questions with descriptive statistics
3	Examine how academics experience and evaluate information literacy in their teaching practices and to ascertain whether there is common ground in information literacy provision already embedded in the curriculum in these programmes	Descriptive analysis of survey responses, locating common practice in traditional and/or emerging information literacy
		Descriptive analysis of survey responses, locating indications of practice particular to academic schools
4	Implement and evaluate a platform for information literacy dialogue amongst staff	Use of survey data to identify potential community of practice members
		Use of survey data to identify potential examples of emerging information literacy practice for focus of meetings
		Identification and description of outcomes of community of practice to impact on curriculum design

2 Literature Review

This chapter offers a critical overview of key theory and research, which relates to the aim and objectives of this thesis. Firstly, it explores the skills-based approach to information literacy, which is a predominant traditional approach in the area of librarianship and incorporates key targets that an information literate person should achieve. In the United Kingdom, the skills-based approach has been mostly represented by the SCONUL (Society of College, National and University Libraries) Seven Pillars of Information Literacy model. The model covers a step-by-step approach to building an individual's information literacy by addressing the development of a number of skills. These skills include the identification of a need for information, assessing current knowledge, constructing search strategies, reviewing the research process, comparing and evaluating information and data, organising information professionally and ethically and applying the knowledge gained (SCONUL Working Group on Information Literacy 2011).

However, the concept of information literacy is a contested one, with different approaches considering both what it encompasses theoretically, and its practical application. Two emerging critiques of the skills-based model, explored in this literature review, are the social construction approach (Lloyd 2010) and critical information literacy (Elmborg 2012). These highlight the limitations of the traditional skills-based approaches as ones that follow an academia-centric and positivist perspective, disregarding the social dimensions of information literacy and the power structures that influence the production of, and access to, information.

The social-construction based approach to information literacy asserts that it is important to expand consideration beyond students' academic experiences and take into account the diverse backgrounds from which they come, and the different influences they will continue to encounter, whilst at university (and how these may impact their experience of studying for a degree) in a more holistic fashion. In addition, this approach argues that although higher education is a place where academics and other members of staff work - a learning community with all involved (Laudrillard 1999) – the focus of skill-based information literacy approaches is solely on students, ignoring the development of information

literacy of staff. Staff have the agency to influence curriculum design which, in turn, impacts on student learning. There is, therefore, a connection between how staff members in higher education understand information literacy themselves and how this then influences the curriculum for students.

The critical information literacy approach (Elmborg 2012), addresses how, historically, in university courses and teaching, information production and access have been influenced by the dominant sections of society, leaving those students (and staff) who are members of marginalised communities feeling misrepresented, isolated and adrift.

A sustainable way of enabling critical and social approaches to information literacy could be achieved through initiatives which incorporate the whole community in a university, with staff from across the institution and students involved (Gustafson 2017) and representing different perspectives. Indeed, it is an assertion of this thesis that it is essential that all should be involved as members of this community as creators of knowledge themselves (Pankl, Coleman 2010).

The literature review, therefore, explores the position of librarians as facilitators of communities of practice in information literacy in higher education with an emphasis on social and critical approaches to learning and teaching. Although the literature demonstrates that there is little evidence on how academic librarians specifically can help facilitate communities of practice in information literacy, previous research has demonstrated positive outcomes in relation to the value of communities of practice in student support and e-learning developments.

The literature review aims to demonstrate this research gap and connect with the aim of this project, which centres on the role of the academic librarian as a participant and facilitator of a communities of practice and social learning in information literacy, developing sustainable partnerships with colleagues across an institution. The following sections discuss in more depth the key direction of this thesis, addressing the main research objectives which deal with an exploration of the skills-based approach versus the social and critical approaches to information literacy, and the current approaches, terminology, meanings and values assigned to information literacy in different academic subject areas. These are followed by an exploration of existing research studies around academics'

experience of information literacy in their teaching practices and the value of collaborative information literacy provision.

2.1 The concept of information literacy

The concept of information literacy is a contested one, with a number of approaches linked to both what it encompasses theoretically, and its practical application. This section will give an overview of those most relevant to this research. It begins with the traditional, skills-based frameworks that have influenced the design of information literacy lessons, modules and programmes, and many projects in higher education, over the past decades (Buckley Woods, Beecroft no date, DaCosta 2010, Jackson 2012, Jarson 2010, Johnston, Webber 2003, Vitae 2012). It then considers critiques of these frameworks which have emerged recently, outlining two key emerging concepts of information literacy: the social construction approach (Lloyd 2010), and critical information literacy (Elmborg 2012).

2.1.1 Traditional definitions

A predominant traditional approach is that of information literacy as a skills model; incorporating key targets that an information literate person will achieve. In the United Kingdom, the SCONUL (Society of College, National and University Libraries) Seven Pillars of Information Literacy model (SCONUL Working Group on Information Literacy 2011) is widely cited in relation to projects by librarians and academics in the area of librarianship (DaCosta 2010, Johnston, Webber 2003). It covers seven key stages of an information search, proposing that as a researcher goes through each of these, they build up their overall information literacy.

1. Able to identify need for information
2. Assess current knowledge and identify gaps
3. Can construct strategies for locating information and data
4. Can locate and access the data needed
5. Can review research process and compare and evaluate information and data
6. Can organise information professionally and ethically

7. Can apply the knowledge gained: present, synthesis and disseminate

(SCONUL Working Group on Information Literacy 2011)

National library associations in the USA and Australia and New Zealand have similar skills models, with a focus on the researcher following a step-by-step process to building up their information searching, evaluation and production skills (Association of College and Research Libraries 2015, Bundy 2004). It has been decided to focus upon the UK-based SCONUL model here for two key reasons. Firstly, it is the predominant model in place in the context of the sector under consideration in this study: the UK higher education context. The seven pillars were aligned with Government priorities at the time they were first produced, with case studies to help librarians implement them, and so these were taken up widely (Folk 2016). In addition to this, the ACRL model has been under extensive revision during the period of this research project, with the 2015 iteration being debated throughout. Fister (2015) shows that there was substantial opposition to its adoption. The framework itself was adopted in 2016 but was still being introduced, debated and discussed in 2019, especially in relation to pedagogic implications (Gross, Latham et al. 2019). Therefore, given these considerations, a decision was made to focus on the UK-based model as an example of a professional association-based skills framework.

The models outlined above, including the Seven Pillars, contain not only skills, but also account for how the information literate person learns as they progress through them. It is recognised that no-one becomes information literate through ticking boxes; rather, it is an iterative, non-linear process whereby learning comes to the fore. Through this a learner will become a critical thinker and be able to create their own knowledge based upon their experiences of the process. The person will become a scholar. A criticism of these skills-based models is that they fail to place sufficient emphasis on the social aspect of learning and present an academia-centric view of information literacy.

However, recent skills-based approaches to information literacy have started to incorporate a more holistic approach, which acknowledges the real-world implications linked to information literacy. For example, the Information Literacy Group (ILG) of the Chartered Institute of Library and Information Professionals

(CILIP), the UK-based association for library and information workers, has recently developed a new definition of information literacy which has already been widely used when a definition is called for (Haigh 2018, Institute of Education 2018, LILAC 2018a). This definition places emphasis on information literacy as an ability to think critically, emphasising its value beyond the context of education, and acknowledging that there are different arenas in which information literacy is an important concept (such as citizenship health and the workplace) as well as its value within the context of everyday life:

> Information literacy is the ability to think critically and make balanced judgements about any information we find and use. It empowers us as citizens to develop informed views and to engage fully with society. (Coonan, Geekie et al. 2018, p.3)

Earlier work by Secker and Coonan (2014) has similarly acknowledged that there is a wider context to consider, putting an emphasis on the importance of transition into and out of higher education, stressing that the university experience of information literacy cannot be taken in isolation and that the individual student will have a unique set of needs in this respect. Secker and Coonan (2014) have also moved the skills models on in terms of encouraging an institution-wide approach to embedding information literacy, acknowledging that departments and agents, other than the library and librarians, in an institution can, and should, be contributing to this end. This approach also advocates active learning as a tool for information literacy teaching and outlines 10 strands in a framework that can be used in auditing the current provision in an institution, and in building capacity based upon that audit:

1. Transition from school to higher education
2. Becoming an independent learner
3. Developing academic literacies
4. Mapping and evaluating the information landscape
5. Resource discovery in your discipline
6. Managing information
7. Ethical dimension of information
8. Presenting and communicating knowledge
9. Synthesising information and creating new knowledge
10. Social dimension of information (Secker, Coonan 2014)

The information literacy framework by Secker and Coonan (2014) addresses not only the students' transitions between the academic and other contexts, but also has a focus on the social aspect of information consumption and production. Although the framework is still rooted in the traditional skills approach and in the academic arena, it addresses the development of information literacy skills linking the higher education experience with what comes immediately before and after. It acknowledges that information literacy is not 'owned' by libraries and librarians, and that it is something that is of concern across an institution; the library can take a proactive role in understanding where information literacy efforts take place, and lead in documenting and developing an information literacy agenda. It is the opinion of the author that this work has shifted the information literacy context onwards, and placed the student at the centre, acknowledging their agency as a researcher within the higher education arena and as a producer of knowledge themselves.

However, there are key critiques of these skills models which go even further than Secker and Coonan (2014) in asserting that that information literacy should always consider real-world contexts, and the importance of the agency of the person seeking to understand information and produce knowledge in those situations. Two perspectives in particular draw out the importance of social learning and the effects of the political and/or social setting, and assert that the traditional models do not address this: the idea of information literacy as a socially constructed phenomenon and the theory of critical information literacy.

2.1.2 Critiques of skills-based models: the social construction theory

Lloyd's social-construction critique (2005) first emerged from an investigation of information literacy in the workplace, exposing how the predominant skills models have been addressing the academic research process as a basis for information literacy skill development. This is to be expected in some, as, for example, SCONUL (2011) brands itself as a model for higher education, yet there are important issues to take into account in excluding other contexts, such as the workplace. However, an important role of higher education is to prepare members of its community for the world beyond. York St John University (2019a) claims that, "We aim to ensure that our students are equipped with the skills and

knowledge that they need to pursue the career of their choice." and that it "is a great place to build a successful career and offers our students more than a degree helping them to achieve their career goals.". In addition, universities in the United Kingdom have attempted to acknowledge and promote the way in which their students are prepared for life beyond higher education via graduate attributes. These often have some element of information literacy in them, but without explanation of what it means. The University of Glasgow claims to produce, "Independent and critical thinkers" who "exercise critical judgement in evaluating sources of information and constructing meaning" (University of Glasgow no date); the University of Sheffield graduate is, "information literate" and "a critical, analytical and creative thinker" (University of Sheffield 2016); Leeds Beckett University claims to produce graduates who are "digitally literate, able to confidently and critically identify and use information and digital technologies to enhance academic, personal, and professional development." (Leeds Beckett University no date). If these claims are being made, it follows that the curriculum must reflect this, and be designed with information literacy embedded in its content and outcomes.

As Fister (2019) explains, it is necessary to connect the use of research tools to both an academic context and a professional context (if courses are designed with professional qualifications integrated), as well as the wider context such as fake news in the political arena, and this should not be ignored or downplayed. If the focus is specifically on the research process for academic assignments, then universities are not aligning their objectives with the graduate attributes outlined above, in terms of personal and professional development and being an overall critical thinker. If the focus is solely on life beyond university, the context of studying for a degree in a specific subject is lost. It is important to align the immediate aims of researching for a subject-based degree with the more general professional and social justice considerations of the information literacy experience and provide a mix of each.

Lloyd (2010) expands the concept of information literacy as dependent on situation by taking a number of different environments into account, including the workplace, public libraries and higher education. Using these situations as core examples, Lloyd seeks commonality between them all and draws out the argument that in all circumstances, it is the people who are vital to information

literacy, leading to the conclusion that it is a social process and is about the experience of the person or people involved in it. Another assertion made is that, while the skills models focus mainly on textual resources, Lloyd sees that information gathering is much more nuanced than that, in all situations including the academic. It often comes from other people, or through a person's own senses, and it is not always a formal research process. Often people gather information from all around them, in formal and informal ways, and sometimes without knowing that information has been taken in until later:

> Information can be explicit or it can be tacit. It can be accessed socially, corporeally[…]or through the written word, so that the person experiences, accesses and engages with different types of information in relation to the activities that are undertaken, e.g. reading, observing, talking, listening, reflecting, thinking or just doing. (Lloyd 2010, p.3)

Putting this into the context of a student on a university course leads to an acknowledgement of the complexity of the situation in which they find themselves. They will arrive having experienced a number of information contexts, described in Lloyd's research as 'landscapes', linked to their schooling, their social lives (including online communities), and the economic and societal background from which they come. This will continue throughout their time at university, with the academic context added into this existing mix, and also find other landscapes such as professional or workplace ones introduced. A student, therefore, on a business course may find that the management advice they are offered in their part-time job in retail is in conflict with the academic theory they are learning as part of their degree. An education student may find their experiences in the classroom are at odds with the Government policy underpinning the current approach to teaching.

Therefore, those engaged in information literacy teaching or instruction in higher education need to reflect upon the different contexts in which information literacy is encountered, both in their own landscapes and in others. Their students do not arrive at university as a blank slate; they arrive having experienced information in a number of contexts (landscapes) and will continue to do so throughout their university experience. This will involve engagement with a number of diverse information sources, such as people, online communities, videos, policies, performances, and traditional academic texts, all as important as each other in

different circumstances. Further to this, an awareness of likely landscapes to be encountered post higher education is vital in ensuring university courses are not functioning in a bubble of their own (Le Maistre, Paré 2004). Alongside this, any learning related to information literacy is going to take place in a social context, with the interaction with others (be it physically, or virtually) having an impact on the individual student learner; these others may be fellow students, lecturers, other university staff, or they could be from people beyond this landscape, professionally or socially, or both.

This social-construction approach is an important critique for this piece of research as, although it takes place in the higher education arena, it is also set in the participants' workplace. Thus far, the analysis on the literature on information literacy has focused in the main on its application to the student in higher education, with the lens that the university is a place where students learn. However, it is also the place where academics and other professionals work. It is an arena in which staff are learning as much as the students (Cullen 1999, Laurillard 1999), where the development of the teaching practice of academics is being explicitly linked to the student experience of learning (Advance HE 2018) and where universities are ideally viewed as learning communities, with all members learning from each other (White, Weathersby 2005). The staff community in a university is responsible for constructing a curriculum in which students learn and this is a vital component in ensuring the information literacy needs of students are met.

It is, therefore, core to this research project that there is a connection between how members of staff in a university understand information literacy themselves and how this therefore influences the curriculum for students. The literature review from this point shifts to reflect this, centring the development needs of academic and professional support staff in information literacy, with the view that this will impact on curriculum design and therefore the student experience.

As Lloyd (2010, p.139) asserts, "all information landscapes are constructed and grounded through collaborative practice and maintained through membership.". As this research takes place in higher education as a workplace for those involved in the study, it is vital that the critiques of models of information literacy from the workplace perspective are taken into account. If it has been

shown that the cause of information literacy is best served by members of a workplace sharing expertise and learning from each other, then there should be some facility in a higher education institution for its staff to learn about it together and from each other:

> To understand how a person becomes information literate requires us to account for more than the acquisition of skills related to information searching or to the student research process. These are only one side of the information literacy equation. The other side is the ability to develop a deep understanding of the complexity of the information experience and to recognize what information is valued and how a community constructs knowledge. It also requires an account of the tensions within a setting that enable or constrain access to information. (Lloyd 2010, p.151)

This provides some justification for taking a community approach to embedding information literacy in the workflows of educational establishments: by acknowledging the landscape in which information literacy takes place and to provide a space to link this to the curricula of the institution. This idea is backed up by Bruce (2004) and Coonan, Geekie et al. (2018), who agree that no one person, or profession, can take responsibility for information literacy within a landscape; it needs to be a cross-institutional endeavour, and by Coonan (2017), who asserts that information literacy is situated practice, culturally and socially dependent on the situation in which it is taught. This is a progression away from the more skills-based approach seen in Secker and Coonan's (2014) work, aligning more with both the social-construction approach and another theory of information literacy: critical information literacy.

2.1.3 Critiques of skills-based models: critical information literacy

Another approach to critique the skills model approach is the critical information literacy theory. Critical information literacy is based on the tenet that:

> Information literacy instruction should resist the tendency to reinforce and reproduce hegemonic knowledge, and instead nurture students' understandings of how information and knowledge are formed by unequal power relations based on class, race, gender, and sexuality. (Beilin 2015)

As Seeber (2019) also asserts, "It is the job of libraries to discuss how information functions in society.". It therefore follows that the models of information literacy traditionally used are viewed as reinforcing old norms and

power structures within academia and the established models of publishing and information production and consumption. Like the social-construction approach, it asserts that by using these models, information literacy is too focused on the formal higher education sector, to the exclusion of the 'real world'. Indeed, when they do consider the world beyond academia, it is to think about obtaining or succeeding in jobs rather than thinking about information literacy more broadly, in terms of social justice.

Social justice and information literacy are linked explicitly in the Alexandria Proclamation (UNESCO 2005):

> Information Literacy lies at the core of lifelong learning. It empowers people in all walks of life to seek, evaluate, use and create information effectively to achieve their personal, social, occupational and educational goals. It is a basic human right in a digital world and promotes social inclusion of all nations.

More specific examples of the link can be found as part of the theory emerging in critical information literacy, which links to the concepts of both critical pedagogy and critical literacy.

Critical information literacy theory is based predominantly on Freire's notion of education; that:

> Education is not reducible to a mechanical method of instruction. Learning is not a quantity of information to be memorized or a package of skills to be transferred to students[…]His critical methods ask teachers and students to question existing knowledge. (Shor 1993, p.25)

Smith (2013) links information literacy to political engagement amongst young people, arguing that traditional information literacy models do not "adequately address critical thinking skills which enable people to critically assess the information they encounter and the structures in which the information and knowledge is held" (p.16) and that "in order to provide young people with a voice, education systems must take a critical approach and challenge the frameworks and processes that prevent young people from imagining alternate perspectives" (p.19). A key proponent of critical information literacy is Elmborg (2006, 2010, 2012), who, having seen a shift in libraries from service providers to educators, sought to link information literacy to learning and teaching more explicitly.

An important issue that Elmborg (2012) takes up is defining the 'literacy' part of information literacy; a consideration skipped in much literature on the topic. He points out that literacy is a loaded term, linked to oppression and marginalisation, and that information literacy practitioners should acknowledge this and think about "theoretical questions of teaching and learning…(and) how problematic teaching and learning can be if we take into account the social and cultural conflicts that shape our sense of what school should do" (p.76).

Therefore, key questions should be:

- Who is becoming information literate?
- What does becoming information literate mean?
- What can librarians do to help people become information literate?
- Who has a stake in what information literacy means? (Elmborg 2012, p.77)

Elmborg puts the researcher at the heart of information literacy, acknowledging the importance of their motivation, background, and what the end goal is for them, "Only a person seeking information can tell us whether a document or statement provides information that he or she desires." (Elmborg 2012, p.84). In the current climate of 'fake news' and 'filter bubbles', there are doubts about the individual's capacity to evaluate this (and, indeed, they may desire confirmation of their own prejudices) (IPSOS 2018). However, Elmborg does accept the impact of these multiple meanings and stakeholders where information is concerned; what does not change is the importance of the agency of the individual in this and how societal structures impact on their experience of information:

> Information[…]is a concept spread across multiple sites of meaning[…]and with multiple participants[…]and various stakeholders. However, the Standards ignore all aspects of information literacy except the student. (Elmborg 2012, pp. 87-88)

What critical information literacy theory brings to the evaluation of the concept of information literacy, therefore, is an acknowledgement of social influences on the research process; that researchers do not work in a vacuum, and place and people influence them:

> Being a literacy worker involves something other than imparting skills. It connects daily work with students, colleagues, and institutions to larger ideological questions about who belongs in higher education and how to make higher education as accessible as possible to everyone. (Elmborg 2012, p. 94)

> A critical approach to information literacy development means changing the view of education as the transfer of information, or 'getting the right knowledge into students' heads' to an awareness of each person's agency and ability to make meaning within the library setting. (Elmborg 2010, p.71)

This tallies with the findings of a study by Donovan and Erskine-Shaw (2019) on the broader topic of academic literacies (i.e. the ability to engage with, and produce, work of an 'academic' nature in university), linking to learning development. They argue that there is more to this than learning study skills. They assert that students need to be at the heart of this process, gaining their own academic identity, and that this is a social and intensely emotional process, especially for those who come from backgrounds where access to higher education is not the norm. When the structures of a sector, or specific institution, do not reflect the student's own experiences and culture, it is vital to put the individual at the centre of efforts to address this, and not rely on a deficit model. The alienating nature of the environment must be acknowledged and addressed, through social and structural changes, and the individual's agency to enact their own academic practice must be at the centre of their journey.

This alienation is brought into even sharper focus when students who are part of already marginalised communities are navigating the university experience for the first time. Tewell (2019) found this in a study of such students, where a contextual approach is recommended as the key way of engaging with learners, as their academic studies are one part of a large picture of considerations and adaptations to a society not understanding (or in some cases wilfully working against) their needs. Taking LGBTQI+ students, as just one example, starting university is often the first time they are able to explore their identity more fully (Ellis 2009) and research has shown that representation in the curriculum and on campus is often lacking, leading to greater feelings of marginalisation and isolation (Ellis 2009, Equality Challenge Unit 2009, Mckendry, Lawrence 2017). Similarly, Morina (2017) argues for inclusive higher education for disabled students and Eddo-Lodge (2018) and Charles (2019) highlight the lack of

representation for people of colour in the higher education experience, with similar feelings of isolation resulting. As Owusu-Kwarteng (2019, p.9) explains, there is:

> Limited understanding around diverse BAME cultures, religions and languages, failure to ensure that the curriculum includes content which analyses varied social groups and their experiences, and opportunities for students to express their views on these issues and their own encounters. Instead, students are frequently expected to assimilate, and their lived experiences are negated.

Relating this back to critical information literacy, the importance of incorporating measures to understand the background of students and their information experiences, and how these transfer into and out of their formal educational experiences, is further emphasised.

The work of Gustafson (2017) further advocates a critical approach to learning, specifically in relation to information literacy, under the umbrella of critical pedagogy. This researcher pushes the need for a combined approach to information literacy and scholarly communications that would not only see these issues of structural power and agency of students to the fore, but also see the promotion of the library's role on an academic campus. A unified approach, with librarians joining forces with others across an institution, is of benefit as it:

> Provides faculty and students with the knowledge they need to empower themselves as authors and information users in their professional lives by highlighting the problematic issues that exist in the academic information ecosystem regardless of discipline or experience. (Gustafson 2017, p.3)

and critical evaluations of this ecosystem are seldom found in higher education teaching. Using an approach to information literacy that encompasses all members of the community is also vital in bringing in those who don't fit neatly into the 'academic' or 'student' camp, such as PhD researchers who are also teaching, therefore having identities as both student and staff, and who can also find themselves subject to marginalisation (English, Fenby-Hulse 2019). This is a key justification for this study's emphasis on changing the role of the librarian to a facilitator of a university-wide community of practice. Gustafson (2017, p.9) poses the important question:

> How can libraries/librarians reveal the homogeny of culture so ubiquitous in information to benefit both faculty and students in their scholarly and everyday endeavors [sic]?

and goes on to advocate a cross-disciplinary approach to scholarly publishing and information, in order to challenge this homogeneity. Drilling it down to a specific example, this could provide a challenge to a common view that book-based information is more accurate and reliable than that on the Internet, when, in fact, there are examples of unreliable sources in both formats and that it is content that should be analysed rather than format (Seeber 2019). Indeed, the scholarly publishing industry has excluded and marginalised many due to structural inequalities (le Roux 2015, Moletsane, Haysom et al. 2015, Regier 2018), as has the more general publishing industry (Akbar 2017) and alternative ways of producing information have engaged communities who have been unable to access such traditional, text-based, information or resources (Oakley, O'Brien 2017). Sociologists such as Zevallos (2019) have critiqued the traditional peer review process as one which still allows white, male voices to dominate due to structural privilege, which means librarians have a responsibility to at least draw attention to the fact that peer review does not automatically equal 'good' or 'academic' when it comes to evaluating sources. Even within evidence-based medicine, there is a call to understand systemic impacts on that which is published and available (Heneghan, Mahtani et al. 2017). Rupprecht (2019, p.16) stresses the need to empower students:

> To be able to reflect on the implications of how […] knowledge is historically constituted and reproduced, to understand the racialised, gendered and classed contexts in which it developed and to notice the silences and exclusions upon which it establishes its authority.

and Tewell (2019, p.173) specifically recommends that librarians acknowledge that information is "not just limited to the textual or verbal but also visual, social, embodied, and often deeply personal.".

The challenge to this homogeneity should be rooted in the curriculum and as a result of faculty-library collaboration, incorporating participative teaching and learning approaches and an acknowledgement of the privileges inherent in the current academic information landscape (Gustafson 2017). This approach shows the importance of information literacy initiatives which incorporate the whole university community; staff and students. It is also linked to recommendations

from investigations into inclusive educational practices, such as those from Mckendry and Lawrence (2017) specifically on the experiences of trans staff and students:

> Consider trans inclusion and inadvertent transphobia within the curriculum and ways to include trans history, identity and experience within content […] For those who design and deliver professional programmes […] consider opportunities to raise awareness amongst professionals of the future and include trans issues within curriculum. (Mckendry, Lawrence 2017, pp.18-19)

It is this idea of the whole university working together on inclusive curriculum development which is core to this researcher's wish to influence information literacy input for students by encouraging staff development (for all staff, academic and professional support staff, including librarians) in information literacy and getting it embedded in the curriculum via its design.

Evidence to back up the need for a consideration of the community or setting in which research takes place in information literacy is also found when disciplinary backgrounds are taken into account. The role of the librarian as someone to "help students recognize and make sense of…disciplinary differences" is considered an essential part of information literacy by Simmons (2005, p.298), who also argues that information literacy should "help our students to see[…]that knowledge is constructed and contested[…]that research is about constructing meaning through active engagement with the ideas and asking questions surrounding the information itself" (Simmons 2005, p.308). Again, the Standards are critiqued:

> The current ACRL approach to information literacy seems based on a positivist epistemology in which seekers can discovered a unified 'truth', even though knowledge is dispersed and decentralized in our current postmodern information environment. (Simmons 2005, p.299)

These studies provide evidence to suggest that the skills models used traditionally for information literacy in higher education have led to a focus that is too much on the academic research process as it currently stands, to the detriment of equipping members of the community with the critical and social approaches to information that are more commonly found outside of that arena, and ensuring a critical view of the information environment and research process more generally. They also show that skills models do not take the political and

social effects of the educational models on those in higher education into adequate consideration, something backed up by Hoffman and Wallace (2013) in their experience of information literacy in a similar institution to York St John (having many local students and those with commitments outside their degrees) and Harris (2008) in his consideration of the importance of community in information literacy. The models have evolved and progressed to some extent to include these recently, especially in incorporating the ideas of transitions in and out of educational settings and understanding the value of information and its origins, but they still focus on a rather passive, positivist approach to information literacy in the main.

It is further argued that the traditional skills models ignore the role of the student in higher education as creators of knowledge themselves by library practitioners with experience of information literacy instruction. Pankl and Coleman (2010) take this stance, advocating for critical pedagogy in library instruction and that "when students are taught that they are[…]knowledge creators, they begin to understand they are responsible for producing 'evidence' that will support their assertions." (p.11), rooting this in the argument that there is more to research than assembling "facts encountered in the outside world" (p.10) (i.e. a positivistic world view) and that research techniques should "become part of the larger narrative of the classroom rather than a presentation of disembodied skill sets"(p.11). Cope (2010) backs this up, stating that the ability to construct and ask questions (rather than looking for the one and only answer) is as important as building up skills in finding information.

2.1.4 Information literacy in this project

Given these competing approaches to information literacy, it is important to establish what information literacy means for this study. This study is based in a higher education establishment in the UK, so the concept will need to take this into consideration. Using the framework of Lloyd (2010) as the underpinning theory, information literacy will be viewed within the landscape of the United Kingdom higher education environment, as both a place for students to study and researchers to work. However, critical information literacy theory also has an impact, in terms of how this landscape impacts on the information available

and how different types of information are privileged in this sector. Therefore, information literacy, for the purposes of this study, is outlined in Figure 1.

It is the belief of this researcher that information literacy in higher education needs to be centred on the experience of the individual learner, and in empowering them to become an agent in their own educational experience. Without acknowledging the context in which much research used in higher education has been carried out and published, students and staff members who do not fit in to that traditionally privileged model will be further marginalised and current structural inequalities will be strengthened. It will therefore be central to this thesis that it takes place in the landscape of higher education, in which learning takes place with social influences, referring to Lloyd's (2010) theory, and that individual members of staff and students will be also parts of other landscapes.

> The library skills needed to undertake academic research (as expressed in the skills models), but with an emphasis upon ensuring that any researcher, staff or student, is aware of the specific landscape in which their use of information takes place – that of their university and the higher education landscape in the United Kingdom (and the political and social impact this has), how this relates to their experiences beyond this situation, and in working with the researcher to develop their agency to pose key research questions for themselves.

Figure 1: The information literacy definition for this thesis

However, it is also the belief of this researcher that these various approaches to information literacy are not mutually exclusive. From a pragmatic point of view, a 'hook' is required to locate those responsible for academic programmes already concerned with information use in the curriculum. These uses could be linked to specific academic research skills, or to professional approaches such as evidence-based practice. Even if these are based predominantly in the traditional skills models, these concerns and practices could provide a basis upon which to build, and introduce a further level of context which acknowledges the structural inequalities implicit in the current research process in higher education. From this, with the learner central to any information literacy input, it could be possible to move to a position where curricula are designed with critical information literacy in mind.

This agency is vital to information literacy; staff and students will bring their own experiences of landscapes and learning with them into higher education, and will exit it into other landscapes, be it linked to their future employment or the society in which they will live. It must be considered how information literacy in higher education takes this into account; specific skills currently taught as part of information literacy may not be applicable, but the understanding of a critical approach to information will; specific search tools used in higher education are very unlikely to be available in other landscapes, but the ability to find and evaluate information to answer a personal need for knowledge will be required (Badke 2011). As Walton, Pickard et al. (2018) state (in research with students of further education), informed by the work of Shenton and Pickard (2014), information literacy in an educational context should, "facilitate a lifelong learning process that will allow students to update the skills, knowledge and understanding needed to make informed decisions and solve problems." (Walton, Pickard et al. 2018, p.297). For example, Martzoukou and Abdi (2017), in a critical literature review of 'everyday' information literacy, pick out situations such as needing health information for oneself, or as a carer. The popularity of genealogy as a hobby is also highlighted. On a more political level, the notion of information poverty, where sections of society are excluded from accessing resources because of a lack of social and political opportunity, is brought up. All of these are not linked to a university course, but are situations in which anyone could find themselves.

This investigation of the literature has shown that there is a substantial body of research which looks at information literacy and its importance in the academic curriculum and beyond. Many studies link the role of the academic librarian to this need, highlighting how they can contribute to instruction in this area. However, when it comes to critical information literacy and the importance of understanding the social and situational influences on an individual's engagement with information, this is not reflected strongly, especially when it comes to the academic librarian's role in wider curriculum design. This is where the concept of learning communities, specifically communities of practice, could be one way forward.

2.2 Critical research approaches in subject areas

This part of the literature review focuses upon research and academic works linked to the programme areas in the curriculum of the university in question, linking to research objective 1, and looked at how information literacy in both academic study and the workplace were described and integrated into those areas. It explored the different terminology that has been assigned to skills relating to information literacy (as outlined in the previous section) beyond the library community and with reference to the academic subject areas to be investigated in this project. This involves both the study of those academic areas in the university context, and also in professional contexts where those programmes have an aim of preparing students for the workplace. The purpose of this was to aid the identification of modules where these were of concern when it came to data collection, and to also ensure that when academics were approached, the language familiar to their discipline was invoked.

A consideration of information literacy in various academic programmes, and also linked workplaces and professions, shows how important it is to consider the landscapes beyond the university in information literacy teaching and curriculum design. This section looks at the research and professional literature in subject areas linked to those taught at York St John University: health, arts, theology, business, linguistics and education. It is based upon journal articles and textbooks published in those areas, rather than institution-specific documents. Indeed, the purpose of this section of the literature review is to discover how issues related to information literacy (e.g. searching for information, using it in the workplace or in research) are expressed in other arenas and to use this knowledge to help identify potential modules and tutors for research participants for this project. A full table of terms and descriptions discovered in this search is found in appendix 6.2.

In the health sector, the concept of evidence-based medicine, "the conscientious, explicit, and judicious use of current best evidence in making decisions about the care of patients" (Sackett, Rosenberg et al. 1996, p.71) is vital to those in linked professions (Boruff, Thomas 2011, Cullen, Clark et al. 2011, Davies 2011, Forster 2015, Toledano O'Farrill 2008a). In education fields (other than higher education) reflective learning or practice (Jasper 2013) is promoted for those in

the teaching profession (Williams, Coles 2007) and is explicitly linked to the use of professional literature (McTavish 2009). Similar concerns can be found in areas as diverse as business (D'Angelo 2012, Griffis 2014, O'Neill 2015, O'Sullivan 2002) and religious office (Cohen 2013, Eliceiri 2014, Gunton 2011, Gunton, Bruce et al. 2012).

The literature linking information literacy to the subject areas of arts, education, health, business, linguistics and theology was located and explored. These align with the academic programmes offered at the university in this project. This literature produced a wide range of examples of critical approaches to information search, access and evaluation. On a broad level, terms such as 'applied research'; "research conducted for purposes[…]to solve a problem or identify a strategy for decision making or product improvement" (D'Angelo 2012, p.643), or 'critical thinking'; "a means of generating new knowledge by processing existing knowledge and ideas using […] analysis, understanding, synthesis." (Moon 2008, p.33) or 'decision making'; "the processing of generating options and then choosing among them" (Kyriakidou 2009, p.486) were used.

Literature focused on the teaching of business programmes, especially those centred on preparing students for the workplace, revealed more applied concepts, but ones that can often be found in other situations too. Knowledge management was a term that was used in a number of considerations of key skills required in the business context (D'Angelo 2012, Makani 2015, Makani-Lim, Agee et al. 2014, O'Sullivan 2002), but was also evident in health (Toledano O'Farrill 2008a, Toledano O'Farrill 2010), with information management occupying a similar position in the research (Makani-Lim, Agee et al. 2014, O'Sullivan 2002, Reitz 2004, Sattar Chaudhry, Al-Mahmud 2015).

The health literature contains constant references to evidence-based practice, the "conscientious, explicit, and judicious use of current best evidence in making decisions about the care of individual patients" (Sackett, Rosenberg et al. 1996) across both those concerned with degree programmes linked to health professions, and in the workplace (Boruff, Thomas 2011, Cullen, Clark et al. 2011, Davies 2011, Forster 2015, Glasper 2011, Toledano O'Farrill 2008a). It is a concept also found in relation to education and teaching professional research

(Williams, Coles 2007). However, the predominant model in that sector is referred to as reflective practice, "a strategy[…]to learn from our practice[…]consists of[…]experience, reflection, action[…]enables us to build a knowledge base from our experience" (Jasper 2013, p.6) and this is the core of their professional courses (Boon, Johnston et al. 2007, Williams, Coles 2007). Both evidence-based practice and reflective practice, as explained in these studies, contain aspects of the emerging forms of information literacy (using the definition in the previous section) as they link context to evidence finding and evaluation (i.e. the landscape), labour the importance of others in the community as information sources (social learning), and encourage a critical approach to evidence, emphasising the need to gather information from a variety of sources.

Considering subject areas with a less explicit link to a specific profession, explorations of skills which link that area with critical thinking both within academic study and beyond can still be found. Within Theology and Religious Studies, 'faith community' is found, "a community, extended across time and space, that is devoted to the same task[…]has learned things[…]that have an enduring value" (Rae 2015, pp.7-8) and this notion of community learning is apparent in a number of different studies in this area (Bruce 2011, Cohen 2013, Eliceiri 2014). Although it is not guaranteed that academic programmes would consider this in their design and teaching, it is possible that they are familiar to those academics in these areas, and so are included here to aid the analysis of learning outcomes linked to information literacy later in the project. Furthermore, there is the more traditional scholarly approach of hermeneutics, which is concerned with the interpretation of texts (in this case, religious texts) and is found in research into academic programmes, especially those considering bible study, emphasising how text analysis "requires empathy for the creator of the text and the appreciation of the cultural and social forces that create context" (Sullivan 2009, p.234), which links to the need to explore and expose structural considerations at play in critical information literacy. Likewise, in arts-based areas, there are concepts such as media literacy (Potter 2004, Vraga, Tully 2015) which also seek to link the information on offer to the context in which it was created and the purpose of its publication.

What links all of these different ways of expressing the search, access, evaluation, and use of information is the way in which they root the process in real-life situations, as well as academic, and many of them stress the importance of context. This is a situation mirrored in the literature specifically on information literacy, from the librarianship and information professional literature. Throughout there is a thread of social learning, or learning from others, with the importance of community evident in many studies.

2.3 The theory of communities of practice

Given the thread of social learning evident in the previous section, and the importance of community in staff development in education, this thesis takes the theory of communities of practice as its core focus. The main theorist linked to the concept of communities of practice is Wenger. It first emerged as a theory of social learning (Lave, Wenger 1991) which asserted that communities of practice emerge in situated, workplace situations and that learning is an inevitable consequence of this. There is therefore a difference between intentional instruction and the process of learning.

Lave and Wenger (1991) base this theory on their view that learning can take place as a consequence of "legitimate peripheral participation" (p.53), whereby newcomers to a group are still legitimate members, but learn by staying on the fringes and participating once they have learned enough to do so or when they feel they have something to contribute, or feel comfortable in the community enough to contribute. Communities sustain as a result of conflict and the way in which it is navigated and overcome, which also results in learning. It also provides a more sustainable model of membership, as new members are continually welcome on the periphery, can stay there if they wish, but can move to a more active role if they choose. This allows for a continuous stream of potential new members, who will add to the community as others move away due to changes in role or priorities.

Wenger has developed this theory and refined it since this first publication, further labouring the assertion that learning is "a fundamentally social phenomenon" (1998, p.3) and that communities of practice are found in every workplace and in multiple manifestations. The focus is on participation.

Therefore, individuals may have their own ways of understanding situations, but it is through communities of practice that they further develop them through social interactions. This includes by negotiating conflict within the group; community does not mean a harmonious entity in this context. It is the underpinning shared values and beliefs that provide the cohesion, along with the community's setting or situation, and these which enable negotiation of the practice from possibly differing perspectives. Neither is it the case that community membership is fixed. Indeed, sustainability depends upon new generations of members coming through and their legitimate peripheral participation.

Another key assertion in Wenger's 1998 development of the theory is that communities of practice cannot be forced into existence, "they can be recognized, supported, encouraged, and nurtured, but they are not reified, designable units" (Wenger 1998, p.229). Therefore, the situation may be one in which a community of practice could develop (e.g. a workplace training classroom), because people with shared concerns have a chance to meet, but a community of practice cannot be arranged to begin there. It is one of the aspects of the theory which has been critiqued in the intervening years (e.g. Cochrane 2010) and has been reviewed by Wenger himself (Wenger, McDermott et al. 2002, Wenger, Trayner et al. 2011, Wenger, White et al. 2009, Wenger-Trayner, Fenton-O'Creevy et al. 2015).

In developing the theory into a practice-based solution to workplace learning, some parts of the initial thesis were modified. One key aspect was a guide to cultivating communities of practice (Wenger, McDermott et al. 2002), whereby is it asserted that they would develop anyway where there are shared goals, beliefs and values surrounding a practice, but that organisations can help them to flourish. Indeed, it is also stated that while "some communities of practice grow spontaneously[…]others may require careful seeding" (p.13), which is a much more involved and proactive role for an institution than that in the initial theory.

The importance of regular interaction is promoted in the 2002 revision. This coincides with the more ready availability of online tools to help this and it is the first mention that communities of practice may be physical, virtual or blended (Wenger, McDermott et al. 2002, p.25). The role of the community coordinator is

now mentioned as a critical agent in the success of a community of practice (Wenger, McDermott et al. 2002, p.80).

As the theory is based upon providing opportunities for interaction, it was inevitable that it would need refining with the growth of social networking and other virtual options for communication, and it was this direction the development took with a focus on digital habitats for communities of practice (Wenger, White et al. 2009). The idea that interaction could be either synchronous or asynchronous gives a new perspective on how communities of practice can be cultivated.

In applying this theory to the situation under investigation in this project, a community of practice, should it be uncovered, could be facilitated by an academic librarian. Investigations can take place into shared practice, values and priorities, and members of the community linked to information literacy identified. Using the concept of "legitimate peripheral participation" (Lave, Wenger 1991, p.53), those who do not currently have the experience or knowledge to participate in the community fully could be invited in by way of an asynchronous online platform, simply by using it as a reference point, before deciding to join in with the community more actively if they wished. Similarly, if they feel their perspective is under-represented, an online platform or face-to-face meeting offers the chance to put this forward, and in this learning takes place for all, but this participation is not compulsory. The community would be of a nature which makes it a welcoming place for such representation to take place. This makes the community of practice distinct from other forms of community or social learning as there is no mandate for participation or membership.

2.4 Social learning and learning communities in education

This part of the literature review will focus on learning communities in education and the links between these and information literacy in the higher education arena. Through this consideration of previous research, a justification for using both skills-based and social learning approaches within a learning community will be offered in relation to this project.

Several key themes emerged from the literature found. Firstly, there is strong evidence for the use of learning communities and social learning approaches in developing staff in educational settings. Investigating concerns specific to the higher education sector, there is some evidence to indicate that social learning approaches can cut through barriers inherent in the organisational structure when it comes to pedagogic change and ensuring staff members have the support to develop this. There is, however, a noticeable split between those who use more generic learning community models to do this and those who specifically use the community of practice model as a guide. Amongst the higher education literature there is a lack of research on information literacy and learning communities or communities of practice, but there are key studies from areas closely related to information literacy (especially e-learning) which have used the communities of practice model to nurture staff development, and related curriculum change. These were the key papers used to inform the progression of this project.

2.4.1 Staff development

A large portion of the available research in this area focuses upon staff development. Some assume that staff development is a desirable thing and thus focus on the method of its delivery (Allen 2013, Gray, Smyth 2012, Kennedy 2014, Mak, Pun 2015, Ness, George et al. 2010, Rae, Taylor et al. 2006). Most identify a number of drivers for instigating new ways in which education professionals can keep their skills up to date, whilst all acknowledging that anyone working in an educational role should also be open to carry on learning themselves. These include a move to student centred learning (Addis, Quardokus et al. 2013, Dempster, Benfield et al. 2012, Murray, Higgins et al. 2011) and improving student outcomes (Furco, Moely 2012, Herbert, Joyce et al. 2014, Naude, Bezuidenhout 2015, Owen, Davis 2010), the availability of new technologies and e-learning approaches (Beach 2012, Cochrane 2010, Cochrane 2014, Laxton, Applebee 2010, Reilly, Vandenhouten et al. 2012, Schneckenberg 2010), professionals becoming leaders or managers (Bouchamma, Michaud 2014, Caudle 2013), wider policy or institutional change (Coburn, Mata et al. 2013, Hotho, Saka-Helmhout et al. 2014), ensuring newcomers have the necessary skills (Cox 2013) and simply ensuring that all teachers' skills are as up to date as they can be (Hodges, Cady 2013, Jones 2010, Quinnell, Russell et al.

2010). Very few cite keeping information skills up to date as a driver, with Jeffrey, Hegarty et al. (2011) looking at digital information literacy, and the various papers on e-learning, being the ones aligned closest with this aim.

This could point to an issue in the approach to information skills in educational environments taken by librarians. It may be that they are conducting staff development in this area, but not via social learning communities. It may be that staff development is being bypassed, in favour of delivering information literacy instruction directly to students. There is a gap to be explored in investigating the embedding of information literacy in the higher education curriculum through cross-department and academic school communities of staff, learning about its merits and delivery.

2.4.2 Pedagogic and curriculum change

Throughout the literature on staff development and social learning, there is a thread on its use to influence pedagogic and curriculum change, both in higher education and other educational sectors. There is evidence to suggest that this is a method which does indeed lead to change in the way educational programmes are developed and delivered.

Much evidence stems from the area of teacher education and development. Beach (2012) investigated the use of learning communities in relation to developing the digital skills of teachers, thereby aiding the introduction of more technological innovation into a school curriculum. The findings here labour the importance of the participants using reflection and action research if a community is to be effective as a learning method, and implicit is the result that the curriculum would change, but this is not proven.

A clearer link between learning communities, staff development and curriculum change is seen in subject specific studies. Longitudinal studies in mathematics have shown they have helped in navigating policy change in this area (Coburn, Mata et al. 2013) and in improving teaching practices (Hodges, Cady 2013), whereas a community approach to changing literacy teaching practice was shown to be effective in another case (Dunsmore, Ordoñez-Jasis et al. 2013). A study of sports teachers showed the use of social media to be a key tool in curriculum development in a United Kingdom context (Goodyear, Casey et al. 2014),

providing evidence that the way in which lessons were delivered became more effective.

Concentrating on the higher education sector, more evidence emerges to support the idea that learning communities for staff development have a beneficial impact on the curriculum. Addis, Quardokus et al. (2013) used faculty learning communities to encourage and facilitate change in the delivery of a higher education course, stressing the importance of their sustainability and the long-term commitment needed to them for it to be a method with lasting consequences. Similarly, using a learning community has been credited with the successful implementation of a problem-based learning approach (Butler, Christofili 2014) and a service-learning approach (Furco, Moely 2012).

The studies with a very strong link to the context of this study relate to student support and similar functions. Cochrane (2010, 2014) and Schneckenberg (2010) have shown links to the embedding of technology into the curriculum after employing communities of practice in e-learning in a higher education institution and Dempster, Benfield and Francis (2012) show how bringing a multi-disciplinary team together to look at course delivery led to new blended methods employed for distance learners. Each of these specifically attribute the social learning aspect to the successful implementation of new curriculum initiatives.

2.4.3 Learning communities or communities of practice?

A key distinction evident in the literature is between the research which focuses on a broad definition of social learning and that which looks at communities of practice as a specific form of this. Indeed, even when it is claimed that it is a community of practice which is under consideration, it is not clear that the group adheres to the definition proffered by Wenger (1998).

The concept of faculty learning communities is used by some investigating social learning. These are often set up with the membership assigned as a result of the role they hold. Addis, Quardokus et al. (2013) provide a case study of such an arrangement. This shows that groups were effective in providing bottom-up change in terms of pedagogy and curriculum delivery, especially in overcoming institutional barriers. As these were prescriptive groups, based on job role, they do not fit in to the bracket of a community of practice. There is no attempt to

uncover shared values, beliefs or concerns to inform the composition of the community. They do not claim to have a community of practice and do not reference Wenger directly. This is true of other studies relevant to social learning (Francis 2012, Furco, Moely 2012, Jeffrey, Hegarty et al. 2011, Quinnell, Russell et al. 2010) and is something to inform this project in terms of establishing whether the community of practice model is appropriate in this particular study.

There are studies which claim to investigate communities of practice, but use the phrase as a generic social learning concept, rather than linking it to Wenger's theory. Reilly, Vandenhouten and Gallagher-Lepak (2012) claim to look at communities of practice as a method for staff development in e-learning in higher education. Analysing their research reveals that there is no consideration of Wenger's original theory (1998), using a description that resonates with his concepts, but relying on how it was used and interpreted in a single research study (Sherer, Shea et al. 2003) as its reference point. Similar use of the term, without reference to the theory, can be found in Madhuri and Broussard's account (2008) of communities of scientific practice.

Of most relevance to this project are the studies which use the communities of practice theory, as espoused by Wenger (1998), to analyse their research subject. Likewise, studies which critique the concept of communities of practice in relation to social learning are of value.

2.4.4 Communities of practice and learning support in higher education

Key papers to help inform this piece of research combine communities of practice, higher education, staff development and learning support. Each focuses on individual case studies with limited evidence in isolation. Combined, they produce a body of evidence to indicate that this is an approach worth pursuing for information literacy.

Biza, Jaworski and Hemmi (2014) focused on learning communities in mathematics in higher education. Linking directly to Wenger's ideas, they look at the importance of research groups which become communities of inquiry, along similar lines to communities of practice.

The importance of communities of practice for staff development in expanding learning support is examined by Owen and Davis (2010) in their analysis of a community of practice of academics looking to promote graduate attributes in the curriculum. Key features of the community of practice were a shared topic of interest, active engagement in developing curriculum materials and the valuing of collaborative work (Owen, Davis 2010, p.18), all of which could be applied to information literacy in higher education.

Similar studies include Ness, George et al. (2010), who looked at the development of social justice outcomes in the curriculum within one graduate school and Laxton and Applebee (2010) who focused on e-learning in a single university. The work of Cochrane (2010, 2014) is also of especial interest in terms of cross-disciplinary communities of practice to support staff development and curriculum change in regards to learning support (in this case e-learning).

There is evidence of work on integrating information literacy into higher education curricula via staff development, but this tends to look at the development of librarians' skills. Of particular interest to this study is the work of Moselen and Wang (2014) who looked at the wider context of integrating information literacy into the university curriculum via a pedagogic development programme for librarians, with practical tips for its implementation. However, there is no official social learning element to this, and it does not employ a community of practice. The development of information literacy knowledge amongst academics is also not considered.

The community of practice model has been used amongst librarians, for their own professional development, and researched in terms of linking this development to positive student outcomes (Bilodeau, Carson 2014), but this research did not extend the model to other members of the academic community.

There is evidence relating to the evolving role of the academic librarian in terms of the need for training in pedagogic theory and practice, and curriculum design, especially in relation to ongoing personal and professional development and perceived or actual gaps in the knowledge obtained on official programmes leading to professional qualification (McNiff, Hays 2017). Moselen and Wang (2014) highlight this need for training, especially when it comes to information

literacy programme design by academic librarians. Mwaniki (2018) also highlights the vital nature of academic librarian collaboration across roles, learning from each other to further subject and skill development. Bilodeau and Carson (2014) specifically advocate the community of practice approach as a key way of ensuring this development happens, as does Attebury (2018). In these studies, academic librarians acknowledge their role as instructors and curriculum designers, but express a need for better training in pedagogy. These relate directly to the design of information literacy programmes for students. They do not necessarily highlight the advantages, however, in academics and academic librarians learning from each other in these settings, in terms of sharing their expertise and knowledge in pedagogy and information literacy and informing programme design from this shared learning.

There is therefore evidence from this overview of existing research that there is a gap to be investigated, linking social learning to information literacy development in the curriculum in higher education, specifically a community of practice which encompasses all staff members involved with the curriculum. This is based on the premise that any learning community in the higher education sector will involve development in information skills linked to the academic pursuit, as detailed in the traditional models, but that these should be just one aspect of information literacy, with an appreciation of the wider context just as important. It may be the case that skills can be used to identify initial, shared concerns about information use in the traditional research process, but that in identifying a community of practice in information literacy it should be possible to shift the debate onwards, towards embedding critical approaches to information in programmes and therefore better equipping students for life beyond their current experiences of their educational establishment. This would also provide evidence on the merits or otherwise of using the community of practice model for identifying and developing information literacy across an institution, with the librarian both facilitating and learning from colleagues. Indeed, with the stress upon the need for librarians to update their pedagogic skills becoming evident (Moselen, Wang 2014), an investigation into a community of practice model could yield results that encourage both information literacy and pedagogic knowledge development.

2.5 Overview of literature

This literature review firstly addressed the concept of information literacy in the professional librarian and information literature. In this, it considered the traditional skills models (SCONUL Working Group on Information Literacy 2011), but then showed how these models do not consider either how information literacy is socially constructed (Lloyd 2010), or subject to social, political and cultural structural influences (Elmborg 2012) sufficiently. It was established that, in this project, information literacy incorporates both of these emerging forms and evidence of practice in these areas will be sought.

Further to this view of information literacy from the professional literature, it was then investigated from the viewpoint of the various subject areas taught at the university at which the research takes place. This partially answers objective one, to explore the terminology assigned to information literacy in different academic programmes. In doing this, it was established that concepts linked to information literacy are described in ways such as evidence-based practice (health), reflective practice (education) or knowledge management (business), amongst many others (see appendix 6.2). In carrying out the investigation of this area of literature, the concepts to look out for in module documentation which may link to information literacy were ascertained, thereby aiding participant identification, and the language to use in discussions with academics could be discovered.

The theory of communities of practice (Wenger 1998) was outlined, as a potential way of encompassing the existing practice evident in information literacy at York St John University, and also as a potential way of facilitating the embedding of emerging forms of information literacy in the curriculum via staff development, and programme and module design. It was emphasised that communities of practice cannot be created from scratch, but rather they can be discovered where they are already at play, and facilitated from this point.

To link the concept of social learning to learning communities in higher education, the literature review concluded with a critical analysis of the existing research in these areas. It located a gap in the research in the use of communities of practice for staff development in information literacy in higher

education. The closest research is in the area of staff development in e-learning, where communities of practice have proven to be effective methods of developing the curriculum (Cochrane 2010, 2014).

This research project therefore aims to fill the gap between the existing literature which covers the value of communities of practice for staff development and curriculum progression in higher education, and that which focuses on information literacy and the role of the academic librarian. It investigates the value of identifying common values and aims already in place across an institution, mirroring the audit approach taken by Secker and Coonan (2014), but with the aim of identifying, cultivating and facilitating a community of practice (Wenger 1998, Wenger, McDermott et al. 2002) in information literacy for staff. This community of practice could enable the embedding of information literacy in its emerging forms in the curriculum, with the sharing and developing of progressive models growing from more traditional formats as the community of practice members learn from each other.

If the claims of various universities in terms of graduate attributes are to be fulfilled, if graduates are to be able to "confidently and critically identify and use information and digital technologies to enhance academic, personal, and professional development" (Leeds Beckett University no date), it follows that the curriculum must reflect this. Ideally, the curriculum should reflect this in a way that reflects critical (Elmborg 2012) and social-construction (Lloyd 2010) information literacy, so that graduates emerge aware of the societal structures which will impact on the information available for them to use, and give them the confidence to challenge these where people are marginalised as a result.

3 Methodology

This chapter outlines the research approach and the specific methodology that has been chosen for the project, which aligns with the aim of the thesis, focusing on investigating the embedding of information literacy in the curriculum at a university: a real-world problem.

A pragmatic approach was chosen as the philosophical paradigm in which to position this research. This is predominantly because of the real-world nature of the subject and problem to be investigated. The pragmatic approach is often used for the investigation of real-world problems and acknowledges that social research seldom takes place in a vacuum; that there is always a context to be taken into account (Creswell 2014). The chosen methodology was action research, which facilitated the investigation of the role of the researcher as a librarian, whilst also giving the opportunity to research the current state of information literacy provision at York St John University.

The use of action research within a pragmatic paradigm allowed the author to investigate the situation as it stands and evaluate interventions to solve issues arising whilst being part of the workplace under investigation. In this, the author, as an academic librarian in the university, was in a position to research her own practice and role, testing out a potential shift from a reactive, one-shot approach to information literacy, to someone who influences the curriculum. Action research also provided a framework within which changes in the workplace could be evaluated, which linked to the author's wish to establish a community of practice in information literacy in order for members from across the university to benefit from learning from each other. The aim was to both improve practice at the institution concerned and also provide a relatable example of research and outcomes for other services and sectors.

Within this pragmatic practitioner led action research framework, the chapter also offers an account of the data collection and analysis process that was employed. This involved a mixed method, exploratory sequential approach (Creswell 2014), with the initial qualitative phase (interviews) using the critical incident technique, tested with a pilot phase, followed by quantitative (survey) methods. In addition, the design and implementation of the community of

practice in information literacy is discussed in detail. This aligned with the chosen methodology of action, practice-based research in a real-world situation and was facilitated by the researcher, with the aim to embed social and critical information literacy into the curriculum.

Finally, the chapter addresses the approach employed to account for bias, using Herr and Anderson's (2015) concept of positionality, and ends with an exploration of the ethics of this research.

3.1 The pragmatic approach

In deciding upon an appropriate approach to this research project, pragmatism was that which was considered to best suit the context and aims. Creswell (2014) asserts that pragmatism is an appropriate philosophical approach when focusing upon identifying a real-world problem, followed by employing appropriate methods such as case studies, interviews, focus groups and surveys to gain more knowledge about it and possible ways to improve it. This makes it a key framework in which to place research into situations influenced by the context in which they have taken place. Those employing a pragmatic approach tend to agree that there are several pressures which are influencing the situation being researched, that "research always occurs in social, historical, political and other contexts" (Creswell 2014, p.11). Essentially, the pragmatist looks at the consequences of actions, is problem-centred, pluralistic and real-world practice oriented (Creswell 2014, p.10), and is appropriate for this thesis as this project wished to investigate the real-world situation as it stood, followed by implementing and evaluating a change in practice.

The pragmatic approach also links with this project's view of information literacy, especially the critical information literacy theory outlined in the previous chapter, which emphasises the importance of understanding political and societal influences on information production and publication (Elmborg 2012). Therefore, if it is accepted here that information literacy should be taught within the context of wider societal pressures, acknowledging that the information produced and made available to both inform and align with a curriculum is itself a product of these pressures, and may marginalise sections of a society as a result, then it

follows that the research methodology also acknowledges these real-life pressures in investigating them.

The pragmatic approach was therefore appropriate for this project due to its aims of improving professional practice (especially in relation to the role of the academic librarian), and investigating the real-world problem of embedding information literacy in the curriculum at York St John University. It allowed for the exploration of the situation as it stands, with the methods employed within the approach leading to practical outcomes for the organisation and practice of the researcher; identifying and facilitating a community of practice in information literacy. Further to this it helped to ensure that the values of the research participants were explored in a way which was not influenced by this researcher's ideology.

3.2 Action research as the methodology

3.2.1 Use of action research in other projects

The methodology of action research has been employed and recommended in many research projects based in complex organisations, with the outcomes of the research being some sort of improvement in practice either for an individual or for a large group (or both). Molineux (2018) recommends it when managing change in an organisation; Kroeger, Beirne et al. (2015) link it to positive outcomes in encouraging collaboration, especially in an educational environment; Loizou (2013) advocates it as a self-reflection tool for improving one's own learning and practice; Currie and Sorensen (2017) use it as a means of investigating the local, but with a view to providing relatable case studies for others to follow. It is also specifically linked to the democratisation of knowledge, through which practitioners can theorise and contribute to the evidence base in their professions (Wood, McAteer et al. 2019).

In this context, Wood, McAteer et al. (2019) assert that democratisation of knowledge is linked to the living of one's value as a researcher, in authentic partnership with others, with this authenticity being linked to working "with participants in ways that are contextually and culturally relevant, and generate knowledge that enables people to take control of improving their own lives as they see fit" (p.8). A key part of knowledge democracy is therefore

acknowledging that different types of information hold different values depending upon a person's cultural and social situation, and that multiple methods of sharing knowledge (not just written forms and not just traditional academic forms of textbooks and journal articles) should be understood as valid and powerful. This particularly links to this research project, as the community of practice can take a number of forms, as highlighted in the literature review. It offers a platform for discussion in oral and online format, with any associated web resources being open to anyone with access to the internet. In this, anyone who is part of the community is able to take part, with content not restricted by membership of a particular group (e.g. current academic staff).

All of these recommendations link to the aims and objectives of this research project in terms of exploring the situation as it stands, identifying a community of practice, facilitating its development, and providing a platform and output from which others can learn.

3.2.2 Overview of action research

Unlike other approaches, in which researchers generate theory and practitioners apply it, action research centres on praxis and empowers the practitioner to research their own practice, as a way of holding themselves accountable for their work. Therefore, whereas in traditional, empirical, positivist approaches to social science research, the subject is studied externally, from the outside, action researchers study from within. Where control groups may be employed in approaches where the researcher is viewing a subject group from the outside, in action research the researcher is influencing the group as a result of being part of it. It is a popular approach in situations where the researcher is not searching for a specific answer to a question, rather wishing to improve a practical professional situation (McNiff 2010).

The action research approach of McNiff and Whitehead (2002) was the first considered for this project. This is based upon the notion of the researcher living their own educational theory and in knowledge as a "living process" (p.18). Cycles of action and reflection take place, linked to the researcher living their role and implementing initiatives to try and improve it. However, it was ultimately decided that it would not suit the overarching aims and was too closely aligned with autoethnography approaches such as narrative self-study

writing (Hayler 2011), whereby a researcher examines one's own memories and experiences in relation to their role, but does not look at the wider situation of a workplace. Although the researcher wished to improve her own practice, and this was a key aim, she also wished to provide more research-led outcomes for others to be able to recognise and follow and be able to investigate the situation across York St John University. Further to this, an outcome of the research was to locate a community of practice, if it existed and the focus on the self would not allow for this wide-ranging and institutional outcome. An alternative approach was needed which would make space for action and reflection, but also build in capacity for institutional investigation and the transferability of the methods used for others to use. Reflection was important to this project, but not only focused on the self. Reflection in relation to the community in which the research was taking place was vital, and the methodological approach needed to account for this too. A way of encompassing this mix of self-study and institutional change was offered by the approach to action research taken by Herr and Anderson (2015).

Herr and Anderson (2015) analyse the different approaches which make up the wider action research method, viewing action research as an "umbrella term" for existing methods such as practitioner research, cooperative inquiry, emancipatory praxis, and teacher research (pp. 2-3), but assert that action is central to all of them, this action usually being ongoing, rather than one specific intervention. These cover a number of subject areas, such as science, business, technology and health. Those linked to education are the ones taken forward in this project.

Given that action research has these many lenses, that proffered by Herr and Anderson (2015) as appropriate for educational research and with ongoing action and evaluation is chosen here. This lens measures the validity of an action research project through a number of factors, including the education of the researcher and the participants, changes in practice in the workplace (or equivalent) in which the project takes place, and the generation of new knowledge. All of these are important factors in this project and help to increase the chances of long-term, structural change with ongoing evaluation.

3.2.3 The position of the researcher in action research

In choosing a methodological approach for this project, within the lens of pragmatism, the position of the researcher as a practitioner within the institution had to be taken into account. This was in terms of acknowledging bias and power relations, which made the methodology of action research appropriate. The pragmatic approach can be used with a number of methodological frameworks and it is compatible with an action research methodology as it takes account of the unique needs of a specific group with members with diverse needs and also acknowledges them as a source of positive change (Greenwood, Levin 1998).

The use of a case study within an action research methodology has been used in complex situations, in order to recommend a specific intervention to potentially resolve issues or improve workflows, and although this project does not use case study methods, it does align with some of its principles in terms of investigating one setting in depth, providing a relatable account for others:

> While action research is seldom statistically generalizable, the knowledge it generates can be transferred beyond the research setting[…]A dissertation may represent the documentation of a successful collaboration and be used as a case study of not only the process, but also the product of the collaboration. (Herr, Anderson 2015, p.6)

This study is therefore in a position to provide a relatable 'case study' for other academic settings, and organisations in which information literacy is vital to operations, in terms of both the methods employed and the eventual outcome of the community of practice.

McManners (2016) employed this combination, with an action research ethos encompassing a prescriptive case study analysis, in identifying issues in the workflows of a part of the aviation sector and, therefore, a likely solution. This was followed by engagement with members of that community in order to enact that potential solution as an intervention. This mirrored key aspects of this research project and also used McNiff's action research approach (McNiff, Whitehead 2002) and the work of Yin (2014) in forming the case study within action research.

This pragmatic, action research, approach to research suited this project as the objectives included a wish to understand a situation as it stood before an

intervention (how information literacy is evident in the practice, values and teaching of academics and other professional staff at York St John University), the extent to which the issues raised by individuals were evident across the institution (where information literacy is evident in the practice, values and teaching), and an intervention design which addressed these (the facilitation of a community of practice, should it be found to exist): both providing an insight into the current situation and informing the form and content of an intervention to improve it. The principles of action and reflection can be incorporated into the community of practice, which helps with the long-term sustainability of the proposed changes in practice.

Action researchers tend to be 'insiders' to the subject of a project; indeed, they may be the subject themselves. This suits the position of the researcher in this project, who is wishing to improve both her own practice as an academic liaison librarian, and to enact actions which will improve information literacy for both staff and students at the university, especially focusing on staff development in information literacy in order to facilitate and influence its embedding in curriculum design. In this, there is a wish to learn on the part of the researcher, and a wish to educate participants where such occasions arise.

The notions of power and values inherent in information production and dissemination, identified as part of critical information literacy in this thesis (i.e. the acknowledgement that political, cultural and societal structures have an impact on the information produced, published and made available; this in turn leads to information privilege for some sections of society (Elmborg 2012)), also needed to be taken into account in the methodology of this project. Action research was therefore a suitable methodology to employ, as it is an approach through which taking action can "promote social change and social analysis" (Greenwood, Levin 1998, p.6), linking to the critical information literacy concerns addressed in the literature review section; that those working in higher education need to consider the power structures behind the publication of any piece of information:

> Action research aims to increase the ability of the involved community or organization members to control their own destinies more effectively and to keep improving their capacity to do so. (Greenwood, Levin 1998, p.6)

Steps such as self-reflection and peer review help address and acknowledge issues of bias. Issues of bias come in to play as the researcher is not outside of the project and her presence within the research situation needs to be accounted for and incorporated into the research process and evaluation. Herr and Anderson (2015) respond to this by looking at the specific point at which the researcher is embedded in the project. Through identifying where this position is for the project in hand, the researcher can put in sufficient checks and balances to ensure validity and rigour.

3.3 Data collection: mixed methods

Maxcy (2003) asserts that, within the pragmatic approach, it is sometimes necessary to use multiple methods in order to reflect a situation, and there is a precedent for doing so. Similarly, Denscombe (2014, p.184) asserts that pragmatism "is generally regarded as the philosophical partner of the mixed methods approach". The methods employed within this approach for this research project reflect this.

The key target for data collection was York St John University, as the objectives related to this workplace specifically. There was a need to explore one particular situation in context and depth, aligning with the theory of communities of practice which focused on the situated nature of a workplace community. Focusing upon one particular workplace such as this is a valuable method for understanding contemporary events without requiring control of participant behaviour and can incorporate qualitative and quantitative research methods within this setting, as is the case with similar approaches such as case studies (McNiff 2010, Yin 2009). This project initially explored the situation as it stood, before intervention, to discover whether a community of practice existed; such an exploratory approach wishes to discover the situation as it stands, rather than uncovering how subjects react to an input. There was an element of evaluating the influence of the researcher's action upon members of the community at a later point in the project, but this was introduced after the existing situation had been investigated.

Researching one's own practice within the workplace setting allowed the researcher to investigate the information literacy landscape at York St John

University, "in depth and within its real life context" (Yin 2009, p.18). Therefore, multiple sources of evidence needed to be identified and analysed and triangulated. The need to do this is stressed in those advocating the action research methodology (Herr, Anderson 2015, p.68). It therefore follows that action research is not just a form of qualitative research, with some examples of such research using mixed methods to gather both qualitative and quantitative evidence in order to ensure these multiple sources are investigated sufficiently.

Within this action research, a mixed methods, exploratory sequential approach was taken (Creswell 2014), with a qualitative phase to explore the views of a sample of participants informing a subsequent quantitative phase to survey the entire academic community.

In order for the action research intervention to be designed appropriately for the institution under investigation, and to be targeted at the most appropriate members of the community, both approaches needed to be undertaken. One did not take precedence over the other. As Morse (2003, p.191) sums up:

> When speaking of mixed methods design, we are not talking about mix-and-match research […] rather we are talking about using supplemental research strategies to collect data that would not otherwise be obtainable by using the main method.

This is backed up by Creswell (2014, p.19):

> The researcher bases the inquiry on the assumption that collecting diverse types of data best provides a more complete understanding of a research problem than either quantitative or qualitative data alone.

Subsequent to the literature review of existing research, the first step in this cycle of action research was data collection. A qualitative approach to data collection and analysis had to form at least part of the study as, if it was established that a community of practice had evolved, an understanding of how and why it had done so would aid its recognition and longevity.

The methodological tool of sense-making (Dervin 1999) underpinned the designing of the collection and analysis of data from the qualitative phase, informing the quantitative. Originally used in the area of researching information seeking, this focuses on practices rather than the person or the position they hold, mandating "a moving from a focus on nouns to a focus on verbs" (Dervin

1999, p.735). It is based on the premise that the "actor is an expert in her world", thereby ensuring no power is removed from the interviewee, nor the perspective of the interviewer forced upon them, and treats them as "theorist of her world, with hunches, hypotheses, and generalizations about how things connect to things and how power flows" (Dervin 1999, p.740). A practical technique which allows for such a focus on practice is the critical incident technique (Flanagan 1954).

Quantitative methods were also employed as they were a way of analysing the situation across the whole institution, thereby helping to identify the prevalence of behaviours contributing to a community of practice, and identify if these are enacted differently according to academic school or other possible factors such as length of teaching experience. The critical incident technique (Flanagan 1954) can also be used for survey research.

It was therefore decided to use interviews with one representative of each academic school as the qualitative stage of the mixed methods approach. The results of the analysis of the data obtained from this qualitative stage then directly informed the design of the quantitative stage in the form of a survey to be sent to all academics and professional support staff who are involved with teaching undergraduates. The exact population targeted for each stage is outlined and justified later in this chapter, but can be described as any member of staff who has taught on a level 4 (first year undergraduate) module at York St John University in the academic year 2016/17.

3.3.1 Interviews

The approach to interviewing participants was chosen as a result of wishing to obtain their views, values and practices linked to information literacy, but without unduly influencing these with leading questions from the researcher. In line with the recommendations of Creswell (2014, pp.140-141), it needed to relate its central questioning with the key aim of the overall research and try to focus on a single concept for the interviewee. The critical incident technique was therefore chosen due to its capacity to allow for this. It was originally implemented by Flanagan (1954) for investigations into workplace incidents, but has been revised and used in many more contexts since, including in research

which has investigated information behaviour and information literacy (Hughes 2007, Radford 2006).

3.3.1.1 The critical incident technique

The original paper published on the critical incident technique is that of Flanagan (1954). In this, the technique is outlined, as a:

> Set of procedures for collecting direct observations of human behavior [sic] in such a way as to facilitate their potential usefulness in solving practice problems and developing broad psychological principles. The critical incident technique outlines procedures for collecting observed incidents having special significance and meeting systematically defined criteria. (Flanagan 1954, p.327)

In revisions to the technique since, the process is described as:

> Asking a number of respondents to identify events or experiences that were critical for some purpose. These incidents are then pooled together for analysis, and generalizations about the event of activity are drawn from the commonalities of the incidents. (Kain 2004, p.71)

Rooted in the discipline of psychology, Flanagan (1954) goes on to suggest that it is a good technique for occupational investigations.

Rather than being a rigid set of rules to follow, Flanagan presents the technique as a set of flexible principles, to be adapted for the project under consideration, following five steps.

1. Determination of the general aim of the activity
2. Development of plans and specifications for collecting factual incidents relating to the activity
3. Collection of the data
4. Analysis of the data
5. Interpretation and reporting of the statement of the requirements of the activity (Flanagan 1954, pp.354-355)

It is also stated that 'observation' can take place via recalled incidents, rather than direct observation of the research participants. For example, group or individual interviews can be used whereby research participants recall and

recount examples of incidents that have taken place. Flanagan (1954) includes a number of descriptions of postgraduate research to have used the technique.

In the years since the early presentation and use of the technique, it has been adapted and evaluated in a number of different ways. Butterfield, Borgen et al. (2005) give an overview of this progression, analysing key studies to have used the critical incident technique in the 50 years since Flanagan's paper. They give examples of its use in a variety of disciplines, including education and organizational learning, which are of particular interest in this project.

Butterfield, Borgen et al. (2005) assert that the primary use of critical incident technique, by Flanagan, was as a tool to create a functional description of an activity. Reviewing its use since then, they outline the following distinctive features.

1. Focus is on critical events, incidents, or factors that help promote or detract from the effective performance of some activity or the experience of a specific situation or event
2. Discipline origin is from industrial and organizational psychology
3. Data collection is primarily through interviews
4. Data analysis is conducted by determining the frame of reference, forming categories that emerge from the data, and determining the specificity or generality of the categories
5. Narrative form is that of categories with operations definitions and self-descriptive titles (Butterfield, Borgen et al. 2005, p. 483)

And criteria for incidents' incorporation into a study are outlined.

1. They consist of antecedent information
2. They contain a detailed description of the experience itself
3. They describe the outcome of the incident (Butterfield, Borgen et al. 2005, p.488)

The key recommendations for any critical incident technique project are that the research method should be followed properly, including checks for validity, so that the results are considered credible (Butterfield, Borgen et al. 2005, p.490).

Kain (2004, p.72) reflects that the studies carried out using the critical incident technique have, "by examining common experiences shared by a broad range of an occupational community…uncovered important patterns…these findings led to selection criteria, training programs, and evaluation tools.". This is shown to be the case in several examples from the field of education, which relates well to this research. Kain's interpretation of the technique also relates to this research in two of his underlying aims:

> I am opting for an epistemology that conceives of research as an interactive venture: I, as a researcher, would have to talk to people whose experience was relevant to my question. No test or survey would provide me access to what interested me; observation alone would be insufficient, because I wanted to understand how the teachers perceived their experience. (Kain 2004, p.82)

> (CIT) allowed me to target what I found important – the perceptions of teachers about what worked for them – in a systematic way. In addition, this research approach provided me with a means to bring together the unique experiences of many teacher groups so that could offer some help to other teacher groups facing the same basic problem. I wanted to go beyond describing what a particular teacher team did (a case study) so that others might seek some general principles to help them in their work. (Kain 2004, p.83)

This project set out to understand how existing members of the York St John staff community experience information literacy, and establish whether was a way for formalising its discussion and promotion via staff development. It was also an aim of the study to provide guidelines should this prove to be effective for its embedding in the curriculum at York St John University, so that other institutions could learn from it.

The critical incident technique has been critiqued, and its limitations uncovered, by researchers looking at professional education, higher education, and information behaviour. Sharoff (2008) highlights that the researcher is relying upon the recollections of the participants in relation to specific incidents, thereby casting doubt upon the accuracy of the account of what actually occurred. This is a valid criticism if the aim of the interview is to try and uncover what has happened as objectively as possible. However, in this case, the experiences and

recollections of the participants are important in addressing the objective of uncovering shared values and concerns in information literacy. In this case, the viewpoint of the participant is important to understanding the situation as it stands.

Another criticism of the critical incident technique brought up by Urquhart, Light et al. (2003), is that the interviewee is placed in a position where there may be a number of interpretations of the incident itself from their perspective. Expanding upon this, it is explained that, as the participant is unaware of the fact that they will be asked to recount their experiences of the incident at the time it actually takes place, they may be unsure as to how to present their interpretation of it. For example, they may respond differently depending upon whether they are being asked as practitioner, or as the manager for a group of staff. For this reason, it is stressed that the questioning must be clear about the aim of asking for their accounts, and that the questioning must be maintained in a consistent manner across all participants.

Further to this, some researchers find it problematic in defining an incident. Urquhart, Light et al. (2003, p.71) assert that the critical incident technique may be "less equipped to explore those situations in which there was no decision to act", i.e. they ask if an incident is a specific moment in time in which a decision is made to affect a solution to a problem. This is not something which can be identified in this particular project: the participants are not being asked to reflect on a specific moment in time. Instead they are being encouraged to think about an entire module delivery. In addressing this, it should be noted that the critical incident technique has evolved over time and has been adapted as a way of uncovering practice over a longer period than one specific incident (e.g. Urquhart, Hepworth 1995) and that the incident as an encounter over a period of time has been established in previous research in education (Halquist, Musanti 2010, Khandelwal 2009), librarianship (Ching-Yu Wong 2013) and information behaviour (Northup, Moore-West et al. 1983).

Halquist and Musanti (2010, p.455) specifically assert that oral accounts of practice by educators can be used as critical incidents and enabled the researcher in their study to use these narratives to help reflect on this practice, offering participants the chance to, "identify, or make visible, aspects of […] their

practice that may have been hidden.". Similarly, Khandelwal (2009) in a study of student behaviours found that it was key to investigating how students learned across three undergraduate programmes, uncovering teacher behaviours which facilitated this best for these cohorts. Ching-Yu Wong (2013) used the critical incident technique to uncover service interactions in a public library, asking participants to recollect experiences in that situation, leaving the reporting decisions to the respondent and not specifically identifying an incident for them. Northup and Moore-West (1983) focused on a recent need to locate information, but did not specify that the incident in question should be restricted to one particular interaction, instead acknowledging that addressing the information need could take a period of time and need not necessarily be classed as 'urgent'. All of these provide examples of the critical incident technique being used to uncover practice linked to experiences over time.

In rounding up considerations for the use of the critical incident technique, potential advantages and disadvantages of its use are proffered by Kain (2004, pp.77-79)

Advantages

- connection to real-world examples and behaviours
- usefulness in understanding a phenomenon at an early stage of process - identifying issues that may deserve further attention/research
- systematic approach to gathering portraits of significance from a wide variety of participants

Disadvantages

- unfamiliar to most readers beyond industrial and organizational psychology
- its flexibility may not suit researchers who require a formulaic system
- identity crisis
- reliance on self-reports make it subject to criticism that these may be inaccurate

These potential disadvantages have been shown to have been overcome in other education and library studies. There is a precedent for the technique's use in

information literacy investigations, as evidenced by Hughes (2007), who used it in doctoral study, with the following justifications,

- it supports a straightforward qualitative approach,
- it offers well proven, clearly defined guidelines for data collection and analysis,
- it focuses on real-life human experiences,
- it enables the development of practical outcomes,
- it is relatively flexible,
- it has successfully supported other LIS and education studies.

and by Radford (2006). It is therefore familiar beyond the areas of industrial and organizational psychology and has been used for information literacy studies. The way in which the technique is used had progressed beyond looking at one critical incident, and towards allowing observation or recollection of experiences. The flexibility issue works in these projects' favour, as they wanted the subjects of the investigations to have the ability to express their own experiences. Likewise, this study is interested in how academics and others designing and delivering the curriculum see themselves and their practice, so self-reporting is a valid aspect of this. It also helps to avoid implementing a pre-defined idea of information literacy upon participants, an issue raised by Stebbing, Shelley et al. (2019), who decided that it was still necessary to give a definition in their interviews on the topic, with academics. The use of the critical incident technique should avoid this influence and therefore mitigate bias from the researcher.

Reflecting upon the decisions made by Hughes (2007) for each of the five accepted steps of a critical incident technique project, it is apparent that the first key step here was to identify the key aim (step 1). Hughes chose to approach experts in information literacy. In this project, the appraisal of the literature on information literacy sums up expert views, and therefore provided the basis for the establishment of the key aim. Another library research project to use the critical incident technique implies that this approach is valid (Radford 2006).

Further to this, peer review from a university pedagogic research group was sought in line with the reflective approach outlined in the methods and linking to dialogic validity within this action research project (Herr, Anderson 2015):

> I gave an account of my research far to the[…]group, with particular reference to the use of the Critical Incident Technique for my data collection and analysis. The attendees included a Pro Dean, the Director of Academic Development, an academic in Education, a study development tutor with a PhD and an academic in Business Management[…]There was agreement generally that the use of the approach was appropriate for the aims of drawing out aspects of information literacy without asking direct questions[…]that may influence the responses. (Reflection 10.03.17)

The key aim from this technique's use in the interview phase was therefore to uncover where and how information literacy concerns are experienced by academics at York St John University, linking to research objectives 1 and 2.

It was believed that the later iterations of the critical incident technique (e.g. Hughes 2007, Radford 2006) would allow participants to recall and recount their experiences of teaching and assessing level 4 modules, so the 'incident' is spread over a semester of teaching, without undue influence of direct questioning on the particular points of information literacy. In this, just one specific question was prepared in advance of an interview, to prompt these recollections (Figure 2). The pilot phase allowed the testing of this, with more questions to be added if it proved that it was not enough to garner enough information for analysis.

Please describe your experience of delivering and assessing this module, specifically in relation to the learning outcome or aim of…

Figure 2: Proposed question to be asked at the beginning of each interview

3.3.1.2 Pilot phase

A pilot phase of interviews took place to test out the critical incident technique. The participants in the pilot interviews were chosen because they delivered level 4 (year 1) modules which had learning outcomes linked to information literacy. These identifications were made using the analysis of alternative terms for information literacy, in other subject areas and professions, identified in the literature review, and searching the university's virtual learning environment for module documentation contents.

Learning outcomes for the module chosen for pilot interview 1:

- Understand key theories and principles at a basic level mostly from recommended sources and make sound judgements in accordance to these;
- Demonstrate the ability to synthesise mathematical learning opportunities that support learning and teaching of mathematics;
- Organise and evaluate these mathematical learning opportunities in relation to effective pedagogy within a school setting;
- Communicate effectively using academic conventions appropriate to level one.

Learning outcomes for the module chosen for pilot interview 2:

- Describe the principles of evidence-based practice;
- Demonstrate knowledge of different types of evidence;
- Discuss tools and approaches to support critical thinking;
- Develop an understanding of ethical issues in published evidence;
- Demonstrate ability to find and review different types of evidence.

The two interviewees were asked to describe their experiences of delivering and assessing these modules (figures 3 and 4), in relation to these learning outcomes, in line with the critical incident technique.

Please describe your experience of teaching and assessing this module, in relation to the learning outcome of "Understand key theories and principles at a basic level mostly from recommended sources and make sound judgements in accordance to these.".

Figure 3: Question asked at beginning of interview with pilot interviewee 1

Please describe your experience of teaching and assessing this module, in relation to the learning outcome of "Demonstrate knowledge of different types of evidence" and also "Demonstrate ability to find and review different types of evidence.".

Figure 4: Question asked at beginning of interview with pilot interviewee 2

It was the case in both pilot interviews that this initial question prompted an extended answer, with little or no intervention from the interviewer. Each spoke for approximately 20 minutes with no need for a follow up question. When additional prompts were needed from the interviewer, they were related to how

to assess the learning outcome(s) in question, as the initial focus was upon the teaching of them.

The critical incident technique of asking interviewees to reflect upon their experiences of delivering and assessing specific modules did prove useful in drawing out examples of information literacy in the curriculum without the need to use the language linked to this area in the library and information science literature on the topic. For example, the concept of understanding and articulating the values and beliefs inherent in the process of information creation and production was expressed in the interviews as "getting them to understand that that is someone's point of view, somebody's interpretation, of that research. And that even the research itself is an interpretation of somebody's views about the[…]data[…]so engaging with that." (Pilot interview 1).

With the critical incident technique, the key aim needs to be linked to expert views. In this project, it was believed that these expert views could be gained from the literature, and that the aim of uncovering where and how information literacy concerns are experienced by academics at York St John University should be elicited. It proved to be the case that these concerns were indeed elicited, using the critical incident technique, in both of the pilot interviews. This indicated that it was an approach worth pursuing in the interviews with academics from across the institution.

Initial analysis of the interviews was linked to the concept of information literacy as outlined in chapter 2:

The library skills needed to undertake academic research (as expressed in the skills models), but with an emphasis upon ensuring that any researcher, staff or student, is aware of the specific landscape in which their use of information takes place – that of their university and the higher education landscape in the United Kingdom (and the political and social impact this has), how this relates to their experiences beyond this situation, and in working with the researcher to develop their agency to pose key research questions for themselves.

Both interviewees expressed concerns and values linked to all of the traditional skills from the SCONUL model (SCONUL Working Group on Information Literacy 2011). There was therefore evidence to suggest that there are shared concerns,

in different subject areas, linked to information literacy and that this was worth investigating further (appendix 6.3).

The pilot interviews indicated that evidence of information literacy in its traditional, skills-based, form can be found using the critical incident technique, and that there are concerns common to two different subject areas. However, as was shown in the information literacy part of chapter 2, this is a traditional and out-dated view. If a community of practice was to be sustainable, some members would need to be engaged with the emerging forms of information literacy and the analysis of the interviews needed to reflect that. Analysis from these pilots, identifying emerging information literacy concepts in the approaches and practices of the academics, revealed that one of the interviewees was engaging with them, but there was little evidence of them in the other. There was a difference in the two areas.

Whereas there were indications that interviewee 1 used approaches to information literacy that link to the emerging concepts of information literacy, there was little in interview 2 from this perspective. However, given the shared values from the traditional view, there is an argument in pursuing a community of practice approach. There are shared concerns in these two different areas, and there may be scope for one to learn from the other.

At the end of this pilot phase, it was concluded that the pilot interviews did provide evidence to indicate that it was worth investigating shared concerns and values in information literacy amongst academics in this community; that it was possible a community of practice would be discovered. It was established that the critical incident technique provided a suitable method of obtaining the experiences and views of the interviewees, without explicitly asking for them. They also indicated that the particular concerns were likely to be of differing importance, which would be interesting to analyse according to subject area and academic school.

There were indications, therefore, that following this approach to interviewing and analysis would prove an effective method for the main set of interviews, and that they should yield both evidence of shared information literacy values and inform a set of survey questions for the questionnaire stage of the research. However, the approach to analysis, in terms of information literacy concerns,

needed to incorporate both traditional and emerging aspects. This indicated that it would be best to employ a thematic analysis approach in identifying aspects of information literacy, incorporating a mixture of the existing frameworks and emerging approaches; it would be too restrictive to use just one framework. There was a need to root the coding in the existing theory and be informed by the prior research that has been identified though, as this has formed the aims of the project and is a key aspect of the critical incident approach. As recommended by Boyatzis (1998), coding would be theory-driven; informed by previous research but not taking one set of previously established codes and reapplying exactly.

The one area that was not clear in the pilot interviews was the interviewees' willingness to take part in a community of practice. As a reflection from the time stated:

> There is no evidence of a willingness to enter into a collaborative, cross-community approach. With neither did I get any clues as to the form my action of providing a platform for information literacy development should take. (Reflection 08.02.17)

Therefore, although the approach of the critical incident technique appeared appropriate in garnering evidence linked to information literacy approaches, a more direct question about the community of practice implementation and participation needed to be added at the end of the interview. This was to ascertain a willingness to take part (or not) and the form the participants thought the community of practice should take; online, face-to-face, or both; synchronous, asynchronous, or both (Wenger, White et al. 2009).

3.3.1.3 Participant identification

Academics from each of the 9 schools at York St John University were approached for interview. Possible participants were chosen if they had taught on level 4 modules with learning outcomes linked to information literacy, identified from information in module outlines on the virtual learning environment (see Table 2 for the specific learning outcomes). They were approached by email and participants from 8 of the 9 schools were found. The 9th school (Art, Design and Computer Science) proved problematic as all academics who fit the criteria were approached, but only one showed interest and then a date for the interview was never finalised. The need to investigate this further was noted:

> It has been suggested by another researcher that it may be worth looking at any existing evidence as to whether Arts subjects have reasons for not engaging with pedagogic research, and if there are any theories as to why this is the case. (Reflection 11.05.17)

A separate research project, looking into engagement with this academic school, has since been carried out by the academic liaison librarian who is responsible for working with its members, and its outcomes will feed into the community of practice (Peach 2019). This concluded that there may have been a problem with initial engagement, as information as a concept was rejected, with knowledge and materials favoured instead. This will be further reflected upon in chapter 4.

Each interviewee was asked an initial question of "Please describe your experiences of delivering and assessing this module, with respect to the learning outcome/aim of…" followed by the learning outcome or aim detailed in table 2. Each interviewee answered fluently and fully for at least 20 minutes with just this prompt. Follow-up questions were used when the flow of the first answer stopped, based upon the context of the information given by the respondent. In some cases this shifted the focus from delivery to assessment of that learning outcome or aim, as this was missing from the response so far. For example, in the School of Education interview, some allusion had been made to a lack of connection between the learning that took place for the first assessment in the module and the second one, later on. As a result, the interviewee was prompted to discuss this further:

> So there's an indication there that even when the formative assignment, or the first stage of an assignment, in the module is designed to lead to the second one, there's still some students that aren't making that leap. Can you please expand on that? (Interviewer in School of Education interview).

In other interviews, follow-up questions were based on the clarification of a point about student learning:

> Can you please describe more about that idea of encouraging the students to take responsibility for their own learning and identifying what else they need to access in order to be a more effective learner? (Interviewer in School of Humanities Religion and Philosophy interview).

More examples of the follow-up questions asked can be found in appendix 6.5.

All interviews took place after the teaching of the modules to be reflected upon had taken place. This meant that the assessments linked to those modules would have been completed, but would still be fresh in the memory, fitting with the critical incident technique approach (Flanagan 1954). Reflection took place throughout the process, in line with the action research methodology chosen and the reflection method outlined in more detail in section 3.5.1 of the thesis (Sen, Ford 2009).

Table 2: Academic Schools and the learning outcome/aim linked to information literacy, identified through module specifications

School	Key aim/learning outcome linked to information literacy
Business School	Access information relevant to the study of business management and use appropriate referencing systems.
School of Education	Understanding what makes a good information source and how literature contributes to the learning process.
School of Humanities Religion and Philosophy	Accessing primary and secondary sources using electronic searches in order to identify and explain key themes and approaches to the study of (programme subject focus).
School of Health Sciences	Acquiring study skills and practical skills.
School of Languages and Linguistics	Demonstrating academic literacy and communicating ideas and arguments in a manner appropriate to the context and audience.
School of Performance and Media Production	Evaluate performances as visual and textual artefacts within a historical and practice context.
School of Psychological and Social Sciences	Exhibit a familiarity with a variety of methods of data collection that are employed in (programme subject focus) research.
School of Sport	Explain how the history of sport has shaped its contemporary form

In addition to the interviews with academics, further interviews took place with representatives of the library service; with one other academic liaison librarian (occupying the same role as the researcher) and with a digital trainer (whose role involves supporting staff and students in the use of software). This was to establish whether there was scope to include these support services in the community of practice. Further to this, it helped ensure that the academic voice was not privileged to the detriment of other interested and important parties in curriculum design, in line with the critical information literacy theory which

acknowledges that existing power structures have a great impact on information publication and availability (Elmborg 2012). All interviews took place on the York St John University campus, in teaching rooms not linked to the library, so that recollections were not unduly influenced by the setting.

3.3.1.4 Initial coding themes

A thematic coding process took place, with its roots in the concepts of information literacy outlined in chapter 2. Any mention of traditional library skills (SCONUL Working Group on Information Literacy 2011), engaging with and navigating the research process in higher education (Secker, Coonan 2014), understanding the different information sources and experiences a student will have encountered, or is encountering, due to the social situation (Lloyd 2010) or putting the student at the centre of the learning experience and acknowledging the power structures at play in any information use (Elmborg 2012) were highlighted and formed the basis of the analysis. It was also informed through the research of others in terms of looking for aspects of social learning and learner agency, linking to information literacy:

> I have just watched a webinar by Emma Coonan (Coonan 2017) on […] the notion of information literacy as situated practice, as culturally and socially dependent on the situation in which it is 'taught'. She also links this to the role of the librarian in its teaching/delivery/design. This has led me to think about how my evidence links to this overall debate. […] When analysing the interviews I am going to look for evidence of academics empowering learners, and allowing the co-construction of knowledge. (Reflection 03.03.17)

Through a number of revisions of the interview transcripts, key themes were identified inductively, as outlined by Boyatzis (1998). This helped to address the issue highlighted in reflections that some instances seemed to fit more than one code when doing the first analysis:

> I have completed the first set of codings of the interview transcripts. […] I found it difficult to assign some of the data to codes as they could fit into more than one, particularly in terms of the agency for search and evaluation sitting with the student vs development of academic voice. (Reflection 18.05.17)

This was addressed using the approach of Boyatzis (1998), who specifically recommends not only finding examples of data that does fit the code, but also

being explicit about why a piece of data would not fit it and is better placed elsewhere.

3.3.2 Survey design

The survey was designed based on the outcomes of the interviews and also followed the principles of the critical incident technique (Flanagan 1954), in that the participants would be asked to reflect upon their experiences of teaching level 4 modules. The content of the questions relates to the examples and themes which emerged in the transcripts and coding. The factors measured in the survey, as outlined in the interview analysis chapter, were:

Teacher/practitioner approach
Student-centredness linked to information literacy
Social/active learning as a pedagogic tool linked to information literacy

Student competencies
Contextualising the literature/information
Developing a position based on the evidence and communicating this

3.3.2.1 Other questions the interviews raised

One of the respondents (School of Sport) linked their use of active and social learning techniques to having completed a Postgraduate Certificate in Academic Practice course (leading to fellowship of the Higher Education Academy). Given that all new members of teaching staff are automatically enrolled on this course, and it has a central element of social learning in its own teaching and assessment methods (York St John University 2019b), it was thought useful to explore whether an association between the use of these techniques and having completed such a qualification is evident, via the survey. This could then facilitate links between the library and the designers of the postgraduate certificate.

As also outlined in the results chapter, social/active learning techniques seemed to be employed for two reasons, but it is not clear from the transcripts if the interviewees employed them with a specific aim in mind. One was to ensure peer learning took place in relation to specific resource evaluation and use. The other was to foster a greater sense of community amongst the cohort (for

support/pastoral reasons), with no explicit learning outcome expressed. It was decided it would be useful to establish which, if either, is the most common aim amongst the academic population. This particularly links to the issue of considering the landscapes from which the student has arrived in higher education, and understanding the political and social structures which will have affected their experiences, and will continue to affect them. This in turn could inform the content of the community of practice in surfacing practice which is helping to inform programme and module design and teaching in this respect.

3.3.2.2 What were the questions the survey needed to answer?

Taking the themes from the transcripts of the interviews, there were four key questions which the survey needed to answer in order to identify whether a community of practice in information literacy was evident, or if there was a basis upon which it could grow, and the aspects of information literacy reflected in this.

1. Can particular approaches be identified amongst practitioners?
2. What are the characteristics of these approaches?
    a. Are they process driven? (i.e. in module design and assessment focused?)
    b. Are they person driven? (i.e. emerging from the individual values and priorities of the academic?)
3. Is the approach taken related to the academic school to which the academic belongs?
4. Is the approach taken related to the educational background of the academic? (e.g. have they done a pedagogic qualification?)

Questions 1 and 2 looked at theory generation and were explored via a descriptive analysis of the survey results. They helped identify themes and the aspects of information literacy which are most prominent in the university and its schools and where they are shared.

Questions 3 and 4 linked to person-driven analysis. They aimed to discover whether a connection could be found between the academic school to which the academic belongs and the priorities given to particular aspects of information literacy. Similarly, it was asked whether there was a connection between the

level of pedagogic research or educational research previously undertaken and the priority given to particular aspects of information literacy.

The questions in the survey were built from the responses gained in the interviews, and associated module documentation. This is especially true of content such as example learning outcomes (question 12) and assessment priorities. The survey also needed to ask whether the academic was interested in taking part in the online community of practice, to obtain a list of initial members for communication and meetings.

The survey was built in, disseminated from, and results analysed in the Qualtrics online survey tool. This is a password protected service in use at York St John University for internal and external surveys. The full survey can be found in appendix 6.8, and an overview of how each question links with the theme elicited from the survey is outlined in Table 3.

(NB The Qualtrics survey tool assigns question numbers to text box inputs as well as questions, so any missing numbers are linked to text explanations and instructions.)

Table 3: Overview of survey content with relevant themes addressed

Survey section	Specific question reference	Theme(s) addressed	Content of question
Respondent information	Q.3		To establish length of service in HE
	Q.4		To establish length of service at York St John
	Q.5		School affiliation
	Q.6		Pedagogic qualification
	Q.7		General qualifications
Academics' research preferences	Q.9		Establish if generally work alone or in groups, if does own info searching
Course design	Q.11	Establish if process-driven aspects were linked to personal values of academics	Did academics design module
	Q.12	Contextualising the literature/ information. Developing a position based on the evidence.	Identification of learning outcomes linked to both traditional library skills and emerging information literacy
Course teaching	Q.14	Contextualising the literature/information.	Tools academics expect students to use.
	Q.16	Student centredness linked to information literacy.	Value of students' previous experiences.
	Q.17	Social/active learning as a pedagogic tool.	Use of group work.
	Q.18	Social/active learning as a pedagogic tool.	Reasons for not employing group work.
	Q.19	Social/active learning as a pedagogic tool.	Reasons for employing group work/

Survey section	Specific question reference	Theme(s) addressed	Content of question
Course teaching (continued)	Q.20	Student centredness linked to information literacy. Contextualising the literature/information. Developing a position based on the evidence and communicating this.	Linking teacher values to student competencies.
	Q.21	Student centredness linked to information literacy. Developing a position based on the evidence and communicating this.	Linking teacher values to student competencies.
Overall approach to teaching	Q.22	Student-centredness linked to information literacy. Social/active learning as a pedagogic tool linked to information literacy. Contextualising the literature/information. Developing a position based on the evidence and communicating this.	Discovering which of the four key themes is most important to the individual.
Course assessment	Q.24 Q.25 Q.26 Q.27 Q.28 Q.29	Student-centredness linked to information literacy. Social/active learning as a pedagogic tool linked to information literacy. Contextualising the literature/information. Developing a position based on the evidence and communicating this.	All of these on assessment. Included in case clarification on course design needed.
Collaboration	Q.31 Q.32		Course design collaboration already in evidence.
	Q.33		Course delivery collaboration already in evidence.
	Q.34		Willingness to pursue community of practice.

3.3.2.3 Survey dissemination and response

The survey was sent out via all-staff email lists, with a request to take part if the academic had taught on level 4 modules in the 2016/17 academic year. It was sent out at the start of the 2017/18 academic year, when memories were still fresh and revisions to those modules taking place, ready to teach again. There were two calls to take part. Further to this, it was disseminated via a mailing list for a York St John educational research group, and via individual academic liaison librarians, to academics they thought would be interested. The survey was open for three months.

There were 61 responses, of which 55 were complete. The figure of 61 is a 26% response rate, the figure of 55 is a 24% response rate, from the population total of 232 (see Table 4).

Given that there was a set population which could be surveyed of 232, it was acknowledged from the beginning of the survey process that even a high response rate would give low figures from which to report. As this was one stage in a wider action research and mixed method methodological approach, it was decided to progress on this basis. The aim of the survey was to try and identify indicators of shared practice and values related to information literacy in order to inform the action part of the project: the community of practice. The survey results were to be used in order to identify possible shared concerns and teaching practice; they were not ever intended to produce results which could be analysed in depth to find statistically significant outcomes by academic school or educational qualification. With this in mind, the results are presented in percentage format in order that the indicators of priorities and values for the community of practice can be identified only.

The survey as designed could, in future, be disseminated further in order to perform statistical modelling such as regression and correlation testing to indicate practice by academic school. This would require a higher sample figure than here, so would require broadening out to other academic staff who taught on other levels, and a longer survey period. This was not appropriate in this study as the priority was garnering indicators for the community of practice content and membership, and there was a time pressure for the introduction of

the community of practice itself, if there was sufficient indication that one was in place and which could, therefore, be facilitated.

All results are reported with percentages to the nearest whole figure.

Table 4: Total responses broken down by School/Dept

School/Department	Eligible respondents	No. of responses	% response
School of Art Design and Computer Science	12	1	8%
School of Education	26	9	35%
School of Health Sciences	30	5	17%
School of Humanities Religion and Philosophy	45	16	36%
School of Language and Linguistics	20	2	10%
School of Performance and Media Production	38	4	11%
School of Psychological and Social Sciences	24	3	13%
School of Sport	16	5	31%
York Business School	16	5	31%
Information Learning Services	5	5	100%
TOTAL	**232**	**55**	**24%**

There were no responses from other departments who teach on first year modules. Of most interest here is the study development team, who provide input on academic writing and learning development. They were all eligible to take part, and this was explicit in the email invitation. Their input is valuable as, like librarians, they are part of the professional academic support on offer to students. As their views have not been garnered by the survey, efforts were made to ensure they were informed of, and included in, the eventual community of practice.

3.4 The action: implementing a community of practice

Any action research project requires an intervention to take place and its outcomes evaluated in relation to the improvement in practice of the researcher (McNiff 2010b). Here, the outcome of the investigation into the academics' values and concerns about information literacy was the implementation of a

community of practice. The form of the community of practice was driven by the results of the interviews and survey, as was content it covers. It could have been online, or face-to-face, or both. It could have been synchronous, or asynchronous, or both. To provide a long-term evaluation of the community of practice would be beyond the scope of this project, in which the first action implemented is the carrying out of interviews and the survey and to use the evaluation of that stage to inform the community of practice. However, initial reflections from the researcher, and members of the community of practice, are included, to give an indication of where future developments may lie. These are centred on specific examples of information literacy curriculum development which have arisen from the work of the community of practice and which are likely to have long-term effects. Indications from previous studies to employ communities of practice are that this is a worthwhile endeavour and that long-term benefits have been evidenced (Cochrane 2010, Cochrane 2014, Nixon, Brown 2013). Further to this, projects linking to the York St John curriculum which emerge from the community of practice will be outlined in chapter 4 showing impact in terms of outcome validity, catalytic validity and process validity.

The survey question about the wish to take part in a community of practice garnered a positive response from 43 of the 61 academics who responded. Of these, 32 left email addresses to find out more. There was a wish for an online platform, as well as face to face meetings, thus the facilitation was designed in light of this, offering synchronous and asynchronous interactions, in line with Wenger, White et al.'s (2009) recommendations. Initially a face-to-face meeting of one hour was organised, with follow up notes and discussions posted in the online site. From options of content offered, the preferred ones were of case studies from both York St John University and other institutions. It was also deemed important to reflect the student view.

The decision about the best way of hosting and designing the online platform was taken in conjunction with academic colleagues at the first community of practice meeting, and informed by the survey answers. It was recognised that it needed to be accessible both internally at York St John University, and externally, to allow those who may not yet have access to the university systems (e.g. visiting lecturers) legitimate peripheral participation. It was also the case that members

of the community should be able to create content for it, and not have to rely on the facilitator to do so, so that the power dynamics of the academic librarian 'owning' information literacy in universities are disrupted, and that the power structures involved with academic publishing are uncovered and challenged, in line with the recommendations of Badke (2017) and Gustafson (2017). Finally, it needed to be removed at least a little from the traditional institutional systems already in place and on offer, as the importance of an 'other' space in which to work is valuable in allowing members the freedom to admit what they do not know without fear of judgement from the institution (Rand, Haines Lyon et al. 2016). The researcher's reflections from the point of reading this paper further elaborate on this:

> I read this paper[…] It gives a justification and philosophical explanation of why a third space, somewhat removed from the neoliberal HE institution, is important in the development of people's identities as researchers. This made me consider the reasons why I thought it was important to have my online community of practice held in a space which isn't entirely connected to the university. (Reflection 10.08.17)

It was decided to host the online community of practice on an institutional WordPress blog, after feedback was gathered from members of the new community of practice. This allowed for a website to be created that could be accessed by anyone, but rooted in the institution at which the research had taken place and which linked the community members. Further to this, plug-ins were available which allowed members to submit content themselves. This content could then be edited and categorised by the facilitating librarian, to allow anyone visiting the site to find this information as easily as possible. Further advantages of this platform were easily installed statistics plug-ins, to track engagement, and the fact that it could be exported from this institutionally hosted option to the generic WordPress platform if it ever needed to be transferred.

It had originally been planned to use WikiSpace to host any documents associated with the community of practice, and have these fed through to the WordPress blog as the front end service where these could be searched for and read. However, the WikiSpace service was discontinued early in the online community of practice platform design phase. It was then decided to use

WordPress for everything, due to its sustainability – everything can be exported and hosted elsewhere if necessary.

3.5 Ethics

The research plan was submitted to go through established ethics procedures at both the university through which the research is being examined, and at the university at which the research took place. No conflicts were raised and the information about the research has been saved in both places. No objections were raised about naming the institution, and as the name of the researcher and links to their role are easily available on the institutional website, it was decided to go ahead and make that information available. There is a precedent for this in similar studies (e.g. Farrell, Badke 2015, Moselen, Wang 2014, Torres, Jansen 2016). All participants were informed that their individual details would remain anonymous, but that analysis would take place at the level of academic school and this would be revealed. They had the option of withdrawing consent and any data collected from them at any point. All data collected was kept on a secure, password protected server, with default access for the researcher and supervisory team only, or on individual devices with appropriate encryption and password protection. Any transfer of data took place via an encrypted memory stick.

3.5.1 Acknowledging bias and ensuring validity

Given the context, and the position of the researcher within this project, the issue of bias must be addressed as part of the methodology. When the researcher is part of the practice being investigated, as is happening in this research, traditional approaches to eliminating bias do not apply – the author cannot place herself outside of this research and the objectives directly relate to her own practice. Instead approaches such as self-reflection and peer-review are embraced in order to interrogate the beliefs and position of the researcher. In this instance, this includes reflection upon the researcher's position on information literacy and how this could impact on participants in the research, and also in obtaining peer review at conferences and meetings on potential research methods and approaches.

Furthermore, of applicability to this study is its acknowledgement of the importance of the social structures within which the interviewee works, and that the focus on practice allows for this to be considered in the data collection and analysis. In doing action research for this project, the researcher is looking to improve her own practice but also look at shared values in information literacy across the university, regardless of position in the academic school or department. It is important for the researcher to not impose a pre-established view of information literacy upon the participants, but that the areas of concern such as societal and structural influences upon teaching and learning, as espoused in critical information literacy (Elmborg 2012) are acknowledged in the design of the research. Mixed methods helps to do this in using a variety of approaches to investigate the issue, allowing input from a variety of perspectives.

Using Herr and Anderson's concept of positionality (2015), the researcher's relationship to the setting, participants and results can be acknowledged, and incorporated into the design and analysis aspects of the project. The positions range from 'Insider researcher' where one studies one's own self and practice, aligning with narrative research and autobiography, to 'Outsider studies insider' where the researcher begins outwith the subject organisation (Herr, Anderson 2015, pp.40-41). This project saw the researcher positioned as 'Insider in collaboration with other insiders' as there are other members of the organisation who would be involved with the action put in place, i.e. the researcher is collaborating with academic and professional colleagues as part of the same community. The key interventions for ensuring bias is acknowledged and appropriate checks put in place for this involved the building in of self-reflection to the methods and allowing for peer review (see McCluskey Dean 2016, McCluskey Dean 2017, McCluskey Dean 2018c, McCluskey Dean, Peach et al. 2018 for specific examples of formal platforms to gather peer review), along with the use of traditional qualitative and quantitative data gathering.

In order to keep a check on the bias that insider-research has by its nature, self-reflection took place as soon as the research began and continued until the end of the project, as recommended by Herr and Anderson (2015, p.4),

> The notion of reflexivity is crucial because action researchers must interrogate received notions of improvement or solutions in terms of who ultimately benefits from the actions undertaken.

The practical self-reflection model chosen as most appropriate for this study was the SEA-change model, specifically designed and tested for reflective practice in libraries (Sen, Ford 2009, McKinney, Sen 2012). It has three core process elements

S – Situation; a consideration of the situation.

E – Evidence; consideration of the evidence used during the practice of reflection.

A – Action; action needed as a result of what has been learnt from the reflective process. (Sen, Ford 2009, p.181)

This allowed for short (the average length of reflection in the research carried out by Sen and Ford was 324 words) but targeted reflections to take place throughout the project. Excerpts from these are interspersed throughout the thesis, and a reflective overview of the learning of the researcher as revealed in these reflections is included in chapter 5, linked to how the research has led to the education of the researcher and Herr and Anderson's (2015) catalytic validity.

Table 5: Herr and Anderson's validity criteria

Goals of action research	**Quality/validity criteria**
1. The generation of new knowledge	Dialogic and process validity
2. The achievement of action-oriented outcomes	Outcome validity
3. The education of both researcher and participants	Catalytic validity
4. Results that are relevant to the local setting	Democratic validity
5. A sound and appropriate research methodology	Process validity

(Herr, Anderson 2015, p.67)

As was explained previously, this research sees the author positioned as part of the research process. This action research approach sets it apart from traditional empirical approaches in which the researcher seeks to eliminate their own influence in a research situation. Anderson and Herr (1999) acknowledge this

and assert that, as a result, validity criteria should be different to those usually accepted in positivist research (although no less 'valid' as a result). They suggest linking such criteria to the goal of the research (Table 5).

Process validity takes problems and resolutions and links them to ongoing personal or organisational learning. Outcome validity measures the actions taken and the extent to which the original problem is resolved. Catalytic validity is concerned with the extent to which the researcher is willing and open to re-considering their view of the practice landscape, and of their own role. Democratic validity concerns relate to the inclusion of all stakeholders in the practice environment. The researcher must choose and defend the validity measures most appropriate for their needs (Herr, Anderson 2015, pp.67-70).

This research was predominantly measured in terms of outcome validity (asking members of the community of practice whether the proposed staff development input be successful in furthering information literacy in the curriculum at York St John), although issues of process validity (in terms of organisational learning) and catalytic validity (the repositioning of the researcher's librarian role and her own learning) were also considered, the latter being evidenced by the researcher's reflections and initiatives in the local setting which were influenced by the researcher's developing understanding of information literacy and its place in this particular workplace.

3.6 Overview of methodology

In investigating the state of the current information literacy landscape at York St John University, it had to be ensured that the researcher did not impose any pre-set ideas of structure or implementation on the participants, as far as was practically possible. The researcher believed it to be the case that there were shared values and concerns linked to information literacy in place across the university, but this was based upon anecdotal evidence and experience that had been documented in various ways such as emails between members of staff, and minutes of departmental meetings. The researcher also believed that there was established practice linked to traditional information literacy (i.e. library skills) across the institution, with pockets of practice which linked to the emerging forms of information literacy, acknowledging landscapes of information (Lloyd

2010) and critical information literacy (Elmborg 2012), but again there was no research evidence to back this up. In employing action research, it was possible to research this, and from it find real-world solutions to further the aims of embedding information literacy in the curriculum via investigating the practice and values of academics and other professional staff, and producing some form of staff development for them, in order to link information literacy to curriculum design.

Within the chosen methodology of action research, mixed methods were used, with each research objective being investigated with an appropriate and individual approach.

1. Suitable modules (and academics working on these) for investigation were identified through learning objectives and aims associated with the outline of information literacy in the literature review. These individual academics (one per School) were interviewed, using the critical incident technique (Flanagan 1954), to identify terminology and concerns about information literacy in their subject area and experience. This links to objective 1.
2. The outcomes of a thematic analysis of the interviews formed the content of a survey sent to all academics at York St John University who had taught on level 4 modules, to ask their experiences of delivering or designing information literacy content in the curriculum. This was to establish whether the experiences and opinions of the interviewees could be found to be representative of those across the institution. This links to objective 2.
3. The survey results were analysed using descriptive statistics, in order to link these to objective 3; to locate a community of practice, if it was in place, and to find the key values and experiences shared by this community.

From these investigations, a community of practice was identified, providing the action in this piece of action research (objective 4).

4 Results and analysis

This chapter focuses on both the qualitative and quantitative phases of the data collection and analysis, which involved interviews and a survey with academics and professional support staff, followed by the action put in place (the facilitation of a community of practice in information literacy).

The interview phase explored the terminology, meanings and values used by academics from different subject areas when describing issues linked to information literacy, and examined examples of their own practice, aligning to traditional or emerging (or both) information literacy perspectives, in the teaching and assessment of modules. In addition, further interviews took place with representatives of the library service, an academic librarian (occupying the same role as the researcher) and a digital trainer (professional whose role is to help staff and students in their use of software, often linked to academic assignments) in order to explore the perspectives of support services.

The intention of the survey was to establish how academics experience and evaluate information literacy in their teaching practices across the university (objective three) and find out the extent to which there was evidence of emerging forms of information literacy in the practice of academics at the institution, or if there was a foundation of traditional information literacy approaches upon which more emerging forms could be built. More specifically, the survey was designed based on the outcomes of the interviews, both in terms of the themes covered and the language used in the specific questions, and it was designed in order to explore whether the survey findings confirmed or challenged the results garnered from the qualitative interviews. Finally, the survey aimed to ascertain whether there was already a common ground in information literacy provision, embedded in the curriculum in different academic schools, that could form the basis for a community of practice and, if that was the case, to explore the design and content it should have in order to further develop.

The outcomes of both phases of data collection informed the design and the content of the community of practice, which formed the action research component of this study. The purpose of this action was to bring together staff

members from across the university with a view to developing and discussing views and teaching related to information literacy, and therefore changing curriculum content and design as a result of this social learning.

4.1 Qualitative phase: interviews

The interviews took place with academics who had taught on level 4 modules of undergraduate programmes in the academic session 2016/17, and represented 8 of the 9 academic schools. Participants were approached by email and were chosen only if they had taught on these level 4 modules with learning outcomes linked to information literacy. These were identified from information in module outlines on the virtual learning environment.

In 5 of the 9 schools, the first academics approached responded positively and so no further requests were made from these. In a further 3 schools, 3 potential interviewees were approached before a positive response was achieved. In the final school, 4 academics were approached, one responded positively, but then did not reply to requests for a suitable time for the interview to take place, leading to a lack of representation from that one school.

The participants were interviewed about their experience of teaching information literacy related modules just after the assessment phase of these had been completed, in line with the critical incident approach (Flanagan 1954). The interviews took between 30 and 60 minutes each and took place on the York St John University campus, but not in the library building. The interviews with academics all occurred over a 3 month period, February-April 2017 (see appendix 6.5 for the exact details of time and location of each interview).

As mentioned above, additional interviews took place with another academic liaison librarian and a digital trainer, both from Information Learning Services (library services), to establish their experiences and views in addition to the academics. They took between 30 and 60 minutes each and in campus rooms, as with the academics, between February and July 2017. Again, each of these was the first to be approached and both responded positively. This was to establish whether there was scope to include these support services in the community of practice.

The interview transcripts were analysed thematically, drawing out examples linking to information literacy in both its traditional and emerging forms, as outlined in chapter 2. They were informed by traditional research skills (SCONUL Working Group on Information Literacy 2011), navigating the research process in higher education (Secker, Coonan 2014), understanding the different information sources and experiences a student encounters (Lloyd 2010), and putting the student at the centre of learning and acknowledging power structures at play (Elmborg 2012).

4.1.1 Analysis of interview data

At the outset of each interview, the participants were asked to reflect upon their experiences of teaching and assessing the learning outcomes of the level 4 modules they had taught (see appendix 6.5). The learning outcomes from particular modules were selected by the researcher on the basis that they were closely aligned to information literacy. In each academic school, more than one module across level 4 was found with learning outcomes and aims linked to information literacy. Priority was given to those which specifically mentioned an aim of linking study skills or research skills to subject study in its module name, and these were the leaders and tutors approached in the first instance. If there was no response, or the request for interview was declined, tutors from other modules with examples of outcomes linked to information literacy were approached. These were generally modules giving an overview of the subject being studied, with outcomes linking to key research approaches in that subject area. The module names are omitted as these are publicly available and would provide an opportunity to identify individuals and risk breaking anonymity. However, it can be stated that there were examples of terms found in the literature search of the journal articles linked to those subject areas, including evidence-based practice and reflective practice, in the module titles or key descriptors. The results of the search carried out in section 2.2 proved central to locating the modules in a search of the virtual learning environment.

The aim or learning outcome was taken directly from the module specification for the course they had taught (see Table 6). It can be seen that several link to skills such as referencing, searching for information, or communicating ideas, which align with traditional information and library skills. Others mention study or

research skills more generally. Two of them (School of Sport and School of Performance and Media Production) seem to align with critical information literacy in mentioning resources in historical context.

Table 6: Academic schools and the learning outcome/aim linked to information literacy, identified through module specifications.

School	Key aim/learning outcome linked to information literacy
Business School	Access information relevant to the study of business management and use appropriate referencing systems.
School of Education	Understanding what makes a good information source and how literature contributes to the learning process.
School of Humanities Religion and Philosophy	Accessing primary and secondary sources using electronic searches in order to identify and explain key themes and approaches to the study of (programme subject focus).
School of Health Sciences	Acquiring study skills and practical skills.
School of Languages and Linguistics	Demonstrating academic literacy and communicating ideas and arguments in a manner appropriate to the context and audience.
School of Performance and Media Production	Evaluate performances as visual and textual artefacts within a historical and practice context.
School of Psychological and Social Sciences	Exhibit a familiarity with a variety of methods of data collection that are employed in (programme subject focus) research.
School of Sport	Explain how the history of sport has shaped its contemporary form

4.1.2 Initial coding themes

The transcripts of the interviews were analysed in relation to information literacy. The interviews were designed to help address objective two, so to answer questions in relation to the terminology, meanings and values assigned to information literacy in the practice of the participants. Further to this, linking these examples to either traditional, social-construction or critical information literacy helped to answer objective two; to establish if these are evident in the practice of academics or if the foundation for their growth can be established.

A thematic coding process took place, as described in the methodology chapter. This included mentions of traditional library skills (SCONUL Working Group on Information Literacy 2011), engaging with and navigating the research process in higher education (Secker, Coonan 2014), and the emerging forms of information literacy in the form of social-construction and critical approaches.

Firstly, each mention of a concept linked to information literacy was identified in the transcripts and a brief description assigned to them by the researcher (Figure 5).

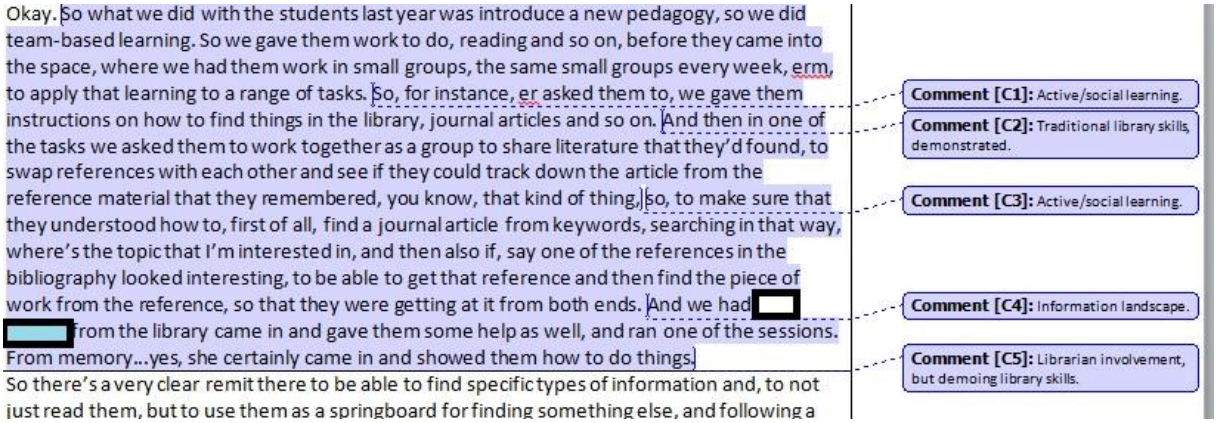


Figure 5: Example of initial comments on interview transcript

These mentions were informed by terms used in the traditional, social construction and critical information literacy literature, and by the terms found as part of the literature review, when the different professional and subject approaches to information literacy were examined. Figure 5 shows how there were mentions of giving students instructions to find things in the library, a traditional library skill with direct instruction, but then immediately follow this by a mention of a social learning activity of sharing literature, thereby possibly enabling different perspectives to be aired, which aligns with social-construction information literacy. These mentions were then reviewed and grouped into broad categories using colour coding to help visualisation (see Figures 6 and 7). Figures 3 and 4 show how the interviewee expressed a wish for the students to consider a wider landscape than just academic information, and also acknowledged that the students' own experiences may impact on how they engaged with those sources from a range of perspectives. Key examples and a rationale for each are outlined after a list of the themes is given and further examples from the interview transcripts can be found in appendix 6.6.

Figure 6: Example of colour coding of key themes – sample from core list

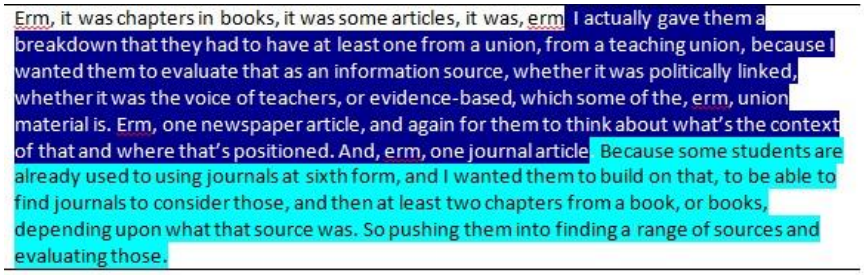


Figure 7: Example of colour coding of initial themes

In this list, each theme has been annotated as representing traditional library skills (T), social construction (S) and critical information literacy (C).

1. Examples of traditional information literacy/library skills (T)
2. Agency for search/evaluation lies with student (C)
3. Takes into account previous experiences (S, C)
4. Considers likely future experiences (S, C)
5. Social/active learning linked to information literacy (S)
6. Collaboration between academics and librarians (S)
7. Wider view of information use and evaluation than just in a university setting (S, C)
8. Information as more than traditional, textual sources (S, C)
9. An awareness of the wider information landscape (including political/social/cultural influences) (C)
10. Development of student's own academic voice (C)
11. Modelling through own academic practice (S, C)
12. Evaluation/worth of information sources (T, C)
13. Linking different academic assignments/modules (S)
14. Need for differentiation in information literacy delivery (S)
15. Information anxiety (C)

4.1.2.1 Examples of traditional information literacy/library skills

This code linked to any mention of information as outlined in the SCONUL model (SCONUL Working Group on Information Literacy 2011) and was flagged when words aligning with traditional library skills were described, e.g. directing students to use particular search tools, or asking them to learn the mechanics of referencing. If further context was supplied that placed these directions within a wider critical framework (e.g. explaining why a database may be useful, outlining its content, and what may be missing from it), this would have been placed in a different theme.

There were examples across the transcripts that tallied with the traditional information literacy approaches outlined previously in the thesis, especially if the SCONUL (SCONUL Working Group on Information Literacy 2011) model was considered. For example, there were incidences of instructing students how to access information in established sources, but not necessarily aligning that with

encouragement to evaluate what is being found or critically engage with how they are doing so:

> We gave them instructions on how to find things in the library, journal articles and so on. (Business School)

> They are set library tasks, so, you know, to go and find a piece of reading that relates to that, or to use the catalogue system, or to find something that's a hard copy of something, because I think a lot of them will, yeah they will fall back on just using the internet and not using the library's full resource. (School of Performance and Media Production)

Words such as 'instructions' and 'library tasks' tended to appear in examples, and there were frequent mentions of a catalogue search. They were often connected with academic library language too, such as 'databases', which have a specific meaning in academic libraries (search tools for finding research, usually indexes or bibliographies with search interfaces), but which in general use would be something akin to Microsoft Access.

4.1.2.2 Agency for search/evaluation lies with student, as a researcher

This theme was defined by the student being given agency for some aspect of the information search and evaluation process, and having that agency recognised by the academic. Agency is core to the theory of critical information literacy, as it empowers the person at the centre of the information experience to make their own decisions and locate their own experiences within the wider concerns (Elmborg 2012). If examples of traditional library skills were mentioned, but the emphasis was on the student being given the control in deciding what to search for, or how to search for it, they would be placed within this theme. Direct instruction with the student merely following would not.

Key examples included:

> The report was very much focused on what have you read, what have you heard, what have you thought about, what have you found in this. (School of Education)

> If you can pick up on bits and pieces like that, to push them in the right direction, oh that looks interesting, oh well done you've found a really important text there, I was hoping that's one you would find. (School of Sport)

Common approaches here included encouraging the student to focus on their own thoughts related to the information search and evaluation process. There was also an acknowledgement that the student should hear the importance or value of the sources they had found on their own initiative, to give the agency they were gaining more meaning and value to them.

4.1.2.3 Takes into account previous experiences

Again, centring the student, as with the previous theme, this one acknowledged previous experiences, taking into account the landscapes of information in line with the theory of Lloyd (2010). Examples were included under this heading if pre-university experiences, either personal or educational, were the focus.

Some referred to this in terms of feedback:

> They have very different skill-sets themselves, and very different experience before coming. The main thing that they have a problem with is the feedback and how much support, because they are so used to at school, I write it, you check it, you tell me what to change, I change it. Again, I give it to you, you change it, and give it back. (School of Health)

Others used it in terms of the content they have covered in previous educational courses:

> If they have done an A level then it's pretty much guaranteed that they've done particular practitioners, or particular theorists, which on one hand is useful in that we know what we are introducing them to is new, erm, to most of them. But I think it does make it difficult for them to transition. (School of Performance and Media Production)

In both of these examples, there is an awareness that the academic landscape in higher education is likely to be new, even if progressing from a further education environment, due to the change in emphasis on independent learning.

Part of the theory of critical information literacy is that those already within the higher education arena should acknowledge, and introduce changes to teaching approaches to account for, the structural impacts on the information experience of those coming into it. One way of doing this is to revert from a deficit model (i.e. the student must assimilate into the higher education culture, even if it marginalises them, as described by Owusu-Kwarteng (2019)) and move towards

changing the curriculum and teaching approaches to accept and incorporate a wider range of resources and experiences (Donovan, Erskine-Shaw 2019).

These examples do not indicate that there is yet evidence of this happening, but they do show that the first step of acknowledging the differences between previous experiences of education and the move into higher education. The second example especially reveals an understanding that those who have done the traditionally more 'academic' A level route into university will nearly all have studied particular theorists; those who take less traditional routes will not. This means one group is automatically privileged over others if university courses fix their teachings around that same group of theorists. This interviewee is showing awareness of this prior experience and moving to address it in their teaching practice.

4.1.2.4 Considers likely future experiences

Similar to the previous theme, these were examples of understanding that the students are not limited to the landscape of higher education, and it is vital that their experiences as part of their course also consider the landscapes into which they will emerge and encounter in their future. Examples filed under this theme include consideration of future employment, or the wider context in which research can be found, beyond a university, linking with the concept of 'everyday' information literacy (e.g. searching for health information as a patient or carer) (Martzoukou and Abdi 2017) detailed in the literature review and with Fister's (2019) assertion that there is a need to consider information literacy in both the context of academic work and with professional concerns too:

> They are very focused on, will this help me get a better mark. That's a conversation that we have a lot. And with the extra-curricular stuff, I said, well probably, it might, but what it will help you do is get a better job at the end of it all, and they've just said huh. (Business School)

> I think it was important to try and embed ideas of how research actually works in practice, rather than having it as just a, kind of, distant idea of things people do. (School of Psychological and Social Sciences)

As was highlighted in the methodology section, employability in particular is high on the agenda of universities, and many list graduate attributes to advertise the expertise that students would be expected to gain over their time with them, to

inform both students themselves and potential employers of this. The first example here is interesting as it lists some of these opportunities as 'extra-curricular', i.e. out of usual teaching, even though they were asked to reflect upon their experiences of teaching a specific academic module. Given that this account is of teaching that module, it is possible that 'extra-curricular' meant content which was not directly linked to the assignment(s), or something in supported open learning which was not compulsory to pass the module, but formed part of the learning experience within it.

Both examples have a common theme, linked to social construction information literacy, of situating information searching in more than the specific academic context of passing assignments. In this, they are vital in linking the academic experience with those students are likely to encounter in parallel to their studies, or once they leave.

4.1.2.5 Social/active learning linked to information search/evaluation

It was apparent that academics were aware that information search and evaluation does not take place in isolation, understanding that it is a social process and, as such, incorporating social and active learning in the modules that link to these processes, and linking to the social construction theory of information literacy (Lloyd 2010). Any example which focused on group learning or activity was placed here:

> And then I actually got them to do, in pairs, a short paragraph using some stuff I had given them to actually write a paragraph, so I could see if they knew what the difference was. If they hadn't got it I could then either do it with them or, if a whole group of people hadn't got it, we went back to it. (School of Humanities Religion and Philosophy)

> So in practicals we let them choose, they work in pairs and we let them choose who they want to work with. Again, they've picked that pair week 1 and they've stuck with it all the way through. They have their group chats and they talk about things on there. And it's interesting – the first year have asked for discussion boards. (School of Health)

There were differences in the approaches to this group work, and the purposes behind it. In these two cases, the first was very specifically linked to an academic task and to seek to improve academic skills. The second seems more focused on fostering group relationships and peer support more generally, and also seems to

give more agency to the members of these groups about how they would like to continue in this social approach to learning. Nevertheless, both have group learning at the centre. These differences, with a common theme or group learning, were evident throughout the examples of social learning in the interviewees' responses.

4.1.2.6 Collaboration between academics and librarians

Moving on from what the students are learning, and how this is done, this theme emerged in examples of the academics acknowledging the expertise of librarians in their teaching. There were several examples of academic/librarian collaboration over the schools:

> I mean (librarian) have taken it forward in leaps and bounds for us in (subject). Well beyond wherever we might have got on our own. And that support is really essential. (School of Humanities Religion and Philosophy)

> What we do is we have a subject librarian[…] who does two sessions with the students very early on, weeks 2 and 3 I think it is, where she talks about what referencing is, academic integrity, where you can find things in the library, what kind of things they should be doing, that kind of thing. (School of Health)

Again, this links to the social construction of information literacy as it considers the benefits of working across teams in building capacity. It aligns well with some of the issues highlighted in the literature review of particular sections of a university community not 'owning' information literacy too (Badke 2017, Gustafson 2017), with cross-departmental working offering pathways to a more institution-wide approach (Secker, Coonan 2014). In the main the examples were of inviting librarians in, as in the second example. However, as with the first example, there were other instances that suggested (although not said explicitly) that the working relationship had extended beyond that into a more collaborative approach to course design and student learning.

4.1.2.7 Wider view of information use and evaluation than university

Similar to the acknowledgement that the students will emerge into a new landscape once they finish their course, or have come in with different experiences, there were examples of threading real-life examples of information use and evaluation throughout the modules in question. Examples were filed

under this heading when the use of information in the workplace was mentioned, or in terms of examples of university research that has a connection to 'real-life' situations. It also linked to critical information literacy as it considers what is having an impact, structurally, on the information available in each of those settings:

> I actually gave them a breakdown that they had to have at least one from a union, from a teaching union, because I wanted them to evaluate that as an information source, whether it was politically linked, whether it was the voice of teachers, or evidence-based, which some of the, erm, union material is. Erm, one newspaper article, and again for them to think about what's the context of that and where that's positioned. (School of Education)

> One of the examples I quite liked was, the topic of research ethics. And the example we used for research ethics was a piece of writing […] who wrote an article about the ethical process of being rejected for a piece of research he did in which he'd handled stolen goods. And the university ethics board were understandably a little funny about the idea that it was ok for him to handle stolen goods. (School of Psychological and Social Sciences)

The concept of the 'voice' behind a source, or set of sources, was particularly evident in some instances, as in the first quote here. This links to both an appreciation that sources are produced with a variety of audiences in mind, and that these may be used differently in different contexts, as Seeber (2019) asserts; there is a responsibility to discuss and explore information and knowledge's place in society. What it also does is link to critical information literacy in terms of understanding the context in which that source has been published. The second example shows an issue raised in some interviews; that of how even academic work needs to be considered in relation to the world beyond that setting. Issues of ethics in research, linked to social sciences and health care and consideration of research subjects and the effects the results will have on another setting, provided some core examples of this.

4.1.2.8 Information as more than traditional, textual sources

There is a key aspect of Lloyd's landscape theory (2010) that critiques traditional information literacy approaches for privileging written information, giving examples across sectors which show the importance of, for example, oral information. This was also evident in the responses of some interviewees, especially in the context of performance, and all examples of information use

that were not textual were placed here, as were examples of sources that do not fall into the traditional academic sources of textbooks (and monographs, edited collections, etc.) and journal articles:

> Particularly because we call them visual and textual artefacts, so we're trying to get them to think about performances not just as things that, erm, well to understand that their study of them is always after the fact, so there's this sort of retrospective thinking. (School of Performance and Media Production)

> They would be thinking about things from a theoretical perspective, then using documentation of practitioners, and then, you know, artefacts around that. So interviews with theatre makers about certain decisions they make, or other critical texts about a particular practitioner. (School of Performance and Media Production)

Similarly, critical information literacy stresses that some avenues for publishing information restrict access to some sections of society (le Roux 2015, Regier 2018), so this links to this theme in acknowledging that textual is not always a preferred information source type (Oakley, O'Brien 2017, Tewell 2019). The reference to the decisions theatre makers make in the second example here sits within such a theme, with the interviewee expressing the view that performances can be outlets for messages that would not always have been as powerful if in the written word, with critical texts or later interviews acknowledging this. This works alongside the next theme, of the wider political landscape having an effect, as textual sources may not only be restricted by structural inequalities, but by explicit political or social instruction.

4.1.2.9 An awareness of wider information landscape

Similar to those other themes which acknowledged information use beyond the university, linking to social construction and landscapes of information, this one had examples of understanding, and portraying through their teaching, societal or political structures bearing influence on its production which reflected critical information literacy more strongly, mirroring the assertions of Beilin (2015) outlined in the literature review. Those incidences filed here included those with any reference to the history of the subject, the society in which information was produced, or politics:

> A lot of the students may be aware of a performance […] by the company, but they wouldn't necessarily know anything about its history, the context, the movement of workers theatre cooperatives, or

> of (director) at all. And so in a way it's about, not just introducing them to that work they may already know, but also to get them to start thinking about that work with information from a whole range of other things that sort of circle around it. And then to be able to evaluate the work based on that information. (School of Performance and Media Production)
>
> Drawing in wider social changes like developments in broader society, industrial developments, ways in which people's attitudes and behaviours have changed over time. (School of Sport)

The link with the previous theme of information being more than textual is apparent, as a source may be produced in one format as writing something down could have been prohibited or dangerous. This is a thread throughout the representative of Performance and Media Production's interview, but was not seen beyond that in the responses of the others. What was apparent were responses aligned with the second example here of understanding that society changes and that knowledge is rooted in historical context (e.g. in terms of women's rights) (Rupprecht 2019); these were more evident throughout the interviews.

4.1.2.10 Development of student's own academic voice

Linking to critical information literacy (Elmborg 2012) and its clear assertion that it is the student as the key agent in research that should be empowered in the process, these examples showed how the interviewees were trying to develop their students' academic voices and putting them at the heart of their own research. These examples went beyond those which referred to student agency (as already outlined) and linked to the student finding an identity within the university context, as a researcher in their own right (Donovan, Erskine-Shaw 2019):

> We do look for whether they can discuss ideas critically. So, for example, have they just taken quotations from the literature, or can they actually contrast them and show where they stand? We look for that kind of thing. (School of Language and Linguistics)
>
> Have they found the relevant information? Interpretation of that information. So, have they drawn out points that are relevant? Have they managed to weave it into a coherent description, a coherent narrative?" (School of Sport)

This also provides links with the previously mentioned aspect of critical information literacy of not seeing the situations in which students find

themselves marginalised as being remedied through a deficit model of training them with the established set of skills that are seen as important to traditional academic practice (Donovan, Erskine-Shaw 2019, Owusu-Kwarteng 2019). In centring the student voice, informed by sources from elsewhere but retaining their own agency for putting that forward, these acknowledge the importance of, as the School of Sport representative says, 'a coherent narrative', but puts the student at the heart of that "have *they*[…] weaved it", can the student "show where *they* stand".

4.1.2.11 Modelling though own academic practice

This theme emerged in examples of the academics putting themselves in the position of being a fellow learner, alongside the students. Any descriptions where the academic put themselves in the position of a learner, or referenced the students as co-learners, or showed that they were themselves learning from the students, were put under this theme. Similarly, examples of recognising that their own practice may be negatively impacting on the students were also put under this heading. These link to both social construction aspects of information literacy, with the concept of learning together, and critical information literacy in breaking down structural hierarchies:

> I think modelling it in the classroom is absolutely essential, so that we reference correctly, we show them the books where we got stuff from, we provide them with a bibliography (School of Humanities Religion and Philosophy)

> There are 12, well there used to be 12, members of staff in (subject) and, trust me, there are at least 15 ways of referencing. None of them will accept that there is one way of referencing, and so we're not being consistent and then we're expecting the students to play ball. (School of Humanities Religion and Philosophy)

Again reflecting the concept of no-one 'owning' practice (Badke 2017, Gustafson 2017), this stretches the idea of collaboration even further than the theme of librarian/academic collaboration by incorporating the students into the academic group amongst which everybody learns.

4.1.2.12 Evaluation/worth of information sources

Whereas earlier examples have shown that there is practice of directing students to specific information types and sources as more 'academic' than others, there

were also incidences where the importance of evaluating the specific source found was more prominent, and also looking at its worth in that particular circumstance. This theme focuses on evaluating the content of a specific source for academic purposes, rather than previous themes which have placed the source itself in relation to other factors:

> I think there needs to be more around how they would judge, you know, the value, the worth if you like, of each information source. (School of Education)

> We get them to read some scientific information, so we give them some quite old journal articles, because when they come into year 1, halfway through semester 1 when we're teaching them, they haven't got some of the experimental knowledge they would need to understand a more recent paper. So we choose quite an old fashioned one, but it's about genetics and they are doing the genetics module. So they read the paper and they do something with it that we call the scientific comprehension test, and it is essentially like an English comprehension would be. (School of Health)

These examples therefore are mainly rooted with aspects of traditional library skills. However, some instances, such as the first example here, hint at encouraging the interrogation of these sources for the purpose in hand, and looking at the background to their publication, which would locate them more in the critical information literacy theory.

4.1.2.13 Linking different academic assignments/modules

There were several clear examples of explicitly linking the work done towards the learning outcomes and aims in these modules with the work the students were expected to do in the rest of their course. All of these were placed under this theme:

> The purpose of that was to, to find those sources, and to evaluate them, and a lot of those were good sources that they could absolutely use, but they just didn't. It was almost as if that was, assignment, tick, out of the way. What's on the next assignment? (School of Education)

> I think there's something about[…]that happens for them in that teaching session, but they're doing two other modules. So how is that teaching session that you're putting in contributing, or how are the tutors following that up, so that they're seeing students do it and they're giving them the feedback, does that make sense? (School of Humanities Religion and Philosophy)

They link to the social construction of information literacy as they were being encouraged to think about the information in the context of one situation, and then in further situations, with different groups of people and tutors involved. The fact that they are all situated within the academic context means that it is a very local example of transferring learning from one situation to another, which does align it with the traditional information literacy view of centring on higher education, so it is less aligned with social construction theory than the previous examples of themes where learning is linked to previous experiences or those beyond the university.

4.1.2.14 Need for differentiation in information literacy delivery

Differentiation was mentioned in two interviews in particular; with the representatives of the School of Education and the School of Humanities, Religion and Philosophy. This is in the sense of how it is used in education, particularly primary and secondary education, by teachers, to understand and acknowledge the differences between the various students in the classroom, and ensure teaching reflects this and does not exclude anyone (Fitzgerald 2016):

> My concern is that it then dumbs it down for those with actually quite good grades and can't believe the drop in standard since they've been doing A levels, because I think they're ready for the shift up. And yet there are people in the class who are quite surprisingly working at really quite a low level. (School of Education)

> What we don't do in higher education, getting on another soap box, is that we don't differentiate. So we don't look at the group and think, okay, this little gang, they're streets ahead of everybody else. If I give them this task to do then that will really enhance what they are doing, and then another group, they haven't got the basics, so let's sit down and work with them. (School of Humanities Religion and Philosophy)

These examples differ from the focus on group work, as they are not necessarily concerned with the students learning from each other, rather it is any method through which their differences are acknowledged. However, it does link to social construction of information literacy as it still involves learning in that group context.

4.1.2.15 Information anxiety

The final theme located in the initial analysis was the emotional response to information literacy, as previously explained using the work of Kuhlthau (1994).

These may be linked with any number of other themes more generally, but if there was a focus on panic, or anxiety, or an emotional reaction, they were placed here:

> There just seemed to be this sort of, I don't know what that is, panic about what it is, almost not engaging with it, and then the sort of anxiety around the task meant they weren't really engaging as well with the sources. (School of Education)
>
> I often find that the panicked student will take out 10 books and never read any of them. (School of Performance and Media Production)
>
> So I try to be careful with it, not to make it too intense, but at the same time they had to do lots of reading for it, so I think that was perhaps a shock for some people, just how much reading was required. (School of Psychological and Social Sciences)

Linking to critical information literacy in acknowledging that being placed in a situation where a person's own experiences may not be adequately reflected or considered, the social and structural norms of higher education (and the use of information and evidence within it) could exclude and provoke emotional reactions as a result, this theme shows at least an acknowledgement of this as an issue. Most examples mentioned it as an issue they recognised and, as in the first and second examples here, link panic and anxiety impacting specifically on the ability to even engage at all with assignments or sources.

At the end of this stage an overview of the themes was created, and the number of times each was mentioned in each interview was examined.

Figure 8 demonstrates how the only theme mentioned in every interview was traditional information skills. Other themes are common, but are not evident in every single interview. The common ground was therefore in traditional library skills, but with indications that there are other areas of emerging information literacy which are practised to varying degrees. Red squares highlight the theme(s) mentioned most often by the participants from each school.

Code	Business School	Education	Humanitie	Health	Language	Performanc	PSS	Sport
Examples of traditional IL/library skills	2	6	1	1	2	1	1	3
Agency for search/evaluation lies with student	2	6		1		3	2	6
Takes into account previous experiences	1	3	3	3		2	4	2
Considers likely future experiences	1			1			2	
Social/active learning linked to IL	3	2	6	2	7	1	1	3
Collaboration between academics and librarians	1	2	3	2	1			2
Wider view of information use and evaluation than just in university setting		2				1	1	
Information as more than traditional, textual sources		2		2		2	3	
An awareness of wider information landscape (including political/social/cultural influences)	3	2				5	2	4
Development of student's own academic voice	3	6	2	1	3	2		1
Modelling through own academic practice			5				1	
Evaluation/worth of information sources	3	4		3		2	3	6
Linking difference academic assignments/modules	1	2	2	5	2		2	4
Need for differentiation in IL delivery	3	1	2	1			1	1
Information anxiety	1	1		2		3	1	1
Total mentions	24	39	24	24	15	22	24	33

Figure 8: Example of analysis of initial codes obtained and number of times mentioned in each school

4.1.3 Refinement and combining of themes

The themes located in the initial analysis were further reviewed, with a view to rationalising and combining those that were linked or similar. Throughout the initial theming process, there were decisions to be made on where examples fit, and in some cases they could have been placed in two or three themes. Cases of similarity between themes were also noted, even if there were other differences evident. For example, the theme of agency for search and evaluation laying with the student, and that of the development of the student's own voice, had core similarities of centring the student in the process of information search and use, which itself is a core tenet of critical information literacy (Elmborg 2012). Considering the theme of information anxiety, it was apparent in the interviews that the interviewees linked this with previous experiences, and this acknowledgement of previous experiences itself has parallels with considering likely future experiences as it all involves moving between information landscapes, as espoused in social construction information literacy.

It was at this stage that peer review was sought, also line with the action research approach and reflecting the importance of the social-construction and critical aspects of information literacy being investigated in this project. This provided fresh eyes in terms of the subject background (education, rather than information studies), levels of experience amongst those reviewing (from fellow doctoral researcher to experienced academic), and cultural background (McCluskey Dean 2017). The researcher was able to present and explain the first set of themes and was able to garner feedback from these different perspectives in terms of whether the explanations for coming up with the initial themes were valid and then combining them into fewer categories. It was also established that the number of themes which incorporated both social construction and critical information literacy theory meant that they could be considered together as 'emerging', in comparison to the identifiably 'traditional' information literacy examples.

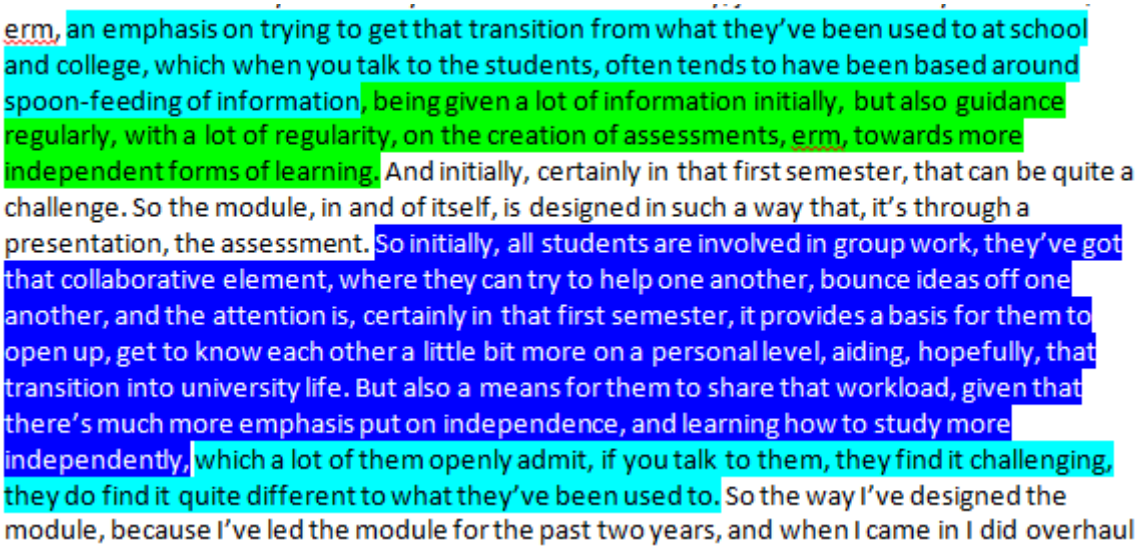

erm, an emphasis on trying to get that transition from what they've been used to at school and college, which when you talk to the students, often tends to have been based around spoon-feeding of information, being given a lot of information initially, but also guidance regularly, with a lot of regularity, on the creation of assessments, erm, towards more independent forms of learning. And initially, certainly in that first semester, that can be quite a challenge. So the module, in and of itself, is designed in such a way that, it's through a presentation, the assessment. So initially, all students are involved in group work, they've got that collaborative element, where they can try to help one another, bounce ideas off one another, and the attention is, certainly in that first semester, it provides a basis for them to open up, get to know each other a little bit more on a personal level, aiding, hopefully, that transition into university life. But also a means for them to share that workload, given that there's much more emphasis put on independence, and learning how to study more independently, which a lot of them openly admit, if you talk to them, they find it challenging, they do find it quite different to what they've been used to. So the way I've designed the module, because I've led the module for the past two years, and when I came in I did overhaul

Figure 9: Example of second colour coding, with revised themes

It can be seen in Figure 9 that there are two previously separate themes now merged into one. The first example is of acknowledging previous educational experiences, so had been included in the theme of "Takes into account previous experiences". The final example evident in the excerpt had been included in "Information anxiety" as the interviewee recalled students finding the work challenging. They are now grouped together in "Students' unique information experiences and needs addressed" as those previous experiences are linked with "what they have been used to" – there is a connection between the two.

The review led to five broad themes being identified (Table 7). Each of these is explained after this list, and further examples of incidents for each theme can be found in appendix 6.7. The first theme is traditional information literacy and the other four combine social construction and critical information literacy, to be termed 'emerging' for the purposes of this project.

1. Examples of traditional information literacy/library skills
2. Agency for research process lies with student, as a researcher
3. Student's unique information experiences and needs are addressed
4. Social/active learning linked to information literacy
5. Information landscape goes beyond academia and is more than textual

Table 7: Refinement of themes

First set of themes	Refined themes
Traditional information/library skills	Traditional information literacy/library skills
Evaluation/worth of individual information sources	
Agency for search/evaluation lies with student	Agency for research process lies with student, as a researcher
Development of student's own academic voice	
Need for differentiation in information literacy delivery	Student's unique information experiences and needs addressed
Information anxiety	
Takes into account previous experiences	
Considers likely future experiences	
Linking different academic assignments/modules	
Modelling through own academic practice	Social/active learning linked to information literacy
Social/active learning linked to information search and evaluation	
Collaboration between academics and librarians	
Wider view of information use and evaluation than just in a university setting	Information landscape goes beyond academia and is more than textual
Information as more than just traditional, textual sources	
An awareness of wider information landscape (including political/social/cultural influences	

4.1.3.1 Examples of traditional information literacy/library skills

This wider theme incorporated subthemes of techniques for using library catalogue/databases, recommendations to avoid certain types of resource and referencing advice:

> We gave them instructions on how to find things in the library, journal articles and so on. (Business School)
>
> What's the difference between a book and a peer review journal, a newspaper article and so on. (School of Education)
>
> We did referencing, showed them referencing for a quote and for a citation that wasn't a quote and how to reference it. (School of Humanities Religion and Philosophy)

As explained in the previous sub-section, traditional library skills were evident throughout the interviews and relate to direct instructions on searching library

catalogues and 'databases', using this library language, and a direct instruction that some types of information source are more 'academic' (e.g. textbooks and journal articles) than others (e.g. websites) and should therefore be used as a preference in academic work. This latter point may be true in some circumstances, but a direct instruction to use them ignores many of the points of critical information literacy, such as the fact that these publishing methods may exclude or marginalise sections of society (le Roux 2015, Moletsane, Haysome et al. 2015, Rupprecht 2019, Zevallos 2019), and so implementing such instruction without critiquing the form may also lead to students feeling excluded or useful information from a marginalised voice, but published in another format, being disregarded.

4.1.3.2 Agency for research process lies with student

This theme incorporated issues such as the agency for search/evaluation lies with student and the development of student's own academic voice and included all of the examples previously identified under those two narrower themes. In addition, the word 'you' is used repeatedly in the context of centring the students in the interviews:

> You've written a paraphrase. What gave you that idea?[...]At some point you read that, or you learned about it. You need to go back and find out who thought that first, so you can put that in. (School of Business)
>
> The report was very much focused on what have you read, what have you heard, what have you thought about, what have you found in this. (School of Education)

Here the student is centred and their own agency encouraged, with their voice being seen as important, aligning with the recommendations of Donovan and Erskine-Shaw (2019). In the emerging forms of information literacy this is vital as it empowers the student to see themselves as a member of the academic community from the very beginning, occupying the position of a researcher from the start of their university experience, and reducing the assumption that they will assimilate into the dominant culture (Owusu-Kwarteng 2019).

4.1.3.3 Student's unique information experiences/needs addressed

This theme incorporated the previous examples from the narrower themes of academics taking into account previous student experiences, considering likely

future experiences, information anxiety and the need for differentiation in information literacy delivery. The idea of information anxiety is important as the interviewees are showing that they understand that emotions, probably related to being in a new landscape, can prevent engagement with information:

> There just seemed to be this sort of, I don't know what it is, panic about what it is, almost not engaging with it, and then the sort of anxiety around the task meant they weren't really engaging as well with the sources. (School of Education)

Some interviewees showed awareness that this could have its roots in previous experiences, educational or personal. For example, the interviewee from the School of Performance and Media Production was very aware of the differing experiences of students who had done A Levels, with a lot of theory involved, and those who had done other courses which focused on performance itself:

> I am very aware that the students can have…a massive amount of confidence with one part of the subject area, and usually the complete opposite when it comes to theory and writing, reading and that kind of knowledge. (School of Performance and Media Production)

This crosses at least two of the previous, narrow themes of previous experience and information anxiety. It also shows the need for differentiation in higher education, as the tutors deal with groups of students with these varying experiences and levels of knowledge in different areas of the curriculum.

Information anxiety was included in this theme as further revisions of the transcripts revealed that this anxiety tended to be linked to students' previous experiences, or worries about future experiences, and very much associated with getting used to working in an 'academic' way. This is demonstrated here when the interviewee comments on those students who have not done traditional A levels:

> These are students who have done really well[…]really do have abilities in writing, reading and research theory, but don't seem to have the confidence. (School of Performance and Media Production)

Further to this, some examples seem simple on the surface, but if put into the context of critical information literacy, could have implications for the information experiences of students from marginalised communities. One particular example stood out in this way:

> People do have a lot of practical experience, just from their everyday lives, that they can draw on. I mean everyone has some sort of experience of crime generally. (School of Psychological and Social Sciences)

If this is incorporated into teaching, there is a danger that the lens put on the 'normal' experience will be that of the dominant community (e.g. white, heteronormative), as shown by Eddo-Lodge (2018) and Charles (2019) in the literature review. There may be students in a group from communities who are more likely to find themselves victims of crime (e.g. people of colour, members of the LGBTQI+ community) and introducing this theme without consideration of this, and through resources that are traditionally written through the dominant lens, would increase the marginalisation of those students. There is no evidence to suggest that this is the case in this example, but it is a reason to include such instances under the theme of addressing the student's unique experiences.

4.1.3.4 Social/active learning linked to information literacy

This theme incorporated the previously identified areas of using peer support to evaluate resources, group work linked to information use and evaluation, and linking information resources to different academic contexts. As explained in those previous examples, this is sometimes expressed as having the aim of facilitating learning in terms of a specific academic task:

> I got them to actually conduct a focus group[…]they'd read a short piece about the process of conducting focus groups, the actual task involved them having two moderators to ask questions, they had a pre-scripted thing that they were asked to build on. (School of Psychological and Social Sciences)

In other examples, there is more emphasis on the value of discussion generally:

> It's really discursive. So they are often having conversations across the room, and in small groups, and feeding back. (School of Performance and Media Production)

In other cases the aim is specifically to encourage a community amongst the students, so they can get to know each other and be supportive:

> All students are involved in group work, they've got that collaborative element, where they can try to help one another, bounce ideas off one another[…]it provides a basis for them to open up, get to know each other a little bit more on a personal level, aiding, hopefully, that transition into university life. (School of Sport)

The theme with the most direct link to the social construction part of the emerging information literacy theories (Lloyd 2010), these examples show the value placed on group work by many of the interviewees, and go some way to indicating that this may be a core aspect of practice upon which an information literacy community of practice in this situation could be facilitated and grown.

4.1.3.5 Information landscape goes beyond academia and textual

This theme provided examples of a wider view of information use and evaluation than just in a university setting, that information is more than traditional, textual sources, and an awareness of wider information landscape (including political/social/cultural influences), i.e. that there is more to information in a higher education setting than the recommendation of the use of textbooks and journal articles (Tewell 2019). This could be because different voices are valued in investigating a topic, acknowledging that they will have different agendas and understanding why:

> I actually gave them a breakdown that they had to have at least one from a union, from a teaching union, because I wanted them to evaluate that as an information source, whether it was politically linked, whether it was the voice of teachers, or evidence-based, which some of the union material is. One newspaper article, and again for them to think about what's the context of that and where that's positioned. (School of Education)

It is also shown that the wider landscape in which a source was produced is a key consideration, aligning with the emerging forms of critical information literacy in acknowledging the structural impact of the wider society of the time (Rupprecht 2019):

> Drawing in wider social changes like developments in broader society, industrial developments, ways in which people's attitudes and behaviours have changed over time. (School of Sport)

Other examples cover the idea that not only is it important to consider different types of information and sources, but that that the political and social situation of the time may mean that a non-textual source provides a key example of a message that could not be written down. It's also the case that, in reverse, you can place that non-textual source within the context of that time and place (Rupprecht 2019) and explore outwards from there:

> that thing of evaluating the performance becomes more about trying to understand how performance sites historically, culturally, and geographically, you know. In a much wider context than maybe they expected. (School of Performance and Media Production)

In narrowing down the original 15 themes to these 5, the core messages they share are retained, but may be expressed or practised in different ways. From this outline of themes, it can be suggested that, overall, there is evidence to indicate shared values in information literacy across the schools, as represented by these individual interviewees. Further to this, in answer to the direct question of whether they would be interested in taking part in a community of practice, all responses were positive. However, the survey is required to see if it can be concluded that this is reflected across the academic community.

4.1.4 Key factors coming out of the interviews

4.1.4.1 Outcomes of interviews with academics

In analysing the interviews with the academics, five themes were identified. The first was of traditional information literacy and library skills. Beyond this, four key values associated with emerging forms of information literacy were located, spread across the schools.

These values uncovered in the practice of the academics linked back to some of the key messages found in the review of the literature for this project. That of the student being empowered through gaining their own academic identity, and moving away from a deficit model that they need to learn the 'right' skills to assimilate, as argued by Donovan and Erskine-Shaw (2019), aligns with this theme in particular. In doing this, the grounding for developing the curriculum in line with some of the other themes is made possible, as it is the first step in acknowledging that each student has their own experiences which will impact on their higher education experience.

These individual experiences are addressed in the theme of understanding and addressing students' unique information experiences, which is especially important in considering those who are 'othered' (Charles 2019). It was argued in the literature review that it is vital that those who are structurally marginalised in higher education (and beyond) have curricula and resources which reflect their own experiences effectively, be that the LGBTQI+ community (Ellis 2009,

Equality Challenge Unit 2009, Mckendry, Lawrence 2017), people of colour (Charles 2019, Eddo-Lodge 2018, Owusu-Kwarteng 2019), or disabled students (Moriña 2017). The emergence of this value in the interviews indicated that there is evidence of some practice already occurring in teaching and curriculum design, which could be built upon in a community of practice.

The value of social and active learning linking to information literacy aligns with the social construction theory of information literacy of Lloyd (2010) and also links in with the theory of communities of practice (Wenger 1998) in asserting that knowledge is socially constructed and situation-specific. Collaboration has been linked with effective embedding of information literacy in the higher education context (Stebbing, Shelley et al. 2019), and faculty and library working together to achieve this is specifically recommended (Badke 2017) and so evidence of this is also key to moving to a stage of information literacy being designed into the curriculum in this institution.

The value of the acknowledgement and understanding of information being more than textual and going beyond academia mirrors that found in the work of Rupprecht (2019), who asserts that there is a need to reflect on how information is dependent on historical context, and Tewell (2019) who makes the argument that knowledge is far more than textual. Along with the work of sociologists such as Zevallos (2019) who shows the structural inequalities in the scholarly publishing processes, this value provides a valuable indication that critical approaches to information are already evident in the work of academics at York St John, and that collaborative working could see it extend further.

The predominant value(s) for each school were as follows. These values were determined by a count of the number of times examples of each theme were found, and represent the one with the highest number of examples. These are shown in red in Figure 10 and highlighted specifically in Table 8.

Code	Business Sch	Education	HRP	Health	Language	PMP	PSS	Sport
Examples of traditional IL/library skills	2	6	1	2	1	1	1	3
Agency for research process lies with student, as a researcher	5	10	5	2	2	3	3	8
Student's unique information experiences and needs addressed	8	7	9	5		6	6	4
Social/active learning linked to IL	4	3	8	4	7	1	1	5
Information landscape goes beyond academia and is more than textual	1	4		3		6	4	4
Total	20	30	23	16	10	17	15	24

Figure 10: Count of revised themes in each school, with most common in red

Table 8: Dominant value in each interview, by academic school

School	Predominant value in interview	Number of times value mentioned
Business School	Student's unique information experiences and needs addressed	8
School of Education	Agency for research process lies with student, as a researcher	10
School of Humanities Religion and Philosophy	Student's unique information experiences and needs addressed	9
School of Health Sciences	Student's unique information experiences and needs addressed	5
School of Languages and Linguistics	Social/active learning linked to information literacy	7
School of Performance and Media Production	Student's unique information experiences and needs addressed AND Information landscape goes beyond academia and is more than textual	6 6
School of Psychological and Social Sciences	Student's unique information experiences and needs addressed	6
School of Sport	Agency for research process lies with student, as a researcher	8

These results help address objective one, in surfacing values assigned to information literacy in different programme areas at York St John University. Whereas the section in the literature review surfaced the terminology used in related professional and subject areas in the research literature, these values are York St John University specific. These show the predominant values assigned to information literacy by the representatives of the specific academic school being investigated, putting this into the context of this specific study.

In addition to these outcomes, each interviewee responded positively to the idea of a community of practice for developing and sharing ideas related to the use and evaluation of information in the curriculum. Some favoured an online resource (e.g. Business School), whereas others wanted the discussion aspect (e.g. School of Humanities Religion and Philosophy, School of Education). The interviewee from the School of Sport specifically mentioned the need to share

practice in order to spread the effort of keeping up to date in pedagogy (linked to information literacy, as discussed in the interview), as well as the subject being taught:

> Yes. We've never talked about this stuff outside of (subject area), other than with (librarian). (School of Humanities Religion and Philosophy)
>
> I think that would be good […] if we could have captured the sessions we delivered and then have a bank of them, that people could bob in and out of. (Business School)
>
> Yeah. I think greater coherence is needed […] where's the discussion, I've not been involved in an any discussion, or didn't know of any discussion across the university […] around this. (School of Education)
>
> Yeah, I think that kind of thing's always useful to have […] because alongside everything else that you're doing in terms of the topic related content, sometimes it's useful to know that there's information there that other people have been able to put together […] been able to keep up to date, in terms of the basics of good pedagogic practice. (School of Sport)

4.1.4.2 Outcomes of interviews with professional support staff

The results of the interviews with professional support staff from the library indicated that there was a wish for partnership working and collaboration from their perspective, as well as amongst the academics. There was also evidence of a wish to collaborate beyond the usual programme areas, and encourage cross-subject discussion, with the academic liaison librarian.

This was encouraging both in terms of potential membership of the community of practice, but also in ensuring a variety of voices are heard as part of it. As was shown in the literature review, there is evidence to suggest that communities of practice working across higher education institutions have been effective in providing staff development, and subsequently a positive impact on the curriculum, when they have been implemented for e-learning (Cochrane 2010, Cochrane 2014, Schneckenberg 2010) and digital literacy (Jeffrey, Hegarty et al. 2011). The willingness to collaborate apparent in these interviews indicate that there is the basis for adding to this evidence base with a further study in information literacy staff development via a community of practice at York St John University. This was examined across the institution via a survey.

As was highlighted earlier in this chapter, interviews were also secured with a digital trainer and an academic liaison librarian, both working for Information Learning Services (library services) in roles which involved working with both students and staff on digital and information skills. A core message coming out of both of these interviews, which followed a similar premise to those of the academics where interviewees were asked to recount their experiences of teaching on a specific academic module on an academic programme, was the need to work collaboratively with academics, to benefit the students:

> There was […] a bit of liaising with the tutor, which I think is very important, to get buy-in from the tutor, that it's a collaboration and that they realise what they are asking their students to do. (Digital trainer)
>
> Our role is to show people how to use the actual systems that are available to them, digital tools. But the actual content is still the tutor's area […] that collaboration is really important. (Digital trainer)
>
> I would love to sit down in the summer, with every […] team that was going to run that particular year and plan sessions, see where they fit in. (Academic Liaison Librarian)
>
> It would also be useful to have something to take to areas where they are not so engaged or interested, to demonstrate what can happen and how it can work with different programmes. (Academic Liaison Librarian)

4.1.5 Overview of interview phase

Five key themes of information literacy were formed from the responses of the interview participants. One was traditional library skills, evident across all schools. In addition to this, four themes linked to the emerging forms of information literacy.

These results can be used to answer research objectives one and two. It was apparent that there was evidence of traditional information literacy in all areas, and, in addition to this, the values linked to emerging information literacy were found with the different interviewees, with each revealing one or two of these themes to be predominant for them in their practice and experiences.

These values were the basis for the survey and its design was based upon them, once they had been transferred into four broad questions. The survey sought to establish whether the thoughts and experiences of these individual interviewees

were found across the academic population who have taught on level 4 modules at York St John University, and whether there was indeed the basis for a community of practice in information literacy, addressing research objectives three and four.

Studying the values in emerging information literacy at York St John University further, it appeared that there were two main types of value: the first links to the approach of the teacher/academic/practitioner to teaching issues linked to information literacy, the second links to the development of student competencies. It was also the case that the identified values needed redefining in order to produce concepts measurable by the survey. Table 9 shows how each value of emerging information literacy at York St John, as indicated by the interviews, were transferred into a measurable factor for the survey, to see if these values are indicative of those of the wider community as well as the interviewees.

Table 9: Values from interviews linking to factors to measure in survey

Value from interviews	**Factor to measure in survey**
Students' unique information experiences and needs addressed	Student-centredness linked to IL
Social/active learning linked to IL	Social/active learning as a pedagogic tool, linked to IL
Information landscape goes beyond academia and is more than textual	Contextualising the literature/information
Agency for research process lies with the student, as a researcher	Developing a position based on the evidence and communicating this

Therefore, the factors to be measured in the survey were:

Teacher/practitioner approach

Student-centredness linked to information literacy

Social/active learning as a pedagogic tool linked to information literacy

Student competencies

Contextualising the literature/information

Developing a position based on the evidence and communicating this

Further to this, one of the respondents (School of Sport) linked their use of active and social learning techniques to having completed a Postgraduate Certificate in Academic Practice course (leading to fellowship of the Higher

Education Academy); this led to the consideration of whether there was an association between the use of these techniques and having completed such a qualification and so were included in the survey.

Rounding up the findings from the interview data, it was asserted that the survey needed to answer some particular questions, in order to address objectives three and four of this research project. Firstly, to examine how academics experience and evaluate information literacy in their teaching practices, and then to ascertain whether there is common ground in information literacy provision already embedded in the curriculum in these programmes. i.e. the basis for a community of practice, and to locate particular practice which may prove useful in the content of the community.

1. Can particular approaches be identified amongst practitioners?
2. What are the characteristics of these approaches? Are they process driven? Are they person driven?
3. Is the approach taken related to the academic school to which the academic belongs?
4. Is the approach taken related to the educational background of the academic (e.g. have they done a pedagogic qualification?)

Whilst exploring the extent to which traditional library skills, plus the four themes from emerging information literacy theories identified in the interviews, were evident across the academic community who have taught at level 4, these four broad questions were kept in mind, and linked to the specific questions asked in the survey. These helped in identifying the existence of a community of practice and the extent to which values are either shared across the community, or specific to those from a particular academic school. The first two broad questions were answered by a descriptive analysis of the data, taking a look across the responses and identifying those with the highest percentage from all answers.

The broad questions 3 and 4 were specific to either school membership or the educational qualifications of the academic. Through an exploration of the survey answers, it was investigated whether an indication of a connection could be found between the academic school to which the academic belongs and the

priorities given to particular aspects of information literacy. Similarly, it was asked whether there was a connection between the level of pedagogic research or educational research previously undertaken and the priority given to particular aspects of information literacy.

The survey also needed to ask whether the academic was interested in taking part in the online community of practice, in line with the approach taken in the interviews, having learnt from the pilot phase that this needed a direct question.

Each of these broad questions informed a set of specific questions asked in the survey, and will be linked and outlined in the next section. An overview of the question sections, themes and content is in the methodology section (Table 3).

4.2 Quantitative phase: survey

4.2.1 Survey design

The intention of the survey was to tentatively investigate, via a descriptive analysis of the results, whether a community of practice was evident, and the extent to which it was evident in terms of both traditional and emerging forms of information literacy, acknowledging that the data collected is indicative of the experiences and views of those who replied and cannot be extrapolated beyond that.

Further to this, the survey aimed to ascertain whether there was common ground in information literacy provision already embedded in the curriculum in different academic schools by exploring examples of practice located in the interviews and asking if these were recognised in the practice of survey respondents. If these were recognised by respondents across the university, these could form the basis for a community of practice. If this was the case, it also asked the form and content the community of practice should take. The survey was designed based on the outcomes of the interviews, both in terms of the themes covered and the language used in the specific questions. Questions were also informed by the content of module documentation, linked to the learning outcomes and aims of those courses the interviewees had taught and experienced.

The questions the survey set out to answer were drawn from the factors of student-centredness, social and active learning, competencies in contextualising information, and competencies in developing a position from the evidence, which were identified in the interviews. This led to the core, broad questions, covering,

1. Can particular approaches (traditional or emerging information literacy) be identified amongst practitioners?
2. What are the characteristics of these approaches?
    a. Are they process driven? (i.e. in module design and assessment focused?)
    b. Are they person driven? (i.e. emerging from the individual values and priorities of the academic?)
3. Is the approach taken related to the academic school to which the academic belongs?
4. Is the approach taken related to the educational background of the academic? (e.g. have they done a pedagogic qualification?)

The survey was designed based on the outcomes of the interviews. The content of the questions relates to the examples and themes which emerged in the transcripts and coding.

Broad questions 1 and 2 looked at theory generation and were explored via a descriptive analysis of the survey results. They helped identify themes and the aspects of information literacy which are most prominent in the university and its schools and where they are shared. They were focused on educational processes and course design, such as the development of learning outcomes.

Broad questions 3 and 4 linked to person-driven analysis. They were linked to the priorities and values held by individual academics, rather than the outcomes prescribed by the modules upon which they taught. They aimed to discover whether a connection or relationship could be found between the academic school to which the academic belongs and the priorities given to particular aspects of information literacy. Similarly, questions were asked about whether there was a relationship between the level of pedagogic research or educational research previously undertaken and the priority given to particular aspects of information literacy.

4.2.2 Survey response

The survey was administered to a total of 232 staff from different schools and departments at the end of the 2016/17 academic year and remained open for 12 weeks, over the end of the summer vacation and into the autumn term 2017/18, with a response rate of 26% (n=61) (Table 10). However, only 24% (n=55) of the returned responses were complete. All eligible respondents in the schools were academic staff. The survey was sent to eligible professional support staff in Information Learning Services (the library) (n=5). Staff from other professional support areas were able to take the survey if they felt they fit into the description of 'having taught on a level 4 module in 2016-17', as it was disseminated via an all-staff mailing list with invitations to respond. Responses from professional support staff were received from Information Learning Services, but from no other professional departments, so these other areas are not included in the population total.

Table 10: Total responses broken down by school/dept

School/Department	Eligible respondents	No. of responses	% response
School of Art Design and Computer Science	12	1	8%
School of Education	26	9	35%
School of Health Sciences	30	5	17%
School of Humanities Religion and Philosophy	45	16	36%
School of Language and Linguistics	20	2	10%
School of Performance and Media Production	38	4	11%
School of Psychological and Social Sciences	24	3	13%
School of Sport	16	5	31%
York Business School	16	5	31%
Information Learning Services	5	5	100%
TOTAL	**232**	**55**	**24%**

As explained in the methodology section, the figures and percentages presented here are to indicate where there was possible shared practice or values in information literacy, in order to inform the content and membership of the

community of practice. It was not the aim to carry out statistical analysis and all response figures are included with the results provided. **All results are reported with percentages to the nearest whole figure.**

The first section of the survey was allocated to gathering demographic information and specifically to investigate whether length of service generally, length of service at York St John itself, or having a qualification that related to teaching in some way impacted upon the way in which information literacy was integrated into the curriculum; information on experience. The issue of gender was rejected as a demographic to survey, in line with inclusive survey design and the core principle of "Do you need to know?" (Montague-Hellen 2018); this is a complex area and the gender of the respondent had no bearing on the topic being investigated.

Table 11: Length of time worked in higher education, broken down by school/dept.

School/Department	Total responses	Worked in HE 0-2 years	Worked in HE 3-5 years	Worked in HE 6-8 years	Worked in HE more than 9 years
School of Art Design and Computer Science	1		1		
School of Education	9	2	1	2	4
School of Health Sciences	5		3		2
School of Humanities Religion and Philosophy	16			3	13
School of Language and Linguistics	2				2
School of Performance and Media Production	4		1		3
School of Psychological and Social Sciences	3	1			2
School of Sport	5		1	1	3
York Business School	5				5
Information Learning Services	5		1		4
TOTAL	**55**	**3**	**8**	**6**	**38**

Higher education experience is detailed in Table 11. Of all respondents, 69% (n=38) have worked in higher education for more than 9 years. Only 5% (n=3)

have worked in higher education for less than two years. This indicates that the respondents are experienced academics in the main, and that very few are newcomers to the higher education arena. When it came to the analysis, length of service was discounted as a measure, as so few were early career researchers or teachers and a comparison between these and experienced members of staff could not be made.

York St John University experience is detailed in Table 12. Only 9% (n=5) have worked there for less than 3 years. Again, this means that length of service at York St John could not be introduced as a variable to measure against types of information literacy employed in practice, due to the high number of respondents who have worked at the institution for more than three years.

Table 12: Length of time worked at York St John University, broken down by school/dept

School/Department	Total responses	Worked at YSJ 0-2 years	Worked at YSJ 3-5 years	Worked at YSJ 6-8 years	Worked at YSJ more than 9 years
School of Art Design and Computer Science	1		1		
School of Education	9	3	2	3	1
School of Health Sciences	5		3		2
School of Humanities Religion and Philosophy	16		8	1	7
School of Language and Linguistics	2				2
School of Performance and Media Production	4		1		3
School of Psychological and Social Sciences	3	1		1	1
School of Sport	5	1	2		2
York Business School	5		3		2
Information Learning Services	5		3		2
TOTAL	**55**	**5**	**23**	**5**	**22**

Data was also collected in relation to teaching qualifications, but the fact that 52 of the 55 respondents have either achieved Fellowship of the Higher Education

Academy (n=48), or are currently working towards it (n=4), means that most have such a qualification, so a comparison with those who did not could not be made.

4.2.3 Process-driven analysis: learning outcomes and aims linked to information literacy

The survey moved on to ask about the module teaching and assessment the respondents had undertaken and, specifically, the learning outcomes and aims they recognise as part of their practice. This was designed to answer the process-driven considerations coming out of the interview analysis and focused upon the design of the modules, rather than the respondents' own views. In designing this survey question (Q.12) example learning outcomes were found in the module documentation available on the virtual learning environment from the modules to which the original interviewees had been linked, and connected with the themes that were drawn out in the interview analysis (see Figure 11 for an example of how a question was designed).

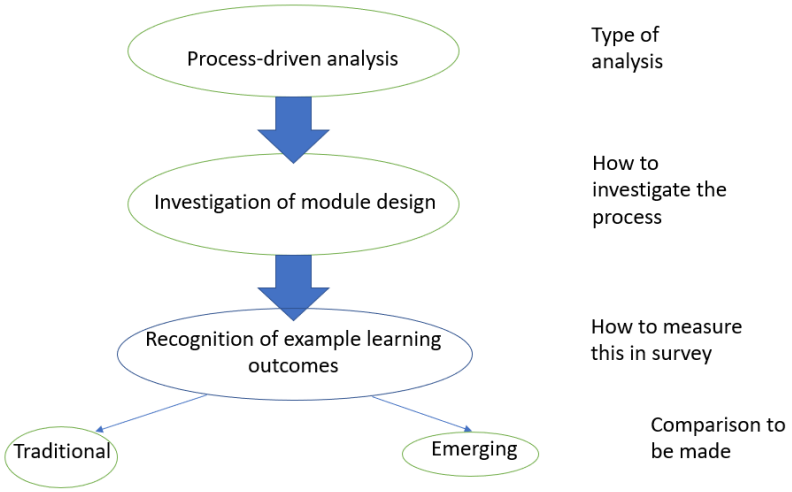


Figure 11: Mapping of process taken to design each question, example of question 12

Four examples linked to traditional library skills (T), and the rest the emerging forms of information literacy (E). The respondents were asked to indicate all of the aims or learning outcomes that they recognised from their level 4 module

teaching. They were asked to identify any which they believed matched, or were similar to, these examples.

Table 13: Number of responses to examples of learning outcomes/aims linked to information literacy recognised in respondents' experiences

Learning outcome/aim	Linked to measurement from interviews	Number of responses
Access information relevant to the subject and reference it accordingly (T)	Traditional	27
Access primary and secondary sources in order to identify key themes and approaches (T)	Traditional	16
Understand what makes a good information source (T)	Traditional	18
Identify, articulate and discuss the work of key scholars (T)	Traditional	17
Communicate ideas and arguments in a manner appropriate to the context and audience (E)	Developing a position based on the evidence and communicating this	22
Understand how literature contributes to the learning process (E)	Developing a position based on the evidence and communicating this	9
Display a knowledge of skills that academics employ in their research and writing (E)	Developing a position based on the evidence and communicating this	20
Evaluate broadcasts, performances or writing within an historical context (E)	Contextualising the literature/information	5
Explain how the history of a specific aspect of the subject has shaped its contemporary form (E)	Contextualising the literature/information	9
Demonstrate personal responsibility for self-directed learning (E)	Developing a position based on the evidence and communicating this	23
Total		166

The responses to this question indicated that there is evidence to suggest that there are learning outcomes and aims linked to information literacy in its traditional form across the university (Table 13). The most common link is in accessing information relevant to the subject being studied and to reference it accordingly; a key part of the traditional information literacy models, with 49% (n=27) of respondents recognising it in the learning outcomes for their modules. The concept of demonstrating personal responsibility for self-directed learning, linking to the more emerging forms of information literacy in terms of student-

centred learning, was the second most common learning outcome with 42% (n=23) of respondents recognising it.

As was outlined previously, 'Contextualising the literature/information' links back to the interview theme of 'Information landscape goes beyond academia and is more than textual' and 'Developing a position based on the evidence and communicating this' links back to the theme of 'Agency for research process lies with the student, as a researcher'. Amongst the emerging information literacy outcomes, there is a preference for outcomes which link to student agency, rather than linking them to the information landscape beyond textual and academic. The answers to this question also revealed that it was difficult to determine a specific learning outcome that represents a school. In many cases, there was a spread of answers and there was little to suggest an obvious focus in any of the respondent groups.

4.2.4 Descriptive analysis of respondents' approach to information literacy: person-driven analysis

4.2.4.1 How respondents expected students to address outcomes

Related to Q.12's focus on the learning outcomes students were expected to work towards, Q.14 asked the respondents to choose which information search tools they expected the students to use, and would direct them to use, in order to search for information to achieve the learning outcomes of the course they delivered. This moved the focus on to their own preferred approach to teaching. They were asked to rank the search tools on a five point scale from key source to never used. Choices included traditional bibliographic databases, in which research is indexed and access is usually by subscription only, and publicly available tools such as Google Scholar. Examples were given, (e.g. Arts and Humanities with Full Text, or CINAHL, for bibliographic databases) in case the respondent did not refer to them by the generic library description. These are the number of responses to judge each tool as 'key' (Table 14).

These results have to be considered in relation to issues such as everyday information literacy (Martzoukou and Abdi 2017), where investigations took place outside of an academic context and found information needs and searching in areas such as health care and genealogy, and covering both academic and

professional contexts in information literacy (Fister 2019) in that the bibliographic databases commonly used in academic circumstances (and vital to the academic search process in many cases) tend to be accessible via paid subscription only and are therefore unavailable to people once they leave higher education. Some professions may provide access (with health and law libraries providing such services) but courses linking academic concerns with other practice may well not, leading to issues of information privilege and exclusion (Dawson 2018, 2019). This was an issue raised by Peach (2019) in considering arts practice in particular at York St John University.

Table 14: Information search tools considered 'key' by respondents

Tool	Number of responses considering it a 'key' resource for students to use
Bibliographic databases	27
Tools to measure usage and reach	1
Film, TV and radio broadcasts	4
Open Access information tools	4
Maps	0
Google Scholar	21
Google	17
Theses	1
Newspapers, current and historic	11
Citation services	1

4.2.4.2 Respondents' own information searching

There were questions about the respondents' own approach to information searching, in terms of whether this was done alone or in groups. These were designed to help in the understanding of whether the way in which they conducted their own information searching was in any way associated with the way in which they then introduced information search and evaluation in their teaching.

The participants were asked to indicate their preferred search strategy (one only) from a list of possibilities, ranging from searching on their own, to working in a group, to asking someone else to undertake the search for them. In contrast to the interview outcomes about teaching, where there were many examples of

employing group work and collaborative learning in the classroom situation, and also the results on encouraging the students to use group work, the vast majority of respondents said that they were likely to do information searching on their own, rather than in groups. 98% (n=54) said they would embark on information searching on their own, with just 2% (n=1) saying they would discuss their likely search approach with others.

4.2.4.3 Importance of students' previous experiences

Question 16 of the survey was designed to help understand the value the respondents placed on the previous experiences of the student, both in terms of their education and their life more generally, linking to the measure of student-centredness, and back to the theme of 'Students' unique information experiences and needs addressed' which came out of the interviews. This links to the social construction theory in terms of the different landscapes they have encountered and experienced, and critical information literacy in determining if respondents understand that some may arrive having structural influences on their information experiences.

This was presented as a ranking question, on a scale of strongly agree to strongly disagree. This was to gain information on how many respondents either strongly agreed or agreed with the statements put forward, indicating agreement rather than having no view, or a negative one. The statements related to understanding the students' experiences prior to university both in terms of their education and in their wider life (see Table 15).

The understanding of students' previous experiences, prior to university, was a concern for most respondents. However, their educational experiences were considered more important than personal, so the idea of ensuring the curriculum is not representative of the dominant culture only is not considered widely as it stands. Again, this is a base from which more critical approaches to information literacy in the curriculum could grow as a result of a community of practice.

As can be seen from this set of results (Table 15), 79% (n=42) of respondents were in agreement that understanding a student's experiences in terms of education was important to them. This figure reduced to 50% (n=26) when it came to other experiences, which may impact on how a student experiences

their new information landscape of academia, and also could be an indication that some academics are not linking the cultural and societal landscapes to the academic ones.

Table 15: Academics' view of the importance of understanding previous experiences of students

		Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
It was important to understand students' educational experiences prior to university	% response	37%	42%	17%	4%	0%
	Number response	20	22	9	2	0
It was important to understand students' life experiences prior to university	% response	25%	25%	43%	7%	0%
	Number response	13	13	23	4	0

4.2.4.4 Group work

A simple yes/no question (Q.17) was asked regarding whether the respondent used group work in their teaching, to gain an overview of whether any social approaches to teaching and learning were used and linking directly to the theme of 'Social and active learning' coming out of the interviews. A social approach to learning is evident across the university and in each school individually. The majority, 92% (n=49), of all respondents used group work in their teaching.

Those who answered 'yes' to this question were invited to indicate their reasons for employing group work. This was asked by putting forward three statements, one linked to peer learning, one to foster a supporting learning environment, and one to create academic debate. The purpose of this was to establish how many respondents were concerned with the information anxiety-linked concerns of

feelings of marginalisation or belonging in critical information literacy, rather than social learning tools such as peer learning and debate.

Overwhelmingly, respondents responded positively to all statements, with only one instance of disagreement in all responses, as outlined in Table 16.

Table 16: Respondents' views of purpose of group work

		Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
An important purpose of group work is to facilitate peer learning	% response	65%	35%	0	0	0
	Number response	32	17	0	0	0
An important purpose of group work is to foster a supportive atmosphere	% response	63%	35%	0	2%	0
	Number response	31	17	0	1	0
An important purpose of group work is to facilitate academic debate	% response	63%	37%	0	0	0
	Number response	31	18	0	0	0

The representatives of 7 of the 9 academic schools indicated that they agreed more strongly with the social learning statements, to facilitate peer learning and inform academic debate, although two schools (School of Performance and Media Production and School of Psychological and Social Sciences) ranked fostering a supportive atmosphere as more important than the more academic concerns.

This was a key area in which a community of practice seems to be evident already, although, as explained earlier, this social approach to information was not evident in the responses to the question on the research practices of the respondents themselves.

4.2.4.5 Aspects of information identification and evaluation

Question 20 was designed to gain responses linked to opinions regarding aspects of information identification and evaluation. Continuing with the strategy of asking respondents to state whether they agree with statements on a five-point scale of strongly agree to strongly disagree, each of the statements links to either traditional information literacy (first three statements) or emerging information literacy (final four statements) (see Table 17).

Table 17: Statements linked to emerging information literacy in question 20, the factor each is measuring, and the original theme from the interviews to which each of these links

Statement in question	Factor to measure	Linked to interview theme
I encouraged the students to start with recommended sources, but then find and evaluate their own in addition to this.	Developing a position based on the evidence and communicating this	Agency for research process lies with the student, as a researcher
I encouraged the students to consider the context in which the source was produced, e.g. the time period/culture/society.	Contextualising the literature/evidence	Information landscape goes beyond academia and is more than textual
I encouraged the students to consider the purpose for which sources were intended (e.g. academic research, professional practice, evidence-based practice, reflective practice, fake news).	Contextualising the literature/evidence	Information landscape goes beyond academia and is more than textual
I encouraged the students to consider sources beyond the academic textual ones of books and journal articles (e.g. performances, personal experiences, artworks).	Contextualising the literature/evidence	Information landscape goes beyond academia and is more than textual
I encouraged students to integrate learning into their professional or everyday life.	Developing a position based on the evidence and communicating this	Agency for research process lies with the student, as a researcher

Table 18: Priorities for student information use

Question	Strongly agree		Agree		Neither agree nor disagree		Disagree		Strongly disagree	
	%	n	%	n	%	n	%	n	%	n
I encouraged the students to cite and reference specific, recommended sources.	47%	25	40%	21	9%	5	4%	2	0%	0
I encouraged the students to use 'academic' sources of journals and books above others (e.g. websites, newspapers, videos).	79%	42	17%	9	4%	2	0%	0	0%	0
I encouraged the students to start with recommended sources, but then find and evaluate their own in addition to this.	64%	34	30%	16	6%	3	0%	0	0%	0
I encouraged the students to consider the context in which the source was produced, e.g. the time period/culture/society.	43%	23	43%	23	14%	7	0%	0	0%	0
I encouraged the students to consider the purpose for which sources were intended (e.g. academic research, professional practice, evidence-based practice, reflective practice, fake news).	45%	24	40%	21	13%	7	2%	1	0%	0
I encouraged the students to consider sources beyond the academic textual ones of books and journal articles (e.g. performances, personal experiences, artworks).	26%	14	30%	16	26%	14	9%	5	8%	4
I encouraged students to integrate learning into their professional or everyday life.	27%	14	58%	30	12%	6	4%	2	0%	0

From the responses (Table 18), it can be inferred that there is evidence to support the idea that. across the university, students are encouraged to use 'academic' sources. 96% (n=51) of all respondents strongly agreed or agreed

that this was important to them. Some schools are much more invested in requiring students to cite specific, recommended sources than others, but all want them to find and evaluate their own 'academic' ones in addition to this.

When it came to determining differences in approaches by school, there were some statements which received a low number of responses from those specific schools or departments (<5), so this was considered to be unreliable. For example, the first statement of "I encouraged the students to cite specific, recommended sources", representing a traditional approach to information literacy, had disagreement from a total of 7 people, across all schools and departments, and it was not appropriate to try and infer school-specific conclusions from this low number.

The statement linked with emerging information literacy which saw the least percentage agreement was "I encouraged the students to consider sources beyond the academic textual ones of books and journal articles (e.g. performances, personal experiences, artworks)". The responses to this question indicated variation amongst the schools in terms of the use of sources beyond the traditional, textual, academic ones. Performance and Media Production, an arts-based school, were the keenest to do this (100% of respondents agreed or strongly agreed that they encouraged the students to use resources beyond the textual), but this was from just 4 respondents, so again specific, school-based conclusions cannot be firmly reached.

4.2.4.6 Use of information in an academic context

Question 21 was used to determine agreement or otherwise with the concept of using information in an academic context, especially on whether the students should be encouraged to develop their own position based on evidence, rather than paraphrasing or repeating existing works. The first statement, of paraphrasing from existing literature, forms the most traditional approach. The other three consider the agency of the student in differing ways and to a different extent (Table 19). The results of this question indicated that there is common practice across the university in encouraging students to develop their own ideas on a topic, based on information found, and showing how this has been developed from evidence. This is a strong basis for a community of practice. There are differences in how this is assessed though (see next section)

so there is scope for those with more traditional practice to learn from those with more progressive assessment criteria.

Table 19: Overview of responses to question on using information in an academic context

Statement	Strongly agree		Agree		Neither agree nor disagree		Disagree		Strongly disagree	
	%	n	%	n	%	n	%	n	%	n
I encouraged students to take ideas from the evidence and paraphrase/write in their own words as much as possible	70%	37	23%	12	4%	2	4%	2	0%	0
I encouraged students to develop their own ideas on a topic	66%	35	26%	14	8%	4	0%	0	0%	0
I encouraged the students to link their own ideas to the evidence	72%	38	26%	14	2%	1	0%	0	0%	0
I encouraged the students to develop a position based on the evidence and communicate this	62%	33	32%	17	6%	3	0%	0	0%	0

4.2.4.7 Assessment

Questions about assessment were asked only of those who assessed the modules in question, so the responses here are fewer in number than those considered thus far (n=44). Again, the respondents were asked to rank their agreement or otherwise with a number of statements which link to traditional information skills, especially in terms of relying solely on the tutor's view of what counts as an 'academic' source and expecting to see a minimum number of those in assignments in order to obtain better marks (Q.29). The responses here show that there are many academics who agree that assessment should include the incorporation of a minimum number of academic sources (with what makes them 'academic' being prescribed), and also that the students would be expected to include recent sources, taking the definition of recent from the tutor, both

aligning with traditional forms of information literacy, as is demonstrated in Table 20.

Table 20: Respondents' view of importance of information literacy in assessment criteria

Question	Strongly agree		Agree		Neither agree nor disagree		Disagree		Strongly disagree	
	%	n	%	n	%	n	%	n	%	n
It was important that students included a minimum number of 'academic' sources (and this was expressed in the marking criteria)	27%	12	25%	11	18%	8	25%	11	5%	2
It was important that, students used 'recent' sources, as defined by the module team (e.g. up to 10 years old only)	16%	7	43%	19	27%	12	7%	3	7%	3
It was important that a single source appropriate to the argument being made was cited and referenced	14%	6	14%	6	20%	9	36%	16	16%	7
It was important that multiple sources appropriate to the argument being made were cited and referenced	43%	19	36%	16	11%	5	9%	4	0%	0

These results show more of a variation in response than some of the other questions, especially in the first two statements. It was therefore thought useful to break them down by school/department, to see if any in particular emerged as a potential source for this (Table 21 and Table 22). No-one from Information Learning Services answered this question as they all gave the response that they were not responsible for assessment.

The School of Humanities Religion and Philosophy and School of Health have the highest percentage of respondents who agreed with this traditional approach, with an expectation that students will use a minimum number of prescribed source types which they view as the most academic (i.e. textbooks and journal articles). 77% (n=10) of respondents from Humanities Religion and Philosophy either strongly agreed or agreed that students should use a minimum, specified number of 'academic' sources. However, as only 4 respondents from the School of Health contributed to this question, it is difficult to come to a conclusion in respect of that particular school other than noting it is worthy of further investigation in the community of practice.

Table 21: Responses to encouraging students to use a minimum number of sources, defined as 'academic'

Responses of agreement (strongly agree or agree) to the statement "It was important that students included a minimum number of 'academic' sources (and this was expressed in the marking criteria).			
School/Department	Total responses	Number of responses of agreement	Number of responses of agreement as % of total responses for that school/dept
School of Art Design and Computer Science	1	0	0%
School of Education	9	5	56%
School of Humanities Religion and Philosophy	13	10	77%
School of Health Sciences	4	3	75%
School of Languages and Linguistics	2	1	50%
School of Performance and Media Production	4	1	25%
School of Psychological and Social Sciences	3	2	67%
School of Sport	5	1	20%
York Business School	2	0	0%

Given that most schools also assess according to the argument being made and how sources are used to form it, there should be practice which manages to assess this without being so prescriptive about source types and this could be part of the content of the community of practice.

Moving on to the consideration of agreement with expecting recent sources to be used, with recent prescribed by tutors (Table 22), it is perhaps unsurprising that areas such as Humanities, Religion and Philosophy would not agree with this, given the historical nature of much research in these areas. Areas such as Health, with much stronger agreement, would expect recent research on medical issues to be prioritised to ensure up to date diagnosis and treatment. Similarly Business may prioritise these because of the need for up to date market information. However, again given the small number of responses per school, it is difficult to come to any conclusions from the survey data alone, and it would need consideration in a different way. These issues could be tested in the community of practice.

Table 22: Responses regarding agreement with concept of encouraging students to use 'recent' sources, and defining 'recent' for them

Responses of agreement (strongly agree or agree) with the statement, "It was important that, students used 'recent' sources, as defined by the module team (e.g. up to 10 years old only)"			
School/Department	Total responses	Number of responses of agreement	Number of responses of agreement as % of total responses for that school/dept
School of Art Design and Computer Science	1	1	100%
School of Education	9	8	89%
School of Humanities Religion and Philosophy	13	6	46%
School of Health Sciences	4	4	100%
School of Languages and Linguistics	2	1	50%
School of Performance and Media Production	4	1	25%
School of Psychological and Social Sciences	3	0	0%
School of Sport	5	2	40%
York Business School	2	2	100%

All of these responses were analysed whilst recognising that, in some cases, schools/departments were represented by small sample sizes. For this reason, they are used as a way of indicating possible exploration of issues in the community of practice and nothing more than this.

4.2.4.8 Scope for community of practice

Not only is there evidence to suggest that there are areas of shared concerns and values linked to information literacy across the university from the survey questions about experiences of level 4 teaching and assessment, there is also a positive response to the explicit idea of a community of practice. 83% (n=43) of all respondents indicated they would be interested in using an online resource to develop the use of information in curriculum design. The key resources they would like to see are case studies from York St John and other universities. There were also academics who expressed a wish for face-to-face discussions on top of the online provision.

This data suggests that there is evidence of shared practice across the university linking to traditional information literacy, which could indeed form the basis of a community of practice. This is particularly true in the case of the use of academic sources in forming arguments. The practice common to all schools which links to more emerging forms of information literacy is the extensive use of group work and social approaches to learning. These two areas could form the core of a community of practice. However, there are pockets of assessment practice which are very traditional in their approach and it would be good to make the sharing of practice from those schools with more progressive ideas one of the first focuses of the community of practice, bearing in mind the small sample sizes give just an indication that this may be the case and provide issues to explore and nothing more.

4.2.5 Survey discussion

Returning to the questions posed initially, which the survey was designed to address, it can be seen that it has done so in some cases, but that the data has not yielded results in others, especially in terms of academic qualification and experience.

4.2.5.1 Can particular approaches be identified from practitioners?

The descriptive analysis of the data did reveal that there are some approaches to teaching and assessing information literacy which are particularly apparent across the entire sample investigated. One of these was found in Q.12, in the learning outcomes associated with information literacy, and is the traditional

library skill of accessing information relevant to the subject and referencing it accordingly. Therefore, there is a predominant traditional approach of accessing and referencing information, linking back to two of the skills in the Seven Pillars (SCONUL Working Group on Information Literacy 2011).

However, the second most common response in learning outcomes is associated with emerging forms of information literacy; that of demonstrating personal responsibility for self-directed learning. This is part of the student-centred approach recommended by Donovan and Erskine-Shaw (2019), moving away from a deficit model focused on asking students to learn established academic 'skills' and towards empowering the student to find their own academic identity.

Further to this, the descriptive analysis also revealed that a concern for understanding students' previous experiences, prior to university, was apparent across the institution. This was in terms of education, rather than social or cultural or personal, and so does not address many of the concerns raised in the literature review of marginalising or 'othering' students from communities which are not part of the dominant norm (Ellis 2009, Mckendry, Lawrence 2017, Eddo-Lodge 2018, Owusu-Kwarteng 2019).

In addition, a social approach to learning is evident across all respondents, in line with emerging forms of information literacy, but with facilitating academic debate proving slightly more of a reason than fostering a supportive atmosphere.

There is evidence to suggest that emerging forms of information literacy are apparent in the priorities of the respondents. For example, the statement, "I encouraged the students to consider the context in which the source was produced" found agreement (strongly agree or agree) from 86% (n=46) of people who responded to that question (Q.20).

4.2.5.2 What are the characteristics of these approaches?

The main question designed to establish whether there is a common approach to information literacy in terms of process was that which looked at learning outcomes (Q.12). In the case of the learning outcome recognised in the practice of most respondents, this was 'Accessing information relevant to the subject and referencing it accordingly'. This learning outcome aligns with those traditional library skills associated with that traditional research approach.

When the questions linked to the practice of the respondents themselves, the response with the greatest level of agreement was that of employing group work, aligned with social and active learning. This could still be process-led, as it may be designed into the method module delivery, but could also be linked to the preferred teaching of the respondents. This would need unpicking more in the community of practice.

It is indicated in the responses to the questions designed to be focused on the values and practice of the academics themselves that there is a mix of practice from both traditional and emerging information literacy. There is evidence that in terms of encouraging the students to consider the context in which sources were produced, there is agreement, and this is person-driven. In terms of individual academics' approaches, they also had a wish to see the student at the centre of the research process and, in addition, prioritised understanding, or at least considering, the experiences of individuals prior to starting their university course.

There is an apparent difference between process-driven approaches and person-driven particularly evident when the critical information literacy concept of understanding that political and societal structures have an impact on information is considered. Only 5 respondents recognised the learning outcome of "Evaluate broadcasts, performances or writing within an historical context" in relation to the modules they had delivered (Q.12). However, 46 respondents either strongly agreed or agree with the statement that "I encouraged the students to consider the context in which the source was produced" (Q.20). This indicates that person-driven approaches are stronger in this area than process.

4.2.5.3 Is the approach taken related to the academic school?

When analysis at school/department level took place, small sample size affected the reliability of the conclusions. There were however indications of practice which could be used as a basis for deciding potential issues to discuss as part of the face to face meetings and online platform and the issues elicited in this subsection are proffered with that aim in mind only.

Two schools ranked fostering a supportive atmosphere as more important than academic concerns as their reason for employing group work: Performance and

Media Production, and Psychological and Social Sciences. This aligns with emerging information literacy and also studies such as that of Morina (2017) in looking at inclusive practice linked to disabled students, and those previously mentioned in terms of LGBTQI+ students (Mckendry, Lawrence 2017, Equality Challenge Unit 2009) and people of colour (Charles 2019, Owusu-Kwarteng 2019, Eddo-Lodge 2018). It also aligns with the theory of communities of practice itself (Wenger 1998) in stressing the importance of social learning and legitimate peripheral participation – that just being part of the social learning group is important, and feeling valid in that group even if the participant is not confident enough to contribute to begin with.

Respondents from Performance and Media Production and Languages and Linguistics are the keenest to use sources beyond the textual, aligning with emerging information literacy. This was highlighted as particularly important by Tewell (2019), especially in conjunction with situating sources in a historical context (Rupprecht 2019) where those who are not represented in the evidence of the time may indicate who was silenced or excluded.

Respondents from Humanities Religion and Philosophy and Health tend to agree that students should use a prescribed number of 'academic' sources in assessments, aligning with traditional information literacy (Q.29). The prescription of what is 'academic' is aligned with traditional information literacy approaches and can be problematic, especially if structural inequalities in the information environment and publishing process are considered (Beilin 2015, Zevallos 2019). It is possible that the traditional 'academic' evidence available excludes the communities from which the students themselves come (Charles 2019).

Respondents from Health and Business tend to agree that students should use 'recent' sources, as defined by tutors, in assessments (Q.29). This would align with traditional information literacy and can be problematic if the students themselves are not encouraged to critically engage with why they should not use sources of a certain age. In the case of Health this is probably because they need to use the most up to date sources in order to provide the most appropriate medical advice, but it has been stressed by those involved in evidence-based medicine of the need to also consider structural and systemic issues in what is

available in health evidence (Heneghan, Mahtani et al. 2017) to avoid clinical advice which is biased in terms of gender or race, for example (Westervelt 2015, Kasprzak 2019).

4.2.5.4 Is the approach taken related to educational background?

A high percentage of the respondents had some sort of pedagogic qualification, or were studying towards one. This meant that a comparison with those who had no pedagogic qualification could not be made, as they were so few in number.

4.2.5.5 Survey overview

The analysis of the survey results has revealed that there are areas of common concern in terms of information literacy (addressing research objective 3), and that this could form the basis for a community of practice. This is particularly linked to group work as part of pedagogic practice and a wish to understand students' previous educational experiences, linking to progressive methods of information literacy education. However, there is still evidence of much shared practice in traditional library skills such as accessing relevant information and referencing it, and recommending 'academic' sources of journals and books above others, indicating that there is a need for staff development in these areas in order to progress the information literacy in the curriculum towards the emerging forms, where textual information is not necessarily privileged and the power structures behind information production are considered, in line with the recommendations of Beilin (2015) and Rupprecht (2019).

- 92% of respondents use group work in their teaching in level 4 modules (links to the emerging form of social construction information literacy)
- 79% of respondents are in agreement that the need to understand students' previous educational experiences is important in level 4 teaching (links to emerging form of critical information literacy)
- 96% of respondents encouraged the students to use 'academic' sources of journals and books above others (a traditional view, privileging the type of information rather than the content, and understanding which voices may be marginalised by the academic publishing process)
- The most common example learning outcome recognised by respondents (49%), in relation to level 4 modules, was "Access information relevant to

the subject and reference accordingly"; this is a traditional information skill

As there is evidence to suggest that there is practice in certain areas which links to the emerging forms of information literacy (addressing research objective two), this suggests that there is a possibility, through legitimate peripheral participation (in line with Wenger's 1998 theory), for this practice to be picked up elsewhere in the university, where more traditional approaches are currently apparent.

Other findings from the survey which will help to address research objective four, in determining content and coverage for the community of practice, are to be found in conflicts between the research practices of the individual academics and the practice they encourage amongst students, and also in interrogating what their views of information are. Three key areas to inform early discussions or postings have emerged:

- 98% of respondents said they would embark upon information searching for their own research on their own, but 92% advocate a more social approach amongst students. Why is there this disparity?
- Traditional bibliographic databases are the preferred information search tools in academics' teaching of level 4 modules. How does this translate into issues of information privilege? How does the curriculum help the student understand that they will not have access to many of these resources once they leave university, and how does this translate into professional courses where there is an expectation of evidence-based or reflective practice?
- 96% of respondents strongly agreed or agreed that they encouraged the students at level 4 to use 'academic' sources of journals and books. Why might this be problematic, especially where marginalised voices are concerned?

The survey has therefore not only identified areas of shared practice and values which indicate a community of practice in information literacy, but it has also helped surface areas of particular interest. This is in terms of where there is particularly strong practice in emerging forms of information literacy in particular

academic schools, but also in surfacing topics upon which to concentrate content for community of practice meetings or online postings. The literature review demonstrated that there is a research gap in terms of information literacy, staff development, and collaborative learning in higher education. There was nothing located in the current research literature which mirrored the approach of Cochrane (2010, 2014), who showed that communities of practice in e-learning were of value in providing staff development in this area and impacting positively on curriculum design and practice. The outcomes of the interviews and survey here demonstrates that this is an approach which may well prove useful in the context of information literacy staff development and curriculum design and could be used as a relatable case from which others could learn.

4.3 The action: facilitating the community of practice

The outcomes from the interviews and the survey suggest that there is evidence of a community of practice in information literacy in existence at York St John University. At its core are shared concerns and values linked to traditional library skills, but there is also evidence of practice linked to both information literacy landscapes (Lloyd 2010) and critical information literacy (Elmborg 2012), grouped together in this study as 'emerging' information literacy theories.

Key issues informing the focus of the community of practice were drawn from the outcomes of the interviews and survey. The first is aligned strongly with the social construction part of the emerging information literacy theories and covers the very strong use of group work in teaching information literacy across many interviewees and nearly all respondents in the survey. Firstly, this contrasts with their own information searching preferences, as the majority of survey respondents stated that they embarked upon this on their own. Secondly, there is the consideration of why group work is used; whether to encourage peer learning or whether to foster a supportive community amongst the cohort.

Another question to come out of the results was the concept of an 'academic' source; what tutors consider academic and a consideration of the structural and systemic issues related to what produces such a thing. A wish for students to use 'academic' sources and build 'academic' work upon them was evident across the schools and departments in both interviews and survey responses, indicating that

a community of practice is in existence in some form, but that further facilitation could draw it together and progress in line with emerging information literacy. Discussions could centre on this, how much direction is given to the students on it, and what the wider context of its production was, and how all of this is incorporated into teaching practice.

It is the assertion of this researcher that a community of practice, both face-to-face and online, provides an opportunity to provide a platform for staff development in information literacy for academics and other professional support staff; that through the facilitation of this community of practice across a university, there is the possibility that academics and other professional staff can learn from each other, and therefore embed emerging forms of information literacy in curriculum design, in line with the theory of Wenger (1998). In doing this, no-one is viewed as the expert, or prescribing best sources. Instead, members learn from each other and debate and reflect upon critical approaches to information use in the university.

This signifies a shift in practice from much information literacy guidance for university staff and students which currently exists in the sector. Hicks (2015) provides a lens on this, putting forward the view that too much centres around the prescriptive use of platforms such as LibGuides (a content management system to help libraries provide online access to their services), providing recommended links to 'academic' sources:

> Web-based research guides have helped to bridge the gap that the growth of online resources has put between the library and its patrons. However, their typical focus on librarian-defined notions of value and authority conceals an industrial-era adherence to library-centric, behaviourist learning theories[…]In short, while librarians have started to think about the nature of critical pedagogy in the classroom, a failure to subject instructional materials to the same processes of reflective, critical thinking serves to dehumanize both our students and the nature of research and inquiry. (Hicks 2015)

Reviewing the content of the research in evidence at recent information literacy conferences (LILAC 2018b, 2019) shows that there are some who are using such platforms in order to engage more critically with sources when dealing directly with students (e.g. Brookbank (2018), who looked at civil rights in the current climate in the USA with students, via a critical engagement with news reporting and whose voices were being heard), but that there is little regarding engaging

with academic staff on this, or employing social learning with them in the United Kingdom. Baume, Secker et al. (2019) mention staff development and collaboration, but not communities of practice. Omar (2019) acknowledges the importance of working in partnership, but links this between librarians and specific academic departments. Tilley and Reid (2019) focus on the value of collaborative learning, but amongst library staff across a large academic organisation. The closest in concept and outcome is the work of Laverty and Saleh (2019) at Queens University in Canada, who have also used a community of practice linking pedagogy and information literacy. However, this also seems to just include librarians and learning developers, and not academic staff.

4.3.1 Content and membership of online community of practice

The survey question about the wish to take part in a community of practice garnered a positive response from 43 of the 61 academics who responded. Of these, 32 left email addresses to find out more. There was a wish for an online platform, as well as face to face meetings, thus the facilitation was designed in light of this, offering synchronous and asynchronous interactions, in line with Wenger, White et al.'s (2009) recommendations (Table 23). From options of content offered, the preferred ones were of case studies from both York St John University and other institutions. It was also deemed important to reflect the student view.

Table 23: Responses to question regarding what CoP should contain

CoP content	Very important	Important	Slightly important	Not at all important
Online discussion boards	6	17	14	6
Example lesson plans	9	14	16	3
Case studies from YSJU	9	28	6	0
Case studies from other universities	5	28	8	1
Student view	17	24	2	0
Associated face to face meetings	11	25	5	1

The decision about the best way of hosting and designing the online platform was taken in conjunction with academic colleagues, informed by the survey answers and discussions in the first face-to-face meeting.

4.3.1.1 First meeting and online community development

In advance of the first face-to-face meeting, some sample content was created in different platforms, so that attendees could reflect upon and evaluate these. These platforms included the university's virtual learning environment (Moodle), the institutional WordPress blog platform, and a generic WordPress blog. The content was provided in conjunction with a representative of the School of Education, who had expressed a willingness to be involved in this during the survey dissemination period. Once the survey data had been analysed, the researcher got together with this academic to establish which example of collaborative practice would match the themes coming out of the data analysis. A level 5 workshop, designed collaboratively between the librarian and the academic, which had been embedded in programme teaching for several years and reviewed throughout that period was chosen (see McCluskey Dean 2018d). This was because it covered key themes such as giving agency to the students, evaluating search tools and sources for the voice within, and the agendas the producers may have in publishing them (e.g. ideologically driven policy from the Government, professional feedback from sector-specific newspapers, and research articles), and who may be missing from representation in the recommended sources for the assignment, all of which link to emerging forms of information literacy. A short account of the content of the workshop was given, along with reflections on how it worked, and a downloadable lesson plan.

The first meeting took place in June 2018, once the initial analysis of the survey data had taken place, and was an hour long. All of those who had left contact details in the survey were invited and the 13 attendees included representatives from the Schools of Business, Health, Education, Humanities Religion and Philosophy, Language and Linguistics, and Information Learning Services. Apologies were sent, with requests to be kept informed of developments, by representatives from the Schools of Education, Business, Humanities Religion and Philosophy, Languages and Linguistics, and Information Learning Services. The first half focused on the purpose of the community of practice and garnered

opinions on how often it should meet face-to-face and the online resource in terms of where and how it should be hosted, and also the content it should include. The second half looked at staff input to information literacy for level 4 students.

It was decided that the community of practice should meet twice per year; once in June and again in November/December. This would be run alongside the online community. There was also the suggestion made that its work should be integrated with the RIPPLE (Research Into Professional Practice in Learning and Education) group which was already established at York St John University, running along a similar model of face-to-face meetings and supporting online resources and focusing on pedagogy. It was felt by attendees that the work of the two groups had a different focus in each, but with complementary and intersecting aims of enabling staff development in curriculum design and teaching.

In regards to the online part of the community of practice, two wishes emerged strongly from the meeting attendees in relation to how it should be hosted; that it should be hosted on a platform that was familiar to them and that access should be restricted as little as possible. Attendees specifically mentioned the institutional WordPress account as their preferred way forward from the options offered. The blog software allows for the design of a basic website, but also for input from anyone with an institutional login. When it came to content, all attendees requested that it include an outline of key information literacy approaches, and information on contacting the academic librarian for their School, as well as case studies, lesson plans and reflections on information literacy initiatives and practice.

The outcomes of the second half of the meeting (regarding information literacy input itself) were posted on the online community of practice the day after the meeting took place (McCluskey Dean 2018a). Members discussed issues such as how to engage students with 'academic' reading and how to encourage them to evaluate sources and then use them in assignments. These were traditional in their focus, but it was planned to examine these topics critically, with information on emerging information literacy supplied, in future meetings.

Once the meeting had taken place, and the preferred platform chosen, more content was created in the institutional WordPress implementation.

4.3.1.2 The design of the community of practice

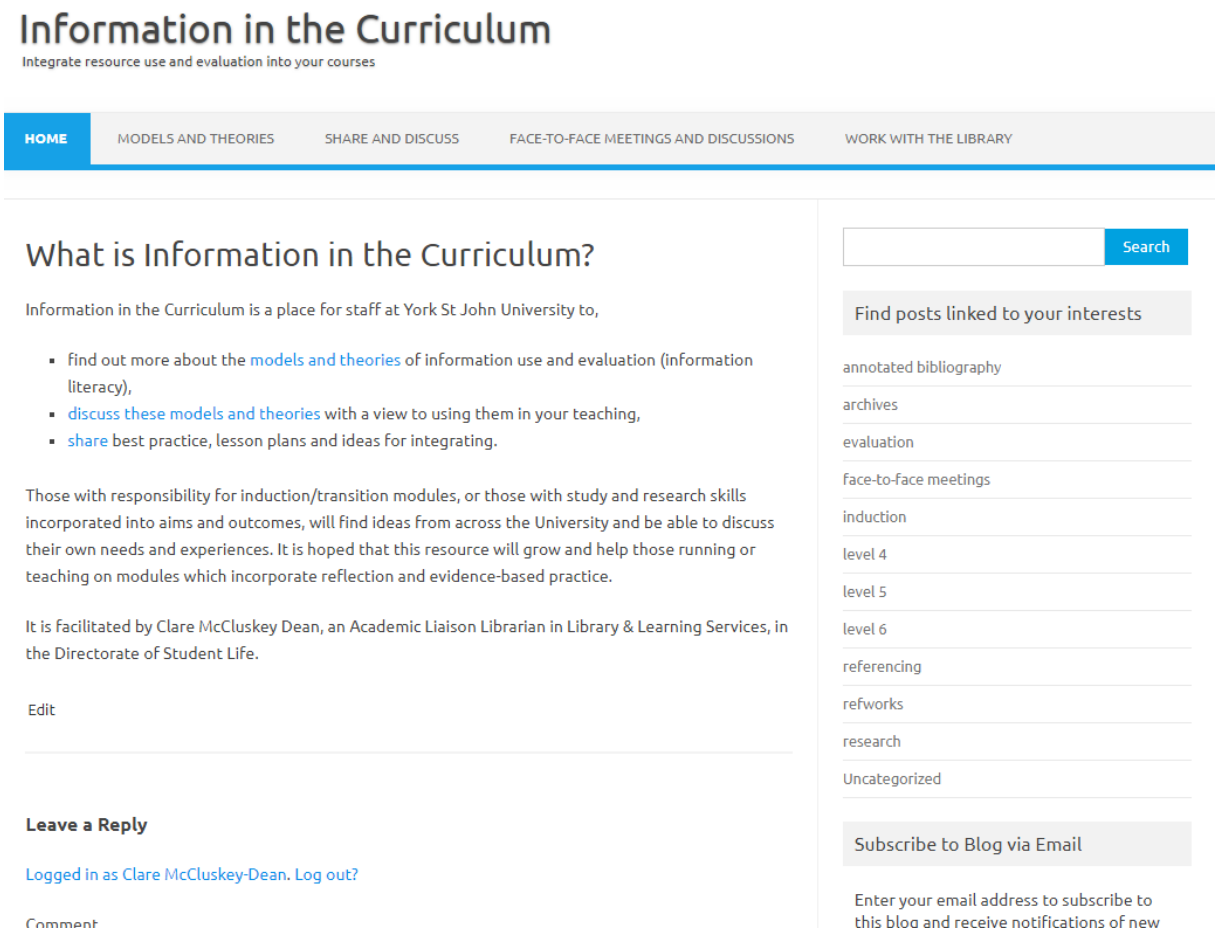


Figure 12: Screenshot of online community of practice's homepage

The online Community of Practice is hosted at
https://blog.yorksj.ac.uk/infoincurriculum/

There are three key sections to the online community of practice. To give some context, a short outline of three approaches to information literacy are given (Figure 12). To reflect the investigations in this project, they are the ANCIL approach (Secker, Coonan 2014), landscapes of information literacy (Lloyd 2010) and critical information literacy (Elmborg 2012) (Figure 13).

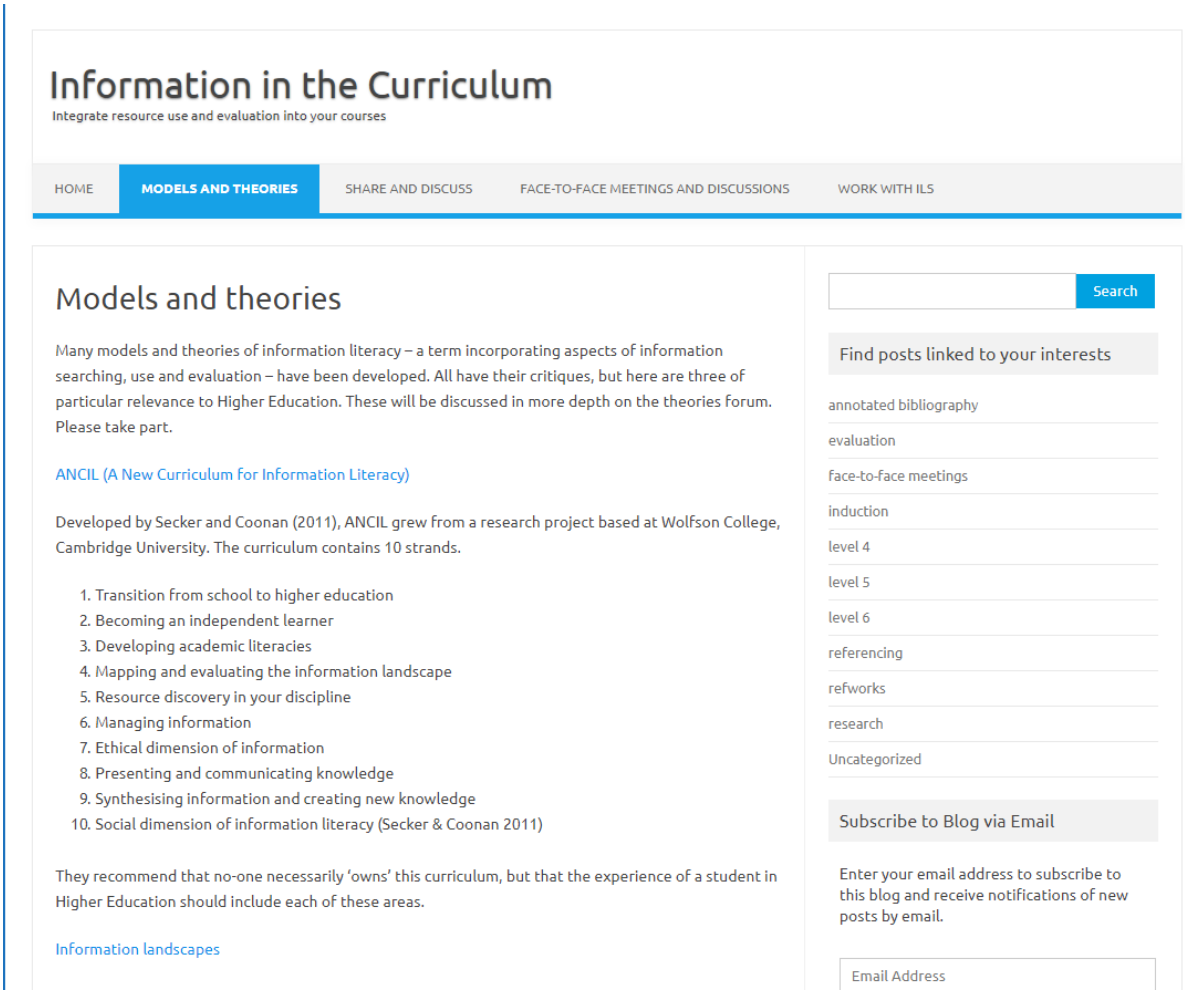


Figure 13: Screenshot of online community of practice's models and theories section

The core of the online community of practice is the place to find and share ideas, lesson plans, reflections and more, linked to information literacy. The first thing available on this page is a form for members to submit these (Figure 14). Below the form, and accessible via links to interests which appear on every page in the site, this content can be found (Figure 15).

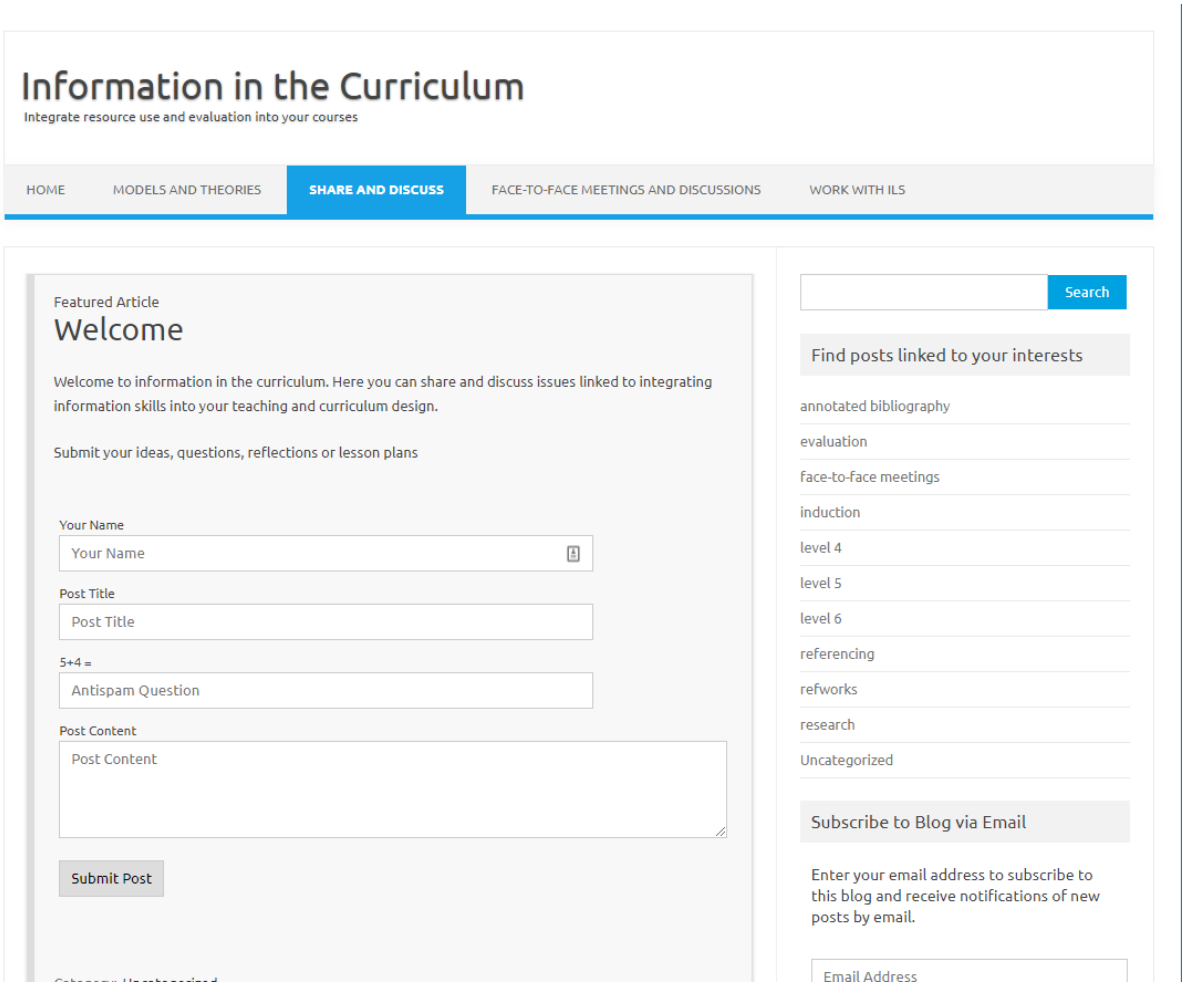


Figure 14: Screenshot of online community of practice's share and discuss area, with submission form

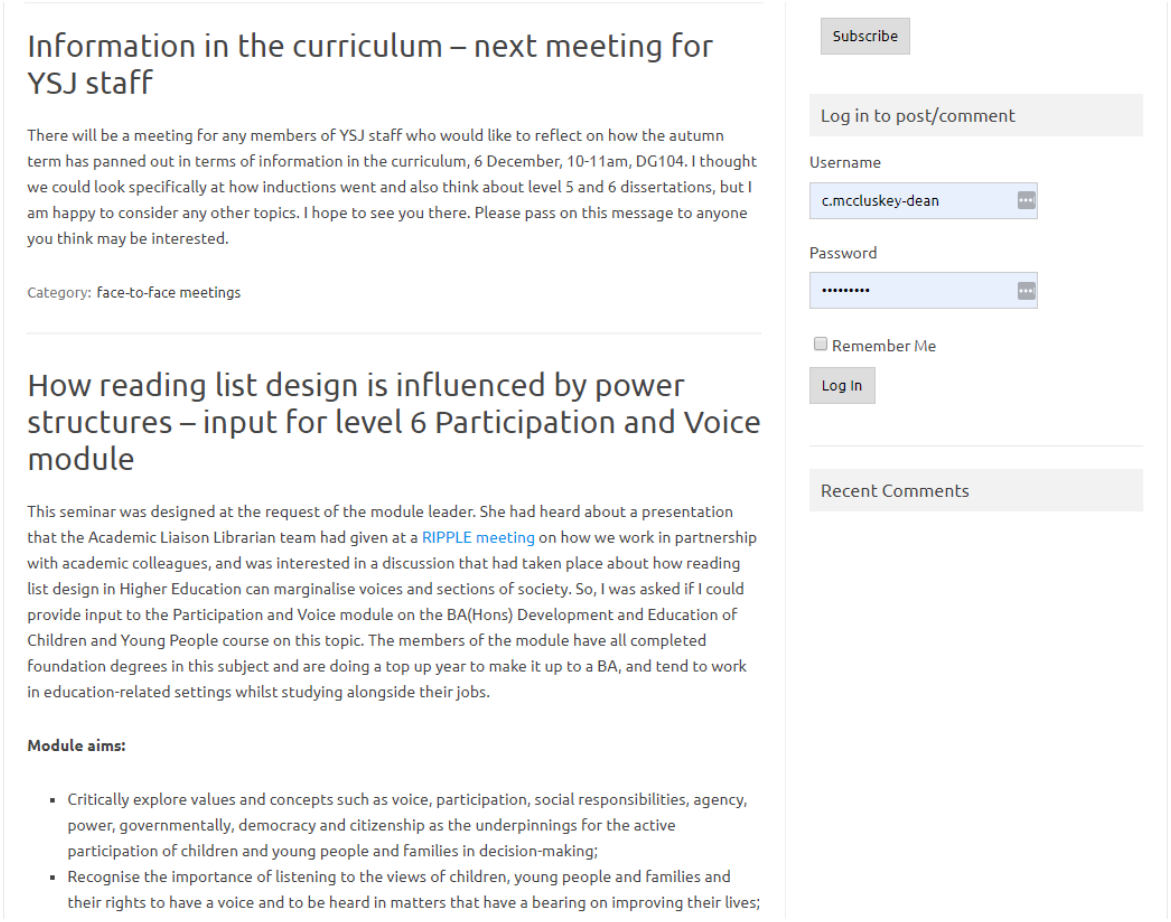


Figure 15: Screenshot of online community of practice's share and discuss area, with examples of posts

The third core section is about face-to-face meetings, to both advertise them and provide minutes and actions (Figure 16).

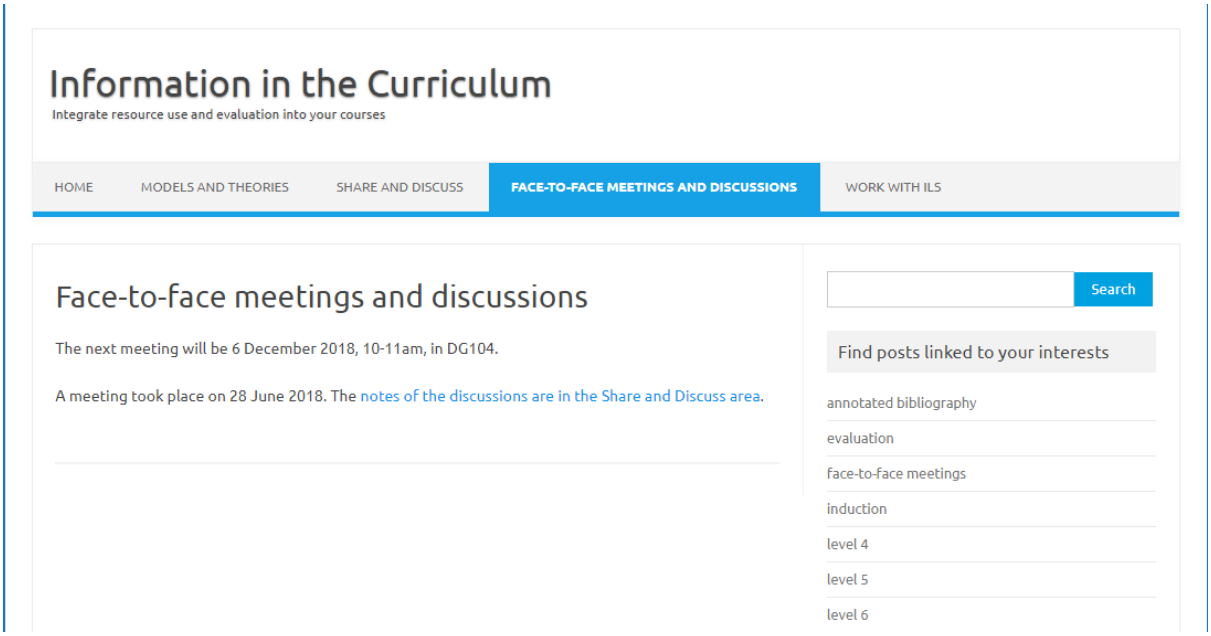


Figure 16: Screenshot of online community of practice's face-to-face discussion section

4.3.1.3 Outreach to other potential members

Information about the school with a lack of representation in the survey was also sought at this point, as a parallel research project on engagement with the area of Art and Design was concluding at the point at which the design of the online community of practice and its content was being initiated. This school had not fed into the interview stage, and only one response was garnered from the survey, so this was important in making sure that potential members had not been missed, and in learning how the content and marketing could be made more appropriate for them.

The parallel project, carried out by Peach (2019), investigated information literacy and art pedagogy via interviews with academics in that subject area at the same institution as this project. It revealed why there may have been a problem with initial engagement, as information as a concept was rejected, with knowledge and materials favoured. However, it did reveal practice which involves acknowledgement of emerging information literacy in curriculum teaching and design, especially in terms of student identity being centred. It also revealed issues of information privilege, linked to landscapes, as the wealth of materials on offer to the students whilst at university were not contrasted with the non-subscription resources on offer whilst not in an educational establishment. One of

the recommendations is that this informs the community of practice which is part of this research. This link via another librarian will be exploited in terms of gaining membership from the school, even if only via initial peripheral participation (Wenger 1998) in the first instance. As the community of practice progresses, the prominence of the word 'Information' on the site will be re-evaluated, possibly adding 'knowledge', to incorporate the findings of Peach (2019).

An important part of driving the community of practice forward is engaging more library staff, and staff such as specialist technicians in the academic schools, with its work. It is intended to be a tool and meeting which cuts across hierarchies and is available to anyone engaged with student learning. Information literacy staff development for library workers can be overlooked (Attebury 2018, Bilodeau, Carson 2014, Moselen, Wang 2014) and studies such as this then tend to focus on librarians, rather than all library staff. To this end, the customer services manager in the library service at York St John University has been approached about engaging staff in their team with the community of practice. It was covered in staff development sessions for that team in September 2019, and plans are being made to encourage engagement going forward. Links to technicians via links with academic liaison librarians are also being explored.

4.3.2 Key outcomes of communities of practice

4.3.2.1 Engagement with academic in School of Education

As documented in an entry on the community of practice online site (McCluskey Dean 2018b), this engagement resulted from a presentation made by the researcher at a pedagogic research group at York St John University, on this piece of research and the emerging online community of practice. The academic in question contacted the researcher in order to discuss her module Participation and Voice, on the BA(Hons) Development and Education of Children and Young People programme. One of the aims of the module is to "Critically explore values and concepts such as voice, participation, social responsibilities, agency, power, government, democracy and citizenship as the underpinnings for the active participation of children and young people and families in decision making." and this academic was keen to explore, with the students, how the reading list for this module and others on their course were representative of different sections

of society, and whether groups and voices were marginalised through a lack of representation.

As a result of this discussion, which emerged directly from the promotion of the community of practice and the idea of critical information literacy put forward as part of one of the discussions linked to it, a workshop was designed to be delivered to the module group. This drew on the work of several people who have written on their experiences of being marginalised in higher education, specifically Ahmed (2013, 2012) on women and people of colour, Tremain (2018) on disabled people, and evidence on LGBTQI+ inclusion from Hudson-Sharp and Metcalf (2016). In doing so the social and political structures which impact on research and curriculum design in higher education were debated, in line with Elmborg's (2012) critical information literacy approach. This debate involved students, along with the member of academic staff leading the module, and the academic librarian, thus cutting across traditional structural hierarchies and ensuring the student voice was valued (Gustafson 2017).

The account of this is the most popular post on the online community of practice, with 282 hits since it was posted in November 2018 (as of September 2019), indicating that there is an appetite amongst the community to explore critical information literacy in relation to curriculum teaching and design. The referral statistics also indicate that there is interest from beyond York St John University, with Twitter providing the main route into the post, and retweets with a tweet with a link to it coming from 13 librarians in other universities or services see Figure 17) (McCluskey Dean 2018f), and analytics from Twitter suggesting 192 active 'engagements' (see Figure 18), 'engagements' being calculated when a user has retweeted, clicked for more detail, replied, or 'liked' the tweet (Twitter 2019).

Together with other academics on this degree programme, this tutor is now revising module resourcing and content, influenced by critical information literacy. This should have a sustainable outcome, with developments embedded at course design level, and emerged from discussions linked to the community of practice. The subject director for this degree programme and others in linked areas has also joined this revision of content and delivery, and is now engaged with the community of practice themselves. Subject directors oversee several

degree programmes, focused around a core subject area. They often teach across them too. A meeting has now taken place with the researcher as academic liaison librarian, two module leaders, and the subject director, to map where and when inputs linked to marginalised voices can be best positioned in the degree courses, and how these will engage student agency throughout their university experience, documented in a reflection,

> we were able to map possible interventions across the whole of the degree programme, and plot possible links to others. They include getting students to help build reading lists, the introduction of an annotated bibliography assignment (the content of which will be posted in the reading list system as a guide for these and future students), and group activities to evaluate the collections of sources found to see if they privilege specific sections of society and amplify their voices to the exclusion of others. The formats of these sources will also be discussed, so that it can be seen whether some voices are marginalised in specific, traditionally academic, formats. (Reflection 01.07.19).

This includes input from another project emerging from the community of practice, outlined in section 4.3.2.2, taking ideas from another academic school, and using them to influence module design in this context. Having a subject director as a member of the community of practice, and engaged in this particular project, has meant that a strategic approach to curriculum development with regards to information literacy has been achieved, in line with objective 4 of this project.

Figure 17: Tweet linking to post on community of practice, with 14 retweets

Figure 18: Twitter analytics for tweet linking to community of practice post

4.3.2.2 Project on representation in Criminology

Written permission for including the details of this research, and the academics involved, has been obtained for inclusion in this thesis and full details of the research project provided as a participant. The project detailed in this subsection also came about as a result of an academic attending a pedagogic research event at which the community of practice was promoted (McCluskey Dean, Peach et al. 2018). After the event, the academic contacted the researcher to ask more about the theories behind critical information literacy, and the researcher was able to send the link to the online community of practice. Here there is the first outcome of actions resulting from initial legitimate peripheral participation in the community of practice (Wenger 1998), as detailed in the literature review. The academic was able to read around the concept of critical information literacy, and take time to apply it to her own situation, where she felt there were voices marginalised in the curriculum. This led to a decision to work together, initially on a reading list project, which would then inform curriculum development. The discussion took place on email and then Twitter.

> Just had a very exciting email from (academic) about researching reading lists and structural inequalities in the curriculum and critical librarianship and YES! Can't wait to meet up and discuss this further. (McCluskey Dean 2019a)

> I've just got too excited by the ideas you suggested/your blog post! Sitting here with my brain literally fizzing now! It's going to be excellent, so pleased to have such a fabulous ILS team to work with on this. (Stockdale 2019c)

The academic applied for, and was awarded, internal funding for a small-scale research project. A research assistant was employed and focus groups with students arranged, along with analysis of reading lists and validation documents. This is important in adding content to the community of practice which relates to the student voice, as a wish for this was expressed by respondents to the survey.

The academic liaison librarian for this subject area (a different person to the researcher for this project) became involved in providing the documentation for this; three years' worth of reading lists, plus the original validation documents for the course. The aim was to analyse and further understand representation (or lack of it) of women, people of colour and LGBTQI+ in module resourcing and

content. This would then inform curriculum development in the programme at York St John University. The academic also wanted to have a wider impact and planned to present the findings at a national conference for Criminology:

> Yes early stages of a #criminology curriculum research with (name of another researcher) both on reading list content and we just had excellent focus group with students to explore their thoughts today! Initial findings available July – presenting @BSCLincs19 (Stockdale 2019b)

Initial findings were reported just three months later, with Stockdale (2019a) reporting that an initial appraisal of reading lists and module documentation had taken place and found "very low % of women, and even lower BME on the validated reading lists", and also reporting that focus groups with students had begun.

This research has since been presented at the British Society of Criminology Annual Conference, leading to interest from other institutions. The paper shows that taking the core texts for the programme that was validated into consideration, over 70% of the authors on them were male, and less than 6% overall were classed as Black and Minority Ethnic (Stockdale, Sweeney 2019). This has now been fed back into curriculum development. In addition, the student voice has been added as focus groups took place to gain their views and experiences, via the design of a new matrix specifically for the purpose of reflection on marginalised voices. Generally, the students could only name white, male criminologists and there was evidence which clearly links back to the concept of critical information literacy, with two participants saying:

> I'll definitely be looking more into female and non-binary people[…]people from different ethnicities[…]I wouldn't have thought about it[…]but now looking at it[…]I can see[…]we need a bit more variation. (Stockdale, Sweeney 2019)

> Because we mostly know just white male criminologists it's hard to get[…]broad opinion, like the experiences of other people. (Stockdale, Sweeney 2019)

The outcomes of this project will be fed back into the community of practice, and they have already been taken up by members in the School of Education (linking back to the strategic planning mentioned in section 4.3.2.1) who, after becoming aware of this via community of practice members, plan to use the matrix in their own teaching and research in the 2019/20 academic year. This links in with the

previously described workshop in the School of Education, with academics involved with both initiatives and combining them. The community of practice is providing a central point of communication and interaction across two academic schools, with the input of two academic liaison librarians, aligning with research objective 4 of this thesis. These developments also have the potential to link with a library-led project on amplifying marginalised voices: the IAMplify project.

4.3.2.3 Integration with IAMplify project

The library service at York St John University is about to launch (as of September 2019) the IAMplify project, which aims to develop and draw together existing projects related to the student voice, the university curriculum and information resourcing and use in, amongst other things, social justice, inclusion and decolonisation. It specifically wants the focus to be across the university, "IAMplify is for everyone – staff and students. It acknowledges the library's necessary role in providing staff and students with some of the means to engage in diversity work." (York St John University Library 2019). The focus in the first instance will be on three areas: LGBTQI+ voices, people of colour/BAME/indigenous voices, and disabled voices. This aim, and the three areas chosen as the focus, have been influenced by the research for this project, especially in terms of critical information literacy. The two projects from Education and Criminology, mentioned here, will feed into this, using posts from the online community of practice to highlight them as examples of initiatives which have already taken place and are ongoing. Thus, the community of practice will be a reference source for staff members seeking examples of how critical information literacy projects are already being enacted in the curriculum, with a specific IAMplify category in the online version to link the two projects together.

In addition to this, an aim is to offer a mechanism through which academics and other staff can surface their practice-based learning and teaching initiatives linked to this area of critical information literacy, and it is planned that the community of practice provides that mechanism, both in terms of the online resource and the face-to-face meetings. It will integrate with other key library tools such as the online reading list system, so that project documentation is held on the library website, curriculum-based initiatives will sit in the community

of practice, and resource lists to promote the titles and services available to module and course designers in linking the curriculum with resources which amplify the marginalised voices detailed above, will be hosted on the university library's online reading list system.

These outcomes show that the community of practice is proving to be a tool which can influence staff members in different academic and professional support areas in developing their practice, especially in relation to linking curriculum design to critical information literacy.

4.3.3 Impact of community of practice

It was set out in the methodology section that this part of the project would be measured in terms of outcome validity (asking whether the proposed staff development input was successful in furthering developments in information literacy in the curriculum at York St John University). The two key outcomes outlined above provide evidence to indicate that the implementation of the online community of practice has led to shifts in programme delivery and design. Therefore, looking at outcome validity, it can be shown that there has indeed been a development in curriculum design in two separate subject areas and that the community of practice has been a catalyst in this.

In terms of process validity (organisational learning) and catalytic validity (the repositioning of the researcher's academic librarian role), there is also evidence to indicate that this project has delivered progress in both areas. The alignment of the community of practice with the existing pedagogic research group, Research Into Professional Practice in Learning and Education (RIPPLE) has been a vital aspect to promoting and engaging members (McCluskey Dean 2018c, McCluskey Dean, Peach et al. 2018). As the RIPPLE group had active members from across the university, with academic schools and professional services such as study development, academic development, and technology enhanced learning all involved, it proved a great platform for both advertising what the community of practice was trying to achieve, and for engaging members. As a way of encouraging staff development in information literacy, and learning collaboratively, this connection has proven to be valuable. Not only has it contributed to organisational learning in this way, it has also led to a shift in the researcher's role, linking to catalytic validity.

The association with RIPPLE has proven important in gaining approval and buy-in to the community of practice from more senior levels of management in the university. The Head of Learning and Teaching, under whose management RIPPLE sits, is supportive of it working in combination with that group, recognising that it fits with the aims of improving pedagogic practice in the university. This has helped to formalise the community of practice's place in the organisational learning structures of the university.

Since the research for this doctoral project began, the researcher has been invited to become co-convenor of the RIPPLE group, working alongside two other members of university staff. Initially this included a Pro Vice Chancellor, who was supportive of embedding the community of practice into the workflows of the university. This support continued with the Head of Learning and Teaching. This is a shift in role from being predominantly reactive in terms of working with academics, and focusing on specific initiatives with individual academics, to having the opportunity to work collaboratively with staff from across the institution and alongside a member of the university's management team, and a professor of education, as a fellow co-convenor. The role involves chairing regular events (at least six per academic year) at which staff from across the university present their research or experiences in learning and teaching in a supportive environment, coordinating this programme, and ensuring the various initiatives from across the institution are brought together. It is a similar premise to the community of practice enacted as part of this project, and the aims are complementary. The researcher is now viewed as someone who can help organisational learning and influence curriculum design by colleagues from across the university, and the collaborative working with the member of the university management team means that this should help this shift sustain.

A further positive from this relationship between the community of practice and RIPPLE could be better integration of the student voice. This was ranked as important by the survey respondents as something the community of practice should consider and involve. The RIPPLE co-convenors have made the decision to involve student representation via members of the 'student as researcher' scheme in place at York St John University from the 2019/20 academic year, with plans to expand this. This is a positive step in helping to inform developments linked to student voice in the community of practice.

In addition to its presentation at RIPPLE, the community of practice, and the research behind it, was presented at a conference hosted by York St John University (McCluskey Dean 2019b). This proved valuable in building further collaboration with the study development team, with their learning development expertise and experience. There had been no response from this team at the survey stage, and it became apparent that there had been a change in staffing since that point in time. The attendee from this team was keen to develop the collaboration further, become part of the community of practice, and also attend RIPPLE. This gives valuable learning development input regarding academic literacies and pedagogy in both groups, and provides input from another professional support service which works across the university's schools, as the academic liaison librarians and digital trainers also do.

Initial analysis of engagement with the online community of practice indicates that people are using it to find out more about information literacy and how it can be embedded in the curriculum (Table 25). Between its soft launch in April 2018 and May 2019 it had a total of 984 visits, increasing to 1309 by September 2019. However, there have been just three submissions of lesson plans that are not from the researcher (from other academic liaison librarians), indicating that visitors are not engaging in terms of sharing their own ideas, questions or case studies. This is something to develop as the usage continues. The options for submitting will be reviewed, along with how the community of practice is being promoted.

By far the highest referrer for visitors is Twitter, when the researcher or fellow academic liaison librarians have tweeted links to specific posts on their own accounts, so the next step for the project will be to establish a better social media presence. There is an existing account for the library service, which is followed by over 1200 people, and the researcher herself has 1500 followers, many of whom are colleagues. These have been used to garner more engagement. The full launch of the online community of practice took place in summer 2019, to help inform the 2019/20 academic year's academic practice. This saw links to it also placed in strategic places on the university website, and the academic liaison librarians using its content in discussions with academic and study development colleagues when planning teaching sessions and collaborations.

Table 24: Hits counted on online community of practice, July 2018-Sept 2019

	2018	2019
Jan		27
Feb		46
Mar		33
Apr		201
May		60
Jun		93
Jul	3	100
Aug	7	64
Sep	56	28
Oct	257	
Nov	304	
Dec	30	
Total	657	652

It was suggested in a meeting with an academic colleague that another way that active engagement could be promoted would be by focusing on a specific topic and inviting people to contribute on that specific area, via email. They said this is how they would be most likely to respond.

> (academic) suggested that emails inviting members to post would be beneficial. He would like to hear what else is going on, but is only likely to post if invited. He suggested concentrating on a specific theme with each invitation, e.g. first year/induction or dissertation. (Reflection 18.07.18)

Therefore, the existing RIPPLE mailing list was used to invite such contributions on the topic of induction, along with hosting a face-to-face meeting, in June 2019, which helped inform practice in Autumn 2019 whilst it was a priority for colleagues. The fourth meeting of the community of practice is due to take place in November/December 2019.

4.3.4 Sustainability of the community of practice

Throughout the research and implementation linked to the community of practice, its sustainability has been kept in mind, and opportunities to help ensure its long-term future taken (Figure 19).

Thus far much of the facilitation of the community of practice has fallen to the researcher for this project. As one of the aims of the research is to provide a sustainable outcome in bringing staff from across the university together in order to develop the curriculum with emerging information literacy concepts, elements of its organisation must be linked to sustainability long-term, and not linked to one specific person. With this in mind, the whole academic liaison librarian team of 6 have opted into the community of practice. They are all members of the community, at least two have attended each face-to-face meeting, and a commitment has been made to keep to at least this level of attendance in the future. In addition, all of the academic liaison librarians have been made administrators of the online community of practice, so it is not the sole role of the researcher for this project to facilitate it.

The fact that anyone in the university is able to contribute to the community of practice also supports sustainability, as it is not reliant on one team's contributions to keep it up to date and with new content. Links to the online community of practice are already on the library website, accessible to anyone, and it is planned to roll out further links on the staff intranet.

Finally, formal and informal integration with other projects ongoing at the university also contribute to the sustainability of the community of practice, as its existence and purpose will be regularly brought to the attention of those engaged with these other initiatives. Two specifically are already in place: alignment with the RIPPLE group for learning and teaching development for staff, and its central position in the IAMplify project in the library.

Figure 19: Methods of sustaining community of practice

4.3.4.1 Plan for future meetings

A plan for the content of future face-to-face meetings has been produced, in line with the outcomes of the interviews and survey (Table 24). This will be introduced at the next meeting, in November/December 2019, and a schedule determined with the attendees in accordance with their preferences. Literature from the review for this project will help inform the theoretical and research content of this, as well as blog posts and opinion pieces from those engaged with these issues professionally in librarianship, academia and publishing.

These sessions will also draw upon collaborative information literacy initiatives that have already been established, and used as examples of how this has worked in practice at York St John University. Two potential projects for this are ones covering marginalised voices, coming from the School of Education and the

School of Psychological and Social Sciences, which have already been initiated as a result of the community of practice, detailed as key outcomes here. Permission has been gained from the academics involved with these initiatives, to include details of modules, communications, and conference presentations in this thesis.

Table 25: Planned content of future community of practice meetings

Session topic	Overview of content	Potential resources
Group membership	How can we include the student voice in the community of practice?	
Why group work?	Social learning Peer support Supportive atmosphere Sympathetic to marginalised voices	Lloyd (2010) Wenger (1998) Mckendry and Lawrence (2017)
What is 'academic'?	Issues with relying on journal articles and textbooks Peer review process Excluded voices Information privilege	Zevallos (2019) Beilin (2015) Tewell (2019) Elmborg (2012)
Professional and academic information searching	Which sources are appropriate in which context? Information privilege	Lloyd (2010) Dawson (2018 and 2019)
Transitions into university	Inductions Information anxiety Marginalisation	Lloyd (2010) Kuhlthau (1994) Owusu-Kwarteng (2019) Mckendry and Lawrence (2017)
Amplifying marginalised voices	Addressing this in teaching practice and resource use/availability LGBTQI+ Race Disability	Elmborg (2012) Beilin (2015) Rupprecht (2019) Ellis (2009) Charles (2019) Morina (2017)

4.3.5 Overview of the action

The community of practice, the action in this action research project, was uncovered and facilitated via the responses to the interviews and the survey which had taken place. Potential members were identified via the survey and contacted about meetings and the development of an online resource, as both were requested by participants. The initial content focused on initiatives in the School of Education, as they had been linked with practice in emerging information literacy in the interviews, especially in relation to the voice behind information sources, and that representatives of that school had expressed a

willingness to contribute in this way, subsequent to the interviews and survey taking place.

The community of practice's online presence was hosted on an institutional WordPress blog, at the suggestion of community of practice members at the first meeting. This kept some link to the university at which the project took place, but also kept the content generally separate as a space in which discussion could take place more freely, and was accessible by people interested who were not members of the university. It also allowed for some sustainability as the content could be exported and hosted elsewhere if necessary.

As a result of the promotion of the community of practice, two initiatives in particular show how it has been effective in terms of outcome validity. These are a workshop in level 6 of an Education degree programme which is designed to engage the students with the concept of marginalised voices, and a Criminology research project to examine the reading lists and curriculum content for dominant perspectives. These were both initiated as a result of the community of practice, and the academics concerned in both, from the different schools, along with their academic liaison librarians (including the researcher for this project), are now in conversation about how they can run parallel projects in the 2019/20 academic year and feed into each other's learning and development. They will report back on all of this to the community of practice.

The sustainability of the community of practice has been kept in mind throughout the process of implementation, and several methods have been put in place. These include other members willing to help facilitate and integration with existing projects in place at the university.

4.4 Overview of results

The qualitative stage of the data collection and analysis involved interviews with 8 academics. Five key values were identified, with one being traditional library skills and found across all schools. In addition to this, four themes linked to the emerging forms of information literacy:

1. Traditional information literacy/library skills.
2. Agency for research process lies with the student, as a researcher.
3. Students' unique information experience and needs are addressed.
4. Social and active learning techniques should be used in information literacy education.
5. Information landscape goes beyond academia and is more than textual.

These results were used to help answer research objectives one and two. It is apparent that there is evidence of traditional information literacy in all areas, and, in addition to this, the values linked to emerging information literacy can be found with the different interviewees, with each revealing one or two of these themes to be predominant for them in their practice and experiences. The results of the interviews directly informed the content of the quantitative, survey phase of the research.

The survey stage of data collection and analysis links to research objectives two and three and the results of these informed the content of the community of practice outlined in objective four. In addressing research objective two, the survey demonstrated that there is indeed practice in emerging forms of information literacy evident in the practice of academics at York St John University.

In relation to research objective three, the descriptive analysis of the data reveals that there is common ground in information literacy across the practice of academics, with a traditional learning outcome of "Access information relevant to the subject and reference accordingly" being recognised as part of their teaching by 27 respondents (49%). There was also evidence of common use of emerging forms of information literacy particularly associated with social learning, with 92% (n=49) of all respondents using group work in their teaching, with the two key reasons identified being to facilitate peer learning and inform academic debate. These responses, in conjunction with the findings from the interviews, indicate that there is the basis of a community of practice and scope to facilitate it with the aim of embedding emerging forms of information literacy in the curriculum.

The action in this action research was the facilitation of a community of practice in both synchronous and asynchronous forms. Face to face meetings have taken

place, and an accompanying website in the form of a WordPress blog created. From this action, at least two initiatives which have impacted upon the curriculum at York St John University have been implemented. These two new projects have roots in critical information literacy and involve uncovering and critically engaging with the issue of marginalised voices in higher education curricula.

5 Discussion of overall findings

At the outset of this project, four research objectives were established.

1. To explore the terminology, meanings and values assigned to information literacy in different academic subject areas in year 1 (level 4) of undergraduate programmes at York St John University.

2. To establish whether there is already evidence of the emerging forms of information literacy (social construction of information literacy (Lloyd 2010) and critical information literacy (Elmborg 2012)) in the practice of academics at York St John University, or if the foundations for their growth can be established.

3. To examine how academics experience and evaluate information literacy in their teaching practices and to ascertain whether there is common ground in information literacy provision already embedded in the curriculum in these programmes. i.e. the basis for a community of practice.

4. To implement and evaluate a platform for information literacy dialogue amongst staff at York St John University,

    a. to promote the evolution of collaborative information literacy provision in line with emerging theories,

    b. to improve the researcher's own practice.

Further to this, it was an objective to potentially inform the practice of librarians in other institutions and settings by providing a relatable case in terms of methodology and outcomes.

In establishing the pragmatic, action research methodology and mixed methods approach within that, each objective was addressed.

5.1 Outcomes in terms of research objectives

5.1.1 Terminology, meanings and values assigned to information literacy

Suitable modules (and academics working on these) for investigation were identified through learning objectives and aims associated with the outline of information literacy in the literature review. From the terminology found in professional and subject-based literature, the terms and descriptions linked to information literacy from those perspectives were identified (e.g. knowledge management in Business, evidence-based practice in Health, reflective practice in Education) and the full list can be found in appendix 6.2. The module documentation available for level 4 in the university's virtual learning environment was analysed to find learning outcomes and aims which contained these terms, and Table 26 outlines those which were chosen.

Table 26: Academic schools and the learning outcome/aim linked to information literacy, identified through module specifications

School	Key aim/learning outcome linked to IL
Business School	Access information relevant to the study of business management and use appropriate referencing systems.
School of Education	Understanding what makes a good information source and how literature contributes to the learning process.
School of Humanities Religion and Philosophy	Accessing primary and secondary sources using electronic searches in order to identify and explain key themes and approaches to the study of (programme subject focus).
School of Health Sciences	Acquiring study skills and practical skills.
School of Languages and Linguistics	Demonstrating academic literacy and communicating ideas and arguments in a manner appropriate to the context and audience.
School of Performance and Media Production	Evaluate performances as visual and textual artefacts within a historical and practice context.
School of Psychological and Social Sciences	Exhibit a familiarity with a variety of methods of data collection that are employed in (programme subject focus) research.
School of Sport	Explain how the history of sport has shaped its contemporary form

The leaders and tutors for these modules were identified via information in the virtual learning environment and the university timetabling system, and

approached for interview. These individual academics (one per school, with 8 out of 9 schools represented) were interviewed, using the critical incident technique (Flanagan 1954), to identify terminology and concerns about information literacy in their subject area and experience. This links to objective 1.

The outcomes of the interviews revealed that there was evidence of shared practice amongst these academics, especially linked to traditional library skills, but also evidence of practice linked to emerging forms of information literacy, with social and active learning employed (Lloyd 2010) and a wish to place students at the centre of their research experience, aligning with recommendations from Donovan and Erskine-Shaw (2019). Through an inductive thematic analysis, five key themes (including one linked to cross-school practice in traditional library skills, and the rest linked to emerging forms of information literacy) addressing objective two, and informing the subsequent survey, emerged.

1. Traditional information literacy/library skills
2. Agency for research process lies with the student, as a researcher.
3. Students' unique information experience and needs are addressed.
4. Social and active learning techniques should be used in information literacy education.
5. Information landscape goes beyond academia and is more than textual.

As far as the values each of the representatives expressed as the most important, after analysis of their transcripts, one or two proved to be predominant (Table 27).

In addition, it can be concluded that there are subject-specific terms aligned with information literacy in the professional and research journal article literature linked to the programme areas at York St John University, which are also used in practice by academics.

Table 27: Dominant value in each interview, by academic school

School	Predominant value in interview
Business School	Student's unique information experiences and needs addressed
School of Education	Agency for research process lies with student, as a researcher
School of Humanities Religion and Philosophy	Student's unique information experiences and needs addressed
School of Health Sciences	Student's unique information experiences and needs addressed
School of Languages and Linguistics	Social/active learning linked to information literacy
School of Performance and Media Production	Student's unique information experiences and needs addressed AND Information landscape goes beyond academia and is more than textual
School of Psychological and Social Sciences	Student's unique information experiences and needs addressed
School of Sport	Agency for research process lies with student, as a researcher

In the School of Education, the associated literature revealed 'reflective practice' to be a term used extensively in relation to information searching and use (Williams, Coles 2007). This was also found in the interview with their representative, with reflection featuring in their responses,

> they want to bring in the value of their own experience, but using it, linking it in to what they've read, rather than just writing something based on […] very narrow experience […](they are) more reflective pieces where they can position themselves within it (School of Education).

Further to this, the Business School and School of Humanities Religion and Philosophy representatives used reflection in their recollections of teaching their module, also revealing that they recognised there was more to the process than a library search:

> Their reflection might be something around, well I thought I'd done a good job, but it's been pointed out these bits were wrong and then they had the opportunity to put in another piece of work later on, to show that they'd had some sort of improvement, and that kind of thing. So I think, I thought it was quite a nice vehicle for them to demonstrate quite a lot of different sorts of things. And the people who

> got, who did well, seemed to get that and do a really good job. More worrying were the people at the other end of the scale, who just put in a sentence saying, I looked for things in the library and it feels like maybe they missed the point a little bit. (Business School)
>
> Getting the students to go and use electronic sources, to bring something back, to show what they'd brought back, and then to be able to have that conversation about what authority are we going to give these sources and why? And that would have been an experiential thing that, either by giving them a series of sources to use, and letting them experience it, and do that cycle of experience, input, reflection, evaluation. And so they've taken something more away from it. (School of Humanities Religion and Philosophy)

Reflection was mentioned in two other school's interviews in addition to these:

> Can you archive? Can you organise? Can you show those skills? So we do all that and a reflective statement at the end of the year, looking back at what they've done. (School of Health)
>
> Most of the written work is reflective writing. So I guess in that respect that is another reason why I think, especially in level 1, they find that quite a challenge, knowing what's expected of them. (School of Performance and Media Production)

Therefore, reflection was a key message coming out, which was then absorbed into the theme of the agency for research process laying with the student, as a researcher.

The other key term found in the literature and then reflected in the interviews was that of the health-based evidence-based practice (Boruff, Thomas 2011). Evidence as a concept was found in a number of instances:

> What we did for that module was we assessed them with a portfolio of evidence.(Business School)
>
> Because I wanted them to evaluate that as an information source, whether it was politically linked, whether it was the voice of teachers, or evidence-based (School of Education)
>
> That education, and Higher Education, was about knowing what other people have said and weighing the evidence. And we have to teach them. They're not going to just, it's not going to happen by osmosis. (School of Humanities Religion and Philosophy)
>
> They have to engage with a creative piece of writing, so that it has a kind of freedom to it, but it still has to evidence that they understand the wider context of modernist, kind of, performance, theatre and dance. (School of Performance and Media Production)

> Teased out the distinction between things like text books and peer-reviewed articles. Again, right from week 1, drawing the distinction in terms of quality of evidence within academia (School of Sport)

Some mentions were linked to evidence-based sources, such as the one evident with the School of Education here. Most were related to providing evidence for statements made in assignments, such as those from the Business School and the School of Sport. These ended up in the theme of traditional information literacy in the thematic analysis when they related to instruction on the quality of information types and, as with the Performance and Media Production example here, in the theme of the information landscape going beyond academia, when a wider context was encouraged. Nevertheless, despite the differences in context, evidence was a term used repeatedly and, along with reflection, is the term most linked to information literacy used at York St John University, as evidenced by the interviews. It can be seen that this has been incorporated into the online community of practice, with these terms used in the welcome message on the front page.

5.1.2 Evidence of emerging forms of information literacy in the practice of academics

The outcomes of the thematic analysis of the interviews formed the content of a survey sent to all academics at York St John University who had taught on level 4 modules, to ask their experiences of delivering or designing information literacy content in the curriculum. This was to establish whether the experiences and opinions of the interviewees could be found to be representative of those across the institution and links to objective 2. This was in line with the exploratory sequential mixed methods approach chosen.

The interviews revealed that there was evidence to suggest that emerging forms of information literacy were apparent in the teaching practices and experiences of academics in the various academic schools.

In the Business School, the students' unique experiences and needs were particularly evident as they were basing teaching around reflection of their own work:

> What we ask them to do as well is just put a little sentence or two of reflection in there, or justification for the piece of work. So if it was a pre-marked piece of work, if it had been maybe a formative piece that they'd got some feedback on, and they'd posted that, their reflection might be something around, well I thought I'd done a good job, but it's been pointed out these bits were wrong and then they had the opportunity to put in another piece of work later on, to show that they'd had some sort of improvement, and that kind of thing. (Business School)

In the School of Education, there was the expression of the wish for students to develop their own agency as a researcher, and linked to an associated assignment in the form of a report:

> The report was very much focused on what you have read, what you have heard, what have you thought about, what have you found in this. (School of Education)

along with recognising that the mechanics of accessing information generally (taught as part of traditional information skills) were not the issue; it's about the evaluation of how that source has been produced and what it is aiming to say:

> More time thinking of how to interrogate the integrity and value of each information source. I think that, whilst they found books, whilst they felt that they could confidently access ebooks and things, which was all part of what we wanted to do, I think there needs to be more around how they would judge, you know, the value, the worth if you like, of each information source. (School of Education)

The School of Performance and Media Production stood out particularly as the interviewee expressed, several times, their understanding of the students' unique experiences and how wider structural concerns impact on both their study of the subject and how information should be interpreted. Examples included looking critically at their own practice, and where it fits in with the wider landscape of information and knowledge:

> We're asking them to sort of develop a critical language about the work that they make as practitioners, and of the work that they see by other performers or artists or theatre makers and dance artists (School of Performance and Media Production).

The interviewee expanded upon this, expressing experiences and priorities which align well with recommendations for critical practice found in the literature review, such as Beilin's (2015) assertion that information literacy instruction should aid students in understanding power relations behind knowledge and

information, and Seeber's (2019) complementary view that it is the job of information literacy to discuss information's place in society. It also mirrors Tewell's (2019) conclusion that information is not limited to textual forms:

> Yeah, absolutely. So I guess there would be, erm, they would be thinking about things from a theoretical perspective, then using documentation of practitioners, and then, you know, artefacts around that. So interviews with theatre makers about certain decisions they make, or other critical texts about a particular practitioner. So, for example in that module we look at a theatre practitioner […] A lot of the students may be aware of a performance of [example of production], but they wouldn't necessarily know anything about its history, the context, the movement of workers theatre cooperatives, or of [practitioner] at all. And so in a way it's about, not just introducing them to that work they may already know, but also to get them to start thinking about that work with information from a whole range of other things that sort of circle around it. And then to be able to evaluate the work based on that information. (School of Performance and Media Production)

Finally, this interviewee also revealed an awareness of a disparity in students' previous experiences, related to the route into university they had taken. Although they did not mention marginalised groups particularly, it does link in with the assertions of Owusu-Kwarteng (2019) and Tewell (2019) that assimilation should not be assumed:

> So the students either haven't done the subject as a discipline-specific class, so their knowledge of it is limited and usually in a classroom, so they're not on their feet doing things, or, if they have done an A level then it's pretty much guaranteed that they've done particular practitioners, or particular theorists […] it's kind of interesting that once we start to raise those questions and ask those things, that that is something that they've just not considered, you know? So that, that is kind of a challenge, I guess. To kind of, to start to unpick the learning that they have done. (School of Performance and Media Production)

and further to this, they realise that placing information in historical and geographical context as it is studied is important in trying to address this, and to be sympathetic but challenging to the knowledge the student brings:

> There's a sense in which you don't want to suggest, you're trying to sort of de-school some of the things that they've done, erm, without undermining it. So they still feel confident in the knowledge that they bring. But that they also feel open enough to add to that and adjust it appropriately. (School of Performance and Media Production)

The interviews have therefore revealed examples of emerging information literacy in the practice of academics. It is evident to varying degrees in the responses of the representatives of the various schools, but it is apparent across responses.

5.1.3 How academics experience and evaluate information literacy in their teaching practices

The survey was designed in order to address the third research outcome of how academics experience and evaluate information literacy in their teaching practices, and to determine if there was already any common ground evident. This indicated that there was indeed a basis for a community of practice in information literacy which could be facilitated in order to progress the embedding of emerging forms into the curriculum. The survey results were analysed using descriptive statistics, in order to link these to objective 3. Further to this, the results were explored to help establish whether there were any indicators of key predictors in place in terms of linking school membership to a wish to incorporate the emerging forms of information literacy in the curriculum, identifying subjects the community of practice could involve.

The survey revealed that, in addition to shared practice in incorporating traditional library skills into module design and teaching, there is also evidence of emerging forms of information literacy across the practice of academics. The most popular learning outcome was one reflecting traditional information literacy; "Access information relevant to the subject and reference accordingly" with 27 (49%) of the 55 respondents recognising it as part of their module teaching. However, there was also evidence that the majority of academics from across the university utilised group and social learning, linking to the social construction of information, in line with Lloyd's (2010) theory of information literacy. This was established by asking the academics about their priorities in teaching the specific modules identified as containing aspects of information literacy. Overall, there was common ground in traditional information literacy in two key areas:

- The most common learning outcome identified (by 49% of respondents) was "Access information relevant to the subject and reference accordingly"

- 96% of respondents encouraged the students to use 'academic' sources of journals and books above others

However, there was also common ground in emerging forms of information literacy, especially in regards to the use of group learning:

- 92% of respondents use group work in level 4 teaching
- 79% of respondents were in agreement that the need to understand students' previous educational experiences was important when teaching level 4 modules

As with the interviews, the respondents from the School of Performance and Media Production indicated alignment with particular aspects of the emerging forms of information literacy, although a low response level means it can be taken as a potential area to explore in the community of practice only, and not as a conclusion in itself. Particular examples were not wishing to recommend specific types of 'academic source' (i.e. text books and journal articles) and in realising that information sources go beyond the textual, in line with the work of Tewell (2019) highlighted in the literature review, and Lloyd's (2010) theory, that information is much more than an academic text. Taking all respondents into account, 56% (n=30) either strongly agreed or agreed that it was important for students to understand that information is more than textual, so this is a basis from which further consideration and debate could occur in the community of practice.

Therefore, it could be asserted that, indicated by these investigations, a community of practice could be identified, providing the action in this piece of action research (objective 4). The content of the community of practice, and the focus of the discussions, could be informed by the findings from particular schools.

5.1.4 Implementing and evaluating a platform for information literacy dialogue amongst staff

The survey revealed a wish for an online platform for discussing information literacy matters, alongside face to face meetings. It was designed with three key sections; one on the main theories linked to information literacy, one to record face to face meetings, and the central section where people can share and

discuss learning and teaching on information literacy. Members were invited to take part based on leaving their email addresses in the survey, and this was followed up by a message in the weekly all-staff email.

Engagement in terms of visits proved strong, with almost 1000 visits in the first year, but there was little when it came to sharing and contributing ideas, with only three people other than the facilitating librarian providing content (although other posts document joint initiatives between the library and other schools and departments). Discussions have taken place with members in regard to this, and plans such as targeted emails, on specific topics, inviting people to email their ideas, plans and questions, have been put in place (Reflection 11.06.19).

Alignment with an existing pedagogic research group (RIPPLE) proved useful in ensuring that word spread about the community of practice. This alignment led to two projects in particular which have had an impact on teaching and curriculum design at York St John, both using ideas from critical information literacy to evaluate information sources and curriculum content in relation to marginalised voices and inclusivity, and both involving staff members from across academic schools and departments. In one area (Education) the subject director, who oversees several degree programmes, is now involved and this has led to a strategic change in how information literacy is viewed and represented in the curriculum. Centred on amplifying marginalised voices, these changes in teaching in the areas of Education and Criminology will be documented on the online community of practice, with further reflections, as cases for others to use and learn from.

The survey data indicated a number of key areas in which discussion as part of the community of practice could lead to a greater understanding of how information literacy is currently experienced and practised in the curriculum, and lead to greater embedding of emerging forms in curriculum design. These included the disparity between the academics' practice in searching for information on their own in their own research, but utilising social learning when the students are finding and evaluating information. It was also identified that 'academic' sources of books and journals were explicitly privileged, and the problems in doing this related to structural impacts on the publishing process and the marginalising of voices as a result would be an important thing to

address, especially in terms of encouraging a critical information literacy approach (Elmborg 2012).

Subsequent to the launch of the online community of practice in July 2019, attention turned to its sustainability. As section 4.3.4. outlined, one part of this is engaging all of the other academic liaison librarians in the community and giving them administration access to the online community. Another is its alignment with the existing RIPPLE pedagogic research group.

5.2 Outcomes in terms of value and contribution

As was outlined in the methodology section, action research projects should be measured in terms of several forms of validity (Herr, Anderson 2015, p.67) (Table 3). This section takes each of the validity criteria and explains how these have been addressed in the thesis, revealing its contribution in terms of the action research approach to a practitioner researching their own practice and the value this adds to the research literature, democratising knowledge as part of that process (Wood, McAteer et al. 2019).

5.2.1 The generation of new knowledge

Through this project, discoveries have been made about the shared values related to information literacy that are evident across York St John University. From the interviews, contextual information about how learning outcomes and aims in transition modules, relating to information literacy, was obtained. In particular, it was found that traditional library skills are evident across the schools' representatives, but that there are also pockets of practice relating to the emerging forms of information literacy. There were four broad themes of practice relating to these emerging forms of information literacy that were evident.

1. Agency for research process lies with the student, as a researcher
2. Student's unique information experiences and needs addressed
3. Social/active learning linked to information literacy
4. Information landscape goes beyond academia and is more than textual

These, combined with the information from a wider population from the survey, provide the academic liaison librarians with contextual knowledge when working

with academic colleagues on embedding information literacy in the curriculum. Where emerging information literacy is evident, these academics can be approached to lead sessions for the face-to-face meetings of the community of practice, or provide posts for the online site. These are also therefore important outcomes for the local context, in terms of democratic validity.

Taking the sum of these findings, new knowledge has been produced in understanding how academics understand information literacy, what their priorities are, and how these are enacted in their practice. This in turn has led to the understanding that a community of practice is in existence, mainly linked to traditional library skills, and social and active learning, but that it is likely that these can be progressed, and the curriculum enhanced with emerging information literacy content and design via this community of practice's facilitation.

In addition to this, the outcomes of the interviews, survey and the ongoing knowledge gained from the community of practice, add to the literature on information literacy. As was highlighted in the literature review, there is research available on librarian-academic collaboration in furthering the information literacy of students, but there was no research found on the use of communities of practice to aid staff development in information literacy and using this as a basis for curriculum development. There is research on using communities of practice as a basis for staff development in higher education, and therefore impacting on curriculum design, in relation to e-learning (Cochrane 2010, Cochrane 2014, Schneckenberg 2010) and digital literacy (Jeffrey, Hegarty et al. 2011), and others which link in to learning support in similar circumstances (Biza, Jaworski, Hemmi 2014, Owen, Davis 2018). There is also a study on librarian staff development in pedagogy (Moselen, Wang 2014). This thesis takes the focus of that research one step further in bringing together librarians, academics, and other professional staff, in one community of practice, to learn from each other on pedagogy and information literacy, and influence curriculum design through this. This influence could be particularly valuable in developing the curriculum in line with emerging, critical approaches to information literacy.

5.2.2 The achievement of action-oriented outcomes

In line with the pragmatic, action research, real-world methodology used in this project, there are deliverables linked to action taken in the practice and workplace of the researcher, providing outcome validity. At its centre is a community of practice which, in line with Wenger's (1998) original theory, was already evident in the work of academics and professional support staff in several areas, but nothing was in place to formalise this and build upon it, especially in terms of building awareness and practice in social information literacy (Lloyd 2010) and critical information literacy (Elmborg 2012).

The action of establishing an online platform for the community of practice in information literacy provides a medium for asynchronous communications, and can run alongside and link into face-to-face meetings of community members. It also allows for marketing the content created by the community of practice to new, potential members in the university at which it is based. The online platform was in a pilot phase for one year, during which it has garnered nearly 1000 visits, and saw two projects linked to critical information literacy in the curriculum established. Both of these are looking at how voices are marginalised in the current curriculum, bringing out and emphasising the structural influences on the information that is available and how it is incorporated into the academic curriculum.

The online community of practice was launched fully in summer 2019 and has now reached over 1300 visits (as of September 2019). A plan has been put together, based upon the outcomes of the interviews and survey, for the focus of meetings and posts on the online community of practice.

The sustainability of this community of practice is promoted by both its position now in the structure of curriculum development opportunities for staff across the university (being aligned with RIPPLE and linking in with its role), and by the membership. All of the academic liaison librarians at York St John University are members, meaning that future facilitation is not dependent upon one person only, and they have access to (and indeed some have already contributed to) the online community of practice. Its place in liaison workflows is acknowledged by library managers, and is in performance development reviews as something to

develop and sustain, as a reflection on the performance development review this year shows:

> Two of my targets for the coming year include initiatives linked to the community of practice. One is to 'Maintain and keep up to date community of practice site as a shared resource for academic colleagues and librarians' and the other was to 'Continue to co-convene RIPPLE with the learning and teaching team, to maintain connection with information literacy work.' […] I will therefore include CoP work and RIPPLE work in my day-to-day work, with the support of the library management. (Reflection 18.06.19)

5.2.3 The education of both researcher and participants

The catalytic validity of the research is evident through the learning, education and professional development of the researcher as an academic liaison librarian. As was explained in the methodology section, the main way of documenting this and aligning it with the action research approach at the heart of this project was through reflection. The SEA Change reflective model (Sen, Ford 2009) was used throughout the project in order to both provoke reflection and provide a record which could be reviewed at the end of it.

Upon reviewing these reflections, three themes emerge which link to the learning of the researcher: learning linked to the use of the critical incident technique; learning linked to the researcher's view of information literacy and what that means for her practice; and a change in the researcher's approach to professional development.

The use of the critical incident technique (Flanagan 1954) has meant a development in the learning and practice of the researcher in providing a change to the way in which she interacts with academic colleagues, improving the quality of these interactions. Before this project, liaison was based upon informal discussions or official committee interactions. Each of these ways was likely to be affected by what each party expected of the other, in terms of trying to say what they believed the other wanted to hear, or affected by previous experiences of library-faculty interaction. In this research, the critical incident technique offered a way of garnering the experiences and views of academics which was less affected by this. By simply recounting experiences and reflections about teaching specific modules, there was no need to ask directly about information literacy, or

the need to explain what information literacy is (a problem highlighted by Stebbing, Shelley et al. 2019).

The critical incident technique has proven to be an effective way of gaining an insight into the experiences of academics and the researcher has learned much about approaching liaison without setting an information literacy agenda in advance. She has used a critical incident-type approach in several instances since, in her practice, when trying to build collaborative working with new lecturers, and it has proven effective in providing a grounding for future partnership working by establishing common values from the outset. An example of this happening has been particularly apparent in building collaboration with teams being brought together to develop and teach new programmes, when the researcher was able to ask new academics to recount their experiences of teaching similar courses elsewhere, and from this understand their values linked to information literacy and resources in the curriculum. This has led to a resource base being collated which is taken from a variety of media, and through different lenses.

Another way in which this project has contributed to the learning of the researcher, as documented through the reflections written throughout the period of the research, in the development of her view of information literacy. Although realising that there was more to information literacy than a skills approach at the outset, her practice did not contain the links to social justice, collaborative learning, or critical librarianship that is espoused in the theories and research outlined in the literature review for this project. In reflecting upon the need to progress her own practice in light of this, she identified several ways in which she could be more visible in tackling marginalisation in reading lists and teaching linked to information literacy, and has both created and taken opportunities to enact and publicise this work.

In this area there must be an acknowledgement from the librarian that her own knowledge of information literacy has developed not just through engaging with the literature, but also as a result of discussion and collaboration with academic colleagues; it is not just pedagogic knowledge that has developed. There is an important aspect of disrupting the power dynamic to understand, in line with assertions from Badke (2017) and Gustafson (2017) in learning from each other

and being willing to unpick and rebuild one's own understanding of the area in which one holds expertise: in investigating curricula matters in terms of representation and marginalisation, this has reflected back on the understanding of information literacy and how it is practised by the researcher.

One example of this was in a meeting of the student experience committee for one of the academic schools. There was a discussion from the academics on wanting to improve information literacy provision across all levels of the undergraduate degrees. The researcher used this as an opportunity to put forward some ideas linked to critical information literacy, and the learning and teaching lead for the school linked this with their interest in decolonising the curriculum, an area in which information resourcing and literacy plays a part, but it is a much wider and more complex issue (Charles 2019). From this a workshop combining the two areas of interest was organised and staff members from the school included in it (Reflection 31.05.18), but also the researcher was given cause to reflect on the position of information literacy in this wider concern and what a librarian is able to contribute.

The development of the researcher's understanding in information literacy has also led to the improved design of workshops. It enabled the researcher to uncover information literacy practice linked to social learning when analysing the interview transcripts and reflecting upon the process, such as this reflection written just after conducting one of the interviews with the academics:

> The account of delivering the module was really rich in evidence of collaborative learning amongst the students, fitting brilliantly with Lloyd's (2010) notion of landscapes of information and the social construction of information. (Reflection 24.02.17)

and also this one made after watching a webinar by Coonan (2017) on information literacy as situational practice, socially dependent upon the situation in which it is experienced, and the importance of (in the case of the higher education environment) the agency of the student:

> Coonan mentions two notions in particular which resonate with my interview data so far: the empowerment of the learner and the co-construction of knowledge with students […] When analysing the interviews I am going to look for evidence of academics empowering learners and allowing the co-construction of knowledge. (Reflection 03.03.17)

This has led to a more pedagogic, critical approach to planning information literacy inputs, and also reflecting upon them. An example of this is the workshop on marginalised voices, designed for students in education and posted as an example in the community of practice. The researcher realised post-workshop that the critical learning she had aimed for had not taken place, and this had affected the quality of the information literacy she had delivered:

> As much as I wanted this to involve discussion with the group, just inviting it didn't seem very effective. Next time I run this, or a similar session, I think a structured task would help […] It could be individual or group, but could maybe involve close analysis of a couple of reading lists […] or the analysis of an article which claims to represent the views of a specific group, but doesn't. (McCluskey Dean 2018b)

Similarly, embedded inputs which have been running for several years have been reviewed in light of critical information theory, and changes in design and focus made accordingly:

> This year, for the first time, we discussed how reference lists can be evaluated in terms of who is and isn't represented in them. This is something I would like to build on next year. It emerged especially with those students focusing on additional educational needs and inclusion, and how important their pupils' voices and experiences are in evaluating their teaching in this respect. (McCluskey Dean 2018d)

Therefore, the development of the researcher's view of information literacy has not only impacted positively on her ability to identify potential collaboration opportunities, it has also led to more critical reflection of workshops and teaching she has undertaken. This demonstrates a wider outcome of the research: the recognition of the impact of librarians and pedagogic researchers working together in curriculum development.

As was stated earlier in the thesis, there is an important link between pedagogy and information literacy and in cross-departmental working in order to develop curricula with these in mind (Bruce 2004, Hannon, Hocking et al. 2018, Secker, Coonan 2014). The process of undertaking this research has also highlighted the value in librarians and pedagogic researchers, be they from a School of Education, a Learning and Teaching team, Learning Developers, or Learning and Teaching specialists in other subject areas, working together to research curriculum design and delivery in an academic context. Links for learning and curriculum design between librarians and a learning and teaching team via a

community of practice are being explored elsewhere (Laverty, Saleh 2019) and the tie-up between RIPPLE and the information literacy community of practice has produced at least two research projects linked to pedagogy: one with the School of Education in revising the curriculum for marginalised voices and one with the Criminology course on representation in the curriculum. Both of these will lead to published research, currently in press, to inform practice of librarians and educators in other universities.

This development also links back to the concerns raised in chapter 1 of the changing role of the academic librarian. As highlighted by Smith (2013) and Jacobs (2008), there is a barrier to librarians becoming educators, linked to a lack of training opportunities. By joining up with researchers in schools of education or learning and teaching departments, and carrying out research into the links between pedagogy and information literacy, the academic librarian shifts their role to one which is more embedded in curriculum design and, via a community of practice, can take this opportunity to learn from colleagues and peers as a normal part of their job. This takes the concept of the embedded research librarian first used by this researcher in earlier work (McCluskey 2013) and linked to a model that was described as emerging in 2011 (Carlson, Kneale 2011) whereby librarians were involved with collating data for projects, or searching for literature, but no more than that (Auckland 2012). The outcomes of this project show a progression, putting the librarian at the core of the research process, setting the agenda in partnership with colleagues, especially in regards to issues such as critical information literacy in the curriculum.

A further example of taking the development of knowledge of critical information literacy, and linking it to practice, is of taking the chance to work with the university's widening participation officer on campaigns linked to LGBT History Month. Wanting to be an ally by making positive changes, and mindful of the research in the literature review on how LGBTQI+ voices and experiences are 'othered' and marginalised (Ellis 2009, Equality Challenge Unit 2009, Mckendry, Lawrence 2017), the researcher used the opportunity to promote newly purchased resources in the school library collection (used by those on degrees linked to teaching, professional youth work and early childhood studies). This focused on a display of children's and young adults' texts with LGBTQI+ families and characters in, and books for young adults which included advice for gay and

trans teens, which was in place for the full month, plus the creation and publicising of a reading list of LGBTQI+ resources which had been purchased for the whole library collection (this list being permanently available) (McCluskey Dean 2018e). From this, texts have been taken by students and staff and incorporated them into their work. These initiatives are directly linked to reflecting on how the researcher's understanding of information literacy had developed, especially in relation to critical information literacy (Elmborg 2012), and putting actions in place to transfer that development into her practice. A year's worth of collaboration for various marginalised groups has been put in place between the researcher in her role as an academic librarian and the widening participation officer, and these will be included in the community of practice as reflections. They also link into the IAMplify project on marginalised voices, and the library's commitment to address issues associated with lack of representation, mentioned earlier in the thesis.

The final key example of the education and learning of the researcher, evidenced through the reflections taken throughout this project, is of a change in that researcher's own approach to professional development. One of the reflections highlighted that more information on critical approaches to information literacy had been obtained via social media, especially Twitter, than any other method (e.g. traditional database searching) (Reflection 09.02.17). It was via Twitter that a paper that impacted the researcher's thinking and development in this project, on critical librarianship and the need to reveal and uncover the impact of structural privilege and marginalisation on information production (Gustafson 2017), was discovered. This also applies to other sources that have proven impactful to this project (e.g. Badke 2017, Coonan 2017, English, Fenby-Hulse 2019). It is also via Twitter that many resources to amplify marginalised voices in the collection have been discovered. The researcher has now incorporated the checking of Twitter for new sources to inform her professional knowledge and practice, and the collections for which she is responsible, following those involved with researching and publishing in the areas of LGBTQI+, people of colour, and inclusive sources linked to disability and additional educational needs. From this she has established a list of bookmarked tweets, informing purchasing and future developments.

In terms of participant learning, the two leaders of the projects previously mentioned, on marginalised voices, have used the resources on the online community of practice in order to inform these, and one is furthering their research with a view to publication of findings from their investigations. Taking focus groups with students and analysing reading lists for representation of women, people of colour and LGBTQI+ has meant much progression in the understanding of critical information literacy on the part of this academic (Stockdale, Sweeney 2019).

5.2.4 Results that are relevant to the local setting

In terms of evaluating the project from a democratic validity perspective, the example of the Criminology curriculum project again shows how this has had an impact in the local setting. The curriculum which students will encounter in the future will be different to the current one, with many more perspectives represented, and it should be more inclusive. Alongside the change in practice of the librarians, academics and other support staff associated with this programme, the local curriculum will see a shift (Stockdale, Sweeney 2019).

The interview and survey have been designed with the local population and setting in mind. The initial project objectives set out to analyse and put an action in place to improve information literacy in the curriculum, especially in terms of its emerging forms, but also to further understand the local context. The data collected will help to do this for some time to come.

The online community of practice has been assigned a space in the library webpages, accessible by all, and under a heading which supplies all members of university staff a place to find resources to help them with their teaching. It sits alongside other initiatives linked to critical information literacy, and which have been influenced by this researcher's development in her view of information literacy in the university. For example, the LGBTQI+ reading lists have been placed there, along with a library initiative to amplify marginalised voices (York St John University Library 2019). This was not wholly influenced by the researcher for this project, but the development of information literacy views, as shown in the previous section under the education of the researcher and the reflections made through this project, fed into it. This initiative will incorporate the research found in the literature review for this project, specifically on

marginalised voices in the LGBTQI+ community, people of colour, and inclusion related to disability, as the academic liaison librarians co-ordinate a project to amplify marginalised voices, link this to the student and staff experience (and curriculum design), and put reflections, action plans and lessons linked to specific initiatives into the online community of practice. The community of practice is therefore now providing a platform for discussion curriculum issues linked to the library and the work of librarians with academics and other staff, which is only available as a result of this project.

5.2.5 A sound and appropriate research methodology

The methodological approach to this study had to be designed with the specific workplace and practice of the researcher in mind. Nevertheless, to ensure the approach taken was as sound as possible, each phase of the methodology design was informed by existing theory, practice and research.

The pragmatic approach taken has been used consistently in helping to research real-world problems (Creswell 2014) and acknowledges the impact that political and societal structures have on the context in which research takes place, which aligns with the critical information literacy view that these also have an impact on information production and publication (Elmborg 2012). This was a project designed to investigate the workplace situation of embedding information literacy in the curriculum at York St John University, and as such needed an approach which acknowledged and reflected this real-life situation.

Within this pragmatic approach, action research has proven to be an appropriate research methodology, also linked to the real-world nature of the issues investigated and in terms of one of the aims being to improve the practice of the researcher herself. These situations are often those where a researcher cannot separate themselves from the research and its participants, and look at them from an objective perspective. Therefore, if practitioners are to be empowered to research and review their working context, a methodology which allows for the researcher to be part of the process is vital. Action research allows this to happen, and Herr and Anderson's (2015) concept of positionality provides a framework through which issues of bias and validity can be addressed.

The use of exploratory sequential mixed methods, and the critical incident technique (Flanagan 1954) in these interviews and surveys, was employed in order to discover the participants' experiences and opinions on information literacy in the curriculum, without undue influence of the researcher. The aim of the interviews was to obtain context about the experiences and values of the participants, and then the survey looked at whether these can be expanded across the institution. The critical incident technique in particular has offered a way of garnering colleagues' experiences of information literacy, without asking directly and therefore possibly impacting on the answers due to a lack of understanding about the topic, or providing an answer that it is believed the questioner wants to hear.

Taking all of this as an approach has proven valuable in obtaining and enacting outcomes in the institution, and in the practice of the researcher herself. It is therefore proffered as an approach which could be taken by librarians in other higher education institutions, or indeed in other sectors, when it is felt a workplace-wide investigation of information literacy is needed.

5.3 Key findings from the research and contribution to knowledge

This research project set out to establish whether a community in practice in information literacy could be found amongst the staff at York St John University and, if so, if the academic liaison librarian could facilitate it in order to influence curriculum design with concepts from landscapes and social construction of information (Lloyd 2010) and critical information literacy (Elmborg 2012). This would see a shift from established patterns of academic librarians offering one-shot information skill support sessions, in reaction or in support of the curriculum already in place, to a position where they could influence the design of curricula which encompass information literacy.

The literature review covered a consideration of what information literacy is, and outlined two particular theories which were classed as 'emerging' in the data analysis: social-construction (Lloyd 2010) and critical information literacy (Elmborg 2012). A key objective of this project was to establish if there was evidence of these emerging forms of information literacy in the existing practice

of academics at York St John University, and, if so, the extent to which they were evident. It is a core part of critical information literacy that systemic pressures in the information production and publication should be acknowledged and the resulting marginalisation resisted and fought. Recommendations for doing this include giving students in higher education the agency to perform their own searches from their own individual perspectives, and that librarians and teachers should aid them in understanding the power relations linked to this (Beilin 2015). It also involves exploring that textual sources from specific types of publication (i.e. journal articles and text books) are not necessarily automatically 'better' (Tewell 2019), especially if the systemic privilege in academic publishing and peer review is considered (le Roux 2015, Moletsane, Haysom et al. 2015, Zevallos 2019).

In embracing social learning and these critical approaches, it is asserted that the isolation encountered by students from marginalised communities will begin to be tackled, and the higher education experience will no longer expect them to assimilate, as a move is made away from a deficit model of viewing their experiences and academic identity (Donovan and Erskine-Shaw 2019, Tewell 2019, Owusu-Kwarteng 2019) and they are no longer 'othered' (Charles 2019). It is the responsibility of librarians to address the place of information in society (Seeber 2019) and to address these issues in their practice in the academic sector by working across the institution and in collaboration with others (Gustafson 2017).

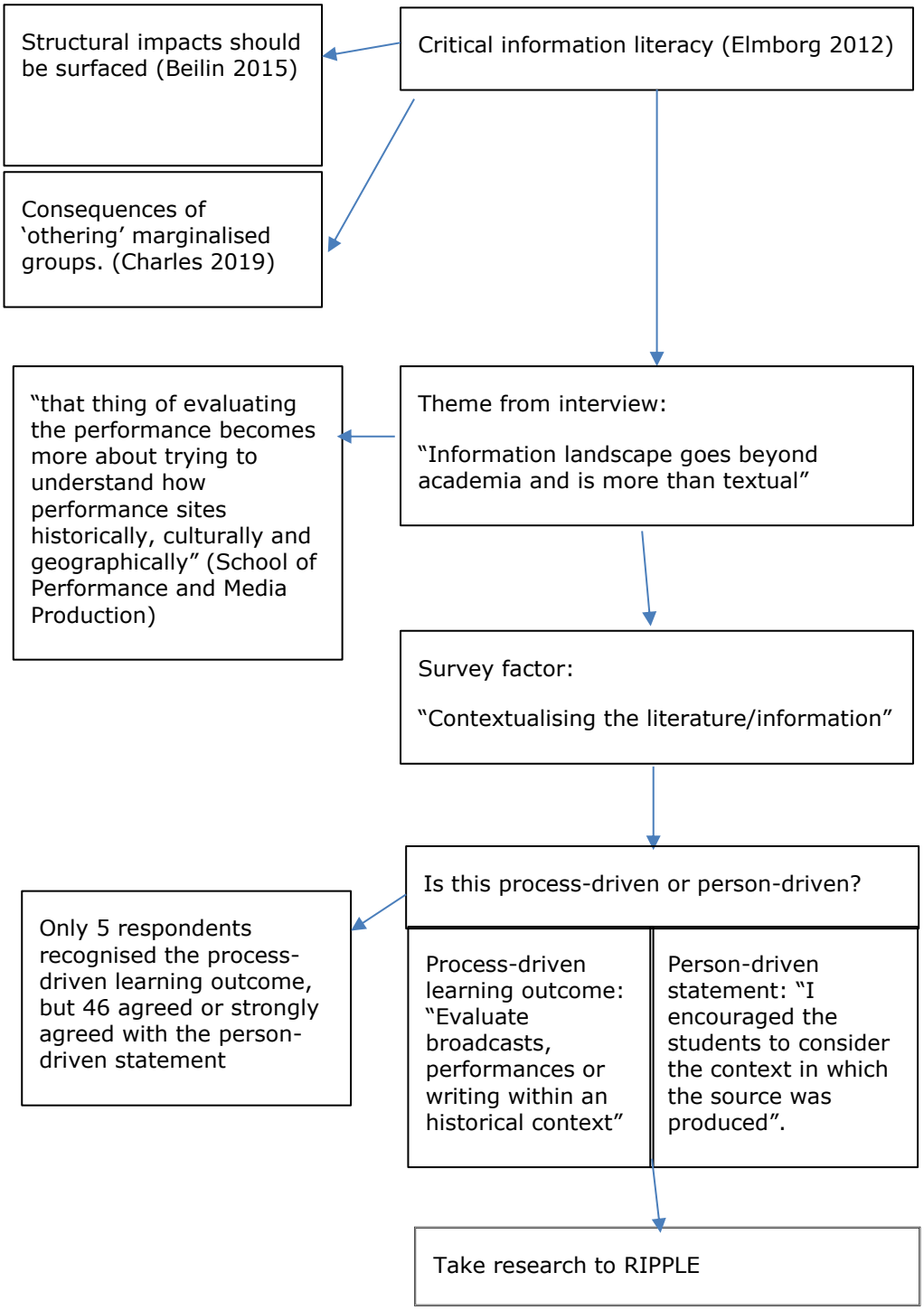
This study helps to fill a gap in the research in how librarians in higher education can address this. It provides a collaborative approach, with librarians, academics and other professional staff learning from each other on matters of pedagogy and information literacy. This information literacy input from librarians, in this case, is influenced strongly by critical information literacy (Elmborg 2012) due to the learning that has taken place during the action research project on the part of the researcher (another criteria by which action research can be evaluated). In this the role of the librarian can be seen to have shifted from reactive, providing ad hoc, one-off instruction, to someone involved in curriculum design with a number of other partners.

Figure 20 shows how this project has addressed such issues, using just one example of mapping an aspect of critical information literacy, exploring it in practice via interviews and the survey, taking the outcomes to an existing university research group, and also using the online community of practice. This crosses academic schools and support departments, allows staff development in pedagogy and emerging information literacy via collaboration, highlights a change in the curriculum, and that the online community of practice provides a forum to start that process again.

The identification and facilitation of the community of practice has led directly to two new curriculum developments in particular, both with a critical information literacy focus, with an impact on the local situation. One of these has been made publicly available, under Creative Commons, on the online community of practice, so that others can pick up and adapt for their contexts, and the other will be written up once evaluation has taken place. In both cases it shows that work is being done to address structural privileges assigned to dominant cultures and approaches in those subject areas' curricula.

The survey created as part of this research has also been made available on the online community of practice (McCluskey Dean 2019c), in response to requests from librarians in other universities, with 10 downloads of the survey. This suggests that the critical incident technique, and how it was applied in this project, could provide a way for other university libraries to establish if communities of practice in information literacy exist in their particular settings, and facilitate them if they do. This aligns with one of the aims of this project in democratising knowledge (Wood, McAteer et al. 2019) and bridging the gap between theory and practice by providing evidence from practitioner research.

There is a gap in the existing research in regard to the information literacy of academic staff, and development opportunities on offer to help with this. There is evidence to suggest that social learning is an effective way of providing staff development in higher education, especially by facilitating communities of practice (Schneckenberg 2010, Biza, Jaworski, Hemmi 2014, Owen, Davis 2018). Along with this there is evidence that communities of practice can be utilised to develop information literacy and pedagogic knowledge, but this is linked to


Critical information literacy (Elmborg 2012)
Structural impacts should be surfaced (Beilin 2015)
Consequences of 'othering' marginalised groups. (Charles 2019)
Theme from interview:
"Information landscape goes beyond academia and is more than textual"
"that thing of evaluating the performance becomes more about trying to understand how performance sites historically, culturally and geographically" (School of Performance and Media Production)
Survey factor:
"Contextualising the literature/information"
Is this process-driven or person-driven?
Only 5 respondents recognised the process-driven learning outcome, but 46 agreed or strongly agreed with the person-driven statement
Process-driven learning outcome: "Evaluate broadcasts, performances or writing within an historical context"
Person-driven statement: "I encouraged the students to consider the context in which the source was produced".
Take research to RIPPLE

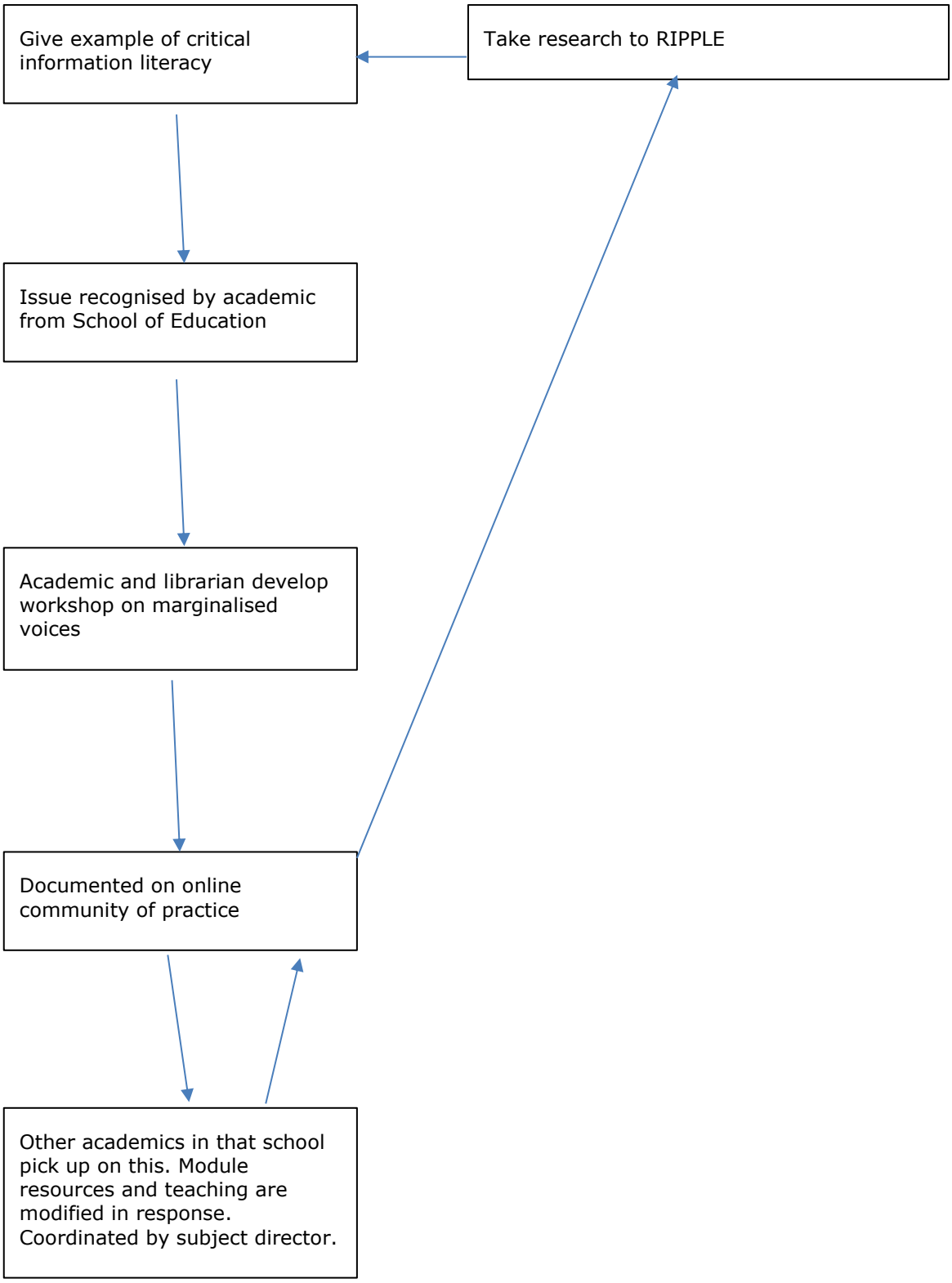


Figure 20: Mapping of critical information literacy to the interview and the survey, linking to the community of practice

librarians' own knowledge, rather than academics' (Bilodeau, Carson 2014, Attebury 2018) or linked to curriculum development (Cochrane 2010, 2014).

As Hicks (2015) asserted, too much tends to focus on the prescriptive use of platforms such as LibGuides, providing recommended links to 'academic' sources, and although practitioners such as Brookbank (2018) are now using these in a more critical, socially engaged manner, there is little available in terms of an online resource which can engage all staff across an institution in information literacy. Baume, Secker et al. (2019) look at staff development and collaboration, but not communities of practice. Tilley and Reid (2019) focus on the value of collaborative learning, but amongst library staff across a large academic organisation. The closest in concept and outcome is the work of Laverty and Saleh (2019) at Queens University in Canada, who have also used a community of practice linking pedagogy and information literacy. However, this also seems to just include librarians and learning developers, and not academic staff.

This project has also confirmed that there is great value in librarians and pedagogic researchers working together, whether these researchers are from a faculty of education, a teaching and learning unit, or a learning development unit. The two projects detailed here which have emerged from the work of the community of practice are with those who either specialise in educational research (School of Education), or in learning and teaching in their subject area (School of Psychological and Social Sciences). The community of practice put in place here has helped address the gap in librarians' need to obtain development as educators, as highlighted by Elmborg (2006), Jacobs (2008) and Smith (2013). It has also placed the librarian as part of a pedagogic research team, leading to probable publications for both of these initiatives, shifting the role of the librarian to one leading in research rather than simply supporting.

At a time when public libraries and school libraries are being closed, and the value of school libraries disregarded by those in Government (Burns 2016), it is imperative that, alongside fighting these cuts in other sectors, academic librarians research and demonstrate the value of the library and their role in universities. Linking librarians' work with pedagogic research is one route in

which the role of the librarian can and should develop, and add to the research base in both librarianship and education.

This study has therefore provided evidence that bringing the two areas of staff development and information literacy together, and focusing on a community of practice that can encompass academic librarians, academic staff, and other professional support staff, all learning collaboratively in regards to information literacy and pedagogy, is a possible way forward. In this study, it has proven to be effective, especially if the outcomes of the community of practice in terms of reading list and curriculum analysis and marginalised voices are considered (Stockdale, Sweeney 2019).

The outcomes of this study show that the action put in place as a result of the investigations, i.e. the community of practice, provides an opportunity for professional and social interaction where had had previously been missing. The previous situation, outlined by Wilson (2019) was one in which staff members across the institution could often go all day without the opportunity for discussions with colleagues. The online platform allows for asynchronous communication amongst community members and those on the periphery throughout the year, along with timetabled slots for face to face meetings.

This approach of social learning via a community of practice should also help in providing a stable platform for discussion and actions linked to information literacy, even when institutional reorganisations take place. With a cross-university endeavour such as this, information literacy input is less reliant on single points of contact which may change as schools and programmes do. The target institution underwent such a reorganisation from four faculties to nine schools in 2016, and it is likely another restructure will take place in 2020. The community of practice helps members to maintain contacts and designing information literacy into curricula provides some continuity where one-shot workshops organised with specific individuals may be more vulnerable.

By facilitating the community of practice, the role of the practitioner researcher for this project, as an academic librarian, has shifted. Whereas it was once a role which was predominantly reactive and focused on specific programmes and academic colleagues, it is now one that can facilitate staff development in information literacy, and impact on the design of the curriculum in this respect,

aligning with the recommendations of Badke (2017, p.24) that "the task of information literacy needs to be handed over to faculty, guided by the […] expertise of librarians.". This has been shown by the invitation to co-convene a pedagogic research group as well as by the curriculum development projects in Education and Criminology previously mentioned.

In carrying out this project, and in aligning it with the research of colleagues (especially the work of Peach 2019), a particular area has been highlighted both for the particular workplace of York St John University and beyond this in the wider higher education sector as important for future research. This is the area of engagement with those working in the arts in academia, and the rejection of the notion of information as a concept, encountered here in trying to locate participants for both data collection and the community of practice. This is the next step for this researcher: to explore the importance of epistemological issues in information and, specifically, research information literacy as understood by librarians in conjunction with arts pedagogy. Peach (2019) found that this is something affecting engagement between the library and arts programmes and has identified the community of practice as a way forward for collaboration. The next step, building on this thesis and Peach's research, is to further unpick the notion of information with representatives of the arts programmes, in order to both engage with them in future, and to understand how to use more appropriate language in this.

Further to this, there is the potential for librarians and academics in other universities, and indeed librarians in other sectors, to use the lessons of this project in taking a different approach to embedding information literacy in the curriculum in their own arenas. This is in terms of the approach taken, with the use of action research and the critical incident technique for investigating the local situation, and the outcomes of the research, with the survey tool established and the use of an online community of practice as a tool for pedagogic development and social learning.

6 Appendices

6.1 Literature review searches

ERIC and British Education Index, via EBSCO

Run November 2016, alert set up for subsequent papers until August 2019

Search ID#	Search Terms	Search Options
S1	SU "communities of practice" AND SU "higher education" AND SU learn* AND SU develop*	**Limiters** - Date Published: 20050101-20161231 **Search modes** - Boolean/Phrase

LISTA and LISA, via EBSCO

Run November 2016, alert set up for subsequent papers until August 2019

S5	information literacy AND staff development AND higher education	**Search modes** - Boolean/Phrase
S4	SU communities of practice AND SU information literacy	**Search modes** - Boolean/Phrase
S3	AU lloyd, a AND information literacy	**Search modes** - Boolean/Phrase
S2	AU lloyd, a	**Search modes** - Boolean/Phrase
S1	SU "communities of practice" AND SU "higher education" AND SU learn* AND SU develop*	**Limiters** - Date Published: 20050101-20161231 **Search modes** - Boolean/Phrase

6.2 Analysis of information literacy in subjects and programme areas at York St John

NB This analysis was done in the early stages of the research project, just before a 2016 organisational reorganisation into the 9 schools detailed in the thesis. At this point, the programme areas were the same as covered in the main thesis, but they were organised into four faculties: Arts, Business, Education and Theology, Health and Life Sciences. The programme information remained constant, however, so the analysis was considered still valid for the purposes of the research project.

Term	Definition	Discipline	YSJ Faculty/Programme	Other references
Abstracting	"a professional writing activity based on analysis and synthesis."(Koltay 2009, p.841)	Humanities Social Sciences	Business/Linguistics	(Koltay 2009)
Applied research	"research conducted for purposes…to solve a problem or identify a strategy for decision making or product improvement" (D'Angelo 2012, p.643)	Humanities Social Sciences	Business/Linguistics	(D'Angelo 2012)
Bibliographic skills	A term used to describe library skills, a small subsection of information literacy – being able to "handle bibliographies, being able to use a library effectively and efficiently" (Boon, Johnston et al. 2007, p.217)	Humanities	Arts/Literature	(Boon, Johnston et al. 2007)
Business modelling	"business models are useful means of simplifying the complexity of business in order to make it understandable, even at the	Business	Business/Business	(O'Neill 2015)

Term	Definition	Discipline	YSJ Faculty/Programme	Other references
	cost of some accuracy. Business models in this sense are an abstraction, but are also a tool for discourse as much as an empirical methodology; they are a way of thinking about the world and of helping us categorise businesses to see their similarities and differences." (Wells 2013, p.22)			
Church community learning	Linked to Faith Community and Informed Learning	Humanities	E&T/Theology	(Gunton 2011, Gunton, Bruce et al. 2012)
Classifying information	Linked to Research and Development and Information Management	Business	Business/Business	
Client centred learning	Linked to Research and Development	Business	Business/Business	(Griffis 2014)
Comprehension	"the ability to understand and interpret spoken and written language" (Crystal 2008, p.97)	Humanities Social Sciences	Business/Linguistics	(Koltay 2009)
Continuing medical education	"largely a professionally driven activity based on "recognised" educational activities for a set number of hours a year" (Richards 1998, p.246)	Health	Health/Occupational Therapy	(Cullen, R., Clark et al. 2011)
Critical appraisal	"Critical appraisal is the process of assessing and interpreting evidence by systematically considering its validity, results and relevance to an individual's work." (Parkes, Hyde et al. 2001, p.1)	Health	Health/Occupational Therapy Health/Sport	(Cullen, R., Clark et al. 2011, Glasper 2011)
Critical literacy skills	"greater focus on the underlying political structures and relationships that control information access and use" (Elmborg 2006, cited in Detmering 2010, p.267)	Arts	Arts/Media	(Detmering 2010)
Critical reading	"a core skill…your ability to comprehend what is written, make judgements about the	Humanities	Business/Linguistics Arts/Literature	(Koltay 2009, Boon, Johnston et al. 2007)

205

Term	Definition	Discipline	YSJ Faculty/Programme	Other references
	reliability of the source and extract relevant information." (Craig 2009, p.142)	Social Sciences Health	Health/Occupational Therapy	
Critical thinking/analytical thinking	"Critical thinking is an aspect of the activity of thinking. It is a form of learning in that it is a means of generating new knowledge by processing existing knowledge and ideas using what we have called the 'tools of manipulation of knowledge' (e.g. analysis, understanding, synthesis). We might call critical thinking itself a 'multiple' tool for the manipulation of knowledge." (Moon 2008, p.33)	Business Humanities Arts	Business/Business Arts/Literature Arts/Media	(D'Angelo 2012, Fiegen, Cherry et al. 2002, Griffis 2014, Makani-Lim, Agee et al. 2014, Yuhfen, Susan 2006, Boon, Johnston et al. 2007, Detmering 2010, Peterson 2010, Vraga, Tully 2015)
Data analysis	Linked to Research and Development	Business	Business/Business	(Griffis 2014, Yuhfen, Susan 2006)
Decision making	"decision making is concerned with the processing of generating options and then choosing among them" (Kyriakidou 2009, p.486)	Business Health	Business/Business Health/Occupational Therapy	(Makani-Lim, Agee et al. 2014, Boruff, Thomas 2011, Toledano O'Farrill, Rubén 2010)
Design and testing	Linked to Research and Development	Business	Business/Business	
Digital literacy	Literacies linked to the web 2.0 environment. "These new practices require from people new abilities and skills, new ways of thinking, and new methods of managing their relationships with others. Some examples of these include: • The ability to quickly search though and evaluate great masses of information. • The ability to create coherent reading pathways through complex collections of linked texts. • The ability to quickly make connections between widely	Social Sciences	E&T/Education	(Kingsley, Tancock 2014)

206

Term	Definition	Discipline	YSJ Faculty/Programme	Other references
	disparate ideas and domains of experience. • The ability to shoot and edit digital photos and video. • The ability to create multimodal documents that combine words, graphics, video and audio. • The ability to create and maintain dynamic online profiles and manage large and com- plex online social networks. • The ability to explore and navigate online worlds and to interact in virtual environments. • The ability to protect one's personal data from being misused by others." (Jones, R. H., Hafner 2012, p.6)			
Emotional learning	"the process through which children and adults acquire and effectively apply the knowledge, attitudes, and skills necessary to understand and manage emotions, set and achieve positive goals, feel and show empathy for others, establish and maintain positive relationships, and make responsible decisions" (Collaborative for Academic Social and Emotional Learning 2015)	Arts	Arts/Media	(Peterson 2010)
Entrepreneurial behaviour	"For knowledge to be understood and used, the individual must be involved in its active construction. You must have opportunities to answer questions, to discuss (heatedly) and debate meanings, strategies and implications, thus engaging authentic problem solving in near-real situations." (Mellor, Coulton 2009, p.14)	Business	Business/Business	(O'Neill 2015)
Ethics of data/information use	Linked to information governance, information literacy and digital literacy.	Humanities Social Sciences	Business/Linguistics	

207

Term	Definition	Discipline	YSJ Faculty/Programme	Other references
Evaluation skills	Linked to critical literacy	Social Sciences	E&T/Education	(Merchant, Hepworth 2002)
Evidence based practice/medicine/healthcare/education	"Evidence based medicine is the conscientious, explicit, and judicious use of current best evidence in making decisions about the care of individual patients." (Sackett, Rosenberg et al. 1996, p.71)	Health Social Sciences	Health/Occupational Therapy E&T/Education	(Boruff, Thomas 2011, Cullen, R., Clark et al. 2011, Forster 2015, Davies, K. S. 2011, Glasper 2011, Toledano O'Farrill, Ruben 2008b, Williams, Coles 2007)
Experiential research/learning	"the process whereby knowledge is creation through the transformation of experience…the process of adaptation and learning as opposed to content or outcomes…a transformation process, being continuously created and recreated." (Kolb 1984, p.38)	Humanities Social Sciences Health	Business/Linguistics Health/Occupational Therapy Health/Sport	(D'Angelo 2012, Toledano O'Farrill, Rubén 2010)
Faith community	"a community, extended across time and space, that is devoted to the same task…has learned things about the nature and purpose of God that have an enduring value."(Rae, M. 2015, pp.7-8)	Humanities	E&T/Theology	(Bruce, Christine 2011, Cohen 2013, Eliceiri 2014)
Faith thinking	Linked to Faith Community	Humanities	E&T/Theology	(Eliceiri 2014)
Field based consulting	Linked to Research and Development	Business	Business/Business	(Griffis 2014)
Financial/consumer/industry research	Linked to Research and Development	Business	Business/Business	(Griffis 2014)
Health literacy	"more than transmitting information, and developing skills to be able to read pamphlets and successfully make appointments. By improving people's access to health information and their capacity to use it effectively, it is argued that improved health	Health	Health/Occupational Therapy	

208

Term	Definition	Discipline	YSJ Faculty/Programme	Other references
	literacy is critical to empowerment" (Nutbeam 2000, p.259)			
Hermeneutics	"The study of the understanding and interpretation of texts (especially religious) and meaning systems. Hermeneutics requires empathy for the creator of the text and appreciation of the cultural and social forces that create context. Understanding is considered a circular process of transmission and interpretation." (Sullivan 2009, p.234)	Humanities Social Sciences	Business/Linguistics E&T/Theology	(Toledano O'Farrill, Ruben 2008b)
Independent learning	Linked to reflective practice	Social Sciences	E&T/Education	(Merchant, Hepworth 2002)
Information competency	Linked to Research and Development	Business	Business/Business	(Fiegen, Cherry et al. 2002)
Information control	"information seeking, giving, and withholding" (Brashers, Goldsmith et al. 2002, p.264)	Health	Health/Occupational Therapy	(Toledano O'Farrill, Rubén 2010)
Information finding and re-finding	Linked to Research and Development	Business	Business/Business	(Sattar Chaudhry, Al-Mahmud 2015)
Information governance	"Information Governance ensures necessary safeguards for, and appropriate use of, patient and personal information." (Health & Social Care Information Centre 2015)	Health	Health/Occupational Therapy	(Toledano O'Farrill, Rubén 2010)
Information management (including personal information management)	"The skilful exercise of control over the acquisition, organization, storage, security, retrieval, and dissemination of the information resources essential to the successful operation of a business, agency, or organization, or institution, including documentation, records management, and technical structure." (Reitz 2004, p.357)	Business	Business/Business	(Sattar Chaudhry, Al-Mahmud 2015, Makani-Lim, Agee et al. 2014, O'Sullivan 2002)

209

Term	Definition	Discipline	YSJ Faculty/Programme	Other references
Information retrieval/gathering	Linked to Research and Development	Business	Business/Business	(D'Angelo 2012, O'Sullivan 2002)
Information seeking behaviour	"seeking out research-based information or developing…knowledge and skills in handling that kind of information" (Williams, Coles 2007, p.193)	Humanities Social Sciences	Business/Linguistics E&T/Education	(Williams, Coles 2007, Koltay 2009)
Information systems	"An information system (IS) consists of the people, processes, and data involved in the handling of information in an organization, and as a field, information systems is the study, design, and implementation of such." (Kte'pi 2009, p.873, White, K. 2006)	Business	Business/Business Health/Occupational Therapy	(Toledano O'Farrill, Ruben 2008b, White, K. 2006)
Information/knowledge economy	"we can say the knowledge economy is what you get when firms bring together powerful computers and well-educated minds to create wealth" (Brinkley 2006, p.3)	Business	Business/Business	(Toledano O'Farrill, Ruben 2008b, Fiegen, Cherry et al. 2002)
Information/learning experience	Linked to Informed Learning	Humanities	E&T/Theology	(Gunton, Bruce et al. 2012, Gunton 2011)
Informed learning	"the experience of using information to learn" (Gunton, Bruce et al. 2012, p.120)	Humanities	E&T/Theology	(Bruce, Christine 2011, Gunton, Bruce et al. 2012, Gunton 2011)
Inquiry based learning/enquiry based learning/problem based learning/active learning	"EBL describes an environment in which learning is driven by a process of enquiry owned by the student. Starting with a 'scenario' and with the guidance of a facilitator, students identify their own issues and questions. They then examine the resources they need to research the topic, thereby acquiring the requisite knowledge. Knowledge so gained is more readily retained because it has been acquired by experience	Social Sciences	E&T/Education	(Callison, Baker 2014, Kingsley, Tancock 2014)

210

Term	Definition	Discipline	YSJ Faculty/Programme	Other references
	and in relation to a real problem." (Centre for Excellence in Enquiry Based Learning 2010)			
Knowledge management	"Knowledge management is a discipline that promotes an integrated approach to identifying, capturing, evaluating, retrieving, and sharing all of an enterprise's information assets. These assets may include databases, documents, policies, procedures, and previously un-captured expertise and experience in individual workers." (Duhon 1998)	Business Health	Business/Business Health/Occupational Therapy	(Toledano O'Farrill, Rubén 2010, D'Angelo 2012, Makani-Lim, Agee et al. 2014, O'Sullivan 2002, Toledano O'Farrill, Ruben 2008b)
Lifelong learning (attributes)	"Adult education, which is responsible for satisfying significant needs that occur in a fast changing reality, is frequently performed in an informal way as a result of spontaneous, social and individual learning. Its significance is invaluable because in many situations only this kind of education can satisfy various, immediate human needs." (Radovan, Koscielniak 2014, pp.7-8)	Humanities Social Sciences	E&T/Theology E&T/Education	(Toledano O'Farrill, Ruben 2008b, Eliceiri 2014, Feast 2003, Gunton, Bruce et al. 2012, Gunton 2011, O'Sullivan 2002)
Lifelong open inquiry	Linked to Lifelong Learning	Humanities	E&T/Theology	(Eliceiri 2014, Gunton, Bruce et al. 2012)
Literacy practices	Linked to reflective practice	Social Sciences	E&T/Education	(McTavish 2009)
Market research	"Market research examines the operating environment of a corporation. It includes all of the processes and operations that deal with the systematic acquisition of knowledge, including searching for, collecting, analyzing, and interpreting information. This knowledge	Business	Business/Business	(Griffis 2014, O'Neill 2015)

211

Term	Definition	Discipline	YSJ Faculty/Programme	Other references
	supports the marketing activities of corporations."(Haghirian 2009, p.1084)			
Mass media information	"familiar, direct, unmediated and continuous communicative contact with great numbers of individuals at all levels and in all parts of society, spreading information, ideas, opinions, models of behaviour and stimulating new cultural tastes and aspirations of a material or spiritual kind" (McQuail 2006, p.1)	Humanities	E&T/Theology	(Cohen 2013)
Media literacy	"a perspective from which we expose ourselves to the media and interpret the meaning of the messages we encounter. We build our perspective from knowledge structures. It is not a natural state; instead it must be developed. It is not a category; there are degrees of media literacy. It is multidimensional with development taking place cognitively, emotionally, aesthetically, and morally. The purpose of developing media literacy is to give the person greater control of exposures and the construction of meaning from the information encountered in those exposures." (Potter 2004, p.63)	Arts	Arts/Media	(Vraga, Tully 2015)
New literacies	Linked to critical information literacy and digital literacy	Social Sciences	E&T/Education	(Kingsley, Tancock 2014, McTavish 2009)
Online comprehension	Linked to digital literacy	Social Sciences	E&T/Education	(Kingsley, Tancock 2014)
Online inquiry	Linked to digital literacy	Social Sciences	E&T/Education	(Kingsley, Tancock 2014)
Organisational behaviour	"Organizational behaviour [sic] … is a field of study that investigates the impact	Business	Business/Business	(Fiegen, Cherry et al. 2002)

212

Term	Definition	Discipline	YSJ Faculty/Programme	Other references
	individuals, groups, and structure have on behavior within organizations for the purpose of applying such knowledge toward improving an organization's effectiveness." (Robbins, Judge 2014, p.28)			
Organisational sensemaking/learning	"the organisation is about identity, retrospect, enactment, social activity, ongoing events, cues, and plausibility" (Weick 1995, p.82)	Humanities Social Sciences Health	Business/Linguisitics Health/Occupational Therapy	(Toledano O'Farrill, Ruben 2008b, Toledano O'Farrill, Rubén 2010)
Problem solving/analysis	"Problem solving is at the core of all managerial activities…The key areas require managers to collect as much information as possible…assess, analyse and evaluate any information related to the problem before attempting to solve it in any meaningful manner." (Sutherland, Canwell 2004, pp.253-254)	Business	Business/Business	(Griffis 2014, Makani-Lim, Agee et al. 2014, O'Sullivan 2002)
Professional self development	Linked to evidence based practice	Health	Health/Occupational Therapy	(Forster 2015)
Quality assurance	"an activity aiming to elicit information about clinical performance, and, based on that information, to readjust the circumstances and processes of health care" (Donabedian 1992, p.247)	Health	Health/Occupational Therapy	(Toledano O'Farrill, Rubén 2010)
Reflective learning/practice	"a strategy…to learn from our practice…consists of…experience, reflection, action…enables us to build a knowledge base from our experience." (Jasper 2013, p.6)	Humanities Social Sciences	Arts/Literature E&T/Education	(Boon, Johnston et al. 2007, Bruce, Christine 2011, Williams, Coles 2007)
Religious information literacy	"the learner's understanding of learning about and from religious information, to enable the individual to participate in a	Humanities	E&T/Theology	(Gunton, Bruce et al. 2012, Gunton 2011)

213

Term	Definition	Discipline	YSJ Faculty/Programme	Other references
	church community and to contribute to the individual's ability to be a lifelong learner in that context" (Gunton, Bruce et al. 2012, p.120)			
Religious literacy	"the ability to understand and use the religious terms, symbols, images, beliefs, practices, scriptures, heroes, themes, and stories that are employed in…public life"(Protheroe 2007, cited in Gallagher 2009, p.209) "Religious literacy, particularly when situated within a metaliteracy framework, assumes that all people are lifelong, reflexive learners and provides them with more expansive and fruitful ways in which to encounter and explore information from both religious and secular points of view." (Eliceiri 2014, p.8)	Humanities	E&T/Theology	(Gunton, Bruce et al. 2012, Eliceiri 2014)
Research and development	"the application of new knowledge (scientific or otherwise) for the generation of economically useful products and processes" (Moskovitz 2009, p.1361)	Business	Business/Business	(Fiegen, Cherry et al. 2002)
Research skills	Linked to Market Research	Business Social Sciences	Business/Business E&T/Education	(Makani-Lim, Agee et al. 2014, Merchant, Hepworth 2002)
Resource management	Linked to Research and Development and Information Management	Business	Business/Business	
Seeking meaning	"exploring and discerning the meanings that define one's identity and focus one's vocation" (Seymour 1997, cited in Gunton, Bruce et al. 2012, p.121)	Humanities	E&T/Theology	(Gunton, Bruce et al. 2012)

214

Term	Definition	Discipline	YSJ Faculty/Programme	Other references
Sensemaking	"Sensemaking involves coming up with a plausible understanding—a map—of a shifting world; testing this map with others through data collection, action, and conversation; and then refining, or abandoning, the map depending on how credible it is." (Ancona 2012, p.3)	Humanities Social Sciences Health	Business/Linguistics Health/Occupational Therapy	(Makani-Lim, Agee et al. 2014, Toledano O'Farrill, Rubén 2010)
Social epistemology	"the ways in which society generates new knowledge, disseminates it, and uses it to contribute to the values the society seeks" (Shera 1966, cited in Roland 2012, p.43)	Humanities	E&T/Theology	(Roland 2012)
Summarising	Linked to abstracting and technical communication.	Humanities Social Sciences	Business/Linguistics	(Koltay 2009)
Technical communication	Linked to Research and Development	Business	Business/Business	(D'Angelo 2012)
Technical communication	"Technical communication is a relatively new discipline, which has developed in response to the expanding role of technology in people's lives. It involves writing paper-based instruction manuals, brochures, and tutorials, as well as designing and developing online help, Web sites and other types of online documentation. It can also involve editing, and writing reports and abstracts." (School of Languages, Literature, Culture and Communication, University of Limerick no date)	Humanities Social Sciences	Business/Linguistics	(D'Angelo 2012)
Time and task management	Linked to Research and Development	Business	Business/Business	(O'Sullivan 2002)
Use of professional literature	Linked to reflective practice	Social Sciences	E&T/Education	(Williams, Coles 2007, McTavish 2009)

215

6.3 Pilot interviews IL analysis

6.3.1 Pilot Interview 1. IL outline analysis

Aspect of information literacy		Examples from interview text.
1	Able to identify need for information	"we often say to them, if you read one person and it agrees with you, you don't know whether or not that's just one out of fifty million…you then have to read somebody else." "It's telling us what happened, telling us why it happened, supported with theory, but then what would happen in the future."
2	Assess current knowledge and identify gaps	"through questioning within the session, we ask them to engage with them, in order to develop their understanding and that's when the key questions will get them to start being more critical and more analytical, rather than just describing." "sometimes on a news story, it says, the research shows this, but they never click on the research"
3	Can construct strategies for locating information and data	"they do something where they go out and get their own articles…and that is a student led session" "they haven't just gone for the reading list, they've done searches, they've gone wider"
4	Can locate and access the data needed	"there's…a lot of research out there that says that resources can be detrimental, be distracting…the interesting thing is that theory, that reading, is not actually in books about resources, it's in books about behaviour"
5	Can review research process and compare and evaluate information and data	"They've read things in different books and thought…does that apply? Does that not apply?...is the value academic?"

Aspect of information literacy		Examples from interview text.
		"I get a lot of questions like…I got this article, can I use it? Or I found this website….I would never say no, because that's me making the decision, and I want them to make it, but I might say things like…consider how you engage with it."
6	Can organise information professionally and ethically	"they email me…that there's no author for this. I say, just leave it out then, but you need to consider the academic value of that." "we also talk about… Harvard conventions, and about plagiarising, and things like that"
7	Can apply the knowledge gained: present, synthesise and disseminate	"they produce a half an hour engagement with that article, and they share it with their group…they present a synopsis and then they engage with it and ask questions about it." "Some students summarise to make the point that they want to make and it's only because you know the text that you can say, actually, this is not what he's saying…or they miss out words, just to get the direct quote to say what they mean."
8	Can use these skills in transitions to other settings	"the really good students start to write something like, although this basically wasn't on mathematics, it was to do with English, it still relates to this" "there is a huge difference between theory and practice. And we want them to actually engage with that"
9	Can understand and articulate the values and beliefs inherent in the process of information creation and production	"getting them to understand that that is someone's point of view, somebody's interpretation of that research. And even the research

Aspect of information literacy		Examples from interview text.
		itself is an interpretation of somebody's views about the…data." "they come to university thinking that everything that anybody has said in a book is true"

6.3.2 Pilot interview 2. IL outline analysis.

Aspect of information literacy		Examples from interview text
1	Able to identify need for information	"there are core skills that the students are…expected to…demonstrate proficiency in, in order to get their professional registration" "we focus in on students being able to understand what evidence supports, will support them being a practitioner"
2	Assess current knowledge and identify gaps	"We expect them to…get a general understanding of the concept of evidence and evidence-based practice" "sources of evidence such as the patient perspective, the patient experience, the local context and also the research evidence"
3	Can construct strategies for locating information and data	"there's…SOL activities…where they have to search, find information." "we…talk to them, or incorporate activities, learning activities, around how to find those resources."
4	Can locate and access the data needed	"We teach them an understanding of those information sources, where they can find them." "we tend to direct them to all sorts of things…position statements…clinical guidelines."
5	Can review research process and compare and evaluate information and data	"we discuss models of evidence-based practice and how we use those...written documents alongside

Aspect of information literacy		Examples from interview text
		other sources of evidence such as patient experiences" "the students are given a…briefing paper and…basically discuss"
6	Can organise information professionally and ethically	"We have one session where we look…at research ethics and some of the dilemmas…as a clinical practitioner."
7	Can apply the knowledge gained: present, synthesise and disseminate	"how are we going to use it [evidence]? How will we understand it? How does it inform practice?" "at level three…we encourage them to write it up for dissemination…take them to conference presentations…write up papers"
8	Can use these skills in transitions to other settings	"if they mention critical appraisal tools, as a tool they could use to get a better understanding of the evidence…as clinical practitioners…they'd get marks for that." "to be able to gain enough of an understanding to act like a clinical practitioner" "often they'll go into multi-disciplinary teams…they have to be able to relate to different professions and to understand the evidence that comes from other professions that might be relevant to them."
9	Can understand and articulate the values and beliefs inherent in the process of information creation and production	

6.4 Pilot interviews ANCIL analysis

6.4.1 Pilot interview 1. ANCIL analysis.

Strand of information literacy		Example from interview text
1	Transition to HE	"in the first year there is a lot of modelling and I think that is very important because…it is a new way of working" "they come to university thinking that everything that anybody has said in a book is true."
2	Becoming an independent learner	"our piece of work is reflective, so it is personal" "they don't want to learn it themselves, they want somebody to do it"
3	Developing academic literacies	"Key theories and principles are shared with the students to start off with. And then what we actually do through questioning within the session, we ask them to engage with them, in order to develop their understanding…get them to start being more critical and analytical." "we should try to prevent the students making these mistakes before they make them. So rather than them handing in an assignment and me saying, that's not referenced correctly…I want to do that beforehand."
4	Mapping the landscape	"The recommended sources are linked to our key texts…and we focus on those to allow the students to develop" "the other thing we encourage is the depth….what have they read? And how far have they read? And we often say to them, if you read one person and it agrees with you, you

Strand of information literacy		Example from interview text
		don't know whether or not that just one out of fifty million"
5	Resource discovery	"I think it also gives you an indication of what the student has done while they were writing their assignment…they haven't just gone for the reading list, they've done searches, they've gone wider."
6	Managing information	"We do a lot of convention work, so on my PowerPoints, the conventions are actually incorrect…I actually say to them…what's wrong with that?"
7	Ethical dimension of information	"We…talk about Harvard conventions, and about plagiarising, and things like that…I often say to them, think about it as if you were in the court room…and you are giving your speech, and you are supporting it with different people"
8	Presenting and communication	"they present a synopsis and then they engage with it and ask questions about it and then we discuss it, and they sort of coordinate that discussion"
9	Creating new knowledge	"we encourage them to read wider…extend their knowledge. I think the 'understand' is the key thing…Paraphrase or summarise. Because that actually increases your understanding of what they are saying."
10	Social dimension of information	"They create this activity…they have a concept map and we give them various areas to look at…So there are resources for a maths game. So there's a lot of theory out there about the use of resources, how it supports learning….There's also a lot

Strand of information literacy		Example from interview text
		of research…that says resources can be detrimental...What we would be expecting to see is this: that they say they have used resources, and why they used them…Give me some context." "the students say to me, they say I see now why that worked in the class. Because that's what somebody [the theorist] said."

6.4.2 Pilot interview 2. ANCIL analysis.

Strand of information literacy		Example from interview text
1	Transition to HE	"let's get them to understand what evidence-based practice is, why it's relevant to them"
2	Becoming an independent learner	"students look at the list [of professional skill requirements] and see…there's all sorts of activities that contribute to CPD, which links to evidence-based practice."
3	Developing academic literacies	"we have understanding and reviewing at level one. Then the next level up is critiquing and analysing and applying the evidence." "We use a critical appraisal tool which helps them to…critique evidence in a…structured manner."
4	Mapping the landscape	"we focus…too much at the moment on research. And research is one part of it, it's not anywhere near all of it." "sources of evidence such as the patient perspective, the patient experience, the local context and also the research evidence"
5	Resource discovery	"we…show the students...how to use them together as a form of evidence-based practice. We teach them an understanding of those information sources. Where they can find them." "there's…SOL activities…where they have to search, find information."
6	Managing information	

Strand of information literacy		Example from interview text
7	Ethical dimension of information	"we have one session where we look…the theme of the whole week is ethics…the ethics of research within that."
8	Presenting and communication	"at level three…we encourage them to write it up for dissemination…take them to conference presentations…write up papers"
9	Creating new knowledge	
10	Social dimension of information	"to be able to gain enough of an understanding…to contribute to that evidence based that helps the practitioners grow" "how are we going to use it?...How does it inform practice?"

6.5 List of interviews and interview schedule

6.5.1 List of interviews

Interview with representative of Business School, 11.00, 14 February 2017, Room De Grey 103, York St John University.

Interview with representative of School of Languages and Linguistics, 10.00, 24 February 2017, Room De Grey 103, York St John University.

Interview with representative of School of Humanities, Religion and Philosophy, 11.00, 13 March 2017, Room Holgate 135, York St John University.

Interview with representative of School of Education, 11.00, 14 March 2017, Room De Grey 103, York St John University.

Interview with representative of School of Psychological and Social Sciences, 14.00, 27 March 2017, Room Holgate 149, York St John University.

Interview with representative of School of Performance and Media Production, 14.00, 7 April 2017, Room De Grey 103, York St John University.

Interview with representative of School of Sport, 14.00, 19 April 2017, Room De Grey 102, York St John University.

Interview with representative of School of Health and Life Sciences, 11.00, 26 April 2017, Room De Grey 228, York St John University.

Interview with Digital Trainer, 14.00, 6 February 2017, Room Fountains 120, York St John University.

Interview with Academic Liaison Librarian, 7 July 2017, 11.00, Room De Grey 228, York St John University.

6.5.2 Interview schedule

6.5.2.1 Initial question

Please describe your experiences of delivering and assessing this module, especially in respect to the learning outcome/aim of…

School	Key aim/learning outcome linked to information literacy
Business School	Access information relevant to the study of business management and use appropriate referencing systems.
School of Education	Access information relevant to the study of business management and use appropriate referencing systems.
School of Humanities Religion and Philosophy	Understanding what makes a good information source and how literature contributes to the learning process.
School of Health Sciences	Accessing primary and secondary sources using electronic searches in order to identify and explain key themes and approaches to the study of (programme subject focus).
School of Languages and Linguistics	Acquiring study skills and practical skills.
School of Performance and Media Production	Demonstrating academic literacy and communicating ideas and arguments in a manner appropriate to the context and audience.
School of Psychological and Social Sciences	Exhibit a familiarity with a variety of methods of data collection that are employed in (programme subject focus) research.
School of Sport	Explain how the history of sport has shaped its contemporary form

6.5.2.2 Follow-up questions by interview

School	Follow up question
Business School	You mentioned there about finding their own academic voice, about somehow, also showing where they got those ideas from in the first place. Can you please describe how you assessed this?
School of Education	So there's an indication there that even when the formative assignment, or the first stage of an assignment, in the module is designed to lead to the second one, there's still some students that aren't making that leap. Can you please expand on that?
School of Humanities Religion and Philosophy	Can you please describe more about that idea of encouraging the students to take responsibility for their own learning and identifying what else they need to access in order to be a more effective learner?
School of Health Sciences	You mentioned the transferability of what they are learning, not compartmentalising. Can you please describe how that played out?
School of Languages and Linguistics	So from what you are saying, there's a lot of social aspects. As in working with peers and discussion of points to do with these skills. Can you please describe how this played out last term in that module?
School of Performance and Media Production	You mentioned discussion of sources. When you were delivering the module, was this done in group format? Would they bounce opinions and reflections off each other? Can you please describe the process?
School of Psychological and Social Sciences	When you've delivered this, how did you assess whether the students had reached the level you expected?
School of Sport	You've mentioned previous experiences. How did the previous experiences of the students before they came have an impact on how they adapted to the course? How they experienced it once they were here?

6.6 Initial coding themes: examples from the interview transcripts

6.6.1 Examples of traditional IL/library skills – baseline

we gave them instructions on how to find things in the library, journal articles and so on (Business School)

it was about supporting them through that advanced search, narrowing things down, how do you get to the 7 or 8 articles that are actually important, useful and relevant (Business School)

these are first year modules, so it is very introductory, so to start it's finding their way around the library (School of Education)

if you're at the library, what's the difference between a book and a peer review journal, a newspaper article and so on (School of Education)

in one of the sessions, we did reference, showed them referencing for a quote and for a citation that wasn't a quote and how to reference it (School of HRP)

the students are looking for more journal articles, how to search journal databases, that sort of thing (School of Health)

we say avoid Wikipedia, for example, you know? Or you can use it as a starting point, but we expect them to go beyond that. To actually look at the academic texts, maybe even bring in a journal article or something. (School of LaL)

They are set library tasks, so, you know, to go and find a piece of reading that relates to that, or to use the catalogue system, or to find something that's a hard copy of something, because I think a lot of them will, yeah they will fall back on just using the internet and not using the library's full resource.(School of Performance And Media Production)

first of all it was a kind of skills-based thing on can you use something like Google Scholar, the library catalogue, those kinds of things, to try to identify articles (School of PaSS)

a few basic tasks, they're on computers, so they can search the different databases, and we showed them some of the databases like the library website, Google Scholar, erm, some of the databases you can access to generate different journal articles, that kind of, with a particular emphasis on journal articles, so teased out the distinction between things like text books and peer-reviewed articles (School of Sport)

what a generic search for the history of swimming will return, how you could then narrow that down using different keywords, different searches, when they've run an initial search, ok, how do we go on from here, how could we change it, how could we alter it? (School of Sport)

6.6.2 Agency for search/evaluation lies with student

Things that they thought were good examples of how they'd done a good job (Business School)

the report was very much focused on what have you read, what have you heard, what have you thought about, what have you found in this (School of Education)

it's enabling our students to somehow take generic study skills and apply them to their assignments (School of Education)

if you can pick up on bits and pieces like that, to push them in the right direction, oh that looks interesting, oh well done you've found a really important text there, I was hoping that's one you would find (School of Sport)

6.6.3 Takes into account previous experiences

when you're at school, maybe the teacher says read this chapter and then regurgitate it to me. Certainly for some of our international students, that's a practice that they had been, that was their experience of education (Business School)

this year for the first time I've noticed that students have got, a lot of students understand an annotated bibliography (School of Education)

our demographic is such that the students that come to us are not the high fliers who are going to be able to do it for themselves. (School of HRP)

they have very different skill-sets themselves, and very different experience before coming. The main thing that they have a problem with is the feedback and how much support, because they are so used to at school, I write it, you check it, you tell me what to change, I change it. Again, I give it to you, you change it, and give it back (School of Health)

if they have done an A level then it's pretty much guaranteed that they've done particular practitioners, or particular theorists, which on one hand is useful in that we know what we are introducing them to is new, erm, to most of them. But I think it does make it difficult for them to transition (School of Performance And Media Production)

we've been doing, which is sort of ancillary to this, is, erm, more and more working with schools and trying to find out from teachers what they're doing and what the students are expecting when they get here and that's an ongoing thing – much more complicated I guess (School of Performance And Media Production)

people do have a lot of practical experience, just from their everyday lives, that they can draw on (School of PaSS)

an emphasis on trying to get that transition from what they've been used to at school and college, which when you talk to the students, often tends to have been based around spoon-feeding of information (School of Sport)

One other thing with the students is, yes, they've got the transition in education, but they're also transitioning in terms of their life beyond that (School of Sport)

6.6.4 Considers likely future experiences

they are very focused on, will this help me get a better mark. That's a conversation that we have a lot. And with the extra-curricular stuff, I said, well probably, it might, but what it will help you do is get a better job at the end of it all, and they've just said huh (Business School)

some generic skills, so we're very keen on transferrable skills, that they have those when they go. (School of Health)

I think it was important to try and embed ideas of how research actually works in practice, rather than having it as just a, kind of, distant idea of things people do (School of PaSS)

6.6.5 Social/active learning linked to information search and evaluation

what we did with the students last year was introduce a new pedagogy, so we did team-based learning. So we gave them work to do, reading and so on, before they came into the space, where we had them work in small groups, the same small groups every week, erm, to apply that learning to a range of tasks (Business School)

in one of the tasks we asked them to work together as a group to share literature that they'd found, to swap references with each other and see if they could track down the article from the reference material that they remembered, you know, that kind of thing (Business School)

can you find any evidence, or any, anything at all that suggests that there's anything that backs that up. So I suppose in terms of how this is, in terms of the information sources, also reinforced through discussion in class (School of Education)

And then I actually got them to do, in pairs, a short paragraph using some stuff I had given them to actually write a paragraph, so I could see if they knew what the difference was. If they hadn't got it I could then either do it with them or, if a whole group of people hadn't got it, we went back to it. (School of HRP)

So in practicals we let them choose, they work in pairs and we let them choose who they want to work with. Again, they've picked that pair week 1 and they've stuck with it all the way through. They have their group chats and they talk about things on there. And it's interesting – the first year have asked for discussion boards (School of Health)

they write a draft essay and then in week, about half way through the module, they submit the first draft onto Moodle and email it to a colleague, a peer. And the peer then gives feedback on the draft essay. So the idea is they learn how to give each other feedback, but they also get a first feedback on their draft that they can then use to recraft the essay (School of LaL)

it's really discursive. So they are often having conversations across the room, and in small groups and feeding back. And so there's a lot of conversation actually, more than, you know, projection or us talking, there's much more conversation around the topics than on any other module (School of Performance And Media Production)

It also involved having practical things in the, in the room when we were actually working on a particular topic. Things like focus groups, I got them to actually conduct a focus group (School of PaSS)

all students are involved in group work, they've got that collaborative element, where they can try to help one another, bounce ideas off one another, and the attention is, certainly in that first semester, it provides a basis for them to open up, get to know each other a little bit more on a personal level, aiding, hopefully, that transition into university life (School of Sport)

6.6.6 Collaboration between academics and librarians

the library came in and gave them some help as well, and ran one of the sessions. From memory...yes, she certainly came in and showed them how to do things (Business School)

the way it has been done this current academic year is to plan in sessions. A couple of sessions with (librarian) (School of Education)

So (librarian) come in and do this fabulous session (School of HRP)

I mean (librarian) have taken it forward in leaps and bounds for us in (subject). Well beyond wherever we might have got on our own. And that support is really essential. (School of HRP)

it's that connection where the students that do come to you, and say can I have a tutorial, a 1-1 with this, the impact of that is huge. And it's how we give the

students the confidence to know that they can go and see (librarian) and she's not going to be all scary, so that they, they can get that. (School of HRP)

what we do is we have a subject librarian… who does two sessions with the students very early on, weeks 2 and 3 I think it is, where she talks about what referencing is, academic integrity, where you can find things in the library, what kind of things they should be doing, that kind of thing (School of Health)

we have a session in week, about half way through, where (librarian) usually comes in and does a literature search session with the students as well, so they get to see the catalogue and how they can search (School of LaL)

we have a session on, how do we source academic literature? So if we take that as an example, (librarian) actually came into, into that session, so we've had involvement from ILS as well (School of Sport)

the guidance booklet that's put together for the referencing format that students need to use at the university. I definitely make use of those kind of materials within sessions (School of Sport)

I was aware that (librarian) was available to come in to help with certain aspects of study skills, so I was keen to take advantage of that. No least because it gives the students the opportunity to put a face to the name as well. You know, this is someone here who is available within the library to help you with things like literature searching, go talk to (librarian) and she'll help you in that sense (School of Sport)

6.6.7 Wider view of information use and evaluation than just in university setting

I actually gave them a breakdown that they had to have at least one from a union, from a teaching union, because I wanted them to evaluate that as an information source, whether it was politically linked, whether it was the voice of teachers, or evidence-based, which some of the, erm, union material is. Erm, one newspaper article, and again for them to think about what's the context of that and where that's positioned. (School of Education)

one of the examples I quite liked was, the topic of research ethics. And the example we used for research ethics was a piece of writing …, who wrote an article about the ethical process of being rejected for a piece of research he did in which he'd handled stolen goods. And the university ethics board were understandably a little funny about the idea that it was ok for him to handle stolen goods (School of PaSS)

6.6.8 Information as more than traditional, textual sources

well what does the reading say about physical challenge and risk, evaluating risk and stepping outside your comfort zone. You know, why do teachers spend time and money doing those kind of things? So again, it's not saying that their experience is worth nothing, but it's how to connect that in to what they are reading (School of Education)

The other things that we get them to do, so information literacy I guess comes in lots of different forms, not just their knowledge of where to get it, it's their inherent skills that we need to develop. So the maths skills they come with. (School of Health)

that's lab reports and maths skills. Other things we get them to do are statistics, very basic statistics in year 1 (School of Health)

particularly because we call them visual and textual artefacts, so we're trying to get them to think about performances not just as things that, erm, well to understand that their study of them is always after the fact, so there's this sort of retrospective thinking (School of Performance And Media Production)

they would be thinking about things from a theoretical perspective, then using documentation of practitioners, and then, you know, artefacts around that. So interviews with theatre makers about certain decisions they make, or other critical texts about a particular practitioner (School of Performance And Media Production)

Even if it's just seeing it on the news (School of PaSS)

6.6.9 An awareness of wider information landscape (including political/social/cultural influences)

Whereas you could say, it seems from the evidence, that having a dynamic leader is a good idea, you don't have to cite that because you are building on an argument based on previous citations (Business School)

Especially taking children out on school trips, you know, is it over-reported in the media, (School of Education)

A lot of the students may be aware of a performance …by the company, but they wouldn't necessarily know anything about its history, the context, the movement of workers theatre cooperatives, or of (director) at all. And so in a way it's about, not just introducing them to that work they may already know, but also to get them to start thinking about that work with information from a whole range of other things that sort of circle around it. And then to be able to evaluate the work based on that information (School of Performance And Media Production)

evaluating the performance becomes more about trying to understand, sort of, how performance sits historically, culturally, and geographically, you know. In a much wider context than maybe they expected (School of Performance And Media Production)

(info from the news) having an impression of how bad things are, or how good things are (School of PaSS)

Drawing in wider social changes like developments in broader society, industrial developments, ways in which people's attitudes and behaviours have changed over time. (School of Sport)

6.6.10 Development of student's own academic voice

That is quite challenging for them to get over. So if you say in your essay, business, small businesses always have a manager who is dynamic, full stop, you've got to go, how do you know that. (Business School)

we do look for whether they can discuss ideas critically. So, for example, have they just taken quotations from the literature, or can they actually contrast them and show where they stand? We look for that kind of thing. (School of LaL)

we ask them to tell us a little bit about the person and then mostly focus on their work. So, this will be someone who has contributed a key theory or something (School of LaL)

Have they found the relevant information? Interpretation of that information. So, have they drawn out points that are relevant? Have they managed to weave it into a coherent description, a coherent narrative? (School of Sport)

6.6.11 Modelling though own academic practice

I think modelling it in the classroom is absolutely essential, so that we reference correctly, we show them the books where we got stuff from, we provide them with a bibliography (School of HRP)

There are 12, well there used to be 12, members of staff in (subject) and, trust me, there are at least 15 ways of referencing. None of them will accept that there is one way of referencing, and so we're not being consistent and then we're expecting the students to play ball (School of HRP)

6.6.12 Evaluation/worth of information sources

when they'd found a range of bits of material, they had to either precis what they found in the document or, somehow, draw out a key learning, key point (Business School)

we did a session on, here's an article, how do you read articles. First of all you read the title – does the title sound interesting? Yes, so then look at the abstract – does that look interesting? Yes, so then read the introduction and the conclusion. They're still interesting, then you look at the chapter heading, you know, that kind of breakdown so that they learn how to read things (Business School)

I think there needs to be more around how they would judge, you know, the value, the worth if you like, of each information source (School of Education)

We get them to read some scientific information, so we give them some quite old journal articles, because when they come into year 1, halfway through semester 1 when we're teaching them, they haven't got some of the experimental knowledge they would need to understand a more recent paper. So we choose quite an old fashioned one, but it's about genetics and they are doing the genetics module. So they read the paper and they do something with it that we call the scientific comprehension test, and it is essentially like an English comprehension would be. (School of Health)

that from the set texts, that there are bibliographies in those and have they gone further from that starting point. So that, to find a way to engage from primary to secondary texts, that's the aim really. Because that's all about them getting those skills to move forward. (School of Performance And Media Production)

a lot of people identified articles that might have had (subject) in the title but had no subject content related to the course at all. (School of PaSS)

But for the most part, people tended to do quite well. Particularly those students who'd identified competing methodologies for the same subject and worked out whether or not there were some practical aspects of x method compared to y method in this paper and this paper. Erm, and that kind of compare and contrast gave them the space to, to think about the relative merits or problems of particular methodologies. (School of PaSS)

6.6.13 Linking different academic assignments/modules

So within their portfolio for the academic and scholarly bit we ask them to include essays that they've done for other modules (Business School)

the purpose of that was to, to find those sources, and to evaluate them, and a lot of those were good sources that they could absolutely use, but they just didn't. It was almost as if that was, assignment, tick, out of the way. What's on the next assignment? (School of Education)

I think there's something about…that happens for them in that teaching session, but they're doing two other modules. So how is that teaching session that you're putting in contributing, or how are the tutors following that up, so that they're seeing students do it and they're giving them the feedback, does that make sense? (School of HRP)

They very much do think in boxes. So if I did it at school, it's finished. If I did it in semester 1, it's finished. Even within modules within a semester. So all the time when I'm teaching, I'm signposting. In genetics last week we did this… Did we? So even that, well that's a different module, I can't possibly think about that. So again, in the key skills, we try and make it so that they are using information from different modules. Kind of bringing it together a bit more. (School of Health)

we try to communicate that as well, to the students, that if you learn how to write an essay, that's not just because you have to write an essay for this module, but that essay writing is something that will come up all the time in academia, so you have to be aware of what you need to do. (School of LaL)

it's practical stuff they're going to be using next year for doing their dissertations, and to a lot of them it still seems very abstract even though practically this is about four months away for you. You're starting to, you know, think about how you will actually employ these skills in terms of the research project you're doing (School of PaSS)

In (one module) we talked about using search terms, putting quotation marks around a phrase to find a specific thing, kind of Boolean techniques, I pick that up again in (another module) a few weeks later. (School of Sport)

There's a lot to take in and across those different modules, you've got to reinforce those key learning points, certainly in that first semester, time and time again, these are the skills you need. Searching for literature, referencing, citation, basics like writing or presenting or whatever their assignments are, because it is new to them. (Sc hool of Sport)

6.6.14 Need for differentiation in information literacy delivery

So mature students come to the study sessions and say, oh I did already know this, but I thought there might be something new and I'm prepared to still fully engage even though I know it all, and actually they do know it. Whereas some of the less mature students think it's boring, I can't see the, that it's valuable (Business School)

my concern is that it then dumbs it down for those with actually quite good grades and can't believe the drop in standard since they've been doing A levels, because I think they're ready for the shift up. And yet there are people in the class who are quite surprisingly working at really quite a low level. (School of Education)

what we don't do in higher education, getting on another soap box, is that we don't differentiate. So we don't look at the group and think, okay, this little gang, they're streets ahead of everybody else. If I give them this task to do then that will really enhance what they are doing, and then another group, they haven't got the basics, so let's sit down and work with them. (School of HRP)

6.6.15 Information anxiety

initially they'd put in, you'd say, well what are you interested in, and they'd go, I don't know, management. So then they'd type management into the search engine and get five million hits and just not know what to do next (Business School)

there just seemed to be this sort of, I don't know what that is, panic about what it is, almost not engaging with it, and then the sort of anxiety around the task meant they weren't really engaging as well with the sources (School of Education)

they hate maths, they are quite maths-phobic. So we get them to do some basic maths, and it is numeracy, it's not difficult maths, basic numeracy, understanding units that will be useful to them, and understanding, if we ask you to make a solution, how would you physically do it? (School of Health)

I am very aware that the students can have, usually extrovert students, can have a massive amount of confidence with one part of the subject area, and usually the complete opposite when it comes to theory and writing, reading and that kind of knowledge. It's a really strange thing but it's the same almost every year. And these are students who've done really well and have, you know, really do have abilities in writing, reading and research theory, but don't seem to have the confidence. (School of Performance And Media Production)

I often find that the panicked student will take out 10 books and never read any of them (School of Performance And Media Production)

So I try to be careful with it, not to make it too intense, but at the same time they had to do lots of reading for it, so I think that was perhaps a shock for some people, just how much reading was required. (School of PaSS)

6.7 Refined coding themes

6.7.1 Examples of traditional IL/library skills – baseline

Techniques for using library catalogue/databases
Recommendations to avoid certain types of resource
Referencing advice
"We gave them instructions on how to find things in the library, journal articles and so on." (Business School)
"what's the difference between a book and a peer review journal, a newspaper article and so on." (School of Education)
"we did referencing, showed them referencing for a quote and for a citation that wasn't a quote and how to reference it." (School of Humanities Religion and Philosophy)
"the students are looking for more journal articles, how to search journal databases, that sort of thing." (School of Health Sciences)
"we say avoid Wikipedia…you know? Or you can use it as a starting point, but we expect them to go beyond that. To actually look at the academic texts, maybe even bring in a journal article or something." (School of Languages and Linguistics)
"They are set library tasks…to go and find a piece of reading…or to use the catalogue system." (School of Performance and Media Production)
"doing a literature search themselves…a kind of skills-based thing on can you use something like Google Scholar, the library catalogue, those kinds of things, to try to identify articles." (School of Psychological and Social Sciences)
"they can search the different databases, and we showed them some of the databases like the library website, Google Scholar, some of the databases you can access to generate different journal articles." (School of Sport)

6.7.2 Agency for research process lies with student, as a researcher

Agency for search/evaluation lies with student
Development of student's own academic voice
"you've written a paraphrase. What gave you that idea?...At some point you read that, or you learned about it. You need to go back and find out who thought that first, so you can put that in." (School of Business)
"the report was very much focused on what have you read, what have you heard, what have you thought about, what have you found in this" (School of Education)
"what I wanted from them was to tell me what other people's views of what is religion. I wasn't interested in their views of what is religion… the sort of 6th form conversations they have in the bar. That education, and Higher Education, was about knowing what other people have said and weighing the evidence." (School of Humanities Religion and Philosophy)
"You shouldn't be using quotation marks. You should be writing in your own words." (School of Health Sciences)

"have they just taken quotations from the literature, or can they actually contrast them and show where they stand?" (School of Languages and Linguistics)
"we're asking them to sort of develop a critical language about the work that they make as practitioners, and of the work that they see by other performers or artists or theatre makers and dance artists." (School of Performance and Media Production)
"it was a task in which they had to identify two journal articles" (School of Psychological and Social Sciences)
"It's for them to choose one of those sports in the group and chart the emergence and development of that sport over time." (School of Sport)

6.7.3 Student's unique information experiences and needs addressed

Takes into account previous experiences
Considers likely future experiences
Information anxiety
Need for differentiation in IL delivery
"when you're at school, maybe the teacher says read this chapter and then regurgitate it to me. Certainly for some of our international students…that was their experience of education." (Business School)
"there just seemed to be this sort of, I don't know what it is, panic about what it is, almost not engaging with it, and then the sort of anxiety around the task meant they weren't really engaging as well with the sources." (School of Education)
"The whole of our education system, right the way through to 18 is, they've been spoon-fed, and we are the ones having to teach them to find a book, open a book, what to do with it when they've got it." (School of Humanities Religion and Philosophy)
"we only have very small student numbers, but even within that they have very different skill-sets themselves, and very different experience before coming." (School of Health Sciences)
"I am very aware that the students can have…a massive amount of confidence with one part of the subject area, and usually the complete opposite when it comes to theory and writing, reading and that kind of knowledge." (School of Performance and Media Production)
"people do have a lot of practical experience, just from their everyday lives, that they can draw on. I mean everyone has some sort of experience of crime generally." (School of Psychological and Social Sciences)
"they've got the transition in education, but they're also transitioning in terms of their life beyond that." (School of Sport)

6.7.4 Social/active learning linked to information search and evaluation

Using peer support to evaluate resources
Group work linked to information use and evaluation

Linking information resources to different academic contexts

"we asked them to work together as a group to share literature that they'd found, to swap references with each other and see if they could track down the article from the reference material." (Business School)

"So can you find any evidence…that there's anything that backs that up…in terms of the information sources, also reinforced through discussion in class." (School of Education)

"getting the students to go and use electronic sources, to bring something back, to show what they'd brought back, and then to be able to have that conversation about what authority are we going to give these sources and why?" (School of Humanities Religion and Philosophy)

"the first year have asked for discussion boards…they said, our group chat is also our social space, but sometimes someone will put something really interesting or important up, about a link or something that's relevant, and it gets lost in the chatter, so could we have a work space where we could talk to each other?" (School of Health Sciences)

"they'll have a text and actually do a critical reading of that and discuss at the end of the workshop." (School of Languages and Linguistics)

"It's really discursive. So they are often having conversations across the room, and in small groups, and feeding back." (School of Performance and Media Production)

"I got them to actually conduct a focus group…they'd read a short piece about the process of conducting focus groups, the actual task involved them having two moderators to ask questions, they had a pre-scripted thing that they were asked to build on." (School of Psychological and Social Sciences)

"all students are involved in group work, they've got that collaborative element, where they can try to help one another, bounce ideas off one another…it provides a basis for them to open up, get to know each other a little bit more on a personal level, aiding, hopefully, that transition into university life." (School of Sport)

6.7.5 Information landscape goes beyond academia and is more than just textual

Wider view of information use and evaluation than just in university setting

Information as more than traditional, textual sources

An awareness of wider information landscape (including political/social/cultural influences)

"searching in that way, where's the topic that I'm interested in, and then also if, say one of the references in the bibliography looked interesting, to be able to get that reference and then find the piece of work from the reference." (Business School)

"I actually gave them a breakdown that they had to have at least one from a union, from a teaching union, because I wanted them to evaluate that as an information source, whether it was politically linked, whether it was the voice of teachers, or evidence-based, which some of the union material is. One newspaper article, and again for them to think about what's the context of that and where that's positioned." (School of Education)

"we get them to do some basic maths, and it is numeracy…understanding units that will be useful to them, and understanding, if we ask you to make a solution, how would you physically do it?" (School of Health Sciences)
"that thing of evaluating the performance becomes more about trying to understand how performance sites historically, culturally, and geographically, you know. In a much wider context than maybe they expected." (School of Performance and Media Production)
"the example we used for research ethics was a piece of writing by a criminologist…who wrote an article about the ethical process of being rejected for a piece of research he did in which he'd handled stolen goods." (School of Psychological and Social Sciences)
"Drawing in wider social changes like developments in broader society, industrial developments, ways in which people's attitudes and behaviours have changed over time." (School of Sport)

6.8 Disseminated survey

DInfSc IL Survey

Start of Block: Default Question Block

Q1
This survey is for those who taught on a level 4 (first year undergraduate) module in the academic year 2016/17.

This research is part of a doctoral project, investigating the model of communities of practice in relation to the embedding of information literacy in Higher Education programmes. Information literacy links to the finding, use, understanding, evaluation of and managing of information.

Communities of practice are collective learning groups which emerge when members share experiences, values, concerns and knowledge within a specific setting (Wenger 1998). I am testing the assertion that, by identifying such communities of professionals in higher education (including academics, librarians and other support staff) that are concerned with information literacy, a community of practice could be facilitated. The community of practice would be a collaborative endeavour, concentrating on these academic skills in the curriculum.

Your answers to this survey will help in the design and content of an online platform to facilitate community interaction across the University in relation to the finding, use, understanding, evaluation of, and managing of information and how this fits into the curriculum. The initial focus links this to students' induction and transition into Higher Education.

The survey should take 10-15 minutes to answer.

It is proposed that this study will provide outcomes that will not only benefit the institution, but also provide evidence to help inform those in similar situations in other settings. Data will be used in the first instance for a doctoral award (Professional Doctorate in Information Science) and will also be used in conference papers, journal articles, or other appropriate research outputs, resulting from the study.

No personal details will be revealed about any individuals in this study. The only information revealed about any participant will be the academic school to which they belong at York St John University, to allow statistical analysis and comparisons. Ethics approval has been obtained at both the institution providing the doctoral programme (Robert Gordon University) and at the institution at which the research will take place (York St John University), and data collected will be stored in accordance with their research data management policies. You may withdraw your permission and data at any stage, without giving reason.

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References
Wenger E. (1998) Communities of Practice: Learning, Meaning, and Identity. Cambridge, Cambridge University Press.

By continuing with the survey, you are consenting to these provisions. Thank you for your participation in this.
Please enter an identifier of your own choosing, to use should you wish to withdraw your data.

_____

Q2 Respondent information

Q3 For how long have you worked in Higher Education? Answer to the nearest year.
0-2 years (1)
3-5 years (2)
6-8 years (3)
9 years + (4)

Q4 For how many years have you worked at York St John? Answer to the nearest year. If you have worked here in more than one role, please add these together.
0-2 years (1)
3-5 years (2)
6-8 years (3)
9 years + (4)

Q5 To which school/department do you belong?
▼ School of Art Design and Computer Science (1) ... Another department (13)

Q6 Have you completed a PostGraduate Certificate in Academic Practice (or equivalent) and/or attained Fellowship of the Higher Education Academy?
Yes (1)
No (2)
Currently studying (3)

Q7 Do you hold any of these qualifications? Tick all that apply.
Undergraduate degree in education (with or without Qualified Teacher Status) (1)
Undergraduate degree in another subject (2)

PGCE or equivalent (3)
Masters degree in education (or similar) (4)
Masters degree in a different subject (5)
PhD or Professional Doctorate in education (6)
PhD or Professional Doctorate in another subject (7)
None of these (8)

Q8 Your own information preferences

Q9 When you search for information as part of your work, which of these do you do? If you use multiple strategies, please pick the one that you do most often or first.
I search for information on my own (1)
I discuss my search with colleagues before doing it on my own (2)
Colleagues and I work collaboratively on the search (3)
Colleagues and I take responsibility for different sections of the search (4)
Someone else does the search for me (5)

Q10 Course design

Q11 Did you design, or contribute to the design of, a level 4 (year 1) module in 2016/17?
Yes (1)
No (2)

Skip To: Q12 If Did you design, or contribute to the design of, a level 4 (year 1) module in 2016/17? = Yes
Skip To: Q13 If Did you design, or contribute to the design of, a level 4 (year 1) module in 2016/17? = No

Q12 Thinking about that module, did it have aims or learning outcomes which match, or are similar to these? Tick all that apply.
Access information relevant to the subject and reference it appropriately (1)
Access primary and secondary sources in order to identify key themes and approaches (2)
Understand what makes a good information source (3)
Identify, articulate and discuss the work of key scholars (4)
Communicate ideas and arguments in a manner appropriate to the context and audience (5)
Understand how literature contributes to the learning process (6)
Display a knowledge of skills that academics employ in their research and writing (7)
Evaluate broadcasts, performances or writing within a historical context (8)
Explain how the history of a specific aspect of the subject has shaped its contemporary form (9)
Demonstrate personal responsibility for self-directed learning (10)

Q13 Course teaching

Q14 Generally, to what extent do you expect undergraduates to use these information sources as part of their studies, over the whole degree?

	A key source, used frequently (1)	To be used sometimes (2)	Rarely used (3)	Never used (4)	Don't know/I am unaware of this (5)
Bibliographic databases (e.g. Arts and Humanities Full Text, CINAHL, Emerald, British Education Index, ATLA) (1)					
Tools to measure usage and reach (e.g. Altmetric) (2)					
Film, TV and radio broadcasts (e.g. Box of Broadcasts) (3)					
Open Access information tools (e.g. CORE) (4)					
Maps (e.g. DigiMap) (5)					
Google Scholar (6)					
Google (7)					
Theses (e.g. EThOs) (8)					
Newspapers, current and historic (9)					
Citation services (e.g. Web of Science) (10)					

Q15 The next 4 sections all link to planning your teaching for level 4 (year 1) modules in 2016/17, or supporting these students with academic skills.

Q16 Issues linked to the students' previous experiences.

	Strongly agree (1)	Agree (2)	Neither agree nor disagree (3)	Disagree (4)	Strongly disagree (5)
It was important to understand students' educational experiences prior to university. (1)					
It was important to understand students' life experiences prior to university. (2)					
It was important to ensure that students understood how to incorporate sources of information into their academic work. (3)					
It was important to ensure that students understood how to use sources of information for answering questions in their life, generally. (4)					

Q17 Did you use group work in your teaching?

Yes (1)
No (2)

Skip To: Q19 If Did you use group work in your teaching? = Yes
Skip To: Q18 If Did you use group work in your teaching? = No

Q18 Why did you not use group work? Tick all that apply.
I usually see students on an individual basis (1)
I was aware that some students do not like group work (2)
I wanted the students to develop their own understanding first (3)
Something else (please state) (4)
_____

Skip To: Q20 If Why did you not use group work? Tick all that apply. = I usually see students on an individual basis
Skip To: Q20 If Why did you not use group work? Tick all that apply. = I was aware that some students do not like group work
Skip To: Q20 If Why did you not use group work? Tick all that apply. = I wanted the students to develop their own understanding first
Skip To: Q20 If Why did you not use group work? Tick all that apply. = Something else (please state)

Q19 Developing a community among new students.

	Strongly agree (1)	Agree (2)	Neither agree nor disagree (3)	Disagree (4)	Strongly disagree (5)
An important purpose of group work is to facilitate peer learning (1)					
An important purpose of group work is to foster a supportive atmosphere (2)					
An important purpose of group work is to facilitate academic debate (3)					

Q20 Aspects of information identification and evaluation.

	Strongly agree (1)	Agree (2)	Neither agree nor disagree (3)	Disagree (4)	Strongly disagree (5)
I encouraged the students to cite and reference specific, recommended sources. (1)					
I encouraged the students to use 'academic' sources of journals and books above others (e.g. websites, newspapers, videos). (2)					
I encouraged the students to start with recommended sources, but then find and evaluate their own in addition to this. (3)					
I encouraged the students to consider the context in which the source was produced, e.g. the time period/culture/society. (4)					
I encouraged the students to consider the purpose for which sources were intended (e.g. academic research, professional practice, evidence-based practice, reflective practice, fake news). (5)					
I encouraged the students to consider sources beyond the academic textual ones of books and journal articles (e.g. performances, personal experiences, artworks). (6)					

I encouraged students to integrate learning into their professional or everyday life. (7)

Q21 The use of information in an academic context.

	Strongly agree (1)	Agree (2)	Neither agree nor disagree (3)	Disagree (4)	Strongly disagree (5)
I encouraged students to take ideas from the evidence and paraphrase/write in their own words as much as possible (1)					
I encouraged students to develop their own ideas on the topic (2)					
I encouraged the students to link their own ideas to evidence (3)					
I encouraged the students to develop a position based on the evidence and communicate this (4)					

Q22 Thinking about the four areas covered in the previous section, how would you rank them in terms of importance in your overall approach to teaching? Drag the statements into the order of your choice. 1 is the most important.

_____ Issues linked to the students' previous experiences. (1)
_____ Developing a community among new students. (2)
_____ Information identification and evaluation. (3)
_____ The use of information in an academic context. (4)

Q23 Course assessment

Q24 Did you assess year 1 (level 4) module assignments in 2016/17?
Yes (1)
No (2)

Skip To: Q25 If Did you assess year 1 (level 4) module assignments in 2016/17? = Yes
Skip To: Q34 If Did you assess year 1 (level 4) module assignments in 2016/17? = No

Q25 Did you design the assessments you carried out in level 4 (year 1) modules in 2016/17?
I designed all myself (1)
All were designed by others (2)
I designed some and others designed some (3)

Skip To: Q26 If Did you design the assessments you carried out in level 4 (year 1) modules in 2016/17? = I designed all myself
Skip To: Q27 If Did you design the assessments you carried out in level 4 (year 1) modules in 2016/17? = All were designed by others
Skip To: Q26 If Did you design the assessments you carried out in level 4 (year 1) modules in 2016/17? = I designed some and others designed some

Q26 Thinking about the assessment methods for those you designed for level 4 (year 1) modules in 2016/17, please tick all of these which applied (you may have used different methods in the same or in different modules).
Students had to follow one, predetermined assessment method. e.g. an essay or a presentation (1)
Students had to follow multiple, predetermined assessment methods. e.g. an essay and a presentation (2)
Assessment methods were predetermined but students could request adjustments if necessary (3)
Students were given a choice of assessment method, e.g. their choice of an essay or a presentation (4)
Students were given a free choice of assessment method (5)
The assessment method was outside my control, e.g. requirement of professional body (6)

Q27 Thinking about the assessment methods for those designed by someone else for level 4 (year 1) modules in 2016/17, please tick all of these which applied (you may have used different methods in the same or in different modules). **Please leave this blank if you did not deliver assessments designed by someone else.**
Students had to follow one, predetermined assessment method. e.g. an essay or a presentation (1)
Students had to follow multiple, predetermined assessment methods. e.g. an essay and a presentation (2)
Assessment methods were predetermined but students could request adjustments if necessary (3)

Students were given a choice of assessment method, e.g. their choice of an essay or a presentation (4)
Students were given a free choice of assessment method (5)
The assessment method was outside my control, e.g. requirement of professional body (6)

Q28 Thinking about the topics assessed in level 4 (year 1) modules in 2016/17, please tick all of these which applied (you may have used different methods in the same or in different modules)
The students had no choice in the assessment topic - the questions were set (1)
The students could choose a topic/question from a selection given to them (2)
The students had free reign in their choice of topic, linked to the content of the module (3)

Q29 When assessing modules in level 4 (year 1) modules in 2016/17, how important were the following criteria?

	Strongly agree (1)	Agree (2)	Neither agree nor disagree (3)	Disagree (4)	Strongly disagree (5)
It was important that students included a minimum number of 'academic' sources (and this was expressed in the marking criteria) (1)					
It was important that, students used 'recent' sources, as defined by the module team (e.g. up to 10 years old only) (2)					
It was important that a single source appropriate to the					

argument being made was cited and referenced (3)

It was important that multiple sources appropriate to the argument being made were cited and referenced (4)

Q30 Working with others

Q31 Did you design, or help in the design, of any of the level 4 (year 1) modules which you taught in 2016/17?
Yes (1)
No (2)

Skip To: Q32 If Did you design, or help in the design, of any of the level 4 (year 1) modules which you taught in... = Yes
Skip To: Q33 If Did you design, or help in the design, of any of the level 4 (year 1) modules which you taught in... = No

Q32 In designing the learning outcomes of the modules you taught, with whom did you collaborate? Tick all that apply.
Other academics from my school (1)
Other academics from different schools (2)
Librarians (3)
Student Services (e.g. writing development) (4)
Digital training (5)
Technology Enhanced Learning (6)
Professionals from linked careers (7)
Others (please state) (8)
_____
No-one else (9)

Q33 In helping students to achieve the learning outcomes of the modules you taught/contributed to, who else helped in the delivery (i.e. teaching) of the module? Tick all that apply.
Other academics from the school to which the module belonged (1)
Other academics from different schools (2)
Librarians (3)
Student Services (e.g. writing development) (4)
Digital training (5)
Technology Enhanced Learning (6)
Professionals from linked careers (7)
Others (please state) (8)
_____
No-one else (9)

Q34 Finally, an online platform for sharing ideas about linking resource use and evaluation to the curriculum is being developed for staff, with a focus on level 4 (year 1) in the first instance. Would you be interested in obtaining more details about this?
Yes (1)
No (2)

Skip To: Q35 If Finally, an online platform for sharing ideas about linking resource use and evaluation to the cu... = Yes
Skip To: Q37 If Finally, an online platform for sharing ideas about linking resource use and evaluation to the cu... = No

Q35 How important to you would it be for the platform to offer the following?

	Very important (1)	Important (2)	Slightly important (3)	Not at all important (4)
Online discussion boards (1)				
Example lesson plans (2)				
Case studies from YSJ (3)				
Case studies from other universities (4)				
The student view (5)				
Associated opportunities for face to face discussions/meetings (6)				

Q36 Thank you for expressing interest in the online platform. Please leave your email address to receive more details. Your personal details will be kept separate to your answers to these questions and not linked in any way.

Q37 Thank you for taking part in this survey. Please click on the arrow button below to submit your answers.

6.9 Ethics form given to interviewees

Research Information Sheet

Title of the study

An investigation into communities of practice in information literacy at York St John University.

Background to the research

My doctoral research investigates the model of communities of practice (Wenger, 1998) in relation to the embedding of information literacy in Higher Education programmes. I am testing the assertion that, by identifying learning communities of professionals in higher education (including academics, librarians and other support staff) that are concerned with the finding, use, understanding, evaluation of, and managing of information, a sustainable model of embedding this in the curriculum could be initiated via staff development opportunities for community interaction. It is proposed that a case study of York St John University will provide outcomes that will not only benefit the institution, but also provide evidence to help inform those in similar situations in other settings.

Focus of the enquiry

Objectives.

1. To explore the terminology, meanings and values assigned to information literacy (IL) in different academic subject areas in year 1 (level 4) of undergraduate programmes at York St John University (YSJ).
2. To establish whether there is already evidence of the emerging forms of IL (social construction of IL and critical IL) in the practice of academics at York St John University, or if the foundations for their growth can be established.
3. To examine how academics experience and evaluate IL in their teaching practices and to ascertain whether there is common ground in IL provision already embedded in the curriculum in these programmes. i.e. the basis for a community of practice.
4. To implement and evaluate a platform for information literacy dialogue amongst staff at YSJ,
    a. to promote the evolution of collaborative IL provision in line with emerging theories,
    b. to improve the researcher's own practice.
5. Potentially inform the practice of other librarians in relation to
    a. the promotion of the idea of a community of practice/community learning as a potential approach to information literacy issues in the academic sector and others,
    b. a collaborative approach (between librarians and academics) to the development of students' IL via curriculum development in the academic sector, with the academic librarian as an active participant in the process,
    c. encouraging a sustainable approach to IL via community learning, using open access platforms to facilitate this.

An action research methodology, employing mixed methods, will be used in achieving these objectives.

What is required from me in taking part?

I will be using evidence from interviews, surveys and meetings with members of staff at York St John University. The data collected from the interviews will inform the content of the survey, and the survey will inform the community of practice.

You may withdraw your participation in this study at any stage by informing me, without giving reason.

Will my taking part in the study be kept confidential?

No personal details will be revealed about any individuals in this study. The only information revealed about any participant will be the academic school to which they belong at York St John University, to allow statistical analysis and comparisons. The specific learning outcomes of some modules may also be referred to in interview analysis. Ethics approval has been obtained at both the institution providing the doctoral programme (Robert Gordon University) and at the institution at which the research will take place (York St John University), and data collected will be stored in accordance with their research data management policies.

What will happen to the results of the research study?

Data will be used in the first instance for a doctoral award (Professional Doctorate in Information Science) and will also be used in conference papers, journal articles, or other appropriate research outputs, resulting from the study.

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