Investigation into the level of involvement of subject librarians with VLEs (Virtual Learning Environments) in Irish Universities

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Abstract

Educational institutions use Virtual Learning Environments (VLEs) as content delivery platforms that connect students, academics and administration together. In this context, library participation in VLEs can increase visibility and use of library resources, improve collaboration with the faculty and enhance information literacy instruction delivery.

Moreover, subject librarians can utilise VLEs to collaborate with academics, link course materials to relevant library resources and provide course-specific support. Regardless of potential benefits of librarians’ participation in VLEs, little is known of their involvement in VLEs.

The research problem is the lack of deeper knowledge of influencing factors that may affect subject librarian’s use VLEs.

The purpose of this study is to identify trends of subject librarians’ use of VLEs and constitute a contribution to a better understanding of influencing factors and challenges experienced by subject librarians in relation to their use of online tools and involvement in VLEs to deliver course-specific support.

The research was conducted by adopting a mixed method approach: five interviews and a survey were conducted in order to obtain both qualitative and quantitative data. The results of both data analyses were compared and contrasted.

The key findings of the study suggest that subject librarians have very little or no interaction with VLEs. In addition, individual relation that subject librarians have with academics plays a significant role in their use of VLEs. Also, a lack of communication, low staff numbers, size of the institution and the issue feasibility of direct involvement in VLE are important influencing factors of subject librarians’ involvement with VLEs.

This research partly fills the gap in the literature in Irish context by presenting and discussing the level of involvement of subject librarians with institution’s VLE.

This research provides a snapshot of the current situation and practices that can be compared to other contexts or, alternatively, any changes of this situation can be examined if similar studies will be conducted in the future.
Chapter 1: Introduction

1.1 Background and context

With the rise of modern technologies and digital content, it is difficult to imagine any educational institution that would not use some platform to organise and deliver its course materials, engage with its users and provide support for its students.

Therefore, virtual learning environments (VLEs) (e.g. Blackboard, Moodle) in educational institutions provide means for course material delivery, various assessments, recording of grades, and student-tutor interaction.

As VLEs are the core digital space connecting students, academics and administration together, the importance for academic libraries to maintain their presence there is discussed throughout the literature. The key benefits include: increased visibility and use of library resources, improved collaboration with the faculty, and enhanced information literacy instruction delivery (Leeder and Lonn, 2013, p.1). However, initial research and literature review suggest that libraries do not usually have direct presence in VLEs. In addition, there are numerous case studies that present single projects aimed to increase library presence in VLEs. These case studies generally show that such initiatives require a lot of collaboration and effort to overcome various challenges to achieve successful integration of library resources into VLEs in order to better address students’ needs and provide support at their “point of need”.

Moreover, subject librarians are in the position to provide support by one-on-one instruction, by devising subject guides that can be used by wider audiences and integrated into course materials and, also, by collaborating with academics to better link course materials and course-specific resources. The latter can be achieved by utilising VLEs as a platform to deliver course-specific support and promote related resources. Throughout the literature, outreach and collaboration are emphasised as the key attributes of the role of a subject librarian. Therefore, as VLEs serve as a platform that brings students, academics and administration together, the question arises if subject librarians have a role in this context.
In addition, despite of widely discussed potential benefits of librarians’ presence in VLEs and integration of library resources into VLEs at module or course level, the literature shows that such practices vary greatly across and within institutions and are subject to different influencing factors. Moreover, the main body of literature presents implemented initiatives and studies conducted in the United States of America. As a contrast, the number of such studies in the Irish context is low. Therefore, while literature provides a theoretical background for my research area, little is known about the situation and practices in Ireland.

As a result, my research problem is the lack of deeper knowledge of influencing factors that may affect subject librarian’s engagement with and use of VLEs.

1.2 Statement of purpose

My research purpose is to identify trends of subject librarians’ use of VLEs and to contribute to a better understanding of influencing factors and challenges experienced by subject librarians in relation to their use of online tools and involvement in VLEs to deliver course-specific support.

This dissertation aims to explore the underlying aspects that may influence subject librarians’ use of VLEs or attitudes towards library integration into VLEs.

Taking into consideration the role and the functions of subject librarians, I defined several areas of interest:

I. The extent to which subject librarians’ use VLEs.
II. Individual experiences and attitudes towards library integration into VLEs.
III. Factors influencing subject librarians’ use of VLEs.
IV. Subject guides and their visibility in VLEs.
V. The concept of embedded librarians in the context of VLEs.

1.3 Thesis structure

My thesis consists of the following chapters.

Chapter 1 is an introduction into my study. It provides background and context of my research problem. In Chapter 2, my literature review, I will discuss literature relevant to my
research. The aim of this literature review is to better define my research questions and locate my study within the body of related studies. In addition, I will discuss literature related to the Irish context of my research question and will address the gaps that my research will attempt to fill. In Chapter 3 I will define the aim of my study and will list the research questions I will answer towards the end of my thesis.

Chapter 4 presents the methodology of my research. I will discuss the philosophy that is underpinning my research. Also, I will detail my research approach, strategy and choice. I will then present the process of my data analysis, my research limitations and ethical considerations related to this study.

In Chapter 5 I will present the findings and analysis of both qualitative and quantitative data.

Chapter 6 will present discussion and implications of my findings. I will address each of my research questions by linking discussion to the data findings. In addition, in this chapter I will discuss how my research findings compare or contrast to the exiting literature and other research in the field of study.

In Chapter 7 conclusions and recommendations will be presented. I will draw general conclusions, present key implications of my study and significance of this research. Furthermore, I will present recommended approach to address the research problem and identify directions for further research.

The following chapter will present relevant literature that provides context for my research.
Chapter 2: Literature review

2.1 Introduction

In order to better locate my research among other studies in the subject area and to justify the directions the study will take, it is essential to review relevant literature that underpins the research topic. It will also allow to further refine my research questions.

The following section presents a review of key literature related to library-VLEs relations and subject librarians’ role in this context.

2.2 VLE and academic libraries

Virtual Learning Environment (VLE) can be defined as “online teaching-learning-evaluation domains that permit synchronous and collaborative interaction among teachers and students, while also providing asynchronous learning resources for individual use by students at any time” (Das, 2014, p.41).

Gibbons (2005b, p.7) presents a range of alternative names for VLEs that are used interchangeably:

- Course-management software packages (CMSP);
- Learning-management systems (LMS);
- Course-management software (CMS);
- E-Courseware;
- E-Learning courseware;
- Managed learning environment (MLE).

In general, the virtual learning environment (VLE), as expressed by Corrall and Keates (2011, p. 29-30), can be defined in two ways: “a way of organising online information and learning resources by subject” and, from a perspective of the library, “a medium for delivering crucial information skills and information literacy tutorials developed for library users”. This two-folded definition describes the complicated nature of numerous discussions that dominate the literature, i.e. the relation and integration of library resources into the VLE.
To begin with, Shank and Dewald (2003, p.38) defined macro and micro levels or approaches that describe how library resources are integrated into the VLE. Macro level relates to generic guides and tutorials or messages that reach broad audience while micro level entails personalised, course-related materials and guides that are delivered to selected modules, i.e. determined by the area of subject or type of study (ibid.). This concept of varying level of library involvement with VLEs is echoed in a number of relatively recent studies (Lawrence, 2006; Black, 2008; Black and Blankenship, 2010). Moreover, this concept is defined further by Mason (2009, p. 219) where, alternatively to macro/macro approach, four levels of library integration are defined:

- Institution - library homepage;
- Subject - library subject homepage and new resources;
- Course/module - resource/reading list;
- Individual – “My Library Account” section.

In addition, Buehler (2004, p.75) expressed that library resources are not perceived as integral part of course management systems. Though somewhat dated, this statement still seems to be relevant in the age of virtual environments and digital content, which is proven by continuous discussions throughout the literature about the importance of achieving seamless connection between library and course materials (Lawrence, 2006; Black, 2008; Daly, 2010; Jeffryes et al., 2011; Hristova, 2013; Leeder and Lonn, 2013). Moreover, literature suggests that the key aims of library-VLE integration are:

- Providing “just in time” support, i.e. students find useful links at their course pages within the VLE (Leeder and Lonn, 2013, p.12);
- Potential of changing general perceptions of the library by enhancing learning experience (Norton and Castaldo, 2010, p. 1036);
- Promoting library resources by placing library links in the visible sections of the VLE (Bowen, 2012, p.449; Shapiro, 2012 p.10).

Alongside with benefits, some issues and influencing factors of library-VLE relation are being considered and discussed throughout some comparatively recent studies.

Firstly, technical, organizational and cultural barriers were identified and discussed in several studies (Gibbons, 2005a; Black, 2008; Blackburn and Walker, 2010). To be more
precise, literature suggest that IT skills, organizational structure and overall habits and culture of various organisations play an important role in initiating change or adapting to changing environments.

Secondly, feasibility and scalability of small-scale initiatives of integrating library resources into deeper levels of VLE is a common underlying issue (Daly, 2010; Jeffryes et al., 2011). For example, linking course- or subject-specific resources to individual course pages in VLEs might be very successful across a small number of modules, yet it can be difficult to implement such a project across a large number of courses.

Overall, the key factors and challenges impacting library-VLE relations are being identified using individual case studies that mainly focus on a single educational institution initiatives and experience.

In addition, such initiatives are mostly presented in the context of the United States of America (Black, 2008; Chesnut et al., 2009; Solis and Hampton, 2009; Kellam et al., 2009; Judd and Montgomery, 2009; Daly, 2010; Norton and Castaldo, 2010; Blackburn and Walker, 2010; Jeffryes et al., 2011; Hristova, 2013; Leeder and Lonn, 2013). In comparison, examples and studies from Ireland or the UK are scarce (Quinlan and Hegarty, 2006; Masson, 2009; Corrall and Keates, 2011; Cooke et al., 2011). Thus, I seek to find out if similar strategies are being implemented or considered in the Irish context, and to explore the attitudes, challenges or obstacles of library resources integration into the VLEs.

2.3 Embedded librarian

‘Embedded librarianship’ is a popular term that presents best practice concept of academic library in terms of outreach, collaboration, and meeting users’ needs. In general, this term entails much more than just librarian’s online presence. Shumaker and Talley (2009, p.9) provide a rich and comprehensive definition of the term. According to them, embedded librarianship encompasses:

(...) focusing on the needs of one or more specific groups, building relationships with these groups, developing a deep understanding of their work, and providing information services that are highly customised and targeted to their greatest needs. In effect, it involves shifting the basis of library services from the
traditional, transactional, question-and-answer model of reference services to one in which there is high trust, close collaboration, and shared responsibility for outcomes.

Relating to this definition, Kesselman and Watstein (2009, p. 383) explore the concept of embedded librarian in several aspects:

- Participation in research teams;
- Collaboration with faculty;
- Integration into virtual collaborations;
- Course-integrated instruction.

The latter, as noted by the authors, is highly influenced by course instructor’s initiative to collaborate and direct students to seek advice from the librarian. Lastly, it is noted that course management systems (e.g. Moodle, Blackboard, etc.) can serve as a medium for librarians to integrate throughout the entire course and provide customised support and reference services (ibid. p. 388).

As we can see, librarian’s involvement with VLEs is perceived as just one way to provide embedded services. However, a wide adoption of VLEs across educational institutions provides a virtual space that can be used to reach various audiences and provide customised support. In other words, as Leeder and Lonn (2013, p.12) expressed, embedded librarian is involved in VLEs, collaborating with academics and provides support at ‘point of need’, i.e. students find course-related guides and convenient access to library resources and services in VLE.

In this context, Daly (2010) explored the concept of embedded librarianship and, as an example, used a single-institution initiative as an example to establish a more embedded role of the librarian within the VLE that the institution has chosen to adopt. The first step towards integration into VLEs was stated to be access provision for the librarian to individual course pages in the VLE to add links to library resources within the course-specific sites. In addition, provision of course-specific Library Guides was considered another important step towards a more embedded librarian’s role in the university (ibid.).
This approach is supported by Blackburn and Walker (2010) who emphasised the role of subject librarians that extend the concept of embedded librarianship further by creating subject guides that enhance course-specific support.

In the following section I will focus on literature that explored subject librarian’s involvement and use of VLEs.

2.4 Subject librarians and VLEs

Due to varying nature and functions within the institutions, the term ‘subject librarian’ is used interchangeably with ‘liaison librarian’, ‘subject liaison’ or ‘subject specialist librarian’ throughout the literature. Although the definition of the role of a subject librarian and the title itself varies greatly, traditional functions can be summarised as ‘Holy Trinity’ – reference, instruction, and collection development (Whatley, 2009, p. 30). Also, more recent literature discusses outreach activities and faculty relationship building as the key roles of subject librarians (Thompson, 2009; Malenfant, 2010; Shen, 2012; Wilson, 2013).

It is worth taking into consideration that these duties are greatly influenced by changes in technology and digital environments, therefore the literature discusses the use of online tools and integration into VLEs as some of the strategies for reaching wide audiences and promoting library resources (De Jager-Loftus, 2009; Whatley, 2009). In this ‘Google age’, subject librarians are providing course-specific support and resources, hence, as described by Solis and Hampton (2009, p. 89), this can be viewed as “an attempt to make the library’s world of information small enough and relevant enough that students will be better able to discern how to use the vast resources available to them”.

Also, in the literature the subject librarian’s use of and involvement in VLEs is discussed as an important factor for successful outreach. To be more precise, in comparison to generic tutorials, course-related support material and subject guides receive more attention, increased use and have the potential to encourage students to use library resources instead of consulting information sources on the Internet (Bowen, 2012, p.449; Essinger and Ke, 2013, p.55).

In general, numerous studies investigated the importance and effects of subject-specific guides and use of online platforms, in-house built, open-source or commercial (e.g.
LibGuides), for their development and distribution (Judd and Montgomery, 2009; Blackburn and Walker, 2010; Daly, 2010; Tawatao et al., 2010; Hristova, 2013). The key findings suggest that although these tools extend the concept of embedded librarianship, their use and integration into VLEs at course level varies from institution to institution and is influenced by multiple factors (Black, 2008; Daly, 2010).

The cornerstone piece of literature is Corrall and Keates’ (2011) investigation of subject librarians’ involvement in VLEs. Their large-scale survey involving seven UK universities aimed to explore the effects of VLEs on the role of subject librarian and to determine influencing factors of their use of VLEs. Their research findings confirm what is echoed throughout a number of small-scale studies within individual institutions: subject librarians’ use of VLEs varies among different institutions and is influenced by the type of subject, attitudes towards technology, and cooperation with the academic staff (ibid. p.29).

Also, Corrall and Keates (2011) shed some light on further directions for future research and emphasise the need for deeper insights into subject librarians’ use of VLEs and influencing factors. While it is difficult to identify broad trends as organisations vary by their size, budgets, culture, and use of technology, my research aims to contribute to the body of knowledge by investigating several Irish universities and analysing individual perceptions and experiences of subject librarians in relation to the use of VLEs.

To sum up, although large-scale investigations into subject librarians’ involvement in VLEs are scarce, numerous case studies and small-scale research suggest the following implications:

I. Library presence and integration into VLEs is an important part of embedded library services;

II. Activities and involvement of a subject librarian are influenced by cultural, organisational and technological factors that vary from institution to institution;

III. The key reoccurring indicators of subject librarians’ involvement with VLEs are: access of course sites, collaboration with course instructors, and creation and use of library subject guides.

Primarily, observations about subject librarian’s use of online space and tools are based on small-scale surveys and case studies covering one institution at a time, mainly in the United
States of America. Therefore, in my research I aim to reduce the gap in the literature by exploring the situation in Irish context. To be more precise, while the main body of literature explores single institution initiatives, i.e. mainly case studies, my study aims to determine broader trends by investigating the situation across several universities.

Lastly, regardless of numerous discussions in the literature about the effects and the potential of VLEs for better integration and outreach for subject librarians, little has been written about their perspectives on such involvement and participation, especially in the light of their other duties and responsibilities. For that reason, my aim is to investigate what factors are effecting subject librarians’ participation in VLEs and whether VLEs are perceived as having potential to effectively enhance subject librarians’ services.

In order to justify and better locate my research within the existing literature, I need to consider the body of research that was conducted at a national level. The following chapter will explore research and initiatives in the Irish context.

### 2.5 Irish context

The most recent large-scale Irish study on the use of VLEs in Irish higher education dates to 2011. However, the data collected for this study presented the situation in higher education institutions in years 2008/2009 (Cosgrave et al., 2011). The study showed a wide adoption of VLEs in Irish universities since 2005. This Irish institutional VLE survey explored students’ perceptions and the use of VLEs for teaching and learning and concluded that VLEs are perceived as an important platform for students, though its use among students was influenced by the extent of course instructors’ activity in VLEs. Also, while the authors suggest that embedding library resources into VLEs can be perceived as an important step in fulfilling library teaching and outreach goals, they also note that the extent to which those resources are actually utilised is worth further exploration (ibid. p.11). As no comprehensive research providing such data was found, it cannot be assumed that embedding library links and resources into VLEs undoubtedly maximises their use and effectiveness.

In a library context, Irish studies mainly discuss VLEs as a medium for delivering information literacy tutorials and instruction. For example, Russell (2008) investigated the ways information literacy instruction can be brought to distance education students and
reported that Irish academic librarians were not utilising the potential that VLEs can offer (only 19% of respondents indicated that a VLE is used for IL training).

Also, McGuiness’ (2009, p.273) large scale investigation into the practices of information skills training (IST) in Irish higher education institutions showed that online tutorials were one of the least favoured methods of delivering IST.

At the same time, taking into consideration advancements in technology and eLearning, it can be assumed that the situation has been changing since 2008 as there is evidence that educational institutions are trying to minimise VLE and library marginalisation, i.e. library eLearning strategies are being realised by individual institutions and, in this way, awareness of library services and resources is being raised.

Despite the fact that no large-scale studies supporting this claim were found, single institution case studies show that VLEs and eLearning technologies are changing the ways IST can be delivered. The examples here can be an initiative of the library to use VLEs for information literacy instruction (Ward, 2010) or an initiative to create instructional videos and tutorials on how to use library resources and provide a guide for academics with step-by-step instructions on how to add videos and tutorials to any module in the VLE (UCD, 2012).

While Irish literature discusses information literacy instruction and its integration into eLearning platforms to reach wider audiences, literature and examples from abroad stress the importance of course-specific support, e.g. customised tutorials, guides and general support. With regard to this particular aspect of library presence in VLEs, no Irish studies were found that would examine the extent of such initiatives.

Furthermore, as course-specific support can be provided by subject librarians, there were no studies found that would examine the extent of their participation in VLEs.

I can conclude that there is a gap in literature exploring the librarian-VLE relation, and, in particular, subject librarians’ participation and role in VLEs in Ireland.

As no comprehensive studies were found in the Irish context, my study aims to address this gap and investigate the situation in several Irish universities and to explore the extent of subject librarians’ involvement and perceived challenges and opportunities in VLEs.
2.6 Conclusion

The literature review provided an important insight into the area of the library-VLE relation and subject librarians’ role in this context. I identified the gap in the literature and discussed the situation in the Irish context. Also, my literature review allowed and facilitated the identification of the key areas of interest and development of my research questions.

In the following chapters I will present my research questions and the outline of the methodology of this study.
Chapter 3: Research questions

The aim of my research is to determine and examine the level of involvement of subject librarians in VLEs and investigate their perspectives and factors influencing their use of VLEs.

The literature review part of this research both informed my decision of the areas of investigation for this research and aided further definition of my research questions. As a result, I devised the following research questions:

1. What is the extent of subject librarians’ use of VLEs?
2. What challenges are subject librarians facing in using VLEs?
3. What are subject librarians’ attitudes towards library participation in VLEs?
4. What are the tendencies of subject guides creation and promotion in VLEs?
5. Are VLEs supporting the concept of embedded librarian?

It is important to adopt appropriate research methodology in order to address these questions in the most effective way. In the following chapter I will discuss my methodology chosen to best answer research questions and fulfil the aims of the study.
Chapter 4: Methodology

4.1 Introduction

Research methodology is a “theoretical perspective” of the research (Pickard, 2013, p. xvii). In this chapter I will present my research philosophy, approach, strategy and choice. Then, I will detail the process of data collection and analysis. Lastly, I will discuss ethical considerations, research significance, and limitations of the method that was adopted for this study.

In short, my research is influenced by the pragmatism school. I use a combination of deductive and inductive approaches for collection of quantitative and qualitative data in order to gain deeper insights into individual subject librarians’ perspectives. In order to visualise different aspects of research methodology, they can be presented as a research “onion” (Figure 1). In this scheme, each layer represents a different aspect of the methodology of a research project, from the broadest concepts (e.g. research philosophy)

Figure 1. Research "onion" (Saunders et al., 2009, p.108)
to the more practical aspects of the study, for example, the duration of the research or how data will be collected and analysed.

Relating to Figure 1, in the following sections I will present rationale and different aspects of chosen methodology I have carefully chosen for my research.

**4.1 Research philosophy**

Research philosophy highly depends on the questions the researcher seeks to answer and on the view of the world of the researcher himself/herself (Saunders et al. 2009, p.109). I need to consider two research philosophy paradigms here: epistemology and ontology.

The first paradigm, epistemology, is concerned with the question of “what is the nature of the relationship between the knower and the known?” (Lincoln and Guba; cited in Pickard, 2013, p.6). There are four main epistemological considerations - positivism, realism, interpretivism, and pragmatism (Figure 1). My research is highly influenced by the latter as pragmatism supports the idea that, in some cases, choosing one of the opposing philosophies (i.e. positivism or interpretivism) is not attainable in practice and, in order to answer various research questions, different types of data may be needed to obtain (Saunders et al., 2009, p.109). In addition, pragmatism complements the nature of my research enquiry allowing flexible research design by combining both qualitative and quantitative data and “dominance of one or the other” (Pickard, 2013, p.11).

The second paradigm, ontology, is concerned with the question of “what is the nature of reality?” (Lincoln and Guba; cited in Pickard, 2013, p.6). Critical realism is an ontological perspective that supports general ethos of my research - it recognises the importance of multi-level study (Saunders et al, 2009, p.115). Moreover, while critical realism supports a scientific approach and the existence of ‘objective social facts’, it does not eliminate social conditioning of human factor from the process of construction of knowledge (Pickard, 2013, p.10). The nature of my research involves investigation of both personal views and collecting data by strictly defined multiple choice questionnaire. Thus, critical realism underpins my chosen research strategy.
4.2 Research approach

There are two types of research approach: inductive and deductive. The former is concerned with generation of theory at the end of data analysis. In comparison, the latter, deductive approach, involves a research strategy that aims to test theoretical proposition or hypothesis (Saunders et al. 2009, p.590). In this research, I adopted various aspects of both approaches.

To start with, in my study I seek to identify and explore personal opinions and underlying factors that contribute to my research problem. In order to achieve this, I had to consider new emerging themes and insights. Therefore, I adopted inductive approach during the process of qualitative data collection. That is, to gain a deeper insight into the participant’s views and allow new themes to emerge, I devised broad open-ended questions.

I also adopted elements of deductive approach in some aspects of my data collection:

I. Closed-ended questions of the survey allowed to collect data that would provide answers to enquiry into clearly defined areas of interest;

II. During the interviews some pre-defined categories of questions were maintained in order collect relevant data to my research aims.

4.3 Research strategy

Based on my research questions, both interviewing and a descriptive survey were chosen as the most appropriate strategies.

First, I decided to conduct semi-structured interviews as this method of data collection can provide a good insight into personal views and experiences of the participants. Also, open-ended questions of the interviews allowed the participants to provide rich information that was used to answer my research questions.

Second, a questionnaire as a data collection technique was used to help answer my research questions and identify patterns of subject librarians’ use of VLEs. Survey questions were designed after having conducted the literature review and having identified the key areas of enquiry. Also, several open-ended questions in the survey were used as a means
for collecting additional qualitative data to complement information obtained during the interviews.

To sum up, conducting interviews allowed me to collect rich qualitative data whereas the survey was used to establish broader trends and give a better overview of the area of inquiry.

**4.4 Research choice**

Considering my research philosophy, approach and strategy, I can conclude that my study is a mixed-method research, i.e. I use both quantitative and qualitative data to achieve the aims of the study and answer my research questions.

The rationale behind combining qualitative and quantitative methods is that a qualitative inquiry provided a deeper insight into the research problem, individual experiences and attitudes while quantitative data was compared to interview findings and showed the situation in a broader context.

Overall, both types of data were used to answer research questions in the most appropriate way – in addition to individual perceptions, broader trends were identified and compared to qualitative data findings.

Lastly, I am aware that mixing quantitative and qualitative methods might be considered not “scientific enough” where, as stated by Pickard (2013, p.10), “the failings of one are compensated by the other”. Regardless, such research method allowed me to achieve better understanding of the researched area, provided more meaningful answers to the research questions, and allowed greater confidence in drawing final conclusions.

**4.5 Time horizons**

Saunders et al. (2009, p.108) identified longitudinal and cross-sectional research designs in relation to time horizons. In my research project I applied the latter for the following reasons. My research project aims to investigate the attitudes and experiences of subject librarians in several Irish universities in this particular time. That is, I am providing a snapshot of the current situation. Also, I adopted a cross-sectional design due to time
4.6 Data collection and analysis

4.6.1. Questionnaire

Having conducted the literature review, I devised a survey based on the gaps in the literature and the key areas that were identified as valuable for further exploration.

The survey primarily aimed to provide insight into the “trends and patterns within the sample group that can be generalised to the defined population of the study” (Pickard, 2013, p.112).

The questionnaire consisted of ten close-ended questions and three open-ended questions that allowed me to collect additional qualitative data from the participants. Survey questions are provided in Appendix 1.

The questionnaire was designed using Survey Gizmo online survey software. I chose this particular platform over other popular survey platforms due to its flexibility (a variety of question designs and questionnaire themes) and a user-friendly interface (easy set-up, quick distribution procedures, and easy response tracking).

Furthermore, together with the link to the survey, I provided necessary information for the participants explaining the purpose of the research and ensuring anonymity and confidentiality of their responses. An email invitation to take the survey is supplied in Appendix 2.

The survey was active online for three weeks. Additionally, we have sent a friendly reminder to take the survey at the beginning of each week for the participants who were not able to take the survey immediately.
4.6.2 Semi-structured interviews

In addition to the survey, I conducted five semi-structured interviews in three different Irish universities. This technique allowed me to gain deeper understanding and a good insight into the attitudes and perceptions of the participants. Similar to the survey, my interview questions were informed by the literature review and based on the areas identified for further exploration.

All potential participants were approached by e-mail inviting them to participate in a research interview. All necessary information detailing the purpose of the research was supplied together with the initial invitation. Having received confirmation of participation, interview questions were sent several days prior to the interviews.

Each participant received the following list of interview questions:

1. Do you use a VLE (Blackboard, Moodle, etc.) of your institution? How often?
2. What features are you using most? Why?
3. What factors are likely to influence (positively or negatively) your use of a VLE?
4. Are academics collaborating in relation to embedding library resources in course sites in a VLE? If yes, how often?
5. What platform are you using for creation of subject guides?
6. How satisfied are you with the platform used to create your subject guides? Are your subject guides promoted in the VLE? If yes, how?
7. Are you familiar with the concept of embedded librarian? In your opinion, what are the key aspects of embedded librarianship?
8. In your opinion, are VLEs supporting this concept? If no, why? If yes, in what ways?

Pre-set interview questions allowed me to collect information related to my research questions. Besides, during the interviews, the participants were encouraged to expand further on replies showing higher significance. All interviews were audio recorded and transcribed.
4.6.3 Data analysis

4.6.3.1 Quantitative data

After having closed the survey, I exported all data into a Microsoft Excel document. Due to low response rate, I was able to analyse data using Microsoft Excel. I could save time in data analysis, ensure accuracy, and obtain a comprehensive view and graphical representation of data.

4.6.3.2 Qualitative data

Qualitative data obtained during the interviews was coded in order to conduct a thematic analysis that included identified themes and patterns. As defined by Saunders et al. (2009, p.509), coding of data needs to undergo open, axial, and selective processes:

- Open coding: marking all data and defining categories;
- Axial coding: linking emerged categories, organising them into a hierarchical scheme;
- Selective coding: developing principal categories and themes, and identifying relationships between them.

In practice, I implemented this technique by taking several steps the goal of which was to provide me with a better grasp of the relations and patterns in large amount of qualitative data. My data analysis process consisted of the following stages:

**Step 1.** Having transcribed all five interviews, I printed them out and carefully read them multiple times first.

**Step 2.** As I was reading the transcripts, I filtered out those pieces of data that had no relevance to my research. This procedure allowed me to reduce the amount of data and better distinguish pieces of data of higher significance.

**Step 3.** I noted emerging themes above the related quotes in the transcripts.

**Step 4.** I developed a list of themes and topics that I identified in the transcripts.
Step 5. I grouped reoccurring themes and topics and developed more precise categories for them. For example:

*Academics:*

*Collaboration*

*Use of VLE*

*Attitudes towards technology*

*Etc.*

Step 6. Once the key categories and themes were defined, I compiled a code guide by listing all identified themes and attaching the linking reference number to significant quotes in the transcripts. As all transcripts were coded for the purpose of confidentiality, I was able to create a comprehensive list of references. The transcript codes were devised as follows:

Institution A, participant 1 – A1
Institution A, participant 2 – A2
Institution B, participant 1 – B1
Institution B, participant 2 – A2
Institution C, participant 1 – C1

The following table presents an example of my reference list.

<table>
<thead>
<tr>
<th>THEME</th>
<th>REFERENCE CODE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academics--Collaboration</td>
<td>A1:7; A1:10; A2:4; B1:5; B2:12; C1:4; C1:8; C1:11.</td>
</tr>
<tr>
<td></td>
<td><em>(note: the number added after the colon marks the page number in the transcript)</em></td>
</tr>
<tr>
<td>Academics--Use of VLE</td>
<td>A1:5; A2:8; A2:10; B1:4; B2:10; C1:2; C1:6.</td>
</tr>
</tbody>
</table>

*Table 1. Reference list example for qualitative data coding.*

In addition, similar to Cresswell’s (2009, p.187) recommendation, I retained the list of qualitative data codes for potential further research in the future.
Step 7. Having completed the reference list, I developed a Microsoft Excel document where I listed all identified themes and, using the reference list, navigated through the transcripts and gathered direct quotes that correspond with the themes. In addition, all quotes were grouped by institution and interview participant. Lastly, I added a separate column in the Excel document for significant replies to the open-ended questions in the survey. Table 2 illustrates how this was achieved.

<table>
<thead>
<tr>
<th>Theme</th>
<th>Institution A</th>
<th>Institution B</th>
<th>Institution C</th>
<th>Survey replies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academics--Collaboration</td>
<td>Quote (A1)</td>
<td>Quote (B1)</td>
<td>Quote (C1)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Quote (B2)</td>
<td></td>
</tr>
<tr>
<td>Academics--Use Of VLE</td>
<td>Quote (A2)</td>
<td>Quote (B1)</td>
<td>Quote (C1)</td>
<td>Quote</td>
</tr>
</tbody>
</table>

Table 2. Example of grouping themes and quotes in an Excel document.

Step 8. After having coded and grouped themes and quotes, I printed out the entire Excel document and cut it up into sections according to the themes. In this way, I have constructed a visual system to assist me in analysing my data. This system enabled me to define relative importance of various themes by analysing how well populated various sections of my Excel document were.

Step 9. Lastly, I devised a structure to report my findings. I grouped and numbered sections of obtained data accordingly.

In addition, once qualitative and quantitative data were analysed separately, I used both sets of findings to complement each other. This method of data analysis is referred to as triangulation method, i.e. use of more than one method of data collection to achieve better validity and reliability of study (Saunders et al. 2009, p.146).

4.7 Population and sample

My research population are subject librarians of seven Irish universities. Accordingly, I attempted to survey the whole population. I identified fifty contacts by visiting websites of
each of the seven universities libraries. Invitations to complete the survey were e-mailed by using an e-mail campaign feature of the online survey platform Survey Gizmo.

I used non-probability self-selection sampling technique to collect qualitative data during five semi-structured interviews. Based on guidance provided by Saunders et al. (2009, p. 234), I examined the purpose of collecting qualitative data for my research and used this particular approach to collect data. That is, survey results were used to question/support data obtained from the interviews were no statistical inferences were made.

I identified five subject librarians from five different subject areas in three different institutions that agreed to participate in my interviews.

4.8 Ethical considerations

I am aware of the ethical issues that are distinctive to a mixed methods research, thus particular aspects of both quantitative and qualitative parts of the study have to be considered. In the following sections I will present prevention strategies that I implemented following four main ethical guidelines - informed consent, deception, privacy and confidentiality, and accuracy (Christians, 2011, p.65).

4.8.1 Informed consent

Participants were informed about the nature and methods of the research. In addition, participants had an opportunity to withdraw or not to answer undesired questions. Also, permission was asked to audio record them and use quotes from the interview. Interview information sheet is supplied in Appendix 3.

4.8.2 Deception

I conducted the study free of active deception, which means that participants were not manipulated to obtain data that would not be available otherwise (Punch, 1998; cited in Cristian, 2011, p.65).
4.8.3 Privacy and confidentiality

I assured confidentiality by providing a confidentiality agreement prior to conducting my interviews (Appendix 4). In addition, to ensure anonymity, I assigned codes to all personal and institution names.

4.8.4 Accuracy

As Mehra (2002) states, “what we believe in determines what we want to study”. I am aware that in qualitative part of data collection a certain level of personal bias is inevitable. Thus, as proposed by Gorman and Clayton (1995 p.191), I attempted to maintain ‘person-as-research-instrument’ approach to ensure objectivity during the interviews and data analysis. For example, I refrained from expressing my personal opinion about the topics discussed in the interviews and encouraged interviewees to express their views freely. I ensured data was recorded, transcribed, and reported accurately.

4.9 Research significance

My study constitutes a theoretical contribution to existing knowledge about subject librarians’ use of VLEs. Also, as there were no similar studies conducted regarding the Irish context, it will allow me to identify broader trends, provide a useful insight, and to compare the findings of this research to similar studies conducted abroad.

4.10 Limitations of the method

Every research method has inherent limitations, so it is important to discuss my awareness of certain limiting factors. And, although a mixed-method choice of my research design has a potential to represent a fair view of a current situation of subject librarians’ use of VLEs, both quantitative and qualitative methods have varying limiting aspects that might influence both reliability and validity of my research findings.
To begin with, despite surveying all subject librarians in all seven Irish universities, the response rate had an impact on the level of generalisation I aimed to achieve in my study. Besides, the qualitative part of the research, i.e. five semi-structured interviews, does not serve the purpose to generalise the findings for the whole population as the interviews are
highly contextual. Although they generate new knowledge in the field of study, these interviews present only a snapshot of a broader spectrum of the research problem.

Also, taking into consideration the ontological aspect of my research philosophy - critical realism, I am aware that human factor is always present and, as expressed by Pickard (2013, p.11), prior knowledge influences our perceptions of the findings.

4.11 Conclusion

In this chapter I discussed the methodology of my research and presented rationale for different aspects of it.

To conclude, my methodology choices were primarily informed by my research problem, my aims and questions that were the key indicators of the nature of the strategies to be adopted in order to collect valuable data and achieve meaningful outcomes.

The following chapter therefore will present my research findings and analysis.
Chapter 5: Research findings and analysis

5.1 Introduction

My research aims to:

a) determine and examine the level of involvement of subject librarians in VLEs and,

b) investigate their perspectives and factors influencing their use of VLEs.

In this chapter I will present findings of my data collection. Both qualitative (interviews) and quantitative (survey) data findings will be presented separately and further discussion combining both results will be provided in the Discussion chapter.

It is important to mention that data obtained from open-ended questions in the survey was treated as qualitative data and was analysed together with interview transcripts.

The size of the study and a low response rate of the survey do not permit generalisations about the whole population of my research. However, both interviews and the survey provides a detailed description of the situation in several Irish universities in relation to subject librarians’ experiences with VLEs. In the following sections I will present the findings of the thematic analysis of the interview transcripts and my survey results.

5.2 Qualitative data findings and thematic analysis

In the beginning, in order to ensure anonymity, each interview participant was assigned a code linking him/her to the institution. I interviewed five participants in three different institutions, therefore the codes were assigned as follows:

A1 – participant 1 in Library A,

A2 – participant 2 in Library A,

B1 – participant 1 in Library B,

B2 – participant 2 in Library B,

C1 - the only participant in Library C.

Then, I analysed my qualitative data thematically. The results are presented in the following sections.
5.2.1 Library integration into VLE

The extent of library integration into VLEs was mentioned by all of the interviewees. During the interviews, librarians noted several times that library participation in VLEs is not extensive and, despite the number of various tutorials and guides being created by the libraries, they are not actively incorporated into VLEs. As one interviewee in Library B expressed:

“[…] when it comes to our stuff going into VLE, then there is very little interaction at the moment”.

Also, participants in all three libraries indicated that there were individual modules within the VLEs that contained resources for improving research skills. However, in two of the libraries these resources were managed by the institution and librarians do not have a direct input in their management. All libraries have a number of guides and tutorials that are facilitated within the library website; however, they are not actively integrated into or promoted in VLEs.

Although academics are the main content providers in VLEs (explored in detail in section 5.2.2), in all three libraries it is librarians who are providing guidance and training for embedding library links and resources into the VLE. As a result, all interviewees reported low success rate of the guidance provided:

A1 [talking about instructions how to embed library links into VLEs]: “[…] That has not been successful. […] because it’s a bit of work for staff. […] I guess they wanted kind of convenience.

B2: “[…] anything that requires work for the academics, is really difficult for us. […] We are not being asked, […] people are ignoring that”.

C: “[academics] stick to doing the same kind of stuff on Moodle due to inexperience or lack of knowledge about it”.

These findings suggest that the lack of time and training required to incorporate library resources and links into VLEs, both from academics and librarians’ perspective, are some of the affecting factors of library’s presence in VLEs. Supporting this, librarian B2 expressed:
“I think about the amount of time that someone has got to devote to put stuff into it [VLE]. I do think I have that time. Is it something I can ask library assistant to do? Would they have that time?”

This view suggests that it is unclear who would be responsible for integrating library resources into VLEs. Also, time constraints seem to play an important role in achieving this type of involvement in VLEs.

This brings us to the question of direct involvement of subject librarians in VLEs. My findings are presented in the following section.

5.2.2 Subject Librarians’ use of VLE

My interview and survey findings reveal that subject librarians have limited presence in VLEs and mostly manage resources that are linked to VLEs. Analysis of all five interview transcripts shows that, in all three libraries, librarians have very little involvement with VLEs. To be more precise, common roles associated with VLEs include supporting academics indirectly or setting up a quiz within the VLE for assessing students’ knowledge of plagiarism. In Library C, for example, a quiz feature of a VLE was used by the librarian that had a teaching role in an accredited module. This finding suggests that the role of the librarian as a teacher has an impact on the use of VLEs.

Overall, subject librarians’ access and involvement with VLEs is subject to a number of influencing factors.

In the following section I will present my findings about various aspects of access to VLEs from subject librarians’ perspective.

5.2.2.1 Access to VLEs

First of all, limited access to VLEs was mentioned multiple times during all five interviews:

A1: “[...] we have a very limited view of these things”.

B2: “Obviously it is just read-only access”.

C: “We would provide the presentation, and they [academics] would put it into Moodle. They have administering rights where you would not normally have that.”
In addition, access varies slightly within institutions depending on the relationship the librarian has with the instructor of the particular module. All five librarians identified academics as the ones who would provide access to the modules in VLEs.

Interestingly, Library A has access to all of the courses in its VLE, although the purpose of this access is not for the librarians to provide direct input, but rather the opposite – to extract information for harvesting reading lists using course content within the VLE. Nonetheless, as expressed by the librarian in Library B, this approach is very time-consuming:

“Someone, some poor soul has to go literary every single module, and every single thing in that module to see if there is anything useful. [...] Probably you can draw your own conclusions, whether it is worth while doing again [shakes his head]”.

Similarly, Librarian B2 expressed that getting access to the VLE courses, even if it is only for the purpose of building reading lists, was a lengthy process:

“He [reading services librarian] fought long and hard to get generic log-ins to Blackboard, so that we could see what is actually on Blackboard”.

This non-traditional interaction with VLEs reveals the gap in effective librarian-academic collaboration at a broader level, i.e. accessing the VLE is perceived as a solution, though very time-consuming, to the lack of direct communication with academics. This aspect is explored in greater detail in section 5.2.2.2.

Other examples of non-traditional use of VLEs include using VLEs in the past as an internal network or repository among librarians for sharing digital content (presentations, guides, etc.), or actively using VLE if the librarian is teaching an accredited module (the case in Library C).

My data analysis resulted in several distinct themes that represent the key influencing aspects of subject librarians’ involvement with VLEs. The findings are detailed in the following section.
5.2.2.2 Influencing factors

One of the reoccurring factors that influence the extent of access of and the level of contribution to VLE content is the perceived role of subject librarians in VLEs and teaching in general.

Regarding the functions of a subject librarian, in all three libraries there was a clear emphasis on the supporting role of this position in teaching and learning. For example, as expressed by librarians in institution A:

A1: “Our job is [...] promote what we have and let them know, and assist then if required.”

A2: “[...] academics are really the leaders so we are their support.”

Supporting this notion, interview participants noted that they provided guides for academics how to embed links into VLE module sites.

Also, interviewees in libraries A and B expressed that academics’ perceptions of subject librarian’s role were affecting the level of their involvement in VLEs. For example, librarian A2 noted:

“It depends on how you are seen as when they have just... a library, or you contributing to the teaching as well.”

Also, librarian B1 described a recent shift towards recognition of librarians as more than just a supporting unit. Instead, they are being increasingly seen as a part of the academic structure within the institution.

“Initially the library was under the offices of chief operations officer, so we were together with building staff, security, other services and all that, but we got it changed, so now we are with academics, so it was good for us, we are more seen as academics that just support.”

Even though this status is changing in Library B, librarian B1 indicates that academics still see subject librarians as supporting unit:
“What we really like is to get using Blackboard [...], but at the moment we cannot do that because we are not recognised as academic... we are recognised as a support structure, which is not very good for us.”

Librarians in libraries A and C are satisfied with their role in providing assistance and support related to embedding links and resources in VLEs to academics. Librarian B1 also expressed that the perceived status of subject librarians was affecting the likelihood of their involvement with VLE:

“They [academics] see themselves as experts and one of the issues is that they see library as sort of support, lesser that they are.”

These findings imply a problem in a broader context, i.e. the role of the librarian in teaching. As all interview participants expressed, their role in university teaching mainly involves supporting academics and, while most of the respondents are satisfied with this function, some implied that their status as a “support unit” affected how their role is perceived by academics and their relative importance to teaching as well.

Another factor that effects how involved subject librarians can be in VLEs is academics’ use of VLEs.

Thematic analysis findings suggest that academics’ use of VLEs is a reoccurring topic in all interviews. For example, participants expressed that “academics run the show”, “they are providing the links” and can be “possessive” and “territorial” over their course content.

Also, in all three libraries interviewees reported that their participation in VLEs was highly dependent on the extent to which academics were using VLEs themselves. As a result, my findings show that the use of VLEs, from subject librarian’s perspective, varies and in some cases is not very extensive:

A1: “[academics] not big fans of Blackboard.”

A2: “Compared to academics, we do not use it as much [...], but compared to some academics we are probably using more than that.”

B2: “The problem we discovered is that half of the courses in Bl. have no content in it at all.”
C: “Older lecturer are familiar with the chalk and blackboard way of teaching, they are probably less innovative and less inclined to use that kind of medium.”

In addition, librarians in two libraries noted that in their institutions “chalk and blackboard” way of teaching was still popular among academics and they were not inclined to use VLEs:

B2: “A lot of older professors [...] are not even using Power Points, they are not going to use VLEs.”

Also, librarian B2 expressed his concerns that VLEs were not actively used in their institution by academics because, as he felt, “teaching is not as important as research anymore”. This notion is based on the view that academics experience a lot of pressure to publish their research and do not have time to focus on VLEs.

As a result, the use of VLEs by academics have a direct impact on subject librarian’s presence in VLEs. Supporting this, librarian B2 stated: “if the academics don’t use it, there’s no point.”

Another important aspect for SL’s use of VLEs was identified during the interviews and from open-end questions in my survey. It is collaboration and relationships with individual academics. As librarian A2 expressed, it is “more of a factor whether we get to use it [VLE] or we do not get to use it.”

Overall, my survey and interview data results show that relationships with academics vary greatly across different subjects, ranging from very close collaboration to no contact at all. For example, librarian B2 described his experience after changing the subjects:

“I was very heavily involved with that school: a lot of teaching, a lot of training, I would be getting emails every day.”

VS.

“ [...] with my new schools I have no contact whatsoever. They do not know who I am, they do not know that they need me, they do not think that they need me.”

In particular, science was identified by three librarians as the area of subjects where relationships were difficult to establish and maintain:
A2: “They are not anti-library, but it is different, they are quite...I am not saying they can get out without the library, but having close relationship with them can be quite difficult to develop.”

B2: “[...] they are not really "library-type" schools, because they are sciences, they do not really see the library as a quintessence.”

Overall, subject librarians expressed willingness to establish active communications with academics. However, in addition to a lack of enthusiasm by academics, a lack of staff in the libraries is perceived as a barrier to achieve subject librarians’ participation in VLEs and active collaboration with course instructors.

Lastly, attitudes towards VLEs in general were identified as important aspect affecting the willingness to use it. For example, institutions A and B are using Blackboard VLE and several librarians from both institutions expressed that it looks “dated”, “clumsy”, “cumbersome” and “clunky”. In addition, librarian C raised an interesting point saying that popular social media sites (e.g. Facebook, Twitter) are being used successfully to interact with students and VLEs are not equal substitutes for this function.

In the following section I will present the results of my qualitative inquiry into the level of integration of subject guides into VLEs.

5.2.3 Subject guides and VLE

All interview participants expressed some dissatisfaction with various aspects of current subject guides in their libraries: “does not look great”, “content in there is very slim”, “need to make more lively and interactive instruction” and “they have been hidden away”. In addition, embedding subject guides and tutorials into VLEs is mostly academics’ responsibility. Relating to the previously mentioned varying use of VLEs by academics, librarians expressed concerns that there is a need for centralisation of guides and tutorials, which would improve access and facilitate their embedding into VLEs.

At the moment libraries A and C are trying to address these issues and are piloting LibGuides as a platform for providing course-specific and information literacy guides for various audiences.
Overall, LibGuides are perceived as a “route to integrate” by most librarians who were personally interviewed and who provided answers to open-ended questions of the survey. Most librarians showed a positive attitude towards LibGuides. The platform was described as a tool to achieve interoperability (easier embedding and linking to VLEs) that will be used as a “learning portal” and will allow better presentation and organisation of information.

In contrast, both librarians in institution B expressed some doubts about LibGuides:

B1: “I am not sure about them really. [...] It is a bit of like spoon-feeding students, [...] people in general should think more for themselves [...] all the information is not necessarily there either.

B2: “In other institutions, they are using things like LibGuides. Which we are not. And I think it is unlikely we are going to because, I think they are fairly steep and there is annual cost.”

In addition, not only do librarians B1 and B2 have rather negative opinions on the adoption of LibGuides, but they are also somewhat dissatisfied with the current format of their subject guides either:

B2: “Our subject guides are just plain HTML and [...] the content in there is very slim.”

While admitting that “they need to be looked at from the start”, librarian B2 is exploring other options than LibGuides to achieve an effective and uniform look of their subject guides.

In general, all surveyed librarians agree and are aware of the need for changes in the way their subject guides are presented in order to improve their usability and integration into VLEs.

In the following section I will present perceived opportunities of VLEs from the perspective of subject librarians. Both interview data and answers provided to open-ended questions in the survey were analysed together.

5.2.4 Perceived opportunities in VLEs

Most of the librarians maintain positive attitudes towards the participation of their library in VLEs. Opportunities that were identified several times in all five interviews include reaching wider audiences, enhancing collaboration and education in general.
Taking into consideration current changes in provision of subject guides in several libraries, librarians in Library A expressed confidence that VLEs will be used more often as various resources will be easier to integrate. Similarly, librarian B2 was hopeful that a soon-to-start initiative to incorporate a widget into the VLE with library links will lead to greater library presence in the individual modules.

Regardless of the overall positive view of the use of VLEs, librarians across institutions expressed several concerns that helped to identify key limiting factors, from the perspective of subject librarians that affect overall initiative and change.

First of all, organisational culture and size seem to have a great influence on individual initiatives by librarians. For example, librarian B2 expressed having difficulty to start a new initiative to improve the look of subject guides:

“I suggested. And I suggested again and suggested again. But no one has said yes, do it. […] A problem I found in big institutions is actually getting things done.”

Librarian B1 confirmed this thought:

“[…] there is a minefield of red tape, […] there’s politics involved, […] it is very difficult to get things done because there’s so many different people, so many different departments, […] it is run by committees and it is so slow.”

Second influencing factor is the need of advocacy by libraries themselves. Librarians in institutions A and B feel very strongly about promoting their libraries in order to receive better acceptance by various schools in terms of collaboration and integration into VLEs:

A1: “[…] awareness, and awareness and awareness of what we have,[…] they do not know what we have.”

B1: “we need schools to […] agree that our material is relevant to their courses, a bit of advocacy there, […] we’ve got to sell ourselves.”

As VLEs were perceived as potential outlets for librarians to enhance their services and reach diverse audience at the course level, in the following section I will present the findings of my enquiry into subject librarians’ perceptions of the primary role and functions of embedded librarian and if VLEs are supporting this concept.
5.2.5 The concept of embedded librarian

All librarians that provided answers to open-ended questions in the survey emphasised the importance of face-to-face tutorials delivered to staff and students as an important aspect of successful embedding. In addition, most of the librarians also considered integration into the curriculum, getting time on students’ timetable, and providing training that is “focused on students’ needs at that particular time” to be the key roles of the embedded librarian.

At the same time, librarian B1 raised concern that, with current number of subject librarians in institution B, it is not feasible to be successfully embedded in all courses. As a result, VLEs are considered a way of providing course-specific instructions and tutorials:

“What we really like is to get using Blackboard and getting every student to some sort of information literacy or some aspect of that.”

Moreover, regardless of the opportunities of VLEs identified in section 5.2.4, subject librarians’ physical presence in the process of instruction or support was identified as the key aspect of the concept of embedded librarian. In addition, taking into consideration limited access and use of VLEs from the perspective of subject librarians, my research findings suggest that VLEs are not considered to be an extension of the concept of embedded librarian.

In the following chapter I will present the findings of my quantitative data that was collected by conducting a survey. I will compare and contrast survey results to the findings of interviews data analysis.

5.3 Quantitative data results

To collect quantitative data, I distributed the questionnaire to fifty subject librarians in seven Irish universities. It returned low response rate of only sixteen replies; three of them were incomplete, leaving thirteen completed questionnaires for the analysis. This constitutes a low response rate of 26%. Out of seven university libraries, four did not provide any responses. Hence, majority of the approached librarians who participated in the survey (13 out of 20) were from the three remaining libraries.
Thus, since my survey cannot serve its intended purpose to represent the level of librarians’ involvement in VLEs at a national level, it complements my qualitative data collected and contributes to the overall aims of my research.

In the following sections I will present the results of the survey and analyse them in relation to my qualitative data findings.

5.3.1 General questions

The first three survey questions were designed to provide me with information about the institution the librarians are employed at, their years of experience, and areas of subjects. This information was supposed to enable me to compare and contrast the results if the desired response rate was reached. However, low response rate did not allow me to draw such comparisons as the results would not be representative across the intended population of my research.

The number of respondents was distributed among three institutions in almost equal proportions (Figure 2).

In addition, survey respondents were representatives of all identified subject areas (Figure 3).

![Figure 2. Survey - Number of survey participants](image1)
![Figure 3. Survey – Areas of subjects](image2)
5.3.2 Subject librarians’ use of VLEs

*Which statements describe your use of VLE (Blackboard, Moodle, etc.) of your institution?*

To determine the nature of the involvement of subject librarians in VLEs, I consulted literature review and identified several levels of involvement of librarians in VLEs. I distinguished four categories:

a) managing resources that are linked to a VLE,

b) sharing responsibility for maintaining VLE site with academics,

c) maintaining a VLE site with other librarians, and

d) maintaining a VLE site individually.

Figure 4 presents the distribution of responses about the librarians’ use of VLEs.

![Subject librarians' use of VLEs](image)

*Figure 4. Survey - Subject librarians' use of VLEs*

Interestingly, none of the respondents maintain a VLE site individually. Survey results indicate that majority of subject librarians manage resources that are linked to a VLE. This finding supports what was expressed by interview participants in the qualitative data analysis part: that direct engagement of subject librarians in VLEs is not common. In addition, four respondents are sharing responsibility to maintain VLE sites with academics. These findings partly support interview findings, i.e. that collaboration and individual relationship with academics can influence the extent to which subject librarians use VLEs.
**Do you have editing rights for individual course sites in VLE?**

Survey question no. 5 was also informed by my literature review and attempted to measure the level of access that subject librarians have to individual course sites in VLEs.

The findings are in line with results that my qualitative data analysis yields: the majority of participants do not have editing rights to individual VLE sites. Although it varies within institution and across different areas of subjects, as was indicated by most of the participants during the interviews. For example, in some cases, subject librarians have read-only access to VLEs to view the resources provided within the course site. Table 3 presents the distribution of responses. The following section will present results of librarians’ use of various features of VLEs.

<table>
<thead>
<tr>
<th>Do you have editing rights for individual sites in VLE?</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>8</td>
</tr>
<tr>
<td>Yes</td>
<td>1</td>
</tr>
<tr>
<td>Yes, to some courses</td>
<td>4</td>
</tr>
<tr>
<td><strong>Total count:</strong></td>
<td><strong>13</strong></td>
</tr>
</tbody>
</table>

*Table 3. Survey - Do you have editing rights for individual sites in VLE?*

**How often do you use VLE for the following activities?**

Question 6 was devised in order to find out if subject librarians use certain features of VLEs and which features are used most often. Again, the results correspond with the experiences shared by interview participants: despite perceived potential of certain features of VLEs, they were either not used at all or were used rarely by subject librarians. Figure 5 shows that survey participants do not use any of the VLE features extensively. Furthermore, blogging and discussion forums were among the features that majority of the participants never use. Providing links to library resources and information literacy instruction were the key activities in VLEs that were identified as used sometimes by more than half of the respondents (n=8). Interestingly, blogging and discussion forums – VLE features that the subject librarians identified as least used or never used - perform similar functions similar to other social media tools widely adopted by librarians and students.
As a result, there is an implication that VLEs are not effective for social interaction and outreach in general. Similar ideas were expressed by interview participants that noted that VLEs, in their opinion, were “clunky” and “dated” and that popular social media sites are more effective for direct interaction with the students.

### 5.3.3 Subject guides and VLEs

I am investigating if and how subject guides are embedded into VLEs. Thus, questions 7, 8, and 9 of the survey attempted to gather data about subject librarians’ satisfaction with the platform they are using to create subject guides and their opinion on how these guides are being accessed. The information collected was used to complement interview data findings.

**Do you have Subject Guides page?**

Out of 13 respondents, 12 reported that they have their subject guides page. This question was asked to facilitate survey logic, i.e. if some respondents did not maintain their own subject guide, they would be able to skip questions 8 and 9 that inquired about their experience of creating and promoting these guides online.

**Please rate how satisfied you are with the platform you are using to create subject guide(s) in the following aspects**

Question 8 was an opinion-based question that collected individual feedback on how satisfied subject librarians are with the platform used to create their subject guides. The
literature review and additional research showed that, in order to provide a more interactive experience for the user, libraries use either static web pages to promote usage of course-specific links and information or to they adopt commercial or open-source platforms to bring together various tutorials, instructions, guides and links. Figure 6 illustrates the range of responses and shows that, on average, survey participants are satisfied with the platform they are using to create their subject guides. It has to be noted that user friendliness of the subject guides platforms received more ‘dissatisfied’ ratings than other aspects. This supports my findings of qualitative data analysis where all interview participants expressed that their subject guides needed to be improved in several aspects: they should be made more interactive and user-friendly, and their visibility and promotion should be advanced.

As a result, adoption of LibGuides platform to create subject guides was perceived as a promising solution by most of the interview participants.

How can your Subject Guide(s) be accessed?

As indicated by survey participants, majority of subject guides are accessible through the library website (Figure 7). Four respondents have their subject guides linked to VLE course sites and in three cases subject guides are parts of the reading list of individual modules. While these findings show numerical representation only, qualitative data results revealed

Figure 6. Survey - Satisfaction with subject guides platform

How can your Subject Guide(s) be accessed?

As indicated by survey participants, majority of subject guides are accessible through the library website (Figure 7). Four respondents have their subject guides linked to VLE course sites and in three cases subject guides are parts of the reading list of individual modules. While these findings show numerical representation only, qualitative data results revealed
various aspects of the integration of subject guides into VLEs. For example, it was confirmed by all interview participants that course instructors play an important role in integrating and linking subject guides to their individual VLE sites.

Other important factors influencing where and if subject guides are present in VLEs include: perceived role of the library and the subject librarian, academics’ use of VLEs and academics’ IT skills.

5.3.4 Collaboration with academics to provide resources in VLEs

In question 10, survey participants were asked to rate the willingness of academics to collaborate in order to integrate course-specific library resources and links into VLEs (Figure 8). This question was opinion-based and data collected was used to supplement findings.
of the interview data analysis. In the interviews all librarians expressed that collaboration with academics is an important aspect determining their involvement with VLEs. Hence, the survey findings complement the views expressed by interview participants and show that, from librarians’ perspective, there is a lack of communication with academics.

5.3.5 Personal views of library integration into VLEs

Survey question 11 was devised in relation to the key trends and issues identified in the literature about the integration of libraries into VLEs. I defined three key areas of discussion throughout the literature:

I. The level of library integration into VLEs;
II. Librarian-academic relation as an influencing factor of librarian’s participation in VLEs;
III. Which agent is responsible for integrating course-specific library resources into VLEs?

Question 11 in the questionnaire mirrored these three areas of interest and librarians were asked to express their attitude towards them. Figures 9, 10 and 11 illustrate the range of responses provided.

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**Figure 9. Survey - Use of VLE depends on collaboration with academics**

- **Strongly agree**: 4
- **Agree**: 5
- **Neither agree nor disagree**: 1
- **Disagree**: 0

**Figure 10. Survey - Library resources are not represented enough in institution’s VLE**

- **Strongly agree**: 2
- **Agree**: 4
- **Neither agree nor disagree**: 2
- **Disagree**: 0

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As we can see, most subject librarians agree with the statements that more integration of libraries into VLEs is needed. They also agree and that the key factor influencing their use of VLEs is the extent of collaboration with academics. These findings correspond with interview data analysis results which showed that the majority of interviewees think VLEs have the potential to increase the visibility of library tutorials and other resources, and to increase librarian-academic-student interaction and improve customised support through the use of VLEs.

In addition, the majority of survey participants either disagree or neither agree or disagree with the statement that academics are responsible for providing course-specific library resources and links in VLEs. Considering that VLEs are the main content delivery platforms in educational institutions, these findings have implications for further discussion about the role of VLEs in teaching.

Lastly, questions 12, 13 and 14 were open-ended questions designed to collect additional qualitative data about subject librarians’ perceptions of the concept of embedded librarian and if VLEs are perceived as an extension of this role. It has to be noted that not all participants provided answers to open-ended survey questions. Nevertheless, the results were analysed qualitatively and presented in the section 5.2 together with interview data findings.

5.4 Conclusion

Both qualitative and quantitative inquiry generated new knowledge in my research area. My interviews provided rich data that I utilised to investigate underlying aspects of the experiences, trends and issues of subject librarians’ use of VLEs. Moreover, survey results,
although not quantifiable enough to define broad trends nationwide, supported qualitative data findings, interpretation and implications of this study.

In the following chapter I will present discussion of my data findings.
Chapter 6: Discussion

6.1 Introduction

In this part I will interpret the results of both quantitative and qualitative data and discuss the implications of my findings. In my analysis I will refer back to my research questions and show how my findings relate to the literature review. I will also consider the limitations of my findings and how they can be addressed in the future studies.

6.2 Addressing research questions

6.2.1 What is the extent of subject librarians’ use of VLEs?

My research findings, both interview results and replies to my survey questions, suggest that library presence in VLEs is very limited. Furthermore, if links to specific library resources (tutorials, subject guides, etc.) are being provided within the VLE, in most cases it depends upon academics’ attitude towards the library and its role within the individual course.

Besides, subject librarians have very limited direct input into VLEs. This is supported by most of interview participants and the results of survey question 4 where the majority of respondents indicated that they mostly manage resources that are linked to VLEs instead of providing access to them through VLEs.

In addition, responses to the survey question 6 (about the extent to which subject librarians use different features of VLEs) support opinions and experiences shared by the interviewees. Thus, it is evident that VLEs are not fully exploited by librarians as a platform for outreach and personal support, and that discussion forums and blogging are the least used features, if used at all.

These findings illustrate what has been defined by Shank and Dewald (2003, p.38) as macro approach of integrating library resources into VLEs. That is, that the resources which are mostly promoted in VLEs are information literacy tutorials and general library guides. As a contrast, micro approach - embedding links to library resources at a deeper level in the VLE, i.e. at course level - is not adopted by librarians due to their limited access to course pages and other influencing factors that are discussed in section 6.2.2.
Moreover, both survey and interview results show that VLEs, if used at all, are mostly utilised as a medium for delivering information literacy tutorials. This approach supports the definition of VLEs in the library context provided by Corrall and Keates (2011, p. 29-30) who state that VLEs are primarily used for presenting course content and delivering information literacy skills tutorials.

Lastly, in contrast to the ideas of De Jager-Loftus (2009) and Whatley (2009) who advocated VLEs as an effective medium for library promotion and increased visibility, I can conclude that subject librarians’ integration into VLEs is not realised as one of the strategies of reaching wide audiences and promoting library resources.

At the same time, this phenomenon does not solely depend on librarians’ incentives to better engage themselves in VLEs, but is rather a multifaceted case of related influencing factors. Further discussion of these factors and challenges is provided in the following section.

6.2.2 What challenges are subject librarians facing in using VLEs?

In spite of re-occurring discussions in the literature about the importance of the seamless library-VLE connection (Lawrence, 2006; Black, 2008; Daly, 2010; Jeffryes et al., 2011; Hristova, 2013; Leeder and Lonn, 2013), my research results show that there is some marginalisation of the library-VLE relation. This phenomenon can be attributed to several influencing factors reoccurring throughout the interviews and confirmed by the survey results.

To start with, access to VLE courses, as identified by interviewees and survey results (question 5 and 10), depends upon the academics, i.e. the “owners” of the individual courses within the VLEs.

Also, the issue of feasibility and scalability of direct presence in individual VLE courses was an important feature of the overall library-VLE relation discussion. Although not directly raised throughout the interviews, this issue was mentioned in a number of responses – in both interviews and open-ended questions in the survey - regarding time and human resources needed for effective integration into VLEs. This issue is common in large institutions where small-scale initiatives are difficult to implement throughout the whole institution (Daly, 2010; Jeffryes et al., 2011).
In addition, the key influencing factors (i.e., personal relation the librarian has with academics, IT knowledge of integration of library links within the VLE, institution size and staff size), can be attributed to technical, organizational and cultural factors identified by Gibbons (2005a), Black (2008) and Blackburn and Walker (2010) as the key aspects affecting the success of librarian-VLE relation.

Interestingly, the perceived role of a subject librarian has an important effect on his/her participation in VLEs and in the academic-librarian relation in general. To be more precise, my research findings indicate that subject librarians have varying levels of interaction and acceptance by course instructors in different subject areas depending on how their role is perceived by the academics. These results are in line with findings in the literature on studies exploring the impact of subject librarians on an academic community. These studies confirmed that disciplinary culture has a great impact on how the value of a subject librarian is perceived (Walters, 2008; Cooke et al., 2011; Corrall and Keates, 2011).

Also, varying interaction with individual academics can be perceived as an important factor affecting the role of the subject librarian. As Rodwell et al. (2008, p. 122) stated, low demand of subject librarian’s services by some makes it more feasible to effectively collaborate with others, especially considering low library staff numbers in some institutions. This exact problem was mentioned most of my interview participants.

Moreover, from the sociological perspective, my research findings reflect what was defined by Christiansen, Stombler and Thaxton (2004, p. 118) as “asymmetrical disconnection between librarians and faculty”. This disconnection suggests that it is librarians’ role to reach out and establish effective collaboration with faculty, while “faculty culture is generally more isolated and proprietary”.

While some respondents were satisfied with the level of interaction and collaboration they receive from academics, some expressed their concerns about a lack of collaboration in general and about difficulties experienced in attempting to establish successful communication. This implies that a faculty-library separation is common across different subject areas and is, as my research findings suggests, indirectly affecting not only librarian’s participation in VLEs but also a broader spectrum of subject librarians’ activities,
for example, obtaining reading lists from the academics to select new resources that need to be acquired.

Lastly, limited access to VLEs and previously identified barriers to effective integration raise another important question about **the role of the librarian in University teaching**. While literature shows that the teaching role of the librarian is evolving (Walter, 2008; Polger and Okamoto, 2010; Austin and Bhandol, 2013), my research revealed that, from librarians’ perspective, their teaching role is not recognised as widely as their support function. It has to be noted here that I do not claim that subject librarians have the same subject expertise as academics. However, a lack of recognition of subject librarians as a part of the academic structure in the institution may be perceived as a barrier to successful communication and collaboration with academics, including in VLEs. Since VLEs are perceived as “a way of organising online information and learning resources by subject” and “a medium for delivering crucial information skills and information literacy tutorials developed for library users” (Corrall and Keates, 2011, p. 29-30), these two objectives could be achieved at course level by facilitating input from subject librarians as well as academics.

Despite numerous challenges experienced by subject librarians, in their opinion, VLEs could be seen as a platform to increase visibility of library links and resources as well as information literacy tutorials and library guides by integrating them at course level.

In the following section I will present my discussion of subject librarians’ perceived opportunities towards library participation in VLE.

**6.2.3 What are subject librarians’ attitudes towards library participation in VLEs?**

Russell (2008), Norton and Castaldo (2010), and Leeder and Lonn (2013) state that VLEs can be a medium that has potential to increase library visibility and library support outreach to diverse audiences. My research findings partly support this notion. All interview participants expressed that while VLEs provide opportunities and potential for more effective outreach, such initiatives are limited due to various influencing factors discussed in section 6.2.2.

In addition, my findings confirm Buehler’s (2004, p.75) statement that library resources are not perceived as integral part of VLEs. Such claims reoccur in my interviews and my survey
where the majority of the participants agreed that library resources are not represented enough in VLEs (survey question 11).

General attitude of librarians towards their institutional VLEs is another important aspect of library-VLE integration debate. As the study by Cosgrave et al. (2011) shows, VLEs have been widely adopted in higher education institutions in Ireland since 2005. Whereas literature presents multiple discussions and advocates library integration and active participation by librarians in VLEs, my research findings partly contradict this position. To be more precise, it raises a new question of whether VLEs have become somewhat dated and if they still serve as an effective platform that goes beyond fulfilling the purpose of course-content repository. My interview participants also expressed their doubts about the effectiveness of VLEs.

Also, there is a level of dissatisfaction with VLEs expressed by the participants of my study: some described VLEs as “dated” and “clunky”. This aspect can be viewed as an important factor influencing perceptions of a VLE as a content delivery platform and, also, the reason why VLEs might not be utilised to their intended extent.

Overall, my research results show that library presence in VLEs is endorsed by subject librarians. However, instead of direct input, it is interoperability, linking and automation that are perceived as the most effective ways to integrate libraries into VLEs. This perspective is similar to the approach adopted in a number of initiatives encountered throughout the literature where library integration into VLEs was achieved by using Web 2.0 technologies to populate library links within individual courses in the VLE (Black and Blankenship, 2010; Jeffryes et al., 2011, Hristova, 2013). Use of Web 2.0 tools to automate library resource management and promotion supports the issue discussed in section 6.2.2 (feasibility of direct presence of subject librarians in VLEs), especially in large institutions where change is slow and staff numbers are inadequate for such initiatives to be implemented.

Lastly, as interviewees and survey participants indicated that, in their opinion, successful integration can be achieved through centralisation and librarians’ easy access to subject-specific resources. In most cases, it involved the use and promotion of subject guides in order to connect with academics and students alike.
In the next section I will discuss the findings of the creation and promotion of subject guides in VLEs.

6.2.4 What are the tendencies of subject guides creation and promotion in VLEs?

Question 8 asked respondents to rate how satisfied they were with the platform that they were using to create subject guides. The respondents replied that they are most satisfied with different aspects of their subject guides, i.e. IT skills required, user friendliness and time required to maintain those guides. In all interviews participants recognised the need to improve centralisation, the level of interaction and user friendliness of current subject guides that they are managing at the moment. Also, my research findings suggest that there is a shift from using static web pages to utilising online platforms to improve subject guides.

Several initiatives were launched to address these issues. Two institutions have begun initial stages of full implementation of LibGuides, a commercial online platform for sharing of information and for creation of online guides for any topic, course or a subject.

While the majority of participants and several survey respondents expressed their views that LibGuides undoubtedly has potential to advance management and promotion of subject guides, both participants in Library B, regardless of their dissatisfaction with the current format of their subject guides (static HTML pages), expressed doubts about LibGuides. They doubted its effectiveness as an online platform and whether it is worth the costs involved. Being uncertain about LibGuides, these two participants noted that a more effective platform, possibly an open-source solution, is needed to achieve a more uniform look and to increase user-friendliness of present subject guides.

The literature, mainly in the context of United States of America, discusses how integration of subject guides into VLEs might help achieve multiple benefits, e.g. improved communication, library promotion and encouragement for students to use library resources instead of consulting various information sources on the internet (Bowen, 2012; Shapiro, 2012; Essinger and Ke, 2013). Contrarily to numerous case studies conducted abroad, my survey results show that subject guides are not actively promoted in VLEs unless academics decide to provide a link in their individual module site or to integrate subject guides into the reading list (survey question 9). What is more, differently to the main body of literature, my research results suggest that the progress of such initiatives is
slow and subject guides are in the initial stages of being updated using different platforms, e.g. LibGuides.

Regarding the access to subject guides, I can conclude that integration and presence of subject guides in VLEs are not realised yet and that they can be currently accessed mainly through library websites (survey question 9). Data from all five interviews confirmed that subject guides are not actively incorporated into VLEs unless academics provide links to them from their individual course sites.

At the same time, multiple participants expressed future hopes and possibilities to incorporate subject guides into VLE after they adopt an effective platform that can ensure scalability and interoperability of such initiatives.

In the upcoming section I will discuss my research findings about the perceptions of subject librarians of the concept of “embedded librarian” and their attitudes towards VLEs as one of the means for embedding and integration.

6.2.5 Are VLEs supporting the concept of embedded librarian?

My conclusions of the responses to this question are based on interview results only, since my survey questions could not cover the experiences and views of subject librarians about the concept of embedded librarian in the context of VLEs.

Regardless of numerous issues inhibiting successful embedding, all interviewees described the role of the embedded librarian as comprised of active participation in the curriculum and of ongoing outreach and communication initiatives targeting academics and students. These views correspond with the traditional definitions of the concept of the embedded librarian encountered in the literature.

Conditions identified as barriers to achieve successful embedding (e.g. difficulties in establishing effective communication, varying awareness of library services among academics and students, and a lack of staff) imply that physical embedding is not always attainable in a large institution. Focus is shifting towards online instruction, virtual services, and outreach as means to fill this gap. In this context, Leeder and Lonn (2013, p.13) broadens the traditional definition of embedded librarian by including online presence of the librarian, i.e. active participation in VLEs as one of the ways to embed.
Taking into consideration this extended definition of an embedded librarian, my research findings suggest that a VLE is not presently perceived or realised as a channel for integration. This may be due to the role of VLEs in teaching in general, i.e. if academics do not recognise VLEs as content delivery platforms and do not use it, it directly affects other patrons’ need and incentive to use VLEs, let alone subject librarians’.

6.3 Research limitations

In my study I attempted to provide an insight into the situation in several Irish university libraries and to discover and identify broader trends of subject librarians’ use and perception of participation in their institution’s VLE. Now, it is of utter importance to acknowledge several limiting factors of my research.

First of all, a qualitative inquiry into my research problem limits the extent of generalization I can draw from my data analysis and implications. Instead, my findings provide a snapshot of the situation in these universities.

Second of all, my survey yielded a low response rate of 26%. This limited the generalisation about my findings even more. Nonetheless, I decided to include my survey results into my research given that they add weight to qualitative data because most of the questions in my interviews and the questionnaire correspond and complement each other.

Finally, although confidentiality and anonymity of the respondents were ensured, certain limitations inherent to qualitative inquiry are characteristic to my study as well. To be more precise, interview participants might be hesitant to express their honest opinions about certain aspects influencing their participation in VLEs, especially when talking about relations with individual academics within their subject area or when explaining general organisational issues in their institution.

In the future, such limitations could be addressed by increasing population size for both quantitative and qualitative parts of the research, i.e. including more academic libraries, and not just university libraries. In this way, the survey might return a higher response rate and permit more generalisation. Besides, it would be useful to conduct the survey during the academic year instead of summer months as I did for my research. It might positively affect the response rate as fewer subject librarians would be out of office for summer
holidays. Lastly, conducting more interviews in the same institution could increase validity and depth of the insight into a particular situation.

6.4 Conclusion

In this chapter I discussed my research findings and their implications by referring back to my research questions. Also, I related my findings to the literature review presented in Chapter 2. My research results, combining interview and survey data analysis, provided a comprehensive view of subject librarians’ experiences and perceptions of their own participation in their institutions’ VLEs.

In general, my research findings were constructed around the following themes:

I. Library integration into VLEs;

II. Subject librarians’ use of VLEs;

III. Subject guides and their integration into VLEs;

IV. Perceived opportunities for subject librarians in VLEs;

V. The concept of embedded librarians in the context of VLEs.

Grouping of my research findings into these themes allowed me to study the multifaceted nature and influencing factors of the subject librarians-VLE relation.

In general, my research findings suggest that identified challenges and issues experienced by subject librarians affect all aspects of their involvement with VLEs. For example, the extent to which subject librarians communicate with academics directly affects access subject librarians have to VLEs, the degree of visibility and promotion of subject guides, and perceived opportunities in VLEs. I discussed my awareness of my research limitations and indicated how they can be addressed in the future studies.

In the following chapter I will present conclusions of my research and provide recommendations for further research.
Chapter 7: Conclusion and recommendations

7.1 Introduction

In this chapter I will present general conclusions and summarise my findings. I will also discuss the significance of my research. Lastly, I will develop recommendations for future research.

The purpose of my research was to identify trends of subject librarians’ use of VLEs and to contribute to a better understanding of influencing factors and challenges experienced by subject librarians in relation to their use of VLEs and in their involvement in VLEs to deliver course-specific support.

The main body of literature, originating mostly from the United States of America, discusses VLEs in library context as having potential to improve library marketing, outreach, and communication. Additionally, multiple case studies show that initiatives to link library and VLEs - in particular, provide library presence at individual course level, - are being implemented in multiple institutions, again, mainly in the United States of America. My aim was to investigate the situation in the Irish context and discuss various aspects of the level of involvement of subject librarians in VLEs in several Irish universities. Therefore, I conducted a survey which, regardless of its low response rate, complemented data obtained in the interviews and so supported the key findings of the research.

Overall, there is a number of views on the VLE-librarian relation throughout the literature that overwhelmingly favours active librarians’ participation in VLEs. In my research, I challenged these views to an extent and looked into how VLEs are perceived and utilised in practise from subject librarians’ perspective

My research findings suggest that the feasibility and the degree of subject librarians’ involvement with VLEs is subject to multiple influencing factors, for example, individual relations that a subject librarian has with academics, the size of staff, or the use of VLEs by other patrons.

The following section will present the key implications of the study.
### 7.2 Key implications of the study

Having analysed both qualitative and quantitative data and discussed my findings, I can summarise my research implications in the following statements.

- **Subject librarians are not actively using VLEs.**

Both interview results and survey responses suggest that subject librarians mostly manage resources that are linked to VLE, but direct input is very limited.

- **Influencing factors include:** individual relationships with academics and their use of VLEs, the size of the institution, and the issue of feasibility of direct involvement in VLEs.

Throughout the interviews it became evident that the librarian-academic relation is the key influencing factor to librarians’ use of VLE and the amount of library links and resources presented at the course level in the VLE. In addition, my research findings suggest that in institutions where ratio between library staff and academics is relatively low, it is not feasible to closely collaborate with every academic individually, yet alone actively contribute to individual VLE sites. In addition, automation of provision of library links and materials within the individual VLE sites was expressed as a more welcome option than direct participation.

- **Subject librarians see the potential of VLEs to enhance the services the librarians provide, although there no such initiatives are known.** There is a general agreement on the potential benefits of subject librarians’ presence in VLEs and on intentions to integrate in the future. However, at the moment no such initiatives are being realised.

- **Subject guides are not actively promoted in VLEs.**

Due to the issue of interoperability, the presence of subject guides in VLEs is a responsibility of academics who may include them into reading lists or provide links in their individual course sites. However, adoption of new platforms (e.g. LibGuides) to create subject guides imply that initiatives of incorporation of subject guides at course level in VLEs are possible only after a full implementation of new formats of subject guides.
• Despite being perceived as a potential channel for better librarian outreach and communication, VLEs are not utilised in such a way in practice.

This conclusion was derived from the inquiry about subject librarians’ opinions of the concept of embedded librarian. Research participants generally indicated that physical embedding into the curriculum and face-to-face instruction are the key aspects of this concept. Furthermore, integration into VLEs for closer communication and to provide support at the “point of need” are not considered as attributes of the concept of embedded librarian and are not realised in practice.

Naturally, there are multiple aspects to each of the statements and I cannot generalise for the whole population of subject librarians. Nevertheless, my findings suggest that VLEs are not used by librarians as much as it is discussed and promoted in the literature.

7.3 Recommended approach to address the problem

My research findings suggest that challenges experienced by subject librarians and described in my research are at least partly caused by varying perceptions of librarians’ role and status within the university. Thus, a practical way to address this problem would require better library promotion and adoption of a systematic approach to increase library visibility in VLEs, e.g. automation of providing library links within VLEs.

Also, definition of librarians’ role in University teaching could be incorporated into institution’s policies and explained to the academics in a comprehensive way in order to address the gap in effective collaboration between librarians and academics.

In the following section I will discuss original contribution and significance of my research to the field of study.

7.4 Significance of the research

In spite of the limitations of my research methods (identified in section 4.10) and findings (discussed in section 6.3), my research constitutes a valuable contribution to the field of study in the following ways.

Firstly, my research narrows the gap in the literature on the Irish context by presenting and discussing the level of involvement of subject librarians with institution’s VLE. This study
can also be used by the libraries and institutions to better understand the library-VLE relation, its underlying aspects and policies affecting them.

Secondly, as no similar studies have been conducted regarding the Irish context, my study provides a thorough overview of the current situation and of practices that can be compared to other contexts. Also, the development of this situation can be analysed if similar studies are conducted in the future.

In general, my research explored individual perspectives and, in some cases, the struggles of subject librarians in relation to outreach, promotion, and integration library resources online.

My study provided an insight into both practices and individual perceptions of the use and value of VLEs to subject librarians while revealing what topics could be suitable for further study. Thus, in the following section I will discuss potential areas for further research.

7.5 Future research recommendations

My research findings and implications provide a lot of space for further research.

First of all, it would be valuable to explore further the role of VLEs in teaching in Irish universities. The study could examine the value of VLEs as content delivery platforms from the academics’ perspective.

Second of all, future studies could focus on academics’ perspectives of subject librarians’ role in their area of subject. In addition, a gap analysis of librarians’ and academics’ views and experiences in relation to VLEs could be conducted.

Finally, as several institutions are in their initial stages of setting up LibGuides to create subject guides, future research could investigate and compare the level of effectiveness, usability, and value for money of this platform across different institutions.

7.6 Summary

To conclude, my research has examined practices and individual perceptions of subject librarians’ use of VLEs. Research findings show that, regardless of varying access of subject librarians to VLEs, the use and contribution to VLEs from the perspective of subject librarians is very limited. Influencing factors include individual relation with academics, the
issue of scalability of direct participation of subject librarians in VLEs in large institutions, the use of VLEs by other patrons, and attitudes of functionality and effectiveness of VLEs in general.

My research findings also indicate that the debate of the subject librarian-VLE relation is multifaceted even at the institutional level. That is, VLE practices vary among and within the institutions.

Overall, this study reduces the gap in the literature by addressing the situation of the Irish context. It shows that practices and perceptions vary from the main ideas expressed in the literature.

Taking into consideration that VLEs are widely accepted as a core digital space connecting students, academics and administration, I provided a glimpse of where subject librarians are in this context, particularly when e-learning and virtual support are increasingly complementing face-to-face interaction.

Lastly, my study shows that the VLE-library separation in the researched institutions is common. However, with current progress in improving subject guides and making library materials easier to integrate, I can ascertain that libraries have already found and will be finding ways to integrate into VLEs. This can be achieved by direct presence of subject librarians in VLEs and also by harvesting resources that can be linked to or integrated into VLEs.
Chapter 8: Reflection on learning and skills development

8.1 Introduction

As Kolb (1984, p.32) expressed, “learning is the major process of human adaptation”. During the process of my study I learned a lot about myself that both goes beyond the scope of this research and is inseparable part of the process and overall experience of my study.

To be more precise, during various stages of my thesis I discovered different aspects of the way I study, how I address arising issues and what my learning preferences are. Therefore, in order to determine the value of this study for my personal growth as a researcher and a young professional, it is important to carry out a critical evaluation and reflection of my research process.

For this reason, having finished my research and looking back at my research process, I raised several questions:

- How confident and skilled was I in certain areas of my study?
- What changes in attitude did I experience?
- What issues or problems did I come across? How did I solve them?
- What do I still need to learn?
- What would I change in my research if I had another chance?

As a result, these questions provided guidelines for my discussion throughout this chapter. In the first part of this chapter I will discuss my experience and significant events of the thesis writing process. Then, I will move on to analysis of my personal growth and evaluation of learning from my overall thesis research experience.

8.2 Thesis process

The following sections will present my discussion on the milestones that required a lot of input with regard to personal characteristics and other skills.
8.2.1 Choosing the topic
Choosing and narrowing down the topic was an extremely challenging stage of the research process, mostly due to its significant importance. I would describe myself as an indecisive person, i.e. the one that takes a lot of time and doubt to reach a definite decision in various situations, which translates to occasional prolonged decision making in my academic life. Hence, taking into consideration the amount of time and effort this research project required and its significance for my overall academic performance, I found it very difficult at first, almost frustrating to choose the topic. As a result, I approached this challenge deductively, i.e. I knew that academic library would be my type of library of interest, so I went through my reflection journal I kept from my work experience placement I had a year ago in a large academic library. Looking back at my experiences there, I reduced my circle of interest to several roles of the librarians that inspired and interested me most. As a result, I chose to study subject librarians’ perspectives and experiences. Lastly, conducting some initial literature review helped me to narrow down the topic of my thesis further – I decided to investigate subject librarians’ use of VLEs.

8.2.2 Literature review
The literature review part of my thesis writing demanded a lot of critical thinking and organizational skills. At first I struggled to filter all possible sources of literature and evaluate relevancy of them to my topic of choice. Also, visual representation of materials and data is very important for my way of learning in order to understand the key meaning and relations between them. Thus, I had to be creative and find a way to build a systematic representation of the literature underpinning my research.

In the end, I used large post-it notes to summarise key aspects of each of my literature sources and then built a “tree diagram” representing various sub-topics of my research. This technique provided me with flexibility to compare and contrast and easily rearrange my literature sources.

8.2.3 Methodology section
At the beginning of my research process I struggled to decide which methodology to adopt for my study. Quantitative approach was my initial choice, although qualitative research was attractive as well because it in itself in presented an opportunity to gain valuable experience in conducting this type of enquiry and gain a deep insight into the area of study.
Generally, the cause of this dilemma was the fact that I focused too much on defining my research method strategy before finalizing my research questions and objectives. Finally, having defined my research questions, I looked for the best way to answer them. As I adopted a mixed-method approach: for my main investigation I organised five interviews while, simultaneously conducting a survey that would complement qualitative data obtained during the interviews.

8.2.4 Conducting original research

Conducting the interviews was a very demanding but, probably, the most rewarding experience of the whole research process. It was so due to several reasons.

Firstly, I would describe myself as a person who enjoys working independently. Thus, scheduling interviews and depending on other people’s will to help challenged my self-confidence and tested my communication skills. Therefore, I was pleasantly surprised how much I enjoyed this stage of my thesis as all people I approached were willing to help in any way they could.

Secondly, at the beginning of my qualitative data analysis I found it difficult to establish the so-called “scientific confidence”. That is, having transcribed all interviews, I was not sure if my qualitative data would be rich enough to answer my research questions.

I addressed this challenge by taking time in data analysis and establishing a systematic approach to data so that I would get a good grasp and come up with adequate visual representation of different themes and trends in my transcripts. By using visual aids, e.g. highlighters, sticky notes and physical layout of printed sets of data sets I managed to cope successfully with large amounts of qualitative data.

Lastly, during the two years of my studies of Library and Information Management in Dublin Business School and especially while working on literature review and discussion chapters of my thesis, I became aware that critical thinking was the skill I needed to improve the most. This realization came first when I discovered that I struggled with assignments that required reports synthesising and evaluating different phenomena or ideas, while IT (Information Technology) based assignments (e.g. HTML, XML, web design programmes and information architecture in general) I tackled with ease.
I can state now that during two years of studies and the thesis stage of my degree I have definitely built more confidence in my critical thinking skills.

In the following section I will discuss personal growth changes in my learning style.

8.3 Personal learning

In general, during my thesis writing time, I experienced several stages of emotions: excitement, frustration, anxiety, lack of confidence and, lastly, sense of achievement. All those emotions came simultaneously during various stages of my research and contributed to better understanding of my own weaknesses and strengths in relation to my individual learning style. This roller-coaster of emotional states can be linked to what Kolb (1981, p.233) calls “inevitable mismatch between personal learning style and learning demands”.

In general, an individual learning style revolves around a broader context that just academic learning. It affects general personal growth and functioning in life, e.g. decision making or problem solving (ibid., p. 248). There is an extensive amount of literature discussing and analysing individual learning styles and applications of this knowledge in academia. The key concepts and trends are discussed in the following section.

8.3.1 Individual learning style

Individual learning style, as defined by Felder (1996, p.18) is “characteristic strengths and preferences” of how we take in and process information. This concept is widely researched in both more and less recent literature.

The importance of understanding various learning styles is mainly discussed in the literature in the context of improving and adapting teaching techniques to accommodate them. In addition, a number of studies show attempts to automate detection of individual learning styles in e-learning environment (Velusamy and Anouncias, 2013).

Interestingly, regardless of numerous discussions throughout the literature about various techniques and benefits of assessment of individual learning styles, there is a number of studies that took a critical view of this research. They concluded that there is lack of empirical evidence that would support effectiveness of the assessment of learning styles in education (Pashler et al., 2008). In addition, little is known about the relation between the individual learning style and overall academic success (Komarraju et al., 2011).
Even though there are several theoretical models of learning styles, I will discuss my personal growth in the context of the model developed by Felder and Silverman (1988) because it provides a comprehensive framework for self-evaluation in five dimensions of the process of learning:

a) Perception of the world – sensory vs. intuitive;
b) The way of perceiving of information – visual vs. auditory;
c) Reasoning progression – inductive vs. deductive;
d) The process of converting information into knowledge – active vs. reflective;
e) Understanding information – sequential vs. global (ibid.)

During the course of study I became aware of my learning preferences that, if matched with the method of delivery of course content, gave me a greater sense of comfort and success in completing assignments.

First of all, I would consider myself to be a sensory learner as I tend to prefer statistics and experimentation as opposed to abstract concepts.

Second of all, I am aware that visual presentation of information is much more important than auditory for my effective learning and memorizing information. Therefore, during my thesis writing process and my studies of Information and Library Management in general, I put a lot of effort in taking notes during lectures and while studying individually, and in organizing them in a way that would be most beneficial for me to understand, synthesise and use them for my further learning.

In addition, I prefer inductive style of learning, i.e. learning by starting with a specific example and them progressing to general concepts or theories as opposed to getting to know broad concepts and then relating them to more specific contexts or examples.

Also, I consider myself a strong reflective learner. I became aware of this aspect during all the courses of my MSc degree as I enjoyed working on my own and felt uncomfortable in situations where I needed to apply newly acquired knowledge during lectures without taking time to fully absorb that new information. On the other hand, during the course, I tested and improved my active learning abilities since promoting team work and introducing fast-paced exercises were an important part of some lecturers’ teaching approach.
Lastly, Felder-Silverman learning style model makes a distinction between sequential and global learners. The key difference between these two types is that sequential learners prefer linear, step-by-step instruction while global learners are more concerned with the “big picture” and learning in large leaps (Felder and Silverman, 1988, p. 679).

Relating to these concepts, I learn more effectively when presented with step-by-step, gradually increasing complexity of concepts, materials or theories. Nonetheless, during the two years of working towards my MSc degree, I noticed a definite shift from sequential to global way of perceiving information and learning in general. To be more precise, as a mature part-time student I spent a lot of time and effort studying and conducting research independently. As a result, this experience required personal adaptation and partial transformation of my learning style as the whole experience was very different from my undergraduate degree learning experience where linear way of learning was mostly used and preferred. In short, I can claim that in my Library and Information Management classes I faced higher expectations from my performance as a critical thinker and an adaptive learner.

Taking into consideration my personal learning style, the whole thesis writing process as well as conducting research and completing this course in general, definitely made me step out of my comfort zone and, at the same time, rewarded me with a great sense of achievement and self-fulfilment. My key achievements and skills developed are discussed in the following section.

8.3.2 Personal growth and skill development

Firstly, during this experience my communication skills improved greatly. Meeting new people at the beginning of the course, collecting data for various assignments and inviting people to participate in my research interviews both challenged and advanced my communication skills. I found it quite difficult at first as I would describe myself as a quite shy person that feels uncomfortable in making new acquaintances. However, as I was progressing with my degree and my thesis writing, I inevitably overcame my fear and, possibly, lack of self-confidence, and started enjoying meeting new people.

Secondly, time management was definitely the skill that was tested during the two years of my studies. In addition to being a mature part-time student, I was also working full-time
most of the time of my studies, thus I had to find a balance between work, study and rest. At times, I found that balance to be very challenging to achieve, yet it definitely made me to examine my priorities and analyse my goals in a broader beyond academics.

Thirdly, studying towards my degree, particularly the Scientific Research Methods module and the thesis writing process itself have greatly improved my research skills. To be more precise, having very little experience in conducting original research in the beginning, I found it very beneficial to gain both theoretical background and practical application of methodology, collection of data and it’s analysis during this course. Overall, learning how to approach and conduct a research project contributed to my critical thinking skills which I felt I was lacking at the beginning of my study and which will benefit my future career as an information specialist.

Furthermore, the whole experience of completing my Master’s degree added to the development of my language skills. English is my second language, therefore every assignment I completed during the course and producing my Master’s thesis tested and improved my English vocabulary, use of different subject-specific terminology, and my academic writing skills in general.

Lastly, the most significant change that I noticed after completing my study is my improved self-confidence. Prior to enrolling in this Master’s degree, I often doubted myself in both personal and professional life decisions. During the course of study I noticed positive change in the way I approach problems and how I take on new challenges. Overall, I developed a more positive attitude and became more enthusiastic about my future professional, personal or academic endeavours.

**8.4. Conclusion**

Overall, studying for MSc in Information and Library Management was a new and extremely rewarding experience.

As the saying by Thomas Jefferson goes, “if you want something you have never had, you must be willing to do something you have never done”. Relating to this quote, writing this Master’s thesis and conducting original research was undoubtedly an experience that tested and improved my critical thinking, time management, language, communication and
an array of other skills. And while there is, as always, a lot of space for improvement in all aforementioned areas, awareness of my weaknesses and improved self-confidence are the greatest strengths I have gained during this journey.
Bibliography


Appendices

Appendix 1: Survey questions

1. What is the institution you are employed at?

2. Years of experience as subject librarian:
   - less than 2 years
   - 2-4 years
   - 4-8 years
   - 8 or more years

3. What is your area of subjects?
   - Arts and Humanities
   - Social Sciences
   - Physical Sciences
   - Health and Medicine
   - Cross disciplinary

4. Which statements describe your, as subject librarian, use of VLE (Blackboard, Moodle, etc.) of your institution? Please tick all that apply.

   - Managing resources that are linked to VLE (e.g. databases, subject guides, tutorials, etc.).
   - Sharing responsibility for maintaining VLE site with academics.
   - Maintaining a VLE site with other librarians.
5. Do you have editing rights for individual course sites in VLE?

- Yes
- Yes, to some courses
- No

6. How often do you use VLE for the following activities?

<table>
<thead>
<tr>
<th>Activity</th>
<th>Very often</th>
<th>Sometimes</th>
<th>Seldom</th>
<th>Rarely</th>
<th>Never</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information literacy instruction</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Discussion forums</td>
<td></td>
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<td></td>
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<tr>
<td>Interaction with academics</td>
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<tr>
<td>Virtual reference</td>
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<td></td>
</tr>
<tr>
<td>Providing links to library resources</td>
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<tr>
<td>Blogging</td>
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</tbody>
</table>

7. Do you have Subject Guides page?

- Yes
- No

8. Please rate how satisfied are you with the platform you are using to create Subject Guide(s) in the following aspects?

<table>
<thead>
<tr>
<th>Aspect</th>
<th>Very satisfied</th>
<th>Satisfied</th>
<th>Neutral</th>
<th>Dissatisfied</th>
</tr>
</thead>
<tbody>
<tr>
<td>IT skills required</td>
<td></td>
<td>⬤</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Very satisfied</td>
<td>Satisfied</td>
<td>Neutral</td>
<td>Dissatisfied</td>
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<td>---------</td>
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</tr>
<tr>
<td>User friendliness</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Time required to maintain/create</td>
<td></td>
<td></td>
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</tbody>
</table>

9. How can your Subject Guide(s) be accessed? Please tick all that apply.

- [ ] Through library website.
- [ ] Links provided within course site in VLE.
- [ ] Integrated into module reading list.
- [ ] Other (please specify) __________

10. To what extent are lecturers willing to collaborate in relation to providing course-related library resources in VLE?

- A great deal
- Quite a bit
- Somewhat
- Very little
- Not at all

11. How do you feel about the following statements?

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly agree</th>
<th>Agree</th>
<th>Neither agree nor disagree</th>
<th>Disagree</th>
<th>Strongly disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Library resources are not represented enough in institution's VLE.</td>
<td></td>
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<tr>
<td>Subject librarians' use of VLE depends on the amount of collaboration with academics.</td>
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</tr>
<tr>
<td>It is academics' role and responsibility to provide library links and embed library resources at course level in VLE.</td>
<td></td>
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</tr>
</tbody>
</table>
12. Could you name few key aspects that, in your opinion, best describe the concept of "embedded librarian":

13. In your opinion, is this VLE supporting this concept? If yes, how? If not, why?
Appendix 2: Email invitation to take a research survey

Dear (participant name),

My name is Laura Zaliene. I am a student of MSc Information and Library Management in Dublin Business School.

I am currently doing my Master’s thesis. I am very interested in subject librarians’ involvement with VLEs (Virtual Learning Environments), e.g. Moodle or Blackboard, etc.

I was wondering if you would be willing to be interviewed, at a time and place convenient to you as part of my research. The interview should take between 30 minutes and one hour.

The title of my research project is “Investigation into the level of involvement of subject librarians with VLEs (Virtual Learning Environments) in Irish universities”.

I hope to explore subject librarians’ perspectives, attitudes and influencing factors of the use of VLEs and other online tools to deliver course specific guides.

I hope to conduct my interview at the end of June - beginning of July, e.g. between 30th June and 12th July.

Before you agree to participate in the interview I would like confirm that:

- Your anonymity will be maintained at all times and no comments will be ascribed to you by name in any written document or verbal presentation. Nor will any data be used from the interview that might identify you to a third party.

- You will be free to withdraw from the research at any time and/or request that your transcript not be used.

- With your permission the interview will be recorded.

- A copy of the interview questions will be sent to you several days before the interview.

- I will write to you on completion of the research and a copy of my final research report will be made available to you upon request.
I sincerely hope that you will be able to help me with my research. If you have any queries concerning the nature of the research or are unclear about the extent of your involvement in it please contact me at (e-mail address).

Finally, I would like to thank you for taking the time to consider my request and I look forward to your reply.

Yours sincerely,

Laura Zaliene
Appendix 3: Interview information sheet

INTERVIEW INFORMATION SHEET

**Title of study:** *Investigation into the level of involvement of subject librarians with VLEs (Virtual Learning Environments) in Irish Universities.*

You are invited to participate in this research project which is being carried out by Laura Zaliene. Your participation is voluntary. If you agree to participate now, you can still withdraw at any time without any consequences of any kind.

The study is designed to investigate how subject librarians are using Virtual Learning Environment (VLE) of their institution. The aim is to identify broader trends and constitute a contribution to better understanding of influencing factors and challenges experienced by subject librarians in relation to their use of online tools and involvement in VLEs to deliver course-specific support.

If you agree to participate in my research, I will conduct an interview with you at a time and location of your choice. The interview will involve the following questions:

1. Do you use a VLE of your institution? How often?
2. What features are you using most? Why?
3. What factors are likely to influence (positively or negatively) your use of VLE?
4. Are academics collaborating in relation to embedding library resources in course sites in VLE? If yes, how often?
5. What platform are you using for creation of Subject Guides?
6. How satisfied are you with it? Are your Subject Guides promoted in VLE? If yes, how?
7. Are you familiar with the concept “embedded librarian”? In your opinion, what are the key aspects of “embedded librarianship”?
8. In your opinion, are VLEs supporting this concept? If no, why? If yes, in what ways?

The interview should last 30-60 minutes.

With your permission, the interview will be audio recorded. The recording is to accurately record the information you provide, and will be used for transcription purposes.
If you choose not to be audio recorded, I will take notes instead. If you agree to be audio recorded but feel uncomfortable at any time during the interview, I can turn off the recorder at your request. Or if you don't wish to continue, you can stop the interview at any time.

Any information or data which is obtained in this research will be treated confidentially. This will be done by coding the names of participants and institutions, e.g. instead of personal name, titles Participant A1 or Participant B2 will be used.

If you have any questions about this research, please feel free to contact me.

E-mail: (e-mail address)

Phone: (phone number)
Appendix 4: Interview consent form

CONSENT FORM

Title of research project:

Investigation into the level of involvement of subject librarians with VLEs (Virtual Learning Environments) in Irish Universities

Name and position of the researcher:

Laura Zaliene, student of MSc Library and Information Management, Dublin Business School

I confirm that I have read and understood the information sheet for the above study and have had the opportunity to ask questions.

I understand that my participation is voluntary and that I am free to withdraw at any time without giving a reason.

I agree to take part in the study.

I agree to the interview being audio recorded.

I agree to use of anonymised quotes in publications.

__________________________________________________
Participant's Name (please print): __________________________

__________________________________________________
Participant's Signature Date

Please initial box

Yes No