University of Cyprus Library students’ perceptions of information literacy

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Title: University of Cyprus Library students’ perceptions of information literacy

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Abstract:
The purpose of this qualitative study is to contribute knowledge on how students in an academic setting conceptualise information literacy, how they interact with information and library provided resources to meet their information needs, as well as to examine how the academic library supports students with their studies as a facilitator and its role in information literacy instruction.

Taking a qualitative approach, the study used semi-structured interviews to gather the necessary data. To collect the empirical data, twenty-six students of the University of Cyprus (UCY) who actively use the library of the institution were interviewed. After the interviews, several themes emerged concerning how students conceptualise information literacy, as well as their opinions on the role of the library as a facilitator for their studies. The findings showed that students relate information literacy mainly to information seeking activities and the appropriate use of information. Concerning the use of library resources, students tend to use both printed and electronic material in order to meet their information needs. The findings also revealed that students are satisfied with the library collection as they find it quite sufficient in helping them accomplish their studies. As far as the teaching of information literacy is concerned, most interviewed students believe that a stand-alone credit information literacy course would be more beneficial and efficient for students, rather than an information literacy course embedded in one of their classes. The importance of an active mode and the compulsory nature of these courses against a passive mode and non-mandatory nature has also been stressed by the students.

Keywords: Information literacy, information skills, academic libraries, university students, Republic of Cyprus, University of Cyprus, library instruction
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CONTENTS

1. INTRODUCTION ......................................................................................................................... 1

2. BACKGROUND, PROBLEM STATEMENT AND RESEARCH QUESTIONS .................................. 3

2.1 Background and problem statement ...................................................................................... 5
2.2 Research aim and questions .................................................................................................... 6
2.3 Research context ..................................................................................................................... 7
2.3.1 The University of Cyprus ................................................................................................. 7
2.3.2 The University of Cyprus library ...................................................................................... 7
2.4 Thesis structure ...................................................................................................................... 8

3. LITERATURE REVIEW .............................................................................................................. 9

3.1 Overview of research ............................................................................................................. 9
3.1.1 Students’ information literacy competency assessment .................................................. 9
3.1.2 Academic library usage by students ................................................................................. 12
3.2 The role of librarian in information literacy within academic library .................................. 13
3.2.1 Students’ perceptions of information literacy instruction ................................................. 14
3.3 Information seeking in academic libraries ............................................................................. 15

4. THEORETICAL PERSPECTIVE AND CONCEPTS .................................................................. 17

4.1 Theoretical perspective ......................................................................................................... 17
4.2 Concepts of information seeking related to information literacy ......................................... 18

5. METHOD .................................................................................................................................. 20

5.1 Selection of method ................................................................................................................. 20
5.2 Selection of participants ......................................................................................................... 21
5.3 Design and conduct of interviews ......................................................................................... 22
5.4 Method of data analysis ......................................................................................................... 24
5.5 Research ethics ....................................................................................................................... 25

6. EMPIRICAL FINDINGS ............................................................................................................ 26

6.1 Information literacy perception ............................................................................................. 26
6.2 Information seeking ............................................................................................................... 28
6.3 How does the library and the librarian help? ....................................................................... 33
6.4 Information literacy seminars ............................................................................................... 35
6.5 Limitation ............................................................................................................................... 39

7. DISCUSSION ............................................................................................................................. 39

7.1 How students understand the information literacy concept ................................................. 40
7.2 How students use library sources to cover their information needs .................................... 44
7.3 The library as a facilitator of students’ studies .................................................................... 46
7.4 The role of the library in information literacy instruction .............................................. 48

8. CONCLUSIONS AND SUGGESTIONS FOR FURTHER RESEARCH ........................................... 51

8.1 Conclusions ...................................................................................................................... 51

8.2 Suggestions for further research .................................................................................... 52

SUMMARY .............................................................................................................................. 54

REFERENCES .......................................................................................................................... 56

Appendix 1: Interview guide (in Greek) ................................................................................ 69

Appendix 2: Interview guide (in English) .............................................................................. 71

Appendix 3: Face-to-face and telephone interviews (sound recording) and length of the interviews ........................................................................................................................................... 73

Appendix 4: Permission from UCY Library acting director .................................................. 74

Appendix 5: Participants informed consent form (in Greek) ............................................. 75

Appendix 6: Participants informed consent form (in English) ........................................... 77

Appendix 7: Interviewees’ discipline and year of studies ..................................................... 79
1. Introduction

Information literacy is a widely discussed subject in the Library and Information Science (hereafter, referred to as LIS) research community worldwide, in various contexts. How do university students perceive the concept of information literacy? Are they aware of this term? Do they know what it means to be information literate? Questions like these have been at the centre of researchers’ attention ever since the term information literacy was initially mentioned by Paul Zurkowski in 1974.

Background and some definitions of information literacy

The term information literacy has its roots in 1974 when it was first mentioned by Paul G. Zurkowski - who was at the time president of the Information Industry Association - in a report to the National Commission on Libraries and Information Science (Zurkowski, 1974). Zurkowski referred to techniques and skills that people had acquired in order to use the wide range of information tools:

*People trained in the application of information resources to their work can be called information literates. They have learned techniques and skills for utilizing the wide range of information tools as well as primary sources in molding information solutions to their problems*” (Zurkowski, 1974, p. 6).

When Zurkowski was asked in an interview by Jeffrey V. Kelly (on his way to the first European Conference on Information Literacy in 2013), how he came up with this definition in 1974, he said that information industry companies found that once information was produced in machine-readable form, they could deliver it in any medium their customers desired (Kelly, 2013, p. 164). Zurkowski could see that these companies’ efforts - electronic funds transfer systems - were changing the fundamentals of publishing and that the population as a whole needed to be educated on how to make the fullest possible use of the new services and thus, how to find information. Hence, he wrote to the Commission urging for universal information literacy training (ibid). Zurkowski was much ahead of his era when he first used the term information literacy, as he seemed prophetic about people’s need for acquisition of the appropriate skills and techniques to be able to use the abundance of the information that surrounds them. Badke (2010), who was fortunate to have a long conversation with Zurkowski, mentions that Paul Zurkowski, unlike most in his generation, saw the information age as a new reality, an utterly new era in which our ability to access and use the best information is the beating heart of society.

Of course, today, forty-four years after the first reference of the term “information literacy” by Zurkowski, many things have changed dramatically, especially due to the rapid development of technology. Apart from the term information literacy, other terms related to information literacy appeared like “computer literacy”, “digital literacy”, “internet literacy”, “critical thinking skills” etc. Many works have attempted to define information literacy, (ALA, 1989; SCONUL, 2011; ACRL, 2016) but all had as a base the main idea captured by Zurkowski, according to which, people who have acquired skills and techniques so that they can handle, search, evaluate and use information effectively and appropriately, can be called information literate.

Sandy Campbell (2004), in her paper presented at a conference of the International Federation of Library Associations (IFLA) in Buenos Aires, Argentina, noted that definitions of information literacy abound. This statement seems to be right as, in the
literature, there is a profusion of definitions that attempt to determine what information literacy is. Various researchers have continued to conduct studies on definitions of information literacy (Lloyd, 2005; Tewell, 2015; Forster, 2015; Bruce, 2016) that have appeared since the initial one by Paul Zurkowski. However, Professor Edward Owusu-Ansah - currently Dean of Cheng Library at the William Paterson University, New Jersey, USA (William Paterson University, n.d.) - in his article with the title: " Debating definitions of information literacy: enough is enough!" in 2005, suggested an end to the continuous attempts of defining information literacy and simply getting on with the practice and teaching of information literacy itself (Owusu-Ansah, 2005). What Owusu-Ansah meant - probably - was that working on information literacy is much more important than attempting to define again and again its meaning. Besides, as Campbell (2004) mentions: “so much effort and ink has been dedicated to defining this term” (Campbell, 2004, p.1), referring to information literacy definition efforts.

The definition of information literacy by the American Library Association (ALA) that was put forward in 1989 reads:

\[
\text{Information literacy is a set of abilities requiring individuals to} \ \text{recognize when information is needed and have the ability to locate, evaluate, and use effectively the needed information (ALA, 1989).}
\]

The above definition may be a broad one but, it seems that it can be applied in many fields (e.g. everyday life activities, the university community, etc.) and in many countries around the world without a substantial difference. People tend to need information skills for their professional, personal, and even entertainment activities (Rader, 2003).

Christine Bruce and Hilary Hughes put it in another way and relate information literacy with the concept of informed learning. They argue that, informed learning, is a part of information literacy which considers the “effective use of information for learning, rather than focusing predominantly on the acquisition of information skills.” (Bruce and Hughes, 2010, p. A3).

Noteworthy is the definition of information literacy by the Society of College, National and University Libraries (SCONUL) United Kingdom and Ireland, which reads:

\[
\text{Information literate people will demonstrate an awareness of how they gather, use, manage, synthesize, and create information and data in an ethical manner and will have the information skills to do so effectively (SCONUL, 2011, p. 3).}
\]

SCONUL’s definition is extended and accompanied by the core model of the seven pillars of information literacy which defines the core skills and competencies (ability) and attitudes and behaviours (understanding) at the heart of information literacy development in higher education (SCONUL, 2011). According to this model, an information literate person must:

1) Identify (be able to identify a personal need for information),
2) Scope (can assess current knowledge and identify gaps),
3) Plan (can construct strategies for locating information and data),
4) Gather (can locate and access the information and data he needs),
5) Evaluate (can review the research process and compare and evaluate information and data),
6) Manage (can organise information professionally and ethically),
7) Present (can apply the knowledge gained; presenting the results of their research, synthesising new and old information and data to create new knowledge, and disseminating it in a variety of ways) (SCONUL, 2011).

More recently, Annemaree Lloyd (2017), emphasising the importance of information literacy instruction notes that becoming information literate requires the development of a meaningful understanding of how knowledge is constructed, located, situated and valued within a landscape and the range of activities that enable information to be drawn from that knowledge base (Lloyd, 2017, p. 93).

In 2016 the Association of College and Research Libraries (ACRL) - a division of the American Library Association (ALA) - in its Framework for Information Literacy for Higher Education, updated the information literacy definition that was presented by ALA in 1989, as follows:

*Information literacy is the set of integrated abilities encompassing the reflective discovery of information, the understanding of how information is produced and valued, and the use of information in creating new knowledge and participating ethically in communities of learning* (ACRL, 2016).

**Information literacy in the context of academic libraries**

Information literacy is applied in many sectors of everyday life. Saunders (2017) notes that information literacy is widely recognised as critical to student success in college and beyond. Indeed, university students need information literacy to attain essential information skills in order to cope with their studies by accessing the needed information effectively and efficiently. However, it happens that many students do not know how to access and use appropriate information. Therefore, teaching of information literacy is essential to university students.

As Lloyd (2010) explains, generally in the higher education sector, information literacy instruction is viewed as the process of facilitating students’ connection with textual sources such as: databases, web-based resources, through information and communication technology and print literacy, blending knowledge of sources with a range of skills and/or competencies that will enable an individual to use information effectively in this setting.

**2. Background, problem statement and research questions**

Libraries have, for centuries, played an important part in collecting, preserving and mediating the information concealed in manuscripts and printed books (Reimo, 2008, p. 105). To move around in these immense storehouses of knowledge, users need guidance (ibid). Information literacy can provide library users with appropriate skills, so they search, find, evaluate and use information in libraries. Within the context of the current study, the author considers that information literacy is related to LIS as librarians are
usually those who build bridges between library users and the library information sources through information literacy instruction.

The author of this thesis - a librarian at the University of Cyprus library for seventeen years - finds the topic of information literacy interesting, as this relates to the students who use the library (the author’s workplace) and often show a rather low level of information literacy competency. A study to measure students’ information literacy competency was not possible though due to practical reasons such as the distribution and collection of paper questionnaires since online questionnaires could not have been sent because of the restriction of using students’ e-mail addresses by the university staff. Therefore, the author decided to conduct a study on students’ information literacy perceptions and consequently followed a qualitative research method with interviews.

In this study the author would like to consider information literacy by ACRL in 2016, which is an updated version of the ALA definition released in 1989. This definition was chosen because - in this thesis author’s point of view - it encompasses the components of a person of our era where almost everything and especially information has gone online, and therefore he can easily adopt abilities which allow him to search, find, evaluate and use information. Hence, he can attain a set of integrated abilities to handle information. In addition, this updated definition is set under the Framework for Information Literacy for Higher Education and consequently it fits this study as the latter seeks to answer questions within the higher education field. This Framework is the most current ACRL guide for the academic community regarding information literacy competency (Bloomsburg University of Pennsylvania, n. d.). In the author’s point of view, a difference between SCONUL’s and ACRL’s definition of information literacy is that ACRL in its definition, includes “the understanding of how information is produced and valued” while SCONUL does not mention the understanding of how information is created.

The notion of information literacy followed in this study, falls rather in what Lloyd (2017) calls “conceptual space” when she distinguishes information literacy in two spaces: the “conceptual space” and the “practical space”. The first includes views, perspectives and studies of information literacy mainly in a theoretical aspect, whereas the latter focuses mainly on the practical segment. In the practical space, information literacy is shaped by teaching, learning or informed policy development within specific settings (such as higher education or schooling) (ibid). The current thesis is in line with the “conceptual space” since its object of study is how students perceive information literacy. Moreover, Limberg et al. (2012, p. 96) note that the term information literacy has been mainly used in the context of library practice.

As the topic of information literacy from university students’ perception within the Republic of Cyprus has not been discussed considerably, the current qualitative study will attempt to shed light on the way university students experience the procedure of searching, acquiring, and using information to cover their information needs in the academic field, with the aid of the academic library. To undertake this study, four research questions were posed. The first question concerns how students conceptualise information literacy within the academic context. The second question deals on how they handle the services offered by the academic library. The third question concerns how the academic library supports students’ development of information literacy and the fourth question deals with the effectiveness of the current information literacy seminars offered by the University of Cyprus library. The study will be accomplished in a qualitative
research method, by conducting interviews with students of the University of Cyprus (hereafter, referred to as the UCY) as active users of the library of this institution.

2.1 Background and problem statement

Over the years, many studies concerning information literacy in the context of academic libraries have been conducted worldwide. According to the annual Reference Services Review bibliography which gathers and presents the professional and scholarly literature on library instruction and information literacy-related topics, in 2016 there was an increase in publications from 488 to 523, the majority of which (370) were oriented toward academic libraries (Reynolds et al., 2017, p. 596). This increase shows that information literacy in academic libraries continues to attract much attention in the research field.

Information literacy instruction

Earlier in 2004, Owusu-Ansah stressed the importance of the role of academic libraries in information literacy and suggested a programmatic solution that ensures that every undergraduate is provided with information literacy instruction before graduation (Owusu-Ansah, 2004). Many studies on information literacy in relation to academic libraries have focused on information literacy instruction for students (Chen and Lin, 2011; Jabeen et al., 2016; Tuamsuk, 2013; Molea et al., 2013; Cook, 2014; Seiler et al., 2012; Webber and Johnston, 2000), paying much attention to the role of academic libraries as protagonists for information literacy instruction. The librarians’ points of view on information literacy in academic libraries was the object of study by Korobili et al. (2008), who investigated the attitudes and perceptions of Greek librarians regarding information literacy programmes and their preparedness for such programmes.

Saunders (2012), discusses the absence of the various faculty members from the discussions about the integration of information literacy into the curriculum, and underlines the need for the integration of such courses in the curriculum. Professional librarians in the United States who provide information literacy instruction were surveyed by Julien et al. (2018) with the aim of gaining insights into their practices (like hands-on activities, Web-tutorials, individualized instruction (one-on-one) etc.) and the challenges they face (like time issues, insufficient support, balance between instruction and other job duties etc.).

Students’ perceptions of library services

Other studies have focused on students’ perceptions of academic library services (Nzivo and Chuanfu, 2013; Tomlin, Tewell, Mullins and Dent, 2017; Datig, 2014), the way students use the library and its services (Dunne, 2016) and even the non-use of libraries (Toner, 2008). Students’ perception of library services could be considered as a component related to information literacy, since it indicates how much students are capable of recognising and using information in libraries. In other words, what students think of library services, reflects whether they know what libraries can offer them to help them cover their information needs.
However, studies that have focused on understanding how students conceptualise information literacy as well as how they experience finding, evaluating, and using information in the academic library have not attracted much attention, within the Republic of Cyprus. Therefore, the problem which this study addresses, focuses on how students who attend the University of Cyprus perceive information literacy in an academic library context, how they interact with information and how they handle the services that the academic library offers. It is important to know how students understand and apply information literacy in order to help library stakeholders to better design information literacy instruction, so as to be more effective.

Thus, interviews with students of the UCY are needed to explore how they perceive information literacy and the process they follow to execute their assignments. Moreover, as Korobili et al. (2008) suggest in their article about information literacy in academic libraries in Greece and Cyprus, “further research needs to be conducted in the users of the academic libraries to specify how they actually interact with information, what kind of resources they tend to use and how they use them, so that librarians will be able to develop information literacy skills programs customized to their needs” (Korobili et al., 2008, p.191). Moreover, this study provides an exciting opportunity in which to contribute to the field of information literacy amongst university students in the Republic of Cyprus.

### 2.2 Research aim and questions

The aim of the current study is to gain an understanding of how students conceptualise information literacy in an academic context, how they interact with information sources as well as how the academic library supports students’ development of information literacy. Understanding students’ research processes and preferences can allow academic libraries to improve their services, so as to meet users’ information needs to the highest possible level. The following research questions have been generated to fulfil the aim of this study and to gain the required knowledge:

- How do the students conceptualise information literacy within the academic context of the University of Cyprus?
- How do they use the library’s resources to meet their information needs?
- In what ways does the library support students’ development of information literacy?
- How effective are current information literacy seminars offered by the University of Cyprus library?

To answer the research questions, empirical data were collected in the form of semi-structured interviews. The interviews were translated (from Greek to English) and then transcribed by the author. The analysis of the interview transcripts and notes of this study are presented by combining two approaches suggested by Kvale (1996): meaning condensation and meaning categorization.
2.3 Research context

The present research is set within the UCY library. In this section, a brief description will be given with regard to the UCY and the UCY library.

2.3.1 The University of Cyprus

The University of Cyprus is located in Nicosia - the capital city of the Republic of Cyprus - was established in 1989 and admitted its first students in 1992. It was founded in response to the growing intellectual needs of the Cypriot people and is well placed to fulfill the numerous aspirations of the country. (The University of Cyprus Brief History, n. d.). Admission for the majority of undergraduate students is by entrance examinations which are organised by the Ministry of Education and Culture of the Republic of Cyprus, and the competition for places is intense (ibid).

Some key facts about the UCY, as they appear in the UCY Strategic Plan 2016-2025:

- UCY offers a range of undergraduate, postgraduate, and professional study programs from eight faculties, twenty-two departments, eleven research units, two institutes and fifteen organizational entities.
- In the academic year 2015-16 the total number of students was close to 6,880 (5,050 undergraduates and 1,830 graduate students).
- UCY is staffed by 356 academic staff members, 57 members of special educational staff, 190 expert scientists, and 465 members of administrative staff.
- UCY is financially supported by 57% from state funding and 43% from own revenues. It provides education with free undergraduate studies and subsidized tuition fees for postgraduate studies (Master and Ph.D.) (The University of Cyprus Vision and Mission, n. d.).

2.3.2 The University of Cyprus library

The UCY library belongs to the UCY, which is a public university. As of the year 2016, it holds 354,598 physical copies, 30,000 electronic journal titles, 186 bibliographic, statistical, and economic databases, full-text collections, etc., and 422,418 e-books acquired through purchase or subscription (The University of Cyprus Library Annual Reports, n. d.). It also includes digitized archival material (printed, audio, photo, video) for the historical and cultural heritage of Cyprus, Greek Literature, and Information Science (The University of Cyprus Library Sources, n. d.). The UCY library is currently divided into six branches, one of which is a closed-access stack space, not accessible to the public. The other branches are open to the public and offer circulation services.

Noteworthy is that in December 2009, the UCY library became the first library in Greece and Cyprus to achieve the EFQM Recognized for Excellence distinction, awarded by the European Foundation for Quality Management (Stavridis and Tsimpoglou, 2012). The EFQM Recognized for Excellence is a peer-assessment carried out by a team of trained assessors from EFQM member organizations. The insights that this assessment delivers
help in understanding how well current management practices perform and pinpoint where further improvements could be made (EFQM Recognized for Excellence, n. d.).

While this information is being written, the UCY Library is in process of completing its new huge and modern building “Learning Resource Centre ‘Stelios Ioannou’”, which began construction in February 2012 and is expected to finish in the next few months. All current branches will be merged within the new building, which was designed by the French architect Jean Nouvel.

Information literacy seminars offered by The University of Cyprus Library
Among the services that the UCY library offers to its users are seminars for the identification and processing of scientific information, which are called “information literacy/seminars” on the UCY library’s webpage. The aim of these seminars is the promotion, dissemination and the utilization of the available sources of printed and electronic information offered by the UCY library to its users. The seminars are optional and can be arranged with the librarian in-charge (The University of Cyprus Library Information Literacy/Seminars, n. d.). These seminars are not embedded in any courses of programmes. The contents of the seminars are the same for all fields of studies, but they can be adjusted to a specific discipline to be more explanatory and understandable to the students.

The seminars offered are about: 1) The library catalogue: Services, collections, branches, 2) Online information services, 3) Search techniques, 4) Bibliographic management tools (RefWorks, Mendeley, CiteULike, Zotero) (ibid).

2.4 Thesis structure
The present study is organised into eight chapters and a summary. The study begins with Chapter 1, which is the introduction of the thesis and presents the term information literacy. Chapter 2 presents a background, states the research questions, displays the research context and shows the structure of the thesis. The thesis continues with Chapter 3 which is a literature review of previous studies concerning students’ information literacy competency assessment, academic library usage by students, the role of academic library in information literacy instruction, and information seeking in academic libraries. Theoretical perspective and concepts of information seeking related to information literacy that frame the current study, are presented in Chapter 4. In Chapter 5 the author explains the method chosen for this study and describes the procedures followed, such as data collection and analysis. Chapter 6 presents the empirical findings of the study, and Chapter 7 discusses these findings in relation to similar studies’ findings and related literature. The thesis ends with Chapter 8 which provides answers to the research questions in a form of conclusions and presents suggestions for further research, based on the findings of this research. In addition, a comprehensive summary of the whole thesis is followed by references and necessary appendices attached to the present study.
3. Literature review

Research is greatly strengthened by placing new information in the context of what is already known about an issue (Blaxter et al., 2010, p. 122). A literature review of previous studies can provide a better understanding for the work to be done in the current study. A literature review can also identify the gaps in the literature which have the potential to act as the catalyst for research. To enrich the knowledge of this study, a relevant literature review has been done by searching the library of the University of Borås, the UCY library, the EBSCO Host database, as well as trustworthy and valid sources on the World Wide Web. The following keywords were used in various combinations, preferably from 2008, for searching the above sources: ‘information literacy’, ‘academic libraries’, ‘university students’, ‘information literacy skills’, ‘information literacy competency’, ‘academic library usage’ ‘information literacy instruction’, ‘information literacy seminars evaluation’.

The focus of this study is on students’ perception of information literacy in an academic setting. However, other issues related to information literacy will also be addressed in this chapter, since they fall within the information literacy field and can contribute to the knowledge of information literacy more broadly. The first section of the literature review chapter will address previous research concerning the assessment of students’ information literacy competency and the usage of academic libraries by students. The second section will focus on the role of the academic library in information literacy instruction, examining the role of the librarian on this issue and students’ perception of information literacy instruction. The third section will deal with information seeking in academic libraries.

3.1 Overview of research

This section of the literature review chapter presents first, an overview of studies that have students’ information literacy competency assessment as an object of study and second, the usage of academic libraries by students.

3.1.1 Students’ information literacy competency assessment

The information literacy competency of both undergraduate and postgraduate university students is an area of concern for librarians, educators and more broadly, researchers of the LIS field. Many studies have been conducted focusing on the assessment of students’ information literacy competency, to find out about the level at which students can use library resources, and generally if they can search, find, assess, and use information efficiently. Studies to determine students’ awareness of library information resources have been undertaken both with students having or not having attended information literacy seminars, as well as both with undergraduate and postgraduate students. Some examples of such studies are given below.

It is quite interesting that some universities pay considerable attention to the information literacy skills acquisition of students and do invest on related programmes. Remarkable
is the example of California State University (CSU) of which the Chancellor’s Office - in 1996 - allocated money to most of the CSU campuses with the recommendation that $10,000 of this amount be used for projects involved in developing student information competency (Dunn and Cook Adamson, 1997). However, CSU did not only offer information literacy skills programmes, it also assessed the results of these programmes. In 2002, Kathleen Dunn presented the first findings of CSU’s assessment programme which was carried out in three phases and included a multi-method, multi-year approach, using qualitative and quantitative strategies. As phase III was still in progress, the results of phase I and phase II were revealed, and showed that students usually turn first to the computer to begin their research (Dunn, 2002). Having in mind that the study was done in the early 2000s, it seems that online information seeking as a first step, is a tactic that continues to be followed ever since. The tactic of turning to computer firstly for information seeking may be used to a greater extent nowadays, as electronic information abounds and, it abounds increasingly.

The study at CSU found that “the more years of college students have, the better able they are to suggest a variety of resources (e.g. text-based, Internet, people, and institutions) to address their information needs” (Dunn, 2002, p. 34). Similar finding has been noted in the study by Samson in 2010. Samson conducted a study at the University of Montana in 2007 and 2008 and compared information literacy skills between first year and capstone students (students in their last year of studies) and found that capstone students attain higher-level research skills (Samson, 2010). Additionally, students in the CSU assessment programme, not only were able to suggest more potentially useful resources, but they also had a better idea of the content and context of the resources, and of how they would fit into a research strategy. Although this CSU assessment programme was not finished by the time the related article was written by Dunn, the preliminary results showed that the information literacy competence programme had started to become fruitful, as students were gradually acquiring information literacy skills.

It seems that library instruction in the first year of studies contributes to the early stages of information literacy development. Fain (2011), in a quantitative study to examine the changes in students’ information literacy skills after receiving a one-shot library instruction session, and after five years of assessment, concluded that “first year students may have a way to go, but assessment indicates they are making progress” (Fain, 2011, p. 118). It could be said that students, when entering university, need to take information literacy courses. In a study of first-year business students, at the Independent University, Bangladesh, Shoeb (2011) reports that first-year students require more competencies to solve information-related problems.

Many students can be considered “information illiterate” when they enter institutions of higher education. The findings of the study performed by Gross and Latham (2007) support this idea, as 45% of the students in the sample tested as non-proficient in their information literacy skills. The same authors in another research on first-year students at two community colleges in the spring and fall of 2009 and again in the spring of 2011, supported in their findings previous research that indicates many students come to college without proficient information literacy skills. What is more, the findings showed that below-proficient information literacy skills have inflated views of their abilities, and that this inability to recognise their lack of skills can also be expressed by students who tested as proficient. The abovementioned studies by Gross and Latham show that most students not only enter higher education institutions without information literacy skills or with a
low information literacy skills level but, they have the view that they do have a high level of such skills. An explanation as to why they overestimate themselves may be due to the fact that they can handle computers adequately and because they probably believe that using search engines - like Google - to write an assignment at university is the right way.

Regarding graduate students, an important improvement when assessing information literacy competency is noted. The study undertaken by Emde and Emmett (2007) at the University of Kansas on graduate students enrolled in a chemistry bibliography course over a three-year period, indicated evidence of skill development over the course of the semester for specified outcomes. When Singh and Joshi (2013) assessed the information literacy competency of first- and second-year postgraduate students at Haryana Agricultural University, Hisar, India, concluded that the information literacy competency of postgraduate students has been found satisfactory, along with a significant difference between the first- and second-year postgraduate students. Singh and Joshi (2013, p. 471), noted that, variation in the results of students may be due to the reason that the first-year students had yet to complete some of the courses offered.

Assessment of students’ information literacy all over the world, is usually done using assessment tools that have been designed by librarians only or by librarians in collaboration with faculties. Most of these tools anchor on the ACRL Information Literacy Competency Standards for Higher Education (Emde and Emmett, 2007; Emmanuel Baro and Fyneman, 2009; Samson, 2010; Gross and Latham 2011; Seiler et al., 2012) or, ACRL Information Literacy Standards for Science and Engineering/Technology, 2006 (Singh and Joshi, 2013), as these standards have become a benchmark in information literacy programmes. The abovementioned studies were based on ACRL 2000 standards (or 2006), since they were undertaken after 2000 and before 2016 when the new standards were released. The five ACRL 2000 competency standards are as follows:

1. Determine the extent of information needed.
2. Access the needed information effectively and efficiently.
3. Evaluate information and its sources critically and incorporate selected information into one’s knowledge base.
4. Use information effectively to accomplish a specific purpose.
5. Understand the economic, legal, and social issues surrounding the use of information, and access and use information ethically and legally (Gross and Latham, 2011).

It may happen that, where ACRL competency standards are not applied in information literacy seminars that are offered to the students, the seminars may not have the desirable outcomes. For example, if only a demonstration about library’s services is delivered to the students instead of well-designed information literacy instruction based on ACRL competency standards (or other credible and approved standards), students would not attain proper information literacy skills. Korobili et al. (2009) in their study at the Technological Education Institute (TEI), Thessaloniki, Greece, found a difference between those respondents who have “attended an information literacy course integrated in the curriculum” and those who have not. The authors gave a possible explanation for this, mentioning that “one may doubt whether the courses that are offered comply with the information literacy competency standards for higher education set by ACRL, since the differences between those who have attended a course and those who have not are not
statistically significant. Besides, the library seminars, which last one or two hours, mainly include Online Public Access Catalog (OPAC) and library databases instruction” (Korobili et al., 2009, p. 351-352). As Korobili et al. (2008, p. 180) mention, most libraries do not deliver information literacy programs, but some kind of library instruction.

3.1.2 Academic library usage by students

University students are expected to use the library and its resources. However, the nature and extent of its use are often not very well-known to the library stakeholders. Do students use the academic library enough or, do they just follow the familiar way: the ‘Google way’? In the case of an academic library, the term “library”, encompasses the services that the library offers to its users, be it physical or electronic.

Nowadays, most libraries (not only academic ones), have become hybrid, namely, they operate both physically and electronically. Although libraries have gone digital concerning the availability of their material and services on a high grade, students still appreciate physical items and sometimes they prefer them to electronic. Clark (2015), mentions that when the topic of physical versus electronic resources arose in focus groups in the research he undertook, while some merits of electronic resources were acknowledged, there was a general preference for printed materials. Lack of awareness of available services and the use of the Internet, were among the factors of non-use of the library in Toner’s (2008) study on non-use of library services in a UK academic library.

In the age of electronic collections, it could be considered strange that the use of printed books is consistent while the use of e-books is less frequent, as mentioned by Tomlin et al. (2017) in their article presenting part of a large-scale, multi-year ethnographic study to better understand how students conduct research and study in the library. It is likely that, students prefer printed to e-books because they probably find the procedure of finding and using the e-book more complicated than finding a book on the shelf. The abovementioned study also revealed that “in contrast to books, which become less important to students as they progress in their studies until the graduate level, finding articles becomes more important as students spend more time at the university” (ibid, p. 642). Electronic articles are gaining the preference of students, possibly because they are easier to search and download in databases.

Digital collections in libraries may have been developed enormously in the recent years but, the use of the physical space of a library, should not be neglected. The students visit the library buildings, not only to borrow books or to use computers and printers but because they find there a quiet “shelter” where they can study comfortably and privately. The students’ most common task when visiting the library building, is to study on their own (Bryant et al., 2009; Hall and Kapa, 2015; Kim, 2017; Ojennus and Watts, 2017).

Academic libraries seem to be sufficiently used by students, but there is still room for increasing their usage. For example, libraries can raise students’ awareness by being involved in the social media. In a recent study, Stvilia and Gibradze found that, “students perceived library social media postings related to operations updates, study support services, and events as the most useful” (Stvilia and Gibradze, 2017, p. 257). A strong and active presence of libraries in social media - which are a part of young people’s and
thus students’ everyday lives - can promote library services, contributing to their dissemination.

3.2 The role of the librarian in information literacy within an academic library

In our era where many everyday activities can be performed on the internet and almost everything is searchable on internet search engines, understandably, first year students enter university with preconceived ideas about evaluating information based on their experiences with Google search engine rankings, usually without cautious analysis and assessment of the results. Miller and Bartlett, in their article where they presented their research on how well young people are being equipped to meet the challenge of sorting good information from bad, argued that many are not careful, discerning users of the internet and that they are unable to find the information they are looking for, or they trust the first thing they see (Miller and Bartlett, 2012, p. 35). Therefore, librarians organise and deliver information literacy programmes aimed at helping students to attain information literacy skills that will help them in their studies and later on, within their workplace.

Librarians’ expertise is highlighted by their long tradition of being experts on the material of the library and of guiding users on the trustworthiness and appropriateness of different books, articles, and other information artefacts in relation to different situations (Sundin, 2008). Therefore, the importance of the role of the librarian as designer and facilitator in the teaching of information literacy courses could not be neglected. As Chang and Wu (2012) mention, librarians have always been considered as educators and promoters of information literacy. Librarians undertake various information literacy programmes and they are constantly looking to improve the methods in which they teach information skills to students, to increase the students’ competencies in this area.

Moreover, it is important that librarians assess these programmes, as by assessing what students do and do not know, librarians can be more purposeful in instruction and can more effectively integrate information literacy into the curriculum (Schaub et al., 2017). Oakleaf and Kaske (2009), mention three main reasons why librarians need to assess information literacy. First, information literacy assessment data can be directly applied to increase student learning. Second, librarians need to use information literacy assessment data to respond to calls for accountability. Finally, information literacy assessment results can be used to improve library instruction programmes.

Librarians all over the world, use several methods of instruction which can be roughly divided into computer-assisted (a computer is used to deliver the instruction directly to the student) and traditional (instructional material is transmitted to students from teachers). Information literacy initiatives in higher education have taken a variety of forms: stand-alone courses or classes, Web-based tutorials, course-related instruction, or course-integrated instruction (Virkus, 2003). Koufogiannakis and Wiebe (2006), carried out a systematic review to assess which library instruction methods are most effective for improving the information skills of students at an introductory, and undergraduate level. The authors searched fifteen databases and retrieved 4,356 potentially relevant citations and of these, 55 studies met author-defined quality criteria to provide information on the effectiveness of different teaching methods. From this review there was a final group of
16 studies with sufficient information to enable meta-analyses and calculations of standardized mean differences. The authors found sufficient evidence to suggest that computer assisted instruction is as effective as traditional instruction.

Nevertheless, it must be mentioned that not all students take classes in information literacy or research skills as these classes are not always mandatory by universities. Toner (2008), stresses the need to embed information skills teaching into the curriculum. Integrating them into the curricula could result in better information literate students. The IDEA (Interview, Design, Embed, Assess) model - a library-specific systematic approach to integrating information literacy instruction and resources within academic courses - which was adopted and applied by Kimberly Mullins, showed that information literacy skills applied in the context of an academic discipline improve student academic performance (Mullins, 2014).

However, applying information literacy skills in the context of an academic discipline is not so easy to be done as there are some issues that librarians face. A research project conducted by the Library at the University of Auckland, found that many of the subject librarians were uncertain how to promote the integration of information literacy to academic staff, and that they felt they lacked the pedagogic knowledge and skills to do so (Moselen and Wang, 2014). Hence, good communication and discussion between librarians and faculty staff on the one side and, appropriate pedagogic knowledge to librarians on the other, may result in a successful integration of information literacy instruction into the curriculum and thus a higher level of information literacy to students. Moreover, in a study of Faculty members, Saunders (2012) concluded that while participants strongly believe information literacy is important, they still have not found systematic ways to integrate it into their curriculum.

Apart from the non-mandatory information literacy seminars, there are also the mandatory ones which some universities are adopting. The example of the University of New South Wales (UNSW) Academic Board which launched a mandatory online information literacy tutorial in late 2004, showed that the collaboration of librarians with university stakeholders and other units can successfully develop a programme that provides information literacy instruction. The tutorial called ELISE (Enabling Library and Information Skills for Everyone), is a mandatory online tutorial on how information is organised and used in the university context. It is a UNSW requirement that all new undergraduate and postgraduate coursework students complete the tutorial and attain at least 80% in the ELISE quiz following the tutorial (The University of New South Wales Handbook 2015, n. d.). ELISE is currently applied in the University of New South Wales. Nevertheless, online information literacy tutorials, compulsory or not, proved to be beneficial for students (Sundin, 2008; Seiler et al., 2012; Ellis, Johnson, and Rowley, 2017), although in a few cases they were found less preferable by them (McCartin, Iannacchione and Evans, 2017).

### 3.2.1 Students’ perceptions of information literacy instruction

What students believe and how they perceive information literacy instruction is an important and interesting matter, as their opinion could constructively contribute to a better (re) design and implementation of information literacy seminars. Knowing what students think of information literacy seminars helps the library stakeholders modify the
content of the seminars, as well as the way these are conducted, to make real and tangible improvements in the information literacy skills of students.

Students seem to appreciate information literacy instruction not only when it is offered as stand-alone seminars, but when embedded in university courses as well. Dubicki (2015), in her study of the research processes of upper-level undergraduate and graduate students, notes in her results that students mentioned library instruction as being helpful when it was embedded in courses. The same study asserts the importance of students attending library instructional sessions, with a student commenting: “An instruction session was fundamental to my academic career” (Dubicki, 2015, p. 677). The effectiveness and value of information literacy instruction for students is also highlighted in a research conducted by Kim and Shumaker (2015).

However, student perception of information literacy instruction may change depending on the teaching methodology and other structural and pedagogical factors. Detlor et al. (2012), studied the impact of active (students are fully involved and participate in the learning process) and passive (students are passive recipients of the information they receive) learning strategies in the teaching of information literacy for undergraduate students at a medium-sized Canadian university and found that, not only is the active way more efficient, but students prefer it to the passive way as well (Booker et al., 2012).

Another important issue concerning information literacy courses is the time frame in which they are delivered to students. When these courses are attended by students in the first year of their studies, they could be much more beneficial than if they are attended at a later stage. McCartin, Iannacchione and Evans (2017) have studied student perceptions of a required information literacy course and one of the most important findings of their study was the period of time in students’ careers that they should take the instruction course. The students’ overall view was that when taking the course early on in their career, it helped them substantially in their studies in the following years as they could implement the skills learned from the information literacy courses to their assignments (McCartin et al., 2017). Moreover, students in Paterson and Gamtso’s (2017) study mentioned that information literacy sessions helped them more generally with brainstorming, drafting, and evaluation of sources. Thus, information literacy instruction does not merely serve the purpose of students’ information literacy skills acquisition for the preparation of their assignments during their studies, but it also helps them broaden their way of thinking in a more general context.

### 3.3 Information seeking in academic libraries

According to Bawden and Robinson (2012), ‘information’, ‘knowledge’, ‘document’, and other similar words, are tricky concepts, which can have many different meanings, and can be understood in many different ways. In Library and Information Science, information is a core concept, yet it is neither simple nor unambiguous (Limberg et al., 2012, p. 97). As people understand information differently, they may seek it anywhere: newspapers, government offices, journals, libraries and of course, the Web. The Web seems to be a very popular tool for information seeking, as we live in a digital era with technology growing at a rapid pace and with an increasing availability of information, with the Web being an immense provider of electronic information. According to
Saracevic (2007), the advances in Information Retrieval (IR) systems are based on advances in information technology and therefore, searches are faster, databases larger, interfaces more flexible, reaches are global. Low-cost equipment and simple software have made electronic information directly available to everyone (Arms, 2000) and thus, knowledge is available at one’s fingertips via the Internet (Schmidt, 2007).

The Web might be a very widespread tool for information seeking, but libraries seem to hold a high position in the list of information seeking means as well. For university communities, the academic library is the main means for research and studies. Information seeking and information retrieval are activities that characterise students’ interaction with libraries namely, they seek and retrieve information in a variety of ways (printed material, databases etc.).

Baeza-Yates and Ribeiro-Neto (2011) mention that information retrieval deals with the representation, storage, organisation of, and access to information items such as documents, Web pages, online catalogues, structured and semi-structured records, and multimedia objects. These are components encompassed in academic library services. While students may use search engines to obtain information, they still seem to appreciate their institutions’ libraries, considering them as a reliable and trustable information source. The student respondents in the study of Lo and Chu (2015), appeared to be enthusiastic users of traditional printed resources and also of their own institution’s library.

Brophy and Bawden (2005) found that Google is superior for coverage and accessibility, but library systems are superior for quality of results. Wu and Chen (2014) in their research on graduate students’ perception of Google Scholar, concluded that students prefer the usability of Google Scholar over library databases, while they appreciate the quality of documents retrieved from library databases and regard these databases as crucial tools for finding scholarly documents. Komissarov and Murray (2016) in their study about factors that influence undergraduate information-seeking behaviour, reported frequent use of Wikipedia and that 40% of students start their search process with the Google search engine. They also found that students do visit the physical library frequently to conduct their work involving library research, and frequently during the week for other reasons (like photo-copying). Google is probably used by students mainly due to its ease of use: it has just one search box where someone types a search term.

In 2013, when Georgas examined student preferences and perceptions on Google vs. the library, found that 81.2% of the students, answered “Google”. It must be noted though that, in the cases where Google is reported as the preliminary way of information seeking by students, studies are conducted with undergraduate students. Studies conducted with graduate students show a lower preference of Google as their main information seeking means (Thomas et al., 2017).

It seems from the above that, undergraduate students often lack the skills necessary to succeed in the rapidly changing environment of higher education (Mishra, 2017) and to use library services appropriately and efficiently. This is why information literacy instruction must be offered to students in the early stages of their studies.
As mentioned in the introduction of this thesis, many studies concerning various aspects of information literacy in the context of academic libraries have been conducted but, studies focusing on how students conceptualise information literacy and how they experience finding, evaluating, and using information in the academic library have not attracted much attention, especially within the country of this thesis author. The focus of the current study is the students’ conception of information literacy.

4. Theoretical perspective and concepts

This chapter presents the theoretical perspective and concepts which frame the current research. The theoretical perspective deals with a constructivist learning approach, concerning both information literacy as a concept and information literacy instruction. Basic concepts related to information seeking, as they might relate to information literacy, are presented. This theoretical perspective and concepts serve as an analytical and interpretative basis for the findings of this study.

4.1 Theoretical perspective

While there are many definitions of information literacy, this study adopts the definition provided by ACRL in 2016. This recently modified definition states that, information literacy is the set of integrated abilities encompassing the reflective discovery of information, the understanding of how information is produced and valued, and the use of information in creating new knowledge and participating ethically in communities of learning (ACRL, 2016). In addition, the ACRL Framework for Information Literacy for Higher Education (2016) can provide the library stakeholders with the pedagogical underpinning to advance the students’ level of understanding of information literacy concepts.

A constructivist learning approach

ACRL (2016) stresses that, in the rapidly changing higher education environment, students have a greater role and responsibility in creating new knowledge. This falls rather into a constructivist approach, which means that the learner is an information constructor and that new information is linked to prior knowledge. In constructivism, learning is an active, contextualised process of constructing knowledge rather than acquiring it (David, 2015). As learners, students must continually gain new knowledge and add it to what they already know. As mentioned in the IFLA (International Federation of Library Associations) Guidelines on information literacy for lifelong learning, 2006, “a constructivist approach focuses on students engaging with information to solve a problem and thereby creating new understanding through active investigation and thought, instead of memorizing facts presented in class lectures” (Lau, 2006, p. 9). This kind of approach needs information literacy skills since it engages student’s interaction with information. Constructivist learning theories promote students’ engagement as one of the key factors in successful learning and knowledge building (Zdravkovic, 2010, p. 49). The constructive process of learning in the library requires services that enable individuals to relate new information to what they already know and extend that knowing to form new understandings (Kuhlthau, 2004, p. 5)
Moreover, a constructivist learning approach can be applied in information literacy instruction as this approach relies on an active way of learning. Active learning is any approach to instruction in which all students are asked to engage in the learning process (Centre for Educational Innovation, n. d.). As such, active learning can result in more positive student learning outcomes than passive. An active way of teaching information literacy allows students to get involved in the learning process. Thus, by participating actively in the learning process, students are encouraged to use their critical thinking and skills such as analysis, synthesis, reflection, and evaluation. For example, a hands-on active learning technique in the context of an information literacy instruction class, is when students are given a scenario (i.e. to find literature about a specific area or subject), and attempt to search, find, evaluate, and use the necessary information and sources, using the available library services. In this way, by actively engaging with information and resources in order to solve problems, they can create knowledge.

Detlor et al. (2012), in their study related to active and passive information literacy instruction, assert the importance of active learning in the context of information literacy instruction. In the same study, results indicate that passive instruction is not an effective style of teaching in yielding positive student psychological, behavioural, or beneficial outcomes, and that instead, active instruction yields more positive effects. Likewise, positive are the results of the study of the web-based information literacy course “Basics of Information Literacy”, which was based on a constructivist learning approach (where active learning techniques were used, and critical thinking was developed through reflection and analysis of fellow students’ assignments), developed at the University of Tartu, Estonia in 2006. Seiler at al. (2012), presented in an article the initial results of this e-course, which indicate that learners place a high value on the knowledge and skills learned in the e-course and that they consider information literacy as a necessary skill to acquire. In other words, students value the knowledge and skills obtained from constructivist learning approach-based courses.

The above-mentioned examples indicate that a constructivist learning approach on information literacy instruction can be beneficial and fruitful for students, as this way of learning encompasses the involvement of students in the learning process. In the author’s opinion, the constructivist approach of learning can support the analysis and discussion of the present study, as interviews will focus on students’ experiences of how they gain new information and build on their existing knowledge, through information seeking, as well as on their opinion on the involvement of students in the learning process.

4.2 Concepts of information seeking related to information literacy

The search, retrieval and use of information, are basic activities within the information literacy context. According to Pilerot (2016), information literacy can be used as an analytical/theoretical concept which is applied as a tool for analysing or theorising a phenomenon (e.g. information-seeking and -use activities). Information seeking is inextricably linked with information literacy. In the simplest terms, information seeking
involves the search, retrieval, recognition, and application of meaningful content (Kingrey, 2002, p.1).

Based on two decades of empirical research, Carol Kuhlthau developed an information seeking model named Information Search Process (ISP), which is a six-stage model of the users’ holistic experience in the process of information seeking (Kuhlthau, 2004). According to Kuhlthau, the ISP is defined as the user’s constructive activity of finding the meaning from information to extend his or her state of knowledge, including initiation, selection, exploration, formulation, collection and presentation:

- **Initiation**, when a person first becomes aware of a lack of knowledge or understanding, and feelings of uncertainty and apprehension are common.
- **Selection**, when a general area, topic, or problem is identified, and initial uncertainty often gives way to a brief sense of optimism and a readiness to begin the search.
- **Exploration**, when inconsistent, incompatible information is encountered, and uncertainty, confusion, and doubt frequently increase, and people find themselves “in the dip” of confidence.
- **Formulation**, when a focused perspective is formed, and uncertainty diminishes as confidence begins to increase.
- **Collection**, when information pertinent to the focused perspective is gathered and uncertainty subsides as interest and involvement deepens.
- **Presentation**, when the search is completed with a new understanding enabling the person to explain his or her learning to others or in some way put the learning to use (ibid).

Kuhlthau’s ISP model can be translated to students’ experience in information literacy as follows: students initially discover the lack of knowledge and try to be more confident in order to start searching for the identified problem. Then, they explore but they feel uncertain of what they find so, they investigate information in order to extend personal understanding. So, confidence is increased, and the stage of knowledge construction appears. Then, interaction between students and the information system becomes more effective and efficient, as they start to gather information related to the focused topic. Finally, students feel relieved and satisfied if the search was accomplished well, or disappointed if it was not. Namely, they present the results of their information seeking when they apply knowledge. Today, research on pedagogical aspects of information seeking and information literacy research is to a large degree dominated by constructivist approaches, partly due to the strong influence of Kuhlthau’s work (Sundin, 2008).

The abovementioned concepts may serve as a basis to understand the opinions of the respondents of this study. The focus of this study is on how the participants interact with information, how they experience the whole information seeking procedure, and overall, how they experience seeking and using information within the academic context. Kuhlthau’s ISP model can be used to analyse students’ information seeking process in the discussion of the current study.
5. Method

Choemprayong and Wildemuth (2017) report that, the specific research question is the most critical criterion in selecting the research method. However, as Patton (2015, p.21) notes, there is no recipe or formula in making methods decisions, that is, there is no a specific norm or pattern that a researcher must follow. Locke et al. (2010, p. 87), support that there is no “best type of research” - there are only good questions matched with procedures for inquiry that can yield reliable answers and that, in every study all of the components must be compatible with the nature of what the investigator seeks to learn. Moreover, Silverman (2013, p. 6) points out that methods cannot always be ‘right’ or ‘wrong’, only more or less appropriate. Qualitative, quantitative, or mixed methods can be used for research, depending on what the researcher seeks to examine. Qualitative and quantitative methods have different strengths and logics and are often used to address different kinds of questions and goals (Maxwell, 2004; Maxwell and Loomis, 2003). Overall, it can be said that, the quantitative method measures things and the qualitative method understands and interprets things. The choice of research method that has been chosen for the current study is presented further down.

5.1 Selection of method

**Qualitative interviewing (semi-structured interviews)**

The present study is exploratory with the aim of contributing knowledge about how students conceptualise information literacy in an academic setting, how they interact with information and library provided resources to meet their information needs, as well as to discover their opinions on information literacy instruction within the academic environment. Moreover, an attempt will be made to look into the role of the academic library in information literacy instruction. Qualitative interviewing has been chosen as the method for the present study and specifically, semi-structured interviews. Interviews are appropriate when the purpose of the researcher is to gain individual views, beliefs, and feelings about a subject (Pickard, 2013). In qualitative research, interviewing may be the sole method used in an investigation (Bryman, 2012). Denzin and Lincoln (2011) mention that, qualitative research involves the studied use and collection of a variety of empirical materials - case study, personal experience, introspection, life story, interview, etc. - that describe routine and problematic moments and meanings in individuals’ lives. This study intends to use empirical material (interviews) that describes respondents’ routine responding to academic assignments.

Semi-structured interviews are one of the most useful data collection methods for studying a wide range of information behaviours (Luo and Wildemuth, 2017). This type of interview involves the implementation of a number of predetermined questions and special topics. These questions are typically asked of each interviewee in a systematic and consistent order, but the interviewers are allowed the freedom to digress; that is, the interviewers are permitted (in fact, expected) to probe far beyond the answers to their prepared standardised questions (Berg and Lune, 2017). Bryman (2012) notes that qualitative interviewing is meant to be flexible and to seek out the world views of research
participants and that in qualitative interviewing, there is much greater interest in the interviewee’s point of view.

Through interviews, the opinions and experiences of participants concerning information literacy in the academic environment were collected and their opinions on the subject were discussed. The interviews have been conducted mainly in the author’s office, which is situated in the UCY library premises, as well as via telephone in the cases where a face-to-face meeting with the respondents was not possible. In the author’s opinion, if the interviews have not taken place in the author’s office but somewhere else and the interviewer was not a librarian the results would not have been affected much. The students seemed very confident about what they said and did not hesitate to say something negative or to mention things that they do not like about the library.

A limitation of face-to-face interviews is that the presence of the researcher can bias responses (Creswell, 2009, p. 179). Moreover, the time required for data collection, analysis and interpretation is lengthy (McLeod, 2017), especially when translation is needed, as well as the transcription of the interviews. For the present study, the author had to translate the interviews from the Greek to English language which was time-consuming, as caution was needed in order to avoid misinterpretation and language mistakes. Ness et al. (2010, p. 314) stress that, translation between languages involves interpretation as well, and that the message communicated in the source language has to be interpreted by the translator (in the case of the current study the translator was the researcher) and transferred into the target language in such a way that the receiver of the message understands what was meant. As Polkinghorne (2005, p. 138) notes, the purpose of data gathering in qualitative research is to provide evidence for the experience it is investigating and, the evidence is the ideas and thoughts that have been expressed by the participants. Therefore, in the translation, caution is needed in order not to alter the meaning of what interviewees said, as consequently, their ideas and thoughts will be changed.

The material gathered by the application of this method could help stakeholders of the UCY library to understand how students experience information literacy in the academic setting, enabling them to re-design and improve its information literacy seminars, in order to achieve the best possible outcomes concerning students’ information literacy competency.

5.2 Selection of participants

The participants who were interviewed for this study have been selected by convenience sampling method and by snowball sampling method. The total number of respondents was twenty-six (26) (See Table 1: Respondents codes).

Table 1: Respondents codes

<table>
<thead>
<tr>
<th>Respondents</th>
<th>Codes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Undergraduate students</td>
<td>A1-A20</td>
</tr>
<tr>
<td>Master’s students</td>
<td>B1-B4</td>
</tr>
<tr>
<td>PhD students</td>
<td>C1-C2</td>
</tr>
</tbody>
</table>
Convenience sample is one that is simply available to the researcher by virtue of its accessibility (Bryman, 2012). This sampling method involves obtaining participants wherever the researcher can find them and typically, wherever is convenient (Dudovskiy, n. d.). Snowball sampling is a sampling technique in which the researcher samples initially a small group of people relevant to the research questions, and these sampled participants propose other participants who have had the experience or characteristics relevant to the research; these participants will then suggest others and so on (Bryman, 2012, p. 424).

Therefore, initially the author - being a librarian - selected students who were working in the library. The fact that there was an intimacy between the author and the respondents, was the reason the author had chosen the convenience sampling method instead of the purposeful sampling method in which, respondents are selected because of their relevance to the research questions (ibid). Purposefully selected participants are those who best help the researcher understand the problem and the research question (Creswell, 2009, p. 178). For example, if a researcher seeks to investigate heart disease treatment, cardiologists and nurses who treat patients with heart problems are the most suitable respondents for the specific purpose.

Moreover, it was likely that students who know the author would easily accept to participate in the research. Indeed, when they were informed about the research, they promptly accepted to participate stressing that, being students themselves they do recognise the importance of participation in researches. Later, to raise the number of respondents, and to maximise information yield (Pickard, 2013, p. 65), the author asked them to suggest some other suitable ones and they did so, willingly. Participants were from different disciplines who develop different information practices.

5.3 Design and conduct of interviews

Means of data collection
The empirical data for this study was collected - as mentioned earlier - by means of semi-structured interviews that were conducted face-to-face or via telephone. Telephone interviews were conducted in the cases where it was not possible for the author and the interviewee to meet in person. Telephone interviewing is quite common in survey research (Bryman, 2012, p. 488). Although a telephone interview is a quick and easy means for interviewing someone, it may result in shortening the time of the interview. It is much easier for the interviewee to terminate a telephone interview than one conducted in person (ibid, p. 488). Interviews included several predetermined questions. However, the author was able to reorder the questions during the interview, change the wording, as well as to add probing questions.

Interview guide and Pilot interviews
An interview guide with questions has been designed for collecting interview data (See Appendix 1 and 2: Interview guide). The interview guide has been pretested with three pilot interviews with three students who were easier for the author to contact than the other students of the sample. It is always desirable, if possible, to conduct a pilot study before administering a self-completion questionnaire or structured interview schedule to
the sample (Bryman, 2012, p. 263). Pilot interviews have been conducted to test the interview guide and to clarify questions that could possibly be misunderstood. The purpose of piloting research instruments is not only to ensure that survey questions operate well; piloting also has a role in ensuring that the research instrument as a whole functions well (ibid, p. 263). Pickard (2013, p. 192), notes that a pilot interview may not reveal all the potential problems, but it is the closest to the real thing without wasting time and asking the wrong questions, asking them in the wrong way or asking them of the wrong people.

After the pilot interviews had been conducted, the interview guide was modified according to the issues that arose. This was done to improve the quality of the interview guide. Once the first pilot interview finished, the author stopped the recording. To the author’s surprise, the conversation with the student continued for about thirty minutes more. Although the conversation was about libraries in general and not focused just on the subject of the study, some extra useful information could be gained and used in the transcription. Therefore, in the next interviews the author continued the recording even when the questions were ended. During the second and third pilot interview, one question was considered as vague, and so it was removed from the guide.

**Interview questions**
The questions generated for the interview were based on the author’s knowledge of research literature in the information literacy field and professional experience with students as an assistant librarian at the UCY library for seventeen years. The interview guide consisted of two main parts: A) closed questions, which gave basic data of the respondents (such as their discipline) and B) open-ended questions, which explored respondents’ experiences and opinions about information literacy within the academic context and what actions could probably be taken by the library to help its users acquire and improve their information literacy skills. The open-ended questions were structured under four main themes, which were derived from the research questions of this study: 1) Information literacy concept, 2) Information seeking in the library, 3) Information sources usage in the library, 4) The role of the library.

**Procedure of interviews**
The basic procedure of the interviews was: initially, the author greeted the interviewee and gave him the informed consent form which the latter signed and then, a discussion took place. As Yin (2011, p. 134) notes, the qualitative interview follows rather a conversational mode and so, it was not just the author asking questions and the interviewee answering; it was rather a discussion between them. At the end of each interview the author thanked the participant, stressing that his contribution to the study was very important, helpful, and much appreciated. In the cases where the interview was conducted via telephone, the author sent the interviewee the informed consent form prior to the telephone conversation, which was sent back to the author signed. This procedure was made with the “in-house correspondence” facility of the UCY by sending envelopes from one office to another to exchange paper documents.

**Timeframe for data collection**

1. Pilot interviews: from 14th to 18th of March 2018 at the author’s office within the UCY Library premises.
2. Main interviews: from 19th to 28th of March 2018 at the author’s office within the UCY library premises and via telephone.

Overall, twenty-six (26) respondents - pilot interviews included - were interviewed from 14th to 28th of March 2018. The interviews lasted 24 minutes on average. This average was calculated by the author who added the minutes of all interviews and then divided the sum by twenty-six which was the number of the interviews. (See Appendix 3: Face to face and telephone interviews (sound recording) and length of the interviews).

**Recording of interviews**

Methods of recording interviews for documentation and later analysis include audio recording, video recording, note taking and remembering (Kvale and Brinkmann 2009, p. 178). In qualitative research, the interview is usually audio-recorded and transcribed whenever possible (Bryman, 2012, p. 482). The data was collected in the form of a recording (on the author’s cell phone) and with written notes. All the interviews were recorded to ensure that no answers were missed.

**Transcription of interviews**

Bryman (2012, p. 498) notes that the qualitative interview should be recorded and then transcribed. Transcriptions are constructions from an oral conversation to a written text (Kvale and Brinkmann 2009, p. 183). The transcriptions were done very carefully to ensure that the meanings of the answers were not altered. During the transcriptions, special attention was paid to the tone of respondents’ voices because as Kvale and Brinkmann (2009, p. 185) point out, “even the exact same written words in a transcript can convey two quite different meanings, depending on how the transcriber chooses to insert periods and commas”. The transcriptions were made as soon as each interview finished. Pickard (2013, p. 201), suggests that the transcription should be done as soon after the interview as possible. Indeed, the immediate transcriptions of the interviews helped the author to remember almost everything so, it was easy to transcribe the interviews having in mind every single word that was said by the interviewees. The interviews resulted in twenty-eight A4 size handwritten sheets. The author worked carefully and well organized in order to deal with the transcriptions (e. g. each answer that was used in the text was marked with a “tick” to avoid the re-use of it).

### 5.4 Method of data analysis

After the transcriptions, the interviews were carefully read in an iterative way and were then broken down to main headings and categories that might reflect the research questions of this study, the literature review, and the theoretical context, e. g. information literacy conception, information seeking.

Kvale (1996), distinguishes five main approaches to interview analysis:

1. Categorization of meaning
2. Condensation of meaning
3. Structuring of meaning through narratives
4. Interpretation of meaning
5. Ad hoc methods for generating meaning (ibid, p. 187).
The analysis of the interview transcripts and notes of this study will be presented by combining two of the above-mentioned approaches: meaning condensation and meaning categorization (Kvale, 1996). Meaning condensation entails an abridgment of the meanings expressed by the interviewees into shorter formulations (Kvale and Brinkmann 2009, p. 205), without changing the main sense. Meaning categorization includes coding the interviews into categories (Kvale, 1996, p. 196) to make it possible to investigate occurrences (Kvale and Brinkmann 2009, p. 205). Therefore, after the transcription and translation of the interviews, an iterative reading took place to understand as best as possible the content of the texts. Then, meaning condensation allowed for shorter formulations so their handling was easier. Finally, categorization generated several themes that labelled the interviews, with the labels relating to the research questions.

5.5 Research ethics

In every research work some ethical issues arise and must be considered prior, during and after the research procedure. Some of these issues have to do with participants’ eagerness to participate in the research, their right to be informed about research targets, the protection of participants’ personal data, and of course the necessary permission. In the case of the current study, permission had to be obtained from the acting director of the UCY library to conduct the interviews among the students-users of the library. Even though the author had the intention to interview students, an official permission from the acting director of the UCY library was undoubtedly needed. Pickard (2013) points out that engaging in research within your organisation does not mean that because you are already a member of this community you do not need permission to engage in the research.

Therefore, prior to the commencement of the interviews, an e-mail was sent to the acting director of the UCY library on January 23th, 2018, asking for permission to conduct the interviews (See Appendix 4: Permission from UCY Library acting director). Permission was granted by the director on January 30th, 2018. Subsequently, in the consent form for the participants, the author mentioned that such permission had been acquired. The permission for conducting a study in an institution solely though, is not enough. The participants must be informed about the study in which they participate and give their consent to the researcher. Pickard (2013) states that every participant in a research study, however small a part they play, has the right to be asked if they are willing to take part. The researcher must provide them with enough information that will allow them to inform their decision to participate in the student and to understand the implications of their participation. When participants give an informed consent it means that they understand what they are agreeing to, accept what is being asked of them, and are comfortable with the purpose of the research and the intended use of the data they are providing (ibid). Consequently, the author prepared and gave participants an informed consent form which they signed prior to the interviews (See Appendix 5 and 6: Participants informed consent form).

The Declaration of Helsinki stresses the importance of confidentiality and of the researcher taking measures to protect the integrity of research subjects and their right to protection of their private lives (The Swedish Research Council, 2017, p. 41). The interviewees had been informed that the responses given to the author are treated
confidentially and that their names are replaced with codes as A1, B2, and C3 (See Table 1: Respondents codes).

6. Empirical findings

This chapter reports on the findings of the current qualitative study. This study aimed to investigate how university students conceptualise information literacy within the academic context, how they use the library’s resources to meet their information needs. Additionally, the study examines how the academic library assists students’ studies, and what is its role in information literacy instruction.

Twenty-six students who actively use the UCY library were interviewed and based on these interviews, several themes emerged concerning how students conceptualise information literacy, as well as their opinion on the role of the library as a facilitator for their studies. After iterative reading of the students’ answers, the findings were categorised under several main themes. This chapter accounts for these themes and for their sub-themes. The chapter ends with a statement regarding the limitation of this study.

For the convenience of the reader, the discipline of each interviewee is given in a parenthesis, the first time they are mentioned in the text. The discipline and year of study of each interviewee can be seen in Appendix 7. (See Appendix 7: Interviewees’ discipline and year of study).

6.1 Information literacy perception

Firstly, the students were asked if they were familiar with the term information literacy, and what they think it means. In the case that they were unaware of this term, they were asked to assume and to mention what information skills or activities come to their mind when they hear this term. Of the twenty-six students interviewed for this study, only three were aware of the term information literacy, and twenty-three were not.

However, the latter ones, gave interesting answers mentioning a number of skills and activities that they think of when they hear the term information literacy, such as: the “search and use of information”, “access to information”, “obtaining information through technology”, “the ability to use technology/computers”, “handling information properly”, and the “use of databases”. The common skills and activities are illustrated in Figure 1. These skills and activities were included in the answers given by the twenty-three students who were not aware of the term.
Figure 1: Skills and activities that most students think of that are related to information literacy

Search and use of information
Many students said that the search and use of information are the issues that they think are related to information literacy. Interviewee A1 (History and Archaeology) said: “Information literacy brings to mind skills like searching, processing and the use of information in the right ways”. Overall, most of the respondents related the concept of information literacy to the search and use of information. Even those who did not have an assumption, just answered: “use of information”.

Access to information
The access to information was also related to the notion of information literacy by many respondents. They said that having access to information is very important as it enables someone to search for information. As A2 (Physics) had put it:

*When I hear this term [information literacy], the search and use of information comes to my mind, as well as having access to it. Without access, I think someone cannot search for information.*

Obtaining information through technology
Most students related information literacy to technology; they considered, as it emerged from their answers, that information is inseparable from technology, considering the latter as the main means to obtaining information. B4 (Civil and Environmental Engineering) said characteristically: “Information literacy? Hmm... This is access to information electronically. In our digital era, what else could it possibly be?”.
The ability to use technology / computers
Another notion that students related to information literacy was the ability to use computers and technology generally. It seemed that students clearly understood that someone must be able to use technological means to access and search for information and consequently to use it to cover his information needs. For A4 (Electrical Engineering), information literacy is “how to use technology” and, for A8 (Civil Engineering) information literacy refers to the “use of technology for accessing e-books, databases, etc.”.

Handling information properly
Apart from the students’ opinions that information literacy is about the search and use of information, students are also aware of the importance of using information properly, that is, to know what information to use and where. A11 (Accounting) said that, “information literacy is [to know] how to handle information properly, in a successful way”. It was discovered from students’ answers that they consider the way they handle information an important issue. A7 (Turkish and Middle Eastern Studies) stressed that “information literacy makes me not only think about searching for information but, handling it properly as well”. By handling information properly, the students meant the use of suitable information for a specific information need.

Use of databases
Another issue that some students related to information literacy was the use of databases or their access to them. Those who gave such an answer consider that information literacy is about knowing how to use the library’s databases. A3 (Social and Political Sciences) said that, “information literacy translates to the correct and easy search of information in databases”. A16 (Electrical Engineering) was amongst those who connected information literacy to the “use of databases”. By mentioning “databases”, students were referring to the databases that are available on the UCY library website, which many of the respondents expressed that they use.

Those who have heard of “information literacy”
Interesting are the answers of respondents A6 (Byzantine and Modern Greek Studies), B3 (Turkish and Middle Eastern Studies) and A14 (Law) who have heard of the term information literacy (only these three respondents were aware of the term):

A6: “I have heard of this term before. It’s users’ training to use library services”.
B3: “I have heard of this term. It is when someone knows how to access - via the Web - to books, journals, e-sources, etc.”.
A14: “I know the term. It is the way someone searches and collects information from the Web”.

When the author asked them when and where they had heard about information literacy, they said that they just knew of the term, and that they couldn’t remember how they came across it. A6 assumed that “perhaps a professor told us about it once…”.

6.2 Information seeking

How do students seek information?
When students were asked how they use the library or its online services to obtain information, most of them mentioned that they use the library mainly for reading and that
they mostly use the library’s e-sources to get the information they need. They also said that they find it easy to search the library’s e-sources, especially when it comes to downloading an article. Interviewee C1 (Turkish and Middle Eastern Studies: direction History) said: “I use the online library sources; very helpful and easy to use”, and A14: “I use the e-sources of the library; it is an easy procedure”. Most of the students use e-sources to cover their information needs, however, some students mainly use printed books either because their discipline requires them to, for their convenience, or because of their lack of information skills (as they admitted). Interviewee A6, said: “Because of my discipline, I mainly use printed books. In History, I don’t particularly need e-articles that may have been published the previous month”.

A2 and A7 mainly use printed books for their convenience: A2 said:

I go to the library and I find the books of my interest (fortunately they are gathered together). I don’t use e-sources; I am very bad at searching for information online. My [searching] methods are ineffective, and they are either very slow or fail to lead me to the information I want.

A7 uses only printed material because she does not like to “read on a screen and to have to scroll up and down”. C2 (Turkish and Middle Eastern Studies: direction History) searches the library’s OPAC for printed books as well as e-sources, and mainly uses the EBSCOhost database. However, as she noted, “my lack of skills, makes a better search difficult”.

The opposite occurs with other disciplines like Mechanical Engineering, Electrical Engineering or Computer Science, where the most recent studies conducted are the most appropriate and useful for students. For example, B4 said: “Because of my discipline, I only use e-sources. I need as most recent as possible information and publications”.

Most interviewees reported using a combination of printed and electronic material. Some of them mostly use printed and some mostly use the electronic material but still, these are used in combination. A small number of students exclusively uses electronic material, and a smaller number exclusively uses printed material. It seems that the disciplines of students may affect the kind of sources that they use. For example, Engineering or Computer Science students may prefer to use e-sources because they need the most recent researches. On the other hand, History or Language students may prefer printed sources as the most recent studies are not their priority.

Students were also asked about the procedure they follow when they have assignments to accomplish; it emerged from students’ answers that, the first thing they do is to identify what the assignment entails. As A14 said: “I initially examine the subject and try to find out what it requires. Then I search sources” and A17 (Mechanical Engineering): “I first try to distinguish what is needed for the task”.

Following this, they either search the library’s OPAC, or the databases offered by the library. They then find books or articles in e-journals and they use them accordingly. They do not prefer e-books though, as they find them difficult to use and the way e-books are presented are non-user friendly, e. g. many “clicks” are needed to read the chapters and their sub-sections, plus the loan period is too short (2-5 days). Moreover, they cannot download the whole book - most of the times – just some pages in one day. Overall,
students are prevented from using e-books because of a number of restrictions imposed by the provider (not the UCY library), and because of their non-easy use. A6 said that he searches the library’s OPAC for books relevant to his subject and that due to his discipline, he mainly uses printed books.

In some cases, students use specific sources that are not on the library’s website. This happens due to the nature of a specific discipline, such as Accounting. A11 for example, said:

*I only use specific sources that are guaranteed and recommended by our professors. These sources include ‘Goldman and Sachs’ and the ‘International Monetary Fund (IMF)’. I do not use the library’s website because I do not feel I need it.*

The procedure that most of the interviewed students follow to accomplish an assignment is presented in *Figure 2*. This procedure begins with the identification of information needed, then with a search on the library’s OPAC or the library’s databases, the study and use of material found (books and/or e-journal articles), and lastly, the accomplishment of the assignment.

*Figure 2: Procedure that most students follow to accomplish their assignments*

**Best path to obtaining information**

Students were asked to mention which method they consider to be the most proper or ideal way of obtaining information. Most of them answered that, the method they currently follow is the most suitable for them. As A1 said: “I am satisfied with the way I am working”. It was revealed that the method most students currently follow is a combination of printed and e-sources. Regarding this issue, A3 said: “The ideal way for me is a combination of printed books and e-sources. Both have their value”. A2 characterised this combination as a ‘qualitative’ one: “For brief and comprehensive
information: [e-] articles; for qualitative information: a combination of some [printed] books and [e-] articles”.

For some other students, the most ideal way to obtain information is by using only e-sources from the library because, apart from the fact that they find the procedure easy, they also trust these sources as they are found on the library’s website. On the other hand, there are those who insist on using only printed material, hence it is their own best way to cover their information needs. They seem to be satisfied with what they find in printed books and do not need to turn to other ways. Also, they feel more confident when they use the sources that their professors have recommended, for example, A20 (Mathematics and Statistics) said: “Printed books suggested by my professors are best for me”. A very small number of the respondents said that the Web is the best way to acquire information, although it is not always a trustable source. They prefer the Web because “it is fast and easy” as they supported, but they try to be cautious with what they find before they use it.

Interviewee A9 (Computer Engineering) was the only student who did not give an expected or ‘classical’ answer about the ideal way to access information. Being a Computer Engineering student, he took it a step further and suggested: “A well-organised database or digital library, guided by an assisted system with artificial intelligence!”, that is, an artificial intelligence system that helps and guides a person to search for information in a digital environment, minimising the person’s effort. This suggestion seemed unusual but not surprising, since it reflects A9’s field of studies.

**Library and e-sources**
Regarding the frequency with which students visit the library, it was revealed that most of them visit the library on a weekly or monthly basis, but mainly for reading as it offers a quiet and familiar environment. Even if they use mainly or only e-sources, they still visit the library often for reading. As B4 mentioned: “I use only e-sources. I still go to the library once or twice a week though, only for reading”. A12 (Mechanical and Manufacturing Engineering) enjoys something else apart from the quietness: “I visit the library once a month. I appreciate the good service offered by the staff. If I need articles, I use e-sources”.

Some students like to have many books at their disposal while they are studying. A10 (Physics) explained that he visits the library not only for its quietness but for the opportunity to work with many books at the same time as well:

> I visit the library once a week for reading because it is quite there and because I am able to have many books in front of me to study at the same time. I search the books’ contents, and this is very useful. In addition, I find it convenient that the books on my subject are located in the same place [on nearby shelves].

According to the UCY library’s regulations, undergraduate students are allowed to borrow only fifteen books for a period of twenty-one days. While they are in the library though, they can study with as many books as they want. This might be a reason that some students, like A10, prefer to study in the library.

As already mentioned, most of the interviewed students combine the use of printed and e-sources to meet their information needs, with some giving emphasis to the one or the
other way. They still appreciate the library as a place for reading undistracted. Only three of the twenty-six interviewees answered that they never visit the library for any reason.

**Alternatives for finding the necessary information**

Students were asked what they do in the case that they do not find what they need in the UCY library. Most of them declared the expected, i.e. the Web, and specifically, search engines. However, they are cautious and try to examine what they find. For instance, none of the respondents said that they use what they find in Wikipedia. The students said that if they find interesting information there, they always look up the original source. However, there may be a suspicion that some students use Wikipedia and they do not want to admit it. This was something the interviewer could not find out. A11 said: “I go to Google, but I cross-check” and A6: “I go to Google, but I search for validity of what I find. I look at who the author is. I usually end up using Google Scholar just to be on the safe side”.

Trustable sites like academia.edu (a platform for academics where research papers are shared), or eudoxus.gr (a Greek electronic service for undergraduate students, under the auspices of the Greek Ministry of Education) were also mentioned as alternative ways to find valid information apart from the UCY library. Google Books was also mentioned for books that are out of copyright (this seemed to be particularly helpful for History students). Some students said that they ask their professors for help, like B2 (Accounting): “I turn to my professors and they guide me”, or a librarian, or their course-mates, like A20: “I ask a librarian, or I search the Internet, and sometimes I ask my course-mates”.

**Evaluation of information**

Concerning the evaluation of information, all students, regardless of whether they have attended information literacy seminars or not, said that they do not have a specific way of evaluating the information they find. However, in the case that they search the Web, they are cautious and try to evaluate the results they find in ways that will be presented further down. Students shared the same opinion that, since something is provided on the UCY library’s website, they consider it as valid explaining that an academic library would not make available to its users something that is invalid or untrustworthy. Additionally, the articles that students find and use in a library’s databases are most of the times (if not always), peer-reviewed, meaning that they have been checked by experts. Students assumed that whatever is provided by an academic library is already checked: “I suppose when an article is published, I consider that it has been checked by specialists before. Besides, since it is available in an academic library, it is safe” (B1: Mechanical Engineering).

Apart from the fact that they trust “their library” for reliability and validity, students also look for some ‘signs’ and have some ‘clues’ for extra trustworthiness. These may include citations, references, and the publishers of works. C2 said that “their bibliographic references are proof for me that they are valid and good works”, while for A4 citations play an important role: “I pay attention to and appreciate when an article has been cited many times. I trust it. I also look for evidence. When something is well-documented, I trust it”. A15 (Accounting) said that she checks who the publisher is and explained that, when it is a reputable one, she definitely trusts it.

Another clue for students regarding the validity of information is when their professors suggest sources. For example, A18 (Electrical Engineering) said that, “if our professors
recommend it, it is valid and safe to use”, and A8 had the same opinion: “if something is suggested by the professor, then it is valid and reliable”. A17 also stressed the importance of professors concerning suggested sources: “professors guide us/inform us about valid sources”.

Students may trust the library’s material, however, there are some cases in which they must check for issues like bias. C1 explained: “Although the material I need is on the library’s website, I have to check it again very carefully because it’s about History. I must check for bias”. In disciplines like History, special caution is needed concerning “sensitive ethnic issues”. For example, a writer may present things from his own point of view, arguing against a specific country or race or even internationally acclaimed historical facts.

Students feel certain about a library’s trustworthiness stressing that “what is in the library, is guaranteed” but, what about information found on the Web? Concerning the “Google way”, it was discovered that students are cautious and try to evaluate what they find on Google. A10 noted that, “when it is something from the library, I do not worry. I mean, I consider it valid. If it is something from the Web, I cross-check for validity”. B4 said that he cross-checks unless a website is trustable itself:

If it is something I found on Google, I will check the provider and I will cross-check the sources. It depends though, where I found it from. If it is from an official site like the European Union, I do not need to worry!

Again, the issue of bias was mentioned for information found on the Web: “There are some sites that I realise immediately that they are biased. I try to use my own judgment. I do not trust blogs either” (A7: Turkish and Middle Eastern Studies).

6.3 How does the library and the librarian help?

The library's collection
Almost all of the students interviewed find the library’s collection quite sufficient: “I find the information I need in the library very often. I also consider the library staff excellent” (A3: Social and Political Sciences); “The UCY library has a lot of qualitative and quantitative material” (A1: History and Archaeology); “I find the information I want very often. The UCY library offers the necessary tools for its users. I find its content quite adequate” (C2).

As mentioned by A11, the professors also tell students that the UCY library is excellent in content and thus, they encourage them to use it. C1 compared the UCY library to the library of a large and well-known university in Turkey, which he had the opportunity to use while participating on the Erasmus programme: “The UCY library is very rich in material. Better than X University Library [he mentioned the name of the university in Turkey]”.

Only two students mentioned that they do not always find what they want in the UCY library. A19 said that the library could have been more specialised concerning his field of studies and A5 (Computer Engineering) said that although he does not find enough information on his discipline, he is “covered” because of the cooperation that the UCY
has with the IEEE (Institute of Electrical and Electronics Engineers). Several students suggested that an update is needed on the material of their field (e. g. Mathematics and Statistics).

Generally, students seem to be satisfied with the resources offered by the UCY library. The answers given on this issue showed that the library has the necessary tools - either printed or electronic - to help students accomplish their tasks in a proper and relatively easy way.

**Do students ask the librarian for help?**

From the twenty-six interviewees, twenty-one said that they need help with locating books on the shelves, three do not go to the library (so, they did not mention that they ask for help), one needs help only when it comes to book recall, and one asks for help through the “Ask a librarian” online service, since she rarely visits the library premises.

On the question about what they usually need help with while in the library, most of the students answered that they need help to find the books they want on the shelves. As already mentioned, students visit the library mostly for reading but, they also visit it to borrow books. However, when they cannot find the books they want on the shelves (it is their responsibility to find them on the shelves), they tend to ask the librarian to help them. Although students may be able to find books in the library’s OPAC as it is easy to use like they have said, they have difficulty in finding the books on the shelves, which is probably due to the classification system that the library uses, and which students find complicated.

The UCY library uses the Library of Congress Classification System which is divided into twenty-one main categories with many sub-categories. Each main category is symbolised by a Latin alphabet letter followed by numbers, then a letter which corresponds to an author, and again numbers etc., for example, the letter P is for Language and Literature and PQ is for Romance literatures. The classification number may be quite extended though, for example, PQ8180.17.A73A53S985 1989 and this is perhaps what confuses students. Even when a librarian shows the students how to locate books on the shelves, the students still need guidance during their next visits to the library, especially when it comes to undergraduate students. An overall impression that the author had formed from the interviewees was that the longer they had been studying, the more experienced they were in using the library’s resources. A10 is now in his fourth and final year of his undergraduate studies. When he was a first-year student, he would often ask for help, but he later progressed quite well in searching for and finding books:

> *In the beginning, I did not even know how to search the library’s OPAC so, I asked a librarian who showed me how to search the OPAC and how to find books on the shelves. Since then, I have become much better at using the library’s material.*

PhD students seem even more experienced and confident when it comes to using the available library services to acquire the material they need. C1 said that when he was an undergraduate student, he would ask the library staff to help him find books on shelves. Now, as a PhD student, he feels that he is considerably experienced in finding whatever he needs. In addition, C2, another PhD interviewee, said that she turns to a librarian only
in the case that she needs a book that has already been lent to another user that is, “book recall”. Otherwise, she feels capable of finding the material she needs.

Students were also asked whether they use the library’s online service “Ask a librarian” which offers help concerning the library and its services, but only five of the students answered that they use it. The remaining students declared that either, they do not know about this service, or, although they are familiar with this service they do not use it as they prefer to ask a librarian in the library when they need help. Those who use this online service said that they use it to ask about the library’s opening hours or for Inter-Library Loan (that is, to loan books or to obtain journal articles etc. that the UCY library does not possess, from other institutions).

6.4 Information literacy seminars

The UCY Library’s information literacy (optional) seminars
When students were asked if they were aware of the information literacy seminars that are offered by the library, only ten answered that they knew about these seminars and that they have attended some. However, some students might have in fact attended these seminars, without knowing that they were information literacy seminars. They were told (by their professors or by course-mates) that they would attend seminars during their classes about “library services demonstration” or, “a seminar on how to use the library sources”. So, the fact that they attended such seminars, does not necessarily mean that they knew that it was about information literacy and therefore, they also did not know what information literacy means. An explanation was required from the author to inform them that the “library services seminars” that they had attended were indeed information literacy seminars. As it was mentioned earlier in this study in section 2.3.2, the contents of the seminars are the same for all fields of studies, but they can be tailored to a specific discipline to be more explanatory and understandable to the students.

The small number of students who have attended these seminars, was essentially expected, as the seminars are not mandatory, and it is usually the professors who take the initiative for their students to attend the seminars. Hence, not all professors take such an initiative, probably because they are not aware of these seminars or, they do not want their students to spend their class hours elsewhere. In the case when a professor arranges such a seminar with the relevant librarian, seminars take place in the context of a course. A1 said that “during one of my classes, a librarian came into the classroom and talked to us about library services”.

Only three of the ten students who have attended these seminars stated that their information skills were improved because of the seminars. A14, a fourth-year Law student, said that “I attended a seminar in the first year of my studies and it helped me a lot. I have acquired information skills that helped me execute my assignments (like bibliography, references, etc.)”. The rest of the students who said that the seminars did not help them obtain information skills (either of a low level or not at all), declared the passive nature of the seminars as the reason. As A1 explained: “The seminar did not help me a lot because it was just an introduction to library services and very general. Besides, I did not pay much attention, as it was only theory”.

Overall, most students did not find the seminars interesting because they were delivered in a rather passive way and were theoretical, and hence, they did not help them enough to
obtain or improve their information skills. In the case of C1 the case was different. C1 did not attend an information literacy seminar during his undergraduate programme but, as a master’s student, he was enrolled in a mandatory course offered by his department called “Research and Archive sources”. As he said:

_It was a credit-course about how to use and evaluate sources. Professors taught us how to use special sources in History and how to use information appropriately. This helped me a lot in my studies. I am very experienced in finding material now that I am a PhD student._

To obtain their opinions, the author briefly explained what the seminars are about to the students who were not aware of them and thus haven’t attended, and all agreed that it would be useful if they had attended such seminars, especially in the early years of their studies. A4 obtained his first bachelor’s degree some years ago from the UCY and later went to the United Kingdom (UK) for a master’s degree (he is currently studying for his second bachelor’s degree at the UCY). As he had not attended a library seminar during his studies at the UCY, he found difficulties in searching and using sources while he was studying in the UK:

_As a master’s student in the UK, I did not even know how to search and download a journal article. If I had attended these seminars [at the UCY], I would have at least known the basics. Instead, I went abroad to continue my studies ‘uneducated’ in this field._

The students who have attended the seminars gave two main reasons for which they did not find these optional seminars very helpful. The first reason regards the length of the seminars, as they are rather short: “they [the seminars] are not very helpful because they are brief” (C2). The second reason is the mode in which the seminars are conducted as they are mostly in a passive way and theoretical: “current seminars are not so helpful, as they are presented in a passive way” (B1); “the seminars can help, if they are conducted in an active mode” (C1).

On the other hand, only a few students found that their information skills had significantly improved after attending the seminars, such as A14: “seminars are very helpful because they show the students how to use the library’s sources. They helped me a lot” and A3: “the seminars helped me very much”. By mentioning that the seminars helped them very much, they explained that they had acquired skills that helped them use the library’s sources like searching the OPAC and the databases, and how to find e-journals, articles etc.

Students expressed the opinion that the library’s non-mandatory seminars should be made compulsory for all students stating so, irrespective of whether they had already attended them or not. As B4 said: “they are important; they should be compulsory for everyone”. Through their answers, students seem to find the library seminars very useful either because “they help students to become familiar with library services” (A6) or, because “they enable someone to use the library’s sources” (A15) or, because “you learn new ways in which to search for information” (A5).
**Embedded or stand-alone credit information literacy instruction?**

Lastly, students were asked about their opinion concerning the way in which information literacy should be taught, having to choose between two options. Both options were described and explained by the interviewer to the interviewees. The first option they were given was embedded seminars to be held during a class of their studies, and the second option was a stand-alone course with credits. The question about the two modes of information literacy instruction was posed to the students although they have not experienced them. Students’ opinion on information literacy instruction mode could be useful for the library stakeholders when it comes to re-design the information literacy instruction programmes.

*Figure 3* presents the preference that students declared as the best way of teaching information literacy, with some reasons for supporting each preference.

![Figure 3: Students’ preferences of the information literacy instruction with reasons for supporting the preference](image)

Thirteen students said that they would prefer the information literacy instruction as a stand-alone credit course, ten chose the embedded seminar to be held during a class of their studies, and three said that both ways of delivering information literacy seminars would work the same and would have similar results.

Most students seemed keen about the idea of having a stand-alone library instruction credit course as a choice. They stated that, in this way, they would definitely attain information literacy skills as this kind of instruction would focus exclusively on library services and information searching techniques in detail. Moreover, having chosen an information literacy instruction course, students would pay more attention since it was their own choice, rather than being (e. g. by a professor) obliged to attend it. As B2 said:
“I would prefer a stand-alone credit course because in this way, students may pay more
text]

attention to the seminars; they would take it more seriously”. Some of the students who

supported the choice of a stand-alone credit course, did mention the collection of credits,

considering it as an incentive for choosing this course. Overall, for students who preferred

the information literacy stand-alone course, it seemed that they appreciate the focus on
library services and the obtainment of credits:

I would prefer a stand-alone credit course because it would focus on library
issues, plus the students would be awarded with credits (A10).

I would choose a stand-alone credit course. It would be more productive, and
the chance to gain credits is very attractive. Moreover, we would definitely learn
how to use the library services (A1).

Ten of the twenty-six interviewed students stated that information literacy seminars
would be more beneficial if they were embedded in one of their classes. The main reason
they declared, was the focus of the instruction on the specific class and subject, stressing
on the importance of the adjustment of library instruction to the specific class:

I would choose an embedded seminar in one of my classes, because it would help
with the search for information concerning the specific class” (A9); “embedded
because it’s specific (A20).

This way of information literacy instruction is considered as beneficial by students as, for
example, when a first-year Philosophy department student enrolls in the class of
“Introduction to Philosophy” and there are some information literacy seminars embedded
in this class, the student will obtain information skills related especially to his field of
study (i.e. Philosophy). He will then use these skills during the following years of his
studies in Philosophy. A5 noted that “library seminars are needed according to each
person’s discipline”.

In addition, uniformity in the audience was mentioned as an important feature of this kind
of information literacy instruction. As explained by C2:

… embedded because there would be uniformity [in the audience]: only
students of the same discipline would be in the audience and no others. This
would help to focus the [library] instruction on the specific discipline.

Furthermore, in contrast to the students who expressed an interest in obtaining credits
(hence they chose the stand-alone credit course), those who preferred the embedded
library instruction method were not interested in obtaining credits, like B1: “I would
choose the embedded way; I’m not bothered about obtaining credits from these
seminars”.

Three students did not express a preference and said that they find both ways logical and
beneficial. They consider that with either way of instruction, students will learn how to
use the library services as they are mature and responsible enough to take academic
related issues seriously and to pay the necessary attention.
As mentioned earlier in this chapter, almost all interviewed students strongly support that information literacy seminars should be compulsory for all students as information literacy skills are necessary to enable students to use the library services, or simply because “it is good to know how to use the library” (A17). C1 correlated the necessity of information literacy skills acquisition as follows:

> It is like if someone goes to a foreign country to study and he is obligated to learn the language [of that country] before he starts his studies because, if he does not know the language, how will he proceed with his studies?

### 6.5 Limitation

In considering the results of the current study, limitations must be made explicit. Participants are only drawn from a single institution - the University of Cyprus - and therefore the findings are localised and specific. The particular institution is the author’s workplace so, it was much easier to contact these students, rather than to contact any other institution’s students. Moreover, no obstacles were found in obtaining permission to conduct the interviews among library users (the students), as the acting director of the UCY library is the author’s director, since the author works at the University of Cyprus library as an assistant librarian.

The findings of this study cannot be used to generalise about how university students in the Republic of Cyprus conceptualise information literacy or how academic libraries in the Republic of Cyprus contribute to students’ studies and how information literacy instruction is done, because the results have been obtained only from one university within the Republic of Cyprus. This research however, may possibly provide an inspiration to others to examine information literacy competency among university students in the Republic of Cyprus. Furthermore, this study does not attempt to make broad statements about the degree of information literacy of university students in the Republic of Cyprus.

### 7. Discussion

Previous research concerning how university students in the Republic of Cyprus conceptualise information literacy, as well as how the academic library supports students’ studies and information literacy development, is very limited, as has been mentioned and documented earlier in this work. The study reported here, attempts to fill this gap by presenting empirical evidence and responds to the research questions stated in section 2.2 of this thesis (Research aim and questions).

In this chapter, the research questions will be discussed based on the empirical findings of the study. The findings will be analysed in relation to findings from other similar studies and relevant literature. Sections 7.1 and 7.2 will focus on discussing findings that may help to answer research questions one and two:

**RQ1. How do students conceptualise information literacy within the academic context of the University of Cyprus?**
RQ2. How do they use the library’s resources to meet their information needs?

Sections 7.3 and 7.4 will focus on discussing findings that may help to answer research question three and four:

RQ3. In what ways does the library support students’ development of information literacy?

RQ4. How effective are current information literacy seminars offered by the University of Cyprus library are?

7.1 How students understand the information literacy concept

The findings of this study indicate that of the twenty-six students who participated in the study, twenty-three were not aware of the term information literacy. The same finding was reported in the study conducted by Gross and Latham (2009), which found that respondents were not aware of the term information literacy and found difficulty in encoding the term. However, students in this study did not show difficulty in understanding the term and made some interesting assumptions of what they believed the term might involve, describing information literacy mainly as skills and activities relating to the search of information. In their understanding, information literacy is connected to searching for and using information in the right way (use the appropriate information for the right information need), as well as the ability to use technology and to access information. As this generation of students “was born into a reality defined by immediate access to vast amounts of information that requires almost no effort on their part to be retrieved” (Yevelson-Shorsher and Bronstein, 2018, p. 3), it is rather expected that they consider information literacy as the search and access to information, and specifically, through electronic means. In particular, students in this study gave the following answers about how they understand information literacy:

- Search and use of information
- Access to information
- Obtaining information through technology
- The ability to use technology / computers
- Handling information properly
- Use of databases.

The abovementioned answers can be summarised under a main theme: searching for information.

Searching for information

The interviews of this study examined the ways in which students manage information, namely, how they interact with information, aimed at covering their information needs for their studies. The way students handle information can be divided into three main parts. First, students seek information in several ways, then they evaluate it for validity,
and finally, they use the information according to their information needs, that is, their academic assignments.

The current study’s students do not turn to search engines as a first action when they seek information for their assignments. On the contrary, previous studies (cf. Brophy and Bawden, 2005; Toner, 2008; Georgas, 2013; Wu and Chen, 2014; Duan, 2016; Komissarov and Murray, 2016) found that students turn to search engines like Google in the beginning of their information seeking process. Moreover, “even advanced students do not use professional databases in a systematic way but instead, they prefer commercial web search engines which are easily accessible” (Mayer et al. 2013, p. 1262). Search engines are the first thing the current study’s respondents turn to, only in case they cannot find what they want in library’s sources. The study carried out by Thomas et al. (2017), revealed the same finding, according to which “students tend to begin research using library databases and do not necessarily start with Google” (Thomas et al., 2017, p. 224). Instead, they start from the library’s OPAC and databases. In other words, search engines were declared as the first alternative for the students when the library does not cover their information needs.

The students of the current study seemed to have a clear idea from where to start, unlike the findings of Yevelson-Shorsher and Bronstein, (2018, p. 8) where “students had difficulty in understanding how and where to start a search”. The current study’s students stated that they begin their search from the library’s OPAC, mainly to find books and databases, and to find articles from e-journals which they find easy to download and use. The easy use of the library’s OPAC might be a reason that students use it in the beginning of their search. As interviewee C1 reported, the library system is easy to use. However, students may consider the OPAC easy to use but it is uncertain in what way they use it. An assumption is that they mainly use simple options like “simple search” and they may ignore the variety of options that an OPAC offers. Proper information literacy skills are necessary to help students search and handle OPAC more effectively. The possible lack of information literacy skills is an issue that information literacy instruction could solve.

In fact, the very first thing that students said that they do when seeking information, is to identify what their information needs are. Interviewees said that they first consider the subject, and then attempt to distinguish the information needed. Once they have distinguished what the information they need is, they look in the library’s sources, then evaluate what they have found, and finally, they use it in their assignments. Specifically, the procedure progresses as follows: first, the identification of information needed, then comes the search on the library’s OPAC or the library’s databases, and the study and use of material found (books and/or e-journal articles) takes place. Finally, the assignment is executed.

The findings of the present study correspond to a certain degree to previous work undertaken by Kuhlthau which resulted in the Information Seeking Process (ISP) (Kuhlthau, 2004), which was mentioned earlier in this study in section 4.2. These stages constitute the user’s constructive activity of seeking the meaning from information to deepen their state of knowledge.

In Figure 4, Kuhlthau’s ISP model main concepts in association with students’ information seeking declared procedure are presented.
While most of the interviewed students (sixteen of the twenty-six) declared that they have not attended information literacy seminars at the university, they seem to follow a basic information seeking process. Namely, they first identify their information needs, and then they search the library’s OPAC where they find the material they need. A possible explanation for this could be that today’s generation of students are familiar with ways of finding information. Today’s students belong to the so called “digital natives” generation, who were raised with technological abilities and skills that older generations are still struggling to attain. In the author’s opinion though, possessing such abilities does not mean that the students are entirely information literate. For example, they may say that they know how to search the library’s OPAC but, is it really true that they know exactly how to search?

From the author’s experience as a librarian, students typically use the “simple search” with a “keyword” in the OPAC. If they have an assignment like “Turkish literature in the mid Ottoman Empire”, they search either by typing “Turkish literature” or “Ottoman Empire”, and as a result, they receive thousands of records since these terms are very broad. Students do not usually use “advanced” or “extended” search with Boolean operators, so they would be more specific in their search. Novothy (2004) in his study which explored how library users search the online catalog, found that they do not incorporate Boolean operators in their searches. Search skills are important as subtle differences in the semantic construction of search queries, including the ordering of Boolean operators, the use of synonyms, antonyms and abbreviates can return hugely different results (Miller and Bartlett, 2012, p. 40). If students knew how to narrow their search down by using Boolean operators, their results would be fewer and closer to their subject. It seems that the simple search they perform in the library’s OPAC, derives from their Google-like search habit. If they had the proper knowledge about how to search correctly, their searches would be much more effective. Interviewee A2 finds his searching methods ineffective as they are either very slow or fail to lead him to the information he wants.

**Figure 4: Kuhlthau’s ISP model main concepts (in black letters) in association with students’ information seeking procedure (in white letters)**

Initiation and Selection

- Students start the search process by identifying the information need

Exploration and Formulation

- Students search the library's sources and feel confident when they find what they need

Collection and Presentation

- Students study and use the information they found and accomplish their assignments
Therefore, in the cases where students have not acquired information skills through the library’s information literacy seminars, it can be assumed that they have achieved the information skills on their own. As Gross and Latham (2009, p. 344), in their study about undergraduate perceptions of information literacy found, “when asked how they learned what they know about information seeking, all but three of the respondents consider themselves primarily to be ‘self-taught’”. The fact that sixteen of the twenty-six students interviewed for the current study have not attended information literacy seminars at the university and stated that they initially turn to the library’s OPAC and databases for information seeking, may lead to the assumption that students are independent learners. Independent learning was a particularly striking strategy among the surveyed population in the study conducted by Pinto (2012, p. 319).

Looking at the results concerning information seeking in this study from the lens of the constructivist learning approach, it can be said that students, through their information seeking process, gain new information and by doing so, are able to build on their existing knowledge. This is connected to what ACRL suggests; that, “in the rapidly changing higher education environment, students have a greater role and responsibility in creating new knowledge” (ACRL, 2016, p. 2). Therefore, by obtaining new information, they enrich their existing knowledge by incorporating this new information to what they already know.

**Evaluation of information**

An important issue concerning the information search process and particularly the use of information, is the evaluation of this information. Typically, after information seeking and retrieving, the user must evaluate the information he has found for reliability, validity, and accuracy. This is not an easy procedure, as one of the most difficult challenges that learners face today, is to determine what can be regarded as a credible source in a particular situation (Francke et al., 2011, p. 676). But, to what degree do students really evaluate information before they use it?

When students in this study were asked if they know how to evaluate information, they said that they do not have a specific method for evaluation. Instead, they put considerable trust in what the academic library provides, stressing that they consider that what is available in the library has been checked and is valid. This may point to the assumption that, what makes the library trustworthy is the fact that the library as an organisation, cooperates with major publishers and database providers.

On the other hand, when it comes to information they find on the internet, they said that they attempt to evaluate it and are very cautious about validity, as information found on the Web is often not trustworthy (e. g. non-peer reviewed articles). Thus, they try to apply some ways to check for credibility. For example, if they find something on Wikipedia, they check the sources listed, or, they search to see if a particular source has been cited many times elsewhere. Interviewee A4 said characteristically that he pays attention and he appreciates when an article has been cited many times. It seems that students do recognize that there can be erroneous, misleading, or inaccurate information on the Web and therefore, they are careful when it comes to use information from the Web.
7.2 How students use library sources to cover their information needs

In relation to the way participants use the library and its sources, this study demonstrates that there is a tendency for students to use the library in terms of physical space, while they use its e-sources for acquiring information. In other words, the library is used for its physical affordances e.g. (a quiet) place to read, while digital space is used to access information. The choice of the library’s digital space to access information, noted in the current study, reflects the findings of the study by Tomlin et al. (2017) about student use of library information sources. In the findings reported by Tomlin et al. (2017), 40% of the interviewees declared that they use the library catalogue and 93% stated that they use the library’s databases as an information source (Tomlin et al. 2017, p. 638-639). An explanation of the students’ tendency to use library’s premises for reading and library’s digital space for acquiring information may be that, reading in the library building is usually quiet and acquiring information digitally is convenient as they can access, download, and use library’s electronic material anytime from anywhere. This way, students may cover their information needs to their desired grade.

Most of the students in the current study declared that they use the library’s reading rooms as they can read in quiet, and because they feel comfortable there. Even in the case where a student uses solely the library’s e-sources to obtain information, he visits the library building for reading, like interviewee B4 who uses only e-sources, but he goes to the library once or twice a week for reading. Similar finding has been noted by Dating (2014) in a study at New York University Abu Dhabi (NYUAD) regarding students’ perceptions of libraries. In Dating’s study, the importance of quietness in the library came up most often in the answers of the students regarding how they use the library premises, stressing the quiet atmosphere that prevails in the library (Dating, 2014, p. 353). In a study conducted by Hall and Kappa which aimed at gaining a better understanding of the specific spatial needs of the library’s campus community at Concordia University, Montreal, Quebec in 2012, the preference of the library being used for its quietness was also declared by the overwhelming majority (84%) of the respondents (Hall and Kappa, 2015, p. 11).

The preference of using the library for quiet reading which was noted in the present study, is reflected in the results of other studies as well, which also found that students visit the library mainly for studying, stressing the fact that it is a quiet place and that they find a shelter there where they can study undistracted. The studies carried out by Hall and Kapa, 2015; Kim, 2017; and Ojennus and Watts, 2017, found that the most common task of students visiting the library building, is to study on their own. Interviews in the current study also revealed that students visit the library to study on their own. The main point of the study conducted by Lux et al. (2016), which examined the reasons users go to the library, was that the primary purposes for which patrons come to the library are for studying and the use of library materials.

Students in the current study seem to be in line with students in above-mentioned studies, as they use library’s premises to read quietly and undistracted. This trend may lead to the assumption that students consider the library of their educational institution as a “nest” where they can quietly study, having the resources of the library at their immediate
disposal. Therefore, they may consider library as the main information provider for their studies.

It seems that students spend many hours in the library, mainly for the quietness they find there. Another possible reason for spending so much time in the libraries’ premises could be that students can use the libraries’ services, such as free Wi-Fi, since many of them bring their laptops along to help them with their work. As Bryant et al. (2009) note, it is the library’s combination of services which make it such an attractive study venue for individuals and groups (Bryant et al., 2009, p. 11). Various services that the library offers to its users such as free Wi-Fi, photocopy machines, etc., may be considered as facilitators to students’ studies along with other kind of services like e-sources, printed books etc. The various kinds of library services, may constitute a bunch of tools that can significantly help students to search, access and use the vast amount of information that a library offers. Information literacy skills can enable students to use these services more effectively.

As already mentioned, with regard to the question concerning about how they use the library and its sources, almost all the interviewees answered that they use the library building for studying and to use the library’s material, such as books. However, none of the interviewees in this study said that they visit the library premises to meet their friends and to have a chat with them. Opposite were the findings of Duan (2016) who examined how Chinese students use American academic libraries, according to which 34% of the research subjects indicated that they used libraries not just to seek materials, but also “for meeting friends and talking with each other in the library” (18%) or “for leisure (reading and navigating through the Internet: 16%)” (Duan, 2016, p. 165). The fact that students in the current study have not mentioned that they meet their friends and chat with them in the library whereas students of another study (Duan, 2016) do so, shows that not all students see the library as a “social venue”. Instead, there are students who visit the library only for information acquisition and for reading.

As far as the kind of material students use is concerned, the findings showed that students use a combination of printed and electronic-sources. However, some of the students use mostly printed and some use mostly electronic material. The current study found a partial preference for printed materials by the students. Contrarily, Clark (2015) in his study about students’ preferences and most frequent activities in an academic performing arts library, observed a general preference by students for printed material.

The interviewees in this study who answered that they mainly use printed books, mentioned that they prefer them over electronic books, as they find the latter difficult to use (in terms of downloading and “borrowing” them, etc.). Similarly, in the study by Rod-Welch et al. (2013), which examined the relative preferences for books in paper and electronic formats, when respondents were asked whether they preferred to read paper/printed books or e-books, 79.6% selected paper books and only 20.4% chose e-books (Rod-Welch et al., 2013, p. 288), mentioning the technical/functional aspects of using e-books. The main reason for preferring printed books that was mentioned by the students of the current study, was the convenience of using them. Students stated that they find it more convenient to get a printed book from the shelf and read it than to “struggle” to search, download and read an e-book online. Apart from the convenience of using a printed book that interviewees mentioned, it can be said that students who prefer printed books may consider that the main purpose of a library is to provide books, so they instinctively use them more than any other library source.
As mentioned above, the current study found a partial preference for printed material by the interviewees. The majority of them though, did not mention that they prefer the printed material of the library. On the contrary, the browsing of printed material was mentioned as an important, as well as a most preferred activity amongst students in the study conducted by Lo and Chu (2015), which aimed at determining the information-seeking practices of students at the HKDI (Hong Kong Design Institute) and found that students regularly used traditional printed resources (Lo and Chu, 2015, p.101).

Concerning the students’ preference for electronic sources in the current study, the interviews revealed that most of the students prefer using them (either only or mainly). Similarly, the greatest percentage of the respondents in the study carried out by Kim (2017), indicated electronic resources as the most frequently used library service. Likewise, the respondents in the study carried out by Ojennus and Watts (2017), ranked the electronic databases and e-journals as the most important material used for their academic work.

An explanation regarding the preferences for printed or electronic material could be that the students’ discipline may influence their information needs, and consequently, their preference of library resources. For example, students of the Humanities School tend to use mainly printed sources, because as A6 noted, as a History student he does not need e-articles that may have been published recently so, he uses mainly printed sources (like books on History). On the other hand, B4 who is studying Environmental Engineering, said that he uses only e-sources because he needs as recent information and publications as possible. Stvilia and Gibradze (2017), found that undergraduate students on Information Technology courses considered access to information and computer resources and study support services as the most important library services offered. This shows that students of disciplines like Technology and Engineering mainly use the e-sources of the library, because they need the most recent studies and research on their subject, as circumstances and data change rapidly in these fields of studies. Particular disciplines may shape the information needs of the students but, only to a certain degree, as this assumption cannot be absolute and general since any student may use both types of resources regardless of their discipline.

### 7.3 The library as a facilitator of students’ studies

The library of a university is of vital importance, not only for the students, but for the whole academic community as well. An academic library plays an important role, being the main path to knowledge and providing trustworthy information to the academic community. Therefore, an academic library must offer a great number of sources that can enable students to accomplish their studies in the best possible way.

In the current study, students were asked about their opinion on the material (printed and electronic) that the UCY library offers to its users, and about how the library supports students, which was part of the second research question of this study. Most of the interviewees answered that they find the UCY library’s material very satisfactory, sufficient and of a good quality.
The opinions of the interviewed students about the library’s collection converge to the same point that, the library offers a vast amount of qualitative information sources. Through the interviews, it was discovered that the UCY library is much appreciated by the students. Generally, students seemed satisfied with the sources offered by the UCY library, stressing that it has the necessary tools - either printed or electronic - to adequately help them with their studies. A similar view was found in the study conducted by Nzivo and Chuanfu (2013) regarding international students’ perception of library services and information sources in Chinese academic libraries, where it was found that academic libraries are much appreciated by the students. Moreover, the findings of the current study corroborate the results found by Kuh and Gonyea (2003), which indicate that libraries play an important role in helping the institution achieve its academic mission (Kuh and Gonyea, 2003, p. 371). However, the students do not simply appreciate the library and its collection. It can be argued that, the library also provides them with a security as most students see it as a trusted source of information, where the resources have already been through an information literacy process e.g. librarians have accessed the resource which means that students are less likely to distrust.

The contribution of the librarian is significant to students when they need assistance concerning the library services and resources. The students in the current study were also asked if they ask a librarian for help either when they are in the library premises or in any other way (e.g. online). Most of the interviewed students declared that they occasionally ask a librarian for help while in the library, mainly about how to find books on shelves. Similar findings were reported by Kuh and Gonyea (2003), where occasionally was the answer with the highest percentage. So, students - even occasionally - tend to ask a librarian for help in the library. This might convey the notion that students in the current study recognise the value and the role of a librarian. Opposite were the findings that have been noted by Thomas et al. (2017) in their study about whom do students tend to consult for research assistance, where students were largely unaware of librarians’ roles (Thomas et al., 2017, p. 224). The librarians can help students how to search, locate and use information in the library and thus assist them in their assignments. It can be said that, the librarian takes some of the responsibility for students’ information literacy. However, findings of the studies reported in Kuhlthau’s book “Seeking meaning” revealed a limited role for librarians in information-seeking tasks, regardless of whether library users were in an academic, public, or school library (Kuhlthau, 2004, p. 108). Librarians, in most cases, were considered primarily organizers of the sources and sometimes regarded as locators of sources (ibid).

Furthermore, in the current study, the vast majority of the interviewed students were not aware of the “Ask a librarian” online service, which is available on the library’s website and thus, this service is very little used. Low use of a similar service was also found in the study by Kim (2017), who examined user perception and the use of the academic library. An explanation for the low use of this online service, could be that most students are not aware about this service. Therefore, librarians must disseminate this service to raise its usage, and thus to help students in another, additional way.
7.4 The role of the library in information literacy instruction

Hunter (2013), states that there is a popular conception among the general public that because the Google generation are au fait (they have a good or detailed knowledge) with the internet, that they are information literate. There is a popular conception among librarians and information literacy professionals however, that because the Google generation are au fait with the internet, this does not make them information literate (ibid, p. 108). Knowing how to search for information on Google and to subsequently receive numerous results is not enough as “they do not critically evaluate the information they find, and they do not understand how information is organized” (Seiler et al., 2012, p. 44). On the contrary, knowing just how to search on Google is rather far from what ACRL defines as what an information literate person is, by stating that:

*Information literacy is the set of integrated abilities encompassing the reflective discovery of information, the understanding of how information is produced and valued, and the use of information in creating new knowledge and participating ethically in communities of learning (ACRL, 2016, p. 3).*

Moreover, if students do not have the appropriate information skills during their transition from high school to university, they may face various difficulties and challenges. As the academic library has become a more complex environment for those wishing to access, select, evaluate and use information, first-year students may face challenges while trying to cope with this new environment and thus may need guidance to do so (Anunobi and Ukwoma 2016, p. 344). The academic library is called upon to play a crucial role, not only in providing students with sufficient and efficient resources, but to also guide them on how to access and use these resources. To assist students with their academic work, higher education institutions have made a number of support services available to students, but it may happen that, students use these services infrequently (Beisler and Medaille, 2016, p. 391).

A reason for the rather infrequent use of library resources may be that students do not pay attention to the existence of these resources or they just do not know how to use them to their benefit. Therefore, libraries must make constant attempts to disseminate these resources to students as much as possible through information literacy instruction, with the expectation that the library’s resources will be used to the highest level. Almost all interviewed students in the present study, agreed that information literacy seminars should be compulsory for all students as information literacy skills attained through these seminars would enable them to use the library services. Therefore, the library stakeholders should take into consideration students’ wish to have information literacy instruction as compulsory and act accordingly so as to make related seminars compulsory to benefit all students.

Information literacy instruction would help students not only during their studies at the university, but also for a lifetime; that is, in their work and in their everyday life activities, etc. Lloyd (2005) notes that the educational emphasis of information literacy is on the student acquiring, developing and demonstrating individual skills and competency which will support independent lifelong learning (Lloyd, 2005, p. 82). Junisbai et al. (2016) note that despite a broadly shared normative belief in the benefits of information literacy skills,
it is not clear where the responsibility for teaching information literacy-related skills lies, and they wonder how the teaching of information literacy should be done and who should be doing the teaching.

Nonetheless, librarians are usually the persons who attempt to facilitate the students’ acquisition of information literacy skills, through information literacy programmes. The implementation of information literacy programmes can help students to benefit from the services that the library offers by instructing them how to locate and use the library’s resources, obtain and evaluate scholarly information and thus, accomplish their studies in the best possible way. Kavšek et al. (2016), evaluated the effect that information literacy training had on first-year psychology students and found that information literacy training played an important role in students' information literacy development over time.

How effective are the library’s information literacy optional seminars?
As it was mentioned earlier in this study (in section 2.3.2), the UCY library offers seminars for the identification and processing of scientific information, which are called “information literacy/seminars” on the UCY library’s webpage. These seminars though, are optional and it is usually the professors who take the initiative for their students to attend them. However, not all the professors take such an initiative, probably because they are not aware of these seminars, or, they do not want their class hours to be spent elsewhere. As Seiler et al. (2012, p. 45) state, most lecturers do not realize the importance of information literacy and feel that learning it within their courses would take too much time and practice. Consequently, the number of the interviewed students in the current study who have attended these seminars is rather small - only ten out of twenty-six. Furthermore, students in the study reported who had attended the seminars stated that they did not find them very interesting, because they were delivered in a rather passive way, and they were theoretical and short. Hence, the seminars did not help them to sufficiently obtain or improve their information skills.

The effectiveness of information literacy seminars may depend on the method in which they are delivered. When information literacy instruction is delivered in an active mode, students essentially participate with hands-on activities, while in a passive mode, they just watch a theoretical presentation by the instructor. An active learning approach allows students to get involved in the learning process. The opinions of the students in the present study concerning the mode of the information literacy instruction, correspond with the findings of Detlor et al. (2012), who in their study about the impact of active and passive ways of information literacy instruction, concluded that active learning strategies in the information literacy instruction are way more efficient than in the passive way. The fact that the students in the current study explicitly stated that they would prefer seminars to be delivered in an active mode, shows that they recognise and appreciate the value and effectiveness of an active learning method. Moreover, by participating actively in the learning process, students are encouraged to use various skills such as critical thinking.

An active mode of delivering information literacy seminars falls into the field of the constructivist learning approach, where students participate in the learning process with hands-on activities and are not just passive recipients of the information that they receive. Diehm and Lupton (2012) who examined approaches to learning information literacy, found - amongst other - that learning by doing was a strategy that students followed.
Specifically, learning by doing involves students engaging with information sources and tools in an active physical and intellectual way (ibid, p. 219). Therefore, the library can contribute to students’ learning by offering them information literacy programmes in an effective active mode and thus, can enable them “to learn to find the best, most relevant information in the most effective and efficient way” (ibid, p. 219). Additionally, a constructivist learning approach on the teaching of information literacy can be particularly beneficial and productive for students, as this way of learning encompasses the involvement of students in the learning process.

**Embedded in the curriculum or stand-alone credit information literacy seminars?**

Information literacy seminars may be delivered in various forms: stand-alone courses or classes, Web-based tutorials, course-related instruction, or course-integrated instruction (Virkus, 2003). Interviewees were asked to choose between two forms: embedded in the curriculum or stand-alone credit information literacy seminars. Thirteen students chose the stand-alone credit option, ten chose the embedded course and three said that both forms of information literacy could have same results.

Preference for stand-alone classes was justified by the students in this study in the following ways: 1) students would pay more attention, 2) the seminars would focus on library services, 3) students would be able to collect credits and, 4) students would be obliged to attain information literacy skills. Credits are not given as a motivation in such courses but since a course is stand-alone, it is probably a credit-bearing course. Besides, obtaining credits was not the most given answer by the students. The most given answer was that the seminars would focus on library services. Students who chose the stand-alone credit course option, highlighted the importance of information literacy seminars being taught separately from the curriculum as in this way, they will focus only on the subject of these seminars, which is the acquisition of information skills. The preference of the stand-alone credit course by most of the interviewed students reinforces the notion that information literacy can be taught as a separate subject and that this would work efficiently, as derives from some studies which are mentioned further down.

Johnston and Webber (2003) offered a credit bearing information literacy class to undergraduates at the Strathclyde University Business School, and after they conducted a case study on this credit bearing information literacy class, they argued that information literacy can stand alone as a subject of study, with the appropriate learning and teaching methods. Seiler et al. (2012), in their study about the performance of a model for an e-learning (stand-alone) course in information literacy, concluded that in order to be beneficial and valuable to students, information literacy does not necessarily have to be integrated into the teaching process of another subject (Seiler et al., 2012, p. 43). Moreover, Owusu-Ansah (2004, p. 10) argues that the library should offer an independent credit course in information literacy, one that offers in-depth engagement with issues inherent in and skills attendant to information literacy.

Fewer students chose the other option, that is, seminars embedded in the curriculum. Most of the students in this group supported that in this way, the seminars would be adjusted to a specific class/lesson, and a very small number mentioned the uniformity in the audience in these classes. The success of this kind of information literacy form was noted in the studies conducted by Wang (2011) and Dubicki (2015), who examined the effectiveness of embedded seminars in the curriculum. What was common to almost all
the interviewed students, was their statement that information literacy seminars should be compulsory for all students, as information literacy skills are necessary to enable students to use the library services.

8. Conclusions and suggestions for further research

This study aimed at understanding how students conceptualise information literacy within the academic context, and how they use the various library’s resources to cover their information needs. Moreover, the study sought to examine how the academic library supports students with their studies as a facilitator and what is its role in information literacy instruction.

In an attempt to answer the research questions, in this final chapter of the thesis, major conclusions of the study will be presented. In addition, suggestions for further research will be noted.

8.1 Conclusions

In conclusion, the aim of this study was to examine how the students conceptualise information literacy within the academic context of the University of Cyprus and how they use the library’s resources to meet their information needs.

In response to research question one and two, this study showed that, on the one hand, students appeared to be unaware of the term information literacy, yet on the other hand, they related the term to activities and skills that involve the search and (the appropriate) use of information. These activities are included in the ACRL’s (2016) definition of information literacy: “the discovery of information and the use of information”. Moreover, reference to the use of databases shows that students relate information literacy to the academic context. By mentioning the “use of databases”, students probably have the impression that information literacy falls into the academic field, and therefore, is inextricably linked to their studies.

Although the students interviewed in the current study may not have been aware of the term information literacy, they made some interesting assumptions about what they believe the term might mean. The findings showed that students relate information literacy mainly to information seeking activities and the appropriate use of information. Students perceive that information literacy is inextricably linked to information seeking and acquiring information, mainly through electronic means. The information seeking process that students in this study follow was examined, as it is considered as the main part of information literacy as this is conceptualised by the students.

Concerning the use of the library’s resources, students combine both printed and electronic resources to meet their information needs (though some of them show
preference to either printed or electronic sources), while the library premises are used mainly for studying, as the students value primarily its quietness.

Additionally, this study sought to investigate how the academic library supports students’ development of information literacy. In response to research question three, the results of this study have stressed the importance of the academic library and its role in helping students with their studies, by providing them with useful and trustworthy resources and services. Students from their side, recognise the value and the role of the library, and specifically the librarians. When students have queries concerning library services, they do not hesitate to ask the librarians for help. This shows that they appreciate them and that they recognise their role. It was revealed that the library not only offers the students the necessary tools for their studies, but it also attempts to instruct them on how to locate and use these tools for their own benefit. This instruction can be fulfilled through information literacy seminars, either embedded in the curriculum or as stand-alone credit courses.

Although most of the interviewees preferred these seminars to be held as stand-alone courses, it can be said that both methods could be effective, as long as they are carried out in a constructivist learning approach where students actively participate in the learning process. It seemed from the interviews of the current study that students call for information literacy instruction, stressing that the relevant seminars must be compulsory for all students, so that they can obtain the necessary information skills which can be applied not only within the academic environment, but in their life after university as well.

8.2 Suggestions for further research

The findings of this study may possibly provide inspiration for further research in the field of information literacy within the academic context in the Republic of Cyprus. As a limitation of this study was that participants were only drawn from a single institution - the University of Cyprus - and therefore the findings are localised and specific. Future studies could investigate more than one university to expand the data on various topics related to information literacy:

- Since this study showed that students relate information literacy mainly to information seeking activities, a study that aims to examine what these information seeking activities are in detail would give a deeper insight about how students seek and use information. Moreover, such study could reveal how the activity of information seeking contributes to the practice of information literacy.

- Concerning the use of the library resources, this study showed that students use both electronic and printed resources. Further studies could focus on which library resources students use the most. This could indicate the exact degree of the use of the library resources, so that the library stakeholders could gain an insight about which of the library resources are used the most or the least. This way, the library stakeholders could better plan their services in order to cover students’ information needs to the best possible degree.
- As the current study has not measured the information literacy competency of the students, a study on this subject would give an indication of how information literate students are. Such a study can be done either to compare first-year students to students in their final year of their studies, or, to compare the information literacy skills of students prior to and following information literacy instruction that may be offered by their university.

- A study on information literacy skills in secondary education could show how ready or unready students in secondary schools are in their transition to the university. Such a study can show how confident students are with their information literacy skills upon entering first-year study.

The abovementioned suggestions for further research could enable academic libraries to know how much information literate students are, and therefore to better design or redesign their information literacy instruction, so as to be as effective as possible. Generally, academic libraries must keep improving their services (information literacy instruction is considered as one of them) and should continue to act as a beacon for the whole university community. As the author and historian Shelby Foote notes: “A university is just a group of buildings gathered around a library” (Shelby Foote quotes, n.d.) stressing thus the importance of the library in the university.
Summary

Information literacy is a topic that is widely discussed in the research community all over the world. Since definitions of information literacy abound in the literature, the author of this study has chosen to follow the definition that was set by the Association of College and Research Libraries (ACRL) in 2016, which reads:

*Information literacy is the set of integrated abilities encompassing the reflective discovery of information, the understanding of how information is produced and valued, and the use of information in creating new knowledge and participating ethically in communities of learning (ACRL, 2016).*

The topic of information literacy from university students’ perception within the Republic of Cyprus has not been discussed considerably. Therefore, this study attempted to fill this gap by conducting a research among the University of Cyprus students.

This qualitative study was conducted with the purpose of creating knowledge about how students in an academic setting conceptualise information literacy, how they interact with information and library provided resources to meet their information needs, as well as to examine how the academic library supports students’ development of information literacy. Face-to-face and telephone semi-structured interviews were the means of collecting empirical data for the study. Twenty-six undergraduate, Master and PhD students of the UCY were interviewed as active users of the UCY library. The interviews were conducted within the UCY premises from 14th to 28th of March 2018.

A constructivist learning approach in both information literacy as a concept and information literacy instruction was followed as the theoretical perspective for the study. Additionally, concepts from Carol Kuhlthau’s Information Search Process (ISP) model served as a basis in understanding the opinions of the respondents of this study. This model lies in six stages: initiation, selection, exploration, formulation, collection, and presentation.

The objectives of the study were achieved, as findings revealed the ways in which students conceptualise information literacy within the academic context, as well as the way they use the library’s collection to meet their information needs. In addition, the role of the academic library as students’ supporter and facilitator, and its role in information literacy instruction, has also been explored. According to the findings, students conceptualise information literacy as a process in which they seek, evaluate, and use information to accomplish their studies. With regard to the method of information literacy instruction, students seem to prefer a stand-alone credit course, as they find it more beneficial for them because it focuses on library services and students would pay more attention on the subject. Additionally, the students support that information literacy seminars should be compulsory, as in this way all students will acquire information literacy skills, especially when these seminars take place in the first year of their studies.

However, it should be noted that the results of the current study cannot be generalised to all academic libraries in the Republic of Cyprus, as the interviews were conducted solely in one institution, the University of Cyprus, which is the work place of the author. Therefore, the researcher suggests that further research concerning information literacy
in other universities and educational institutions in the Republic of Cyprus should be made.
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Appendix 1: Interview guide (in Greek)

A) Ερωτήσεις κλειστού-τύπου:

Πληροφορίες για υπόβαθρο:
1. Τύπος φοιτητή (Προπτυχιακός, Μάστερ, Διδακτορικός): ___________________
2. Τμήμα και Σχολή: ______________________

B) Ερωτήσεις ανοιχτού-τύπου:

Έννοια πληροφοριακής παιδείας:

1. Έχετε ποτέ ακούσει τον όρο “πληροφοριακή παιδεία”; Αν ναι, τι νομίζετε ότι είναι ακριβώς; Όταν σκέφτεστε τον όρο αυτό, ποιες πληροφορικές δεξιότητες και δραστηριότητες σας έρχονται στο μυαλό?

Αναζήτηση πληροφοριών στη βιβλιοθήκη:

2. Πώς χρησιμοποιείτε τη Βιβλιοθήκη ή τις ηλεκτρονικές υπηρεσίες της για να αναζητήσετε πληροφορίες; Μπορείτε να περιγράψετε την εμπειρία σας σχετικά με την αναζήτηση πληροφοριών στη Βιβλιοθήκη;

3. Όταν έχετε εργασία να διεκπεραίωσετε, ποιο είναι το πρώτο πράγμα που κάνετε; Μπορείτε να περιγράψετε σύντομα τη διαδικασία που ακολουθείτε από τη στιγμή που σας αναθέτει ο καθηγητής μια εργασία, μέχρι τη στιγμή που θα την παραδώσετε;

4. Αν σας ζητούσαν να εισηγηθείτε τον ιδανικότερο κατά την άποψή σας τρόπο για απόκτηση πληροφοριών, ποιος θα ήταν αυτός;

Χρήση πηγών πληροφοριών στη βιβλιοθήκη:

5. Πόσο συχνά επισκέπτεστε τη βιβλιοθήκη; Τι σας αρέσει στη βιβλιοθήκη; Προτιμάτε να αναζητάτε πληροφορίες χρησιμοποιώντας τις ηλεκτρονικές πηγές της βιβλιοθήκης;

6. Στη βιβλιοθήκη, τι χρησιμοποιείτε περισσότερο; (έντυπο υλικό, ηλεκτρονικά βιβλία, περιοδικά, βάσεις δεδομένων, κλπ.).

7. Τι κάνετε όταν δεν μπορείτε να βρείτε στη βιβλιοθήκη του ΠΚ αυτό που ψάχνετε; Χρησιμοποιείτε άλλους τρόπους αναζήτησης πληροφοριών; (π.χ. μηχανές αναζήτησης (π. χ. Google), Wikipedia, ρωτάτε τους συμφοιτητές σας, κ.ά.).

8. Πώς ξέρετε ότι κάτι που βρήκατε στη ΒΠΚ είναι αξιόπιστο; Γνωρίζετε πώς να αξιολογείτε μια πηγή (αν δεν είναι στη ΒΠΚ);

O ρόλος της βιβλιοθήκης:

9. Πόσο συχνά βρίσκετε τις πληροφορίες που θέλετε στη ΒΠΚ; Πιστεύετε ότι η Βιβλιοθήκη παρέχει τα απαραίτητα ερώτια για να σας βοηθήσει με τις εργασίες σας; Πόσο επαρκή τα θεωρείτε;

10. Σε περίπτωση που χρειάζεστε βοήθεια στη βιβλιοθήκη, αποτείνετε σε κάποιο βιβλιοθηκονόμο για να σας βοηθήσει; Αν ναι, για ποιο θέμα χρειάζεστε βοήθεια συνήθως; Αν όχι, γιατί δε ρωτάτε κάποιον
βιβλιοθηκονόμο; Γνωρίζετε την online υπηρεσία “Ask a librarian” (=Ρωτήστε ένα βιβλιοθηκονόμο) που προσφέρει η βιβλιοθήκη;
11. Είστε ενήμεροι για τα σεμινάρια πληροφοριακής παιδείας που προσφέρει η βιβλιοθήκη του ΠΚ στους χρήστες της; Αν έχετε παρακολούθησει κάποιο σεμινάριο, ποια είναι η εντύπωσή σας; Σας έχει βοηθήσει να αποκτήσετε πληροφοριακές δεξιότητες;
12. Πιστεύετε ότι η βιβλιοθήκη βοηθά αρκετά τους χρήστες της στην απόκτηση πληροφοριών με τα υφιστάμενα προαιρετικά σεμινάρια πληροφοριακής παιδείας; Γιατί; Γιατί όχι;
13. Αν είχατε να επιλέξετε ανάμεσα σε σεμινάρια πληροφοριακής παιδείας 1) ενσωματωμένα σε κάποιο από τα μαθήματα σας και 2) σε μεμονωμένο μάθημα με πιστωτικές μονάδες, ποιο θα επιλέγατε και γιατί;

14. Υπάρχει κάτι άλλο που θα θέλατε να αναφέρετε; Θα θέλατε να προσθέσετε κάτι άλλο;
Appendix 2: Interview guide (in English)

A) Closed questions:

Background questions:
1. Type of student (Undergraduate, Master, PhD): ______________________
2. Faculty and Department: ______________________

B) Open-ended questions:

Information literacy concept:
1. Have you ever heard of the term “information literacy”? If yes, what do you think it is exactly? When you think of the term information literacy, what information skills and activities come to your mind?

Information seeking in the library:
2. How do you use the library or its online services to seek information? Can you describe your experiences using the library to seek information?
3. When you have assignments to accomplish, what is the first thing that you do? Can you briefly describe the procedure you follow from the time the professor gives you a task until the time you hand it in?
4. If you were asked to suggest the most proper/ideal - in your point of view - way of obtaining information, what would your ideal way of obtaining information be?

Information sources usage in the library:
5. How often do you visit the library? What do you like about the library? Do you prefer seeking information using the library’s online sources?
6. What do you mostly use in the library? (Printed books, e-books, printed journals, e-journals, databases, etc.).
7. What do you do if you can't find what you are looking for in the UCY Library? Do you use other ways of information seeking? (e. g. search engines, Wikipedia, asking your course-mates, etc.).
8. How do you know that something you have found - in the UCY Library - is reliable? Do you know how to evaluate a source in general? (if not found in the UCY library).

The role of the library:
9. How often do you find the information that you need in the UCY Library? Do you think that the library has the necessary tools to help you with your assignments? How sufficient do you consider these tools?

10. In the case that you need help in the library, do you ask a librarian to help you? If yes, what do you usually need help with? If no, why don’t you ask a librarian? Are you aware of the “Ask a librarian” online service offered by the library?
11. Are you aware of the information literacy seminars that the UCY Library offers to its users? If you have attended one, what is your overall impression? Did it help you to obtain information literacy skills?

12. Do you think that the library is sufficiently helping its users to gain information literacy skills with the current optional seminars? Why / Why not?

13. If you had to choose between embedding such seminars in the curriculum or applying them as a stand-alone credit course, which would you choose and why?

14. Is there anything else you want to mention? Do you want to add anything else?
Appendix 3: Face-to-face and telephone interviews (sound recording) and length of the interviews conducted from 14th to 28th of March 2018

<table>
<thead>
<tr>
<th>No.</th>
<th>Date</th>
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<th>Respondent</th>
<th>Length</th>
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<td>Telephone</td>
<td>A3</td>
<td>20 min</td>
</tr>
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Appendix 4: Content of the e-mail sent for permission (23/01/2018):

Dear Mrs. Elena Diomidi,

In the context of my Thesis of Master on “Library and Information Science, Digital Library and Information Services” of the Swedish School of Library and Information Science (SSLIS) at the University of Borås, Sweden, I have the intention to apply a qualitative research method by interviewing 15-20 students of the University of Cyprus which are users of the Library. The interviews will not last more than thirty or forty minutes. The interviews will take place probably in February or March 2018 in times and places which will be arranged by the interviewees and the interviewer. I do ensure the confidentiality of the interviews as the answers will not be used by anyone else instead of the interviewer, plus the interviewees will be coded.

The study will focus on understanding how students experience finding information in the library and in the course of preparing for and executing their assessment tasks. The exact title of the Thesis has not been formulated yet.

I, therefore, would like to ask for your permission as an Acting Director of the University of Cyprus Library for conducting the survey. Your consent will be really appreciated.

Sincerely,

Lilia Charalambous
Assistant Librarian
University of Cyprus Library
tel. 22893546

Content of the e-mail received from the acting director of UCY Library (30/01/2018):

Dear Lilia Charalambous,

You have my permission in order to conduct interviews to students that are users of the University of Cyprus Library for thesis writing purposes.

Looking forward to seeing your final work.

Best of luck

Elena Diomidi-Parpouna
Acting Library Director
Appendix 5: Participants informed consent form (in Greek)

Φόρμα συγκατάθεσης για συμμετοχή σε συνέντευξη

Τίτλος εργασίας: “Η αντίληψη των φοιτητών του Πανεπιστημίου Κύπρου για την πληροφοριακή παιδεία”

Ερευνήτρια: Λίλια Χαραλάμπους
Βιβλιοθήκη Πανεπιστημίου Κύπρου
Τουρκολογική Συλλογή
Χαλκοκονδύλη 10, 1071
Λευκωσία, Κύπρος
tel: 22893546
E-mail: charalambous.lilia@ucy.ac.cy

Αγαπητή φοιτήτρια/αγαπητέ φοιτητή,

Ονομάζομαι Λίλια Χαραλάμπους και είμαι Βοηθός Βιβλιοθηκονόμος στη Βιβλιοθήκη του Πανεπιστημίου Κύπρου/Τουρκολογική Συλλογή. Αυτή την περίοδο διεξάγω έρευνα για Μεταπτυχιακό στη Βιβλιοθηκονομία και Επιστήμη της Πληροφόρησης, Ψηφιακές Βιβλιοθήκες στη Σουηδική Σχολή Βιβλιοθηκονομίας και Επιστήμης της Πληροφόρησης, Πανεπιστήμιο του Μποράς, Σουηδία (The Swedish School of Library and Information Science (SSLIS), University of Borás, Sweden). Άδεια για τη διεξαγωγή των συνεντεύξεων έχει δοθεί από την Αναπληρώτρια Διευθυντή της Βιβλιοθήκης, Ελένα Διομίδη-Παρπούνα.

Το θέμα της έρευνας
Η έρευνα θα επικεντρωθεί στην κατανόηση του τρόπου με τον οποίο οι φοιτητές αντιλαμβάνονται την πληροφοριακή παιδεία στη βιβλιοθήκη και πώς βιώνουν την όλη διαδικασία της αναζήτησης, αξιολόγησης, ανάκτησης και χρήσης της πληροφορίας, καθώς και στο ρόλο της βιβλιοθήκης ως διευκολυντή στις σπουδές των φοιτητών καθώς και στη διδασκαλία της πληροφοριακής παιδείας.

Η συμμετοχή σας
Προσκαλείστε να συμμετέχετε στην έρευνα αυτή με την ιδιότητα σας ως χρήστης της ΒΠΚ. Η συμμετοχή είναι εθελοντική και μπορείτε να αποχωρήσετε σε καθόλου. Η συλλογή των δεδομένων θα γίνει μέσω προσωπικών συνεντεύξεων σε τόπο και χρόνο κοινός αποδεκτό ή μέσω τηλεφώνου. Οι συνεντεύξεις δεν αναμένεται να διαρκέσουν περισσότερο από 30-40 λεπτά. Όλες οι πληροφορίες που θα συλλέχουν ως μέρος των συνεντεύξεων είναι εμπιστευτικές και το όνομά σας δε θα αποκαλυφθεί ή δημοσιευτεί σε αναφορά που προέρχεται από αυτή τη μελέτη.

Ενώ δεν υπάρχει άμεσο όφελος για εσάς, αναμένεται ότι αυτή η μελέτη θα έχει μελλοντικό όφελος για το ΠΚ όσο και ατομικά, εφόσον θα συμβάλει στην καλύτερη σχεδίαση επιμελείς πληροφοριακής παιδείας που ήδη προσφέρονται από τη Βιβλιοθήκη. Επιπλέον, θα συμβάλει στην προώθηση της πληροφοριακής παιδείας μεταξύ φοιτητών πανεπιστημίου της Κύπρου. Τα αποτελέσματα της μελέτης θα τεθούν στη διάθεση του ΠΚ, εφόσον ζητηθεί.
Περαιτέρω ερωτήσεις/διευκρινήσεις
Εάν έχετε οποιεσδήποτε ερωτήσεις ή διευκρινήσεις σχετικά με την έρευνα ή την εφαρμογή της φάσης συλλογής δεδομένων, μπορείτε να επικοινωνήσετε με την υπεύθυνη έρευνας μου, Καθηγήτρια Annemaree Lloyd στο Τμήμα Βιβλιοθηκονομίας και Επιστήμης της Πληροφόρησης, Πανεπιστήμιο του Μπορός, Σουηδία στο e-mail: annemaree.lloyd@hb.se
Εάν συμφωνείτε οικειοθελώς να συμμετάσχετε στη μελέτη αυτή, παρακαλώ υποδείξτε τη συγκατάθεσή σας υπογράφοντας αυτή τη φόρμα.

Σας ευχαριστώ εκ των προτέρων,
Λίλια Χαραλάμπους

Όνομα: Υπογραφή: Ημερομηνία:
Appendix 6: Participants informed consent form (in English)

Consent form for participation to interview in English

Title of study: “University of Cyprus students’ perceptions of information literacy”

Researcher: Lilia Charalambous
The University of Cyprus Library
Turkish Studies Collection
Chalkokondyli 10, 1071
Nicosia, Cyprus
Tel.: 22893546
E-mail: charalambous.lilia@ucy.ac.cy

Dear student,

My name is Lilia Charalambous, and I am an assistant librarian at the University of Cyprus Library/Turkish Studies Collection. I am currently undertaking research for a Master’s Degree in Library and Information Science, Digital Libraries, at the Swedish School of Library and Information Science (SSLIS), University of Borås, Sweden. Permission to conduct the interviews has been obtained from the Acting Director of the Library Mrs. Elena Diomidi-Parpouna.

What the study is about
The study will focus on understanding how students conceptualise information literacy in the academic context, and how they experience the whole process of information seeking, evaluation, acquisition and use of information, as well as the role of the library as a facilitator in student studies and in instruction of informational literacy.

Your participation
You are invited to participate in this study as an academic library user. All participation is voluntary, and you are free to withdraw at any time. Data will be collected through face to face interviews which will be held at a place and time that is mutually convenient, or via telephone. The interviews should not take longer than 30-40 minutes. All the information gathered as part of the interviews is confidential, and you will not be named in any publication or report that comes from this study.

While there is no immediate benefit to you, it is anticipated that this study will have a future benefit for both the institution and the individual, as it will probably contribute to better designed seminars related to information literacy that are already offered by the UCY Library. Moreover, it will contribute to the field of information literacy amongst university students in the Republic of Cyprus. The results of the study will be made available to the institution, if requested.

Further questions/clarifications
If you have any questions/clarifications on issues related to the study or my implementation of the data collection phase, you may contact my research supervisor, Professor Annemaree Lloyd of the Department of Library and Information Science, University of Borås, Sweden, e-mail: annemaree.lloyd@hb.se
If you voluntarily agree to participate in this study, please indicate your consent by signing this form.

Thank you in advance,
Lilia Charalambous

Name:  
Signature:  
Date:  

78
### Appendix 7: Interviewees’ discipline and year of studies

**A**=undergraduate students **B**=master’s students **C**=PhD students

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