An Investigation into the use of an Online Tutorial in a Third Level College.

A Case Study Approach

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Submitted to the University of Limerick, March 2014
“I hereby declare that this is entirely my own work and that it has not been submitted for the award of any degree at any other university”.

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March 2014
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Áine Marie Meehan

Abstract

Rapid changes in technology and the proliferation of online sources has made information literacy (IL) a necessary and valued skill in today’s society. Academic libraries are faced with the challenges of delivering IL instruction to their entire body of students even with decreased resources. There has been a growing trend in academic libraries to create online tutorials that teach IL in order to meet demand. This study primarily investigates the effectiveness of such an online tutorial in teaching within a third level college in Ireland.

A case study approach was used to discover the effectiveness of an online tutorial in terms of learning outcomes. Questionnaires were used to compare learning outcomes after use of the online tutorial and taught classes. In depth interviews were conducted with students, focus groups of teaching staff and students were assembled and students were observed using the online tutorial.

The study found that although the staff and students of IT Sligo placed a high value on IL skills, there is a lack of appropriate training in this area. The study established that there is support from the lecturing staff and students of IT Sligo in embedding the online tutorial in the curriculum.

The study found that after a further collaborative process with stakeholders and further improvement of the online tutorial, integration into the curriculum should be easily achieved. This improvement would include universal design principles and improvement of multimedia principles. Other improvements include using a more socially constructivist framework.

This study found that students and staff favour a blended learning environment therefore the online tutorial should be used in conjunction with taught classes.

This study suggests that after improvements are made to the online tutorial it is an effective tool for the teaching of information literacy in IT Sligo.
Acknowledgements

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I would like to give a very special thanks to my parents for their relentless support and my sister for her words of encouragement. Finally a very special thank you goes to my children Éabha and Siomha and especially my husband Adrian for their patience, encouragement and understanding.
Dedication

This thesis is dedicated to my two girls Éabha and Síomha and my husband

Adrian
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<th>Full Form</th>
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<tr>
<td>ACRL</td>
<td>Association of College and Research Libraries</td>
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<td>ALA</td>
<td>American Library Association</td>
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<tr>
<td>ANZIL</td>
<td>Australian and New Zealand Information Literacy Framework</td>
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<tr>
<td>CAW</td>
<td>College at Work</td>
</tr>
<tr>
<td>CILIP</td>
<td>Chartered Institute of Library and Information Professionals</td>
</tr>
<tr>
<td>DCU</td>
<td>Dublin City University</td>
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<tr>
<td>ETS</td>
<td>European Test Symposium</td>
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<tr>
<td>HEA</td>
<td>Higher Education Authority</td>
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<tr>
<td>ICT</td>
<td>Information and Communications Technology</td>
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<td>IL</td>
<td>Information Literacy</td>
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<tr>
<td>ILO</td>
<td>Information Literacy Online Tutorial</td>
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<tr>
<td>IT Sligo</td>
<td>Institute of Technology Sligo</td>
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<tr>
<td>LMS</td>
<td>learning management system</td>
</tr>
<tr>
<td>MIT</td>
<td>Massachusetts Institute of Technology</td>
</tr>
<tr>
<td>MOOC</td>
<td>Massive Open Online Course</td>
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<tr>
<td>NDLR</td>
<td>National Digital Learning Resources</td>
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<tr>
<td>OECD</td>
<td>Organisation for Economic Co-operation and Development</td>
</tr>
<tr>
<td>PLD</td>
<td>Personal Learning and Development Programme</td>
</tr>
<tr>
<td>RLO</td>
<td>Reusable Learning Object</td>
</tr>
<tr>
<td>SAILS</td>
<td>Standardized Assessment of Information Literacy Skills</td>
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<tr>
<td>SCONUL</td>
<td>The Society of College, National and University Libraries</td>
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<tr>
<td>SIF</td>
<td>Strategic Innovation Funds</td>
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<td>VLE</td>
<td>Virtual learning environment</td>
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Chapter 1 Introduction

1.1 Introduction

There is a lack of research on how technology influences the teaching of Information Literacy (IL) by librarians, in particular in Ireland. IL training is one of the most important roles librarians currently have, moving as Wallis puts it from “gatekeepers to guides”. (2005b) This is due to the move from print to digital formats and the proliferation of the amount of information available online. This information is in different formats and is accessed in a myriad of different ways, and this had led to significant training needs.

1.2 Statement of Topic

This study is a case study of a library in a third level college in Ireland in which three staff attempt to deliver IL training to students. There has been a recent trend in libraries to create online tutorials that teach IL.

It was decided to create an online tutorial using the ANZIL (Australian and New Zealand Information Literacy) framework for information literacy to meet the needs both on and off campus students.

Standard Two from ANZIL was chosen to start with and to create a working online tutorial. Learning theories and learning styles were researched prior to the creation of the online tutorial in order to create a sound pedagogical basis, and therefore version 1 of “ILO” (Information Literacy Online Tutorial) was created. (Library 2014)
1.3 Research Questions

The aim of this study is to investigate the effectiveness of an online tutorial in teaching IL. The study asks in more detail the following:

1. Does effective learning occur when an online tutorial is used for IL teaching?
2. What is the value of an online tutorial to the staff and students?
3. How should the online tutorial be used by staff and students of IT Sligo?
4. How can an online tutorial be improved for more effective learning?

1.4 Relevance of the Research

Rapid changes to the way we access and use information as well as the proliferation of freely available information such as blogs, websites and open access journals has meant that there is a need for students to learn how to find, appropriately use and evaluate these resources. Students need to know the difference between information sources, learn how to manage their information, amalgamate prior and new information in such a way as to create new understanding, and also to use information correctly from a social, cultural and legal stance. IL skills are not just concerned with finding journal articles and being able to reference, and very often that is all library staff have time to teach students in what Dewald terms “one shot” fifty minute classes. (1999a)

Libraries struggle in general to provide IL training to students. One solution to this problem which many libraries have used is to create online tutorials.
The relevance of this study is to ascertain if previous literature in the area of using technology to teach IL is evident within the actual use of an online tutorial. Other factors are also identified which are specific to the use of online tutorials such as testing and implementation.

1.5 Significance of the Research

Due to the trend in libraries to create online tutorials, it is of increased importance to research the use and efficacy of these tutorials.

This study aims to investigate the effectiveness of an online tutorial in teaching IL, as well as the value staff and students place on both IL skills in general and on the online tutorial. Finally the study will determine how the online tutorial needs to use improved and used by IT Sligo.

1.6 Background of the Study

The way libraries teach IL has evolved in recent years. The author has worked in IT Sligo for 14 years, from when online learning was known as distance learning, and library databases were provided by database vendors on disk instead of online. IL training has been developed over the years to the point where it is now entrenched in the library’s strategic goals. (Library 2014)

Over the last few years the library has recognised the need to streamline its IL training and try different approaches.
The Deputy Librarian is working on an embedded librarian pilot scheme in the school of Business and Social Sciences, within their Personal Learning and Development Programme (PLD). The author is involved with the Learning to Learning Programme that runs through the science classes, both staff liaise in advance with lecturers so classes are bespoke and therefore more meaningful to students. The librarians involved in the teaching of IL also have one to one tutorials with students on request. Even with all this training ongoing, the library staff recognises that it is a drop in the ocean to the amount of training that ought to occur.

**Research Methodology Used**

Both qualitative and quantitative data was gathered from the sampling frame of the study which was the students and teaching staff of IT Sligo. A triangulation approach was used to ensure validity.

One group of students were taught IL in a computer lab, and the online tutorial was given to another group, both groups were given a questionnaire within which there was a quiz that tested their IL skills. Some of the students who used the online tutorial did so in a lab, and were observed doing so.

Qualitative data was mainly gathered by the use of a series of focus groups or interviews that took place after the students or staffs used or were shown the online tutorial.
1.7 Structure

Chapter 1: Introduction

The study consists of six chapters, the first one being an introduction which gives an overview of the topic.

Chapter 2: Literature Review

Chapter two is a review of the literature surrounding the topic. It examines the area of IL training and the literature on how we learn.

Chapter 3: Methodology

This chapter outlines some of the main research methods used in education and also gives a justification for the research methods chosen for this study.

Chapter 4: Findings

This chapter describes the findings of the study and presents them by research question.

Chapter 5: Discussion

The discussion chapter analyses and discusses the findings of the study in terms of the themes in the literature review.

Chapter 6: Conclusion

This Chapter gathers and summaries the main findings of the study, and presents any other relevant issues that arose in the process of the study.
Chapter 2 Literature Review

2.1 Introduction

This literature review seeks to discover and scrutinize the most appropriate literature on the subject of this thesis. The author will investigate the literature on current practices in teaching information literacy, the different ways students learn, and how multimedia and ICT impacts this pedagogy.

2.2 Information Literacy: a definition

Zurkowski coined the term “information literacy” in 1974 as “People trained in the application of information resources.” (Zurkowski 1974, p.6) Since then its meaning has been adapted, debated and built upon by individuals and organisations.

The terms “bibliographic instruction” and “information literacy” have sometimes been used interchangeably, but “bibliographic instruction” traditionally means to teach someone how to use a library, in particular the print resources. (Grafstein 2002) The most used definition of Information Literacy (IL) by the American Library Association (ALA) is to “recognize when information is needed and have the ability to locate, evaluate, and use effectively the needed information.” (ALA 1989)

The Irish working group on Information Literacy (WGIL) was founded in 2002 and, seeks to define a national strategy for IL in Ireland. WIGL acknowledge the difficulty due to
the many definitions of IL, and have adopted the Chartered Institute of Library and Information Professionals (CILIP) definition of Information literacy.

“Information literacy is knowing when and why you need information, where to find it, and how to evaluate it, use and communicate it in an ethical manner” (CILIP 2003)

2.2.1 The Problem with the Definition of Information Literacy

The definition of IL is problematic, Foster states that it is a “vague and slippery notion”. How can you compare the way information is found and used by different people? (Foster 1993)

Information literacy is defined in different ways in the literature, with little consensus being reached. There is a consensus in the literature that we need to interpret the term “very broadly.” (Owusu-Ansah 2005; Campbell 2008) A UNESCO report published in 2008 concurs and bundles the term in with core literacies of reading and writing, and with computer literacy, e-learning and cultural literacy stating that they all overlap. (Horton 2008, p.14)

In fact the term “information literacy” can be used as a synonym for “digital literacy” “media literacy”, or ICT literacy. There is a blurring of the way the term is used in the literature. (Miller and Bartlett 2012)

Wallis is in agreement that ICT and IL are indistinguishable defining information literacy as an “overarching term to describe the skills needed to use information and communication technologies (ICTs) effectively.” (Wallis 2005a)
The International Conference on Media and Information Literacy for Knowledge Societies was held in Russian Fed, Moscow in June 2012, and issued what is known as “The Moscow Declaration on Media and Information Literacy.” The primary aim of the conference was to raise awareness and advocate for media and information literacy.

Part of the declaration states that the

“In order to succeed in this environment, and to resolve problems effectively in every facet of life, individuals, communities and nations should obtain a critical set of competencies to be able to seek, critically evaluate and create new information and knowledge in different forms using existing tools, and share these through various channels” (Media and Societies 2012)

2.2.2 The Growing Need for Information Literacy Training.

The increasing popularity of IL stems from “Rapid advances in digital technologies” that have occurred in recent years, (Grafstein 2002) and with the majority of print resources being replaced by electronic resources.

Rowlands et al define this change as a “digital transition” and state that due to the vast amounts of information available online students have now become “digital consumers”. Research defines the undergraduate students today as the “Google generation”, born after 1993. They have certain expectations of digital media, they want to find content instantly; they rely heavily on major search engines; do not use search strategies; do not evaluate information sources and cut and paste content without thinking about copyright. (Rowlands et al 2008) This generation has a tendency to overestimate their ICT and information literacy skills. Gross and Latham call this a “miscalibration .. between what they can do and what they think they can do.”(Gross and Latham 2012) They feel
comfortable with ICT, they can tweet and use Facebook, but do not often know how to effectively search for information, evaluate it, and use it effectively. (Ofcom 2013) Worryingly, the research seems to concur that this Google generation is not information literate. (Gross and Latham 2007; Rowlands et al 2008; Gabriel et al 2012; Taylor 2012; Smith et al 2013)

The problem with this “miscalibration” which in psychology terms is known as the “Dunning-Kruger Effect” (Kruger and Dunning 1999) is that because these students think they are information literate, they often do not ask for help. Even when they fail at finding information, they are unlikely to seek help from information professional. This and the proliferation of information sources and formats is why IL programmes are so important.

Wallis explains the changing role of librarians due to these changes, as moving from “gatekeepers to guides”. (Wallis 2005b, p.122) The librarian’s career has changed as more often they become guides or teachers of information literacy and with it ICT.

2.2.3 Information Literacy- A lifelong skillset

The literature asserts that IL is a lifelong skill, (ALA 1989; Bruce 2004; Breivik 2005; Horton 2008) citing that the digital divide is becoming less about who has the internet or a computer and more and more about those who are Information literate and those who are not. (Horton 2008, p.44) Indeed ICT literacy and IL go hand in hand. The divide is not just about who owns a computer or a device people need “a broad spectrum of literacy skills in order to utilize IT effectively.” (Carvin 2000) IL skills are not just for college students, they are skills that are necessary in the workplace also. IL is seen as crucial to personal and economic development. (Bruce 2004)
In a study of a College at Work (CAW) program, which is a collaboration between State University of New York at Albany and the New York State Education Department, Branch (2003) scrutinised the information seeking behaviour of adult learning undergraduate students and it was determined that once these students received IL training Branch it had a “powerful impact” on their confidence and ability to critically assess information. (Branch 2003)

2.2.4 Information Literacy Frameworks

Kuhlthau uses a problem based learning approach to information literacy and states that we need to view the topic from a user’s perspective. (Kuhlthau 2007) She focuses on the user, and using the constructivist paradigm she explains how we find information and derive meaning from it, stating that we derive meaning from information which “fits in” with what we already know. Information literacy frameworks and standards attempt to remove the ambiguity out of the contrasting definitions of information literacy. Foster states that they have a “positive effect” in that they “set targets” for IL, and define a list of skills an information literate person should have. (Foster 2006) Miller disagrees with this hypothesis, stating that information literacy frameworks have been created without emphasis on newer online collaborative learning and social media. (Miller and Bartlett 2012)

All of the standards and policies surveyed took their core themes from the competency standards by the Association of College and Research Libraries (ACRL) which is a subdivision of the ALA, the most notable being the UNESCO report “Understanding information literacy: A primer”, the “The Society of College, National and University
Libraries (SCONUL) Seven Pillars of Information Literacy” which was updated in 2011, and ANZIL (2004).

The Irish Working Group on Information Literacy (WIGL) recommended that The ANZIL framework be used as the framework for information literacy training in Ireland. (O’Brien and Russell 2012)

In essence, the frameworks or models, while they differ in some ways, still list a number of standards or pillars that are derived from the original ACRL standards.

**The Australian and New Zealand Information Literacy Framework**

The six core standards from the ANZIL Framework are progressive in nature moving from the recognition of the need for information to finding, synthesising and managing that information in an ethical way.

**Standard One**  The information literate person recognises the need for information and determines the nature and extent of the information needed

**Standard Two**  The information literate person finds needed information effectively and efficiently

**Standard Three**  The information literate person critically evaluates information and the information seeking process

**Standard Four**  The information literate person manages information collected or generated
**Standard Five**  The information literate person applies prior and new information to construct new concepts or create new understandings

**Standard Six**  The information literate person uses information with understanding and acknowledges cultural, ethical, economic, legal, and social issues surrounding the use of information (Bundy 2004)

### 2.3 How we learn

#### 2.3.1 Learning Theories

##### 2.3.1.1 The Behaviourist Approach

The behaviourist approach is that of behaviour observation. Behaviourists are only concerned with observable behaviour and not by the subconscious or cognitive structures of the mind. Behaviourism stemmed from Skinner’s theory that learning is a behavioural change, which can be conditioned. Behaviourist theorists such as Watson, Pavlov, Thorndike and Skinner believed that you could only measure and theorise on what was to be seen, therefore not allowing any inspection of the cognitive or mental processes which take place when learning occurs. They see learning as passive, the teacher as someone who transfers knowledge directly to the student through a series of repeated patterns until that pattern becomes automatic. This type of drill and practice learning is seen as passive and teacher centred. The behaviourist approach is used in directed learning and teaching. For example the student gives the right answer, and is rewarded by praise, gives the wrong answer and is admonished. This theory is still widely used today, and is very effective in teaching computer use and other technical training and for example rules of grammar. (Dewald 1999a)
2.3.1.2 Cognitive Psychology

Cognitivist Psychology focuses on the inner workings of the mind rather than on observable behaviour. Learning is seen as a result of processes in the mind through the use of symbols rather than conditioned learning. Piaget was instrumental for the development of this theory, asserting that learning occurs from understanding rather than the bombardment of information. Cognitive psychologists are concerned with “what learners know and how they come to acquire it”; they believe that mental constructions are “representations of the real world to which the learner had to accommodate”. (Jonassen 1991)

2.3.1.3 Constructivism

Constructivism falls into the category of cognitive psychology, but constructivists use a more interpretive approach to learning. Learning takes place when the student constructs meaning of their world. This learning occurs when we interpret our perceptions in terms of our past experiences, beliefs and biases”. (Jonassen 1991) These past experiences are often termed “prior learning” in the literature. (Beetham and Sharpe 2013) One issue with prior learning being a stepping stone to constructing meaning is that in some cases prior learning might not have taken place, or the prior learning might have been biased or incorrect.

Constructivists believe that behaviourist learning theories are too “teacher centred and directed…void of meaningful learning. They also see the teaching process focus too much on individual work rather than group work” (Forrester and Jantzie 1998)
Blin and Mundo state that in a teaching environment that is technology enabled, sometimes the behaviourist way of teaching is used with the technology, as opposed to the constructivist. (Blin and Munro 2008) They use the example of the adoption of the Moodle Virtual learning environment (VLE) platform in Dublin City University (DCU) and illustrate how the majority of teaching staff use Moodle to disseminate information, rather than use the more interactive features of Moodle such as quizzes and blogs. Blin and Mundo state that while lack of awareness of advanced features in the VLE, and inappropriate training in its use could be somewhat to blame, that there was an underlying reticence to change teaching practices at the heart of the reason that the more interactive features were not used. (2008) Dalsgaard proposes that we move from a dependency on learning management systems and begin to use social software that creates a more social constructivist environment. (Dalsgaard 2006) He proposes that learning management systems have limited impact on pedagogy and should be used only for the management or administrative side of e-learning courses. Dalsgaard proposes that we use a variety of separate social media tools which are underused in the learning management system (LMS) and should be either used separately or integrated into the LMS.

2.3.1.4 Social Constructivism and social media

In contrast Social Constructivism maintains that meaningful or higher learning is socially constructed and “culturally transmitted. (Vygotsky 1978) Vygotsky terms the “zone of proximal development” as the gap between what we know and what is beyond our reach. Bridging this gap is up to the learner with the teacher merely as a facilitator for learning and social interaction. In terms of ICT this bridge can be gapped with software prompts or input from a more knowledgeable teacher. (Holmes and Gardner 2006) While the
constructivist view of learning is that learners construct their own knowledge, the social constructivist view is that this knowledge is created by the individual while interacting with others. Savery and Duffy expand on this by stating that interaction is critical to learning. In individual or collaborative learning other people are critical in that they test knowledge. (Savery and Duffy 1995) This knowledge is socially and culturally constructed within a “learning community” (Holmes and Gardner 2006), an argument which is backed up by Savery and Duffy in their explanation of socially constructed knowledge. (1995) They use the example that in the middle ages it was thought of as a fact that the earth was flat, and that this knowledge was in fact at the time our interpretation of the world. Salomon and Perkins state that individual learning occurs less frequently than is expected, that learning very often includes a social aspect. (Salomon and Perkins 1998) They state that higher level knowledge (what they term “high road” learning) does not occur in a behaviourist setting, and that learning can be enriched with more “varied and intricate spirals of reciprocity.” Within a social constructivist approach the student tries to problem-solve themselves. Education is seen as a

“self-governed, problem-based and collaborative processes .. learning is considered a social and active process.” (Dalsgaard 2006)

This would suggest that social media tools could be incorporated into the learning environment with positive effect, a stance advocated by Dalsgaard who postulates that the use of social learning tools have a major role to play in creating a social constructivist learning environment. (2006)
2.3.1.5 Andragogy

It is debatable whether andragogy is in fact a learning theory. Pedagogy is defined in the literature as ‘the activities of educating, or instructing or teaching’ and ‘activities that impart knowledge or skill’. (JISC 2004) The term is one which was used by the ancient Greeks to describe the teaching of children. Watkins and Mortimore define it as “any conscious activity of one person designed to influence learning in another”. (Watkins and Mortimore 1999)

Andragogy in contrast is the theory of adult learning. Knowles differentiates between pedagogy and andragogy, asserting that pedagogical assumptions were originally based on children and how they learn. (Knowles 1980) Knowles states that behaviourist modes of teaching are unsuitable for adults and lists several different principles of andragogy:

- Adult learners are independent and more likely to favour self-directed learning.
- Adult learners have amassed a substantial amount of prior experiences or “prior learning”. Problem based learning rather than subject based suits adult learners better.
- Adult learners fare better when faced with real life examples and problems

Education is seen as a process of knowledge acquisition. Adult learners are motivated to gain new knowledge. They wish to apply this knowledge to real world situations in the near and not distant future.

Knowles theory of andragogy uses these principles to outline the differences between how adults and children learn. Darbyshire in his critique of andragogy states that Knowles
oversimplifies learning and presents little evidence. (Darbyshire 1993) Ozuah concurs with Knowles and in summarizing the literature adds the assumption

“that adults need to know the utility and value of the material that they are learning before embarking on learning” (Ozuah 2005)

He defends the idea of andragogy and endorses its use as an educational paradigm, which needs to inform our instructional design decisions.

**2.3.1.6 Learning Theories and IL**

Manuel isolates the issue of prior learning in information literacy teaching stating that students have difficulty learning if what they are being taught does not fit in with their “prior knowledge”. Most first year students for example do not have prior experience of being taught IL and indeed some of their prior learning is incorrect. (Manuel 2005) Webber and Johnston in their review of information literacy frameworks argue that the ACRL framework is more behaviourist than constructivist in design, stating that there is a more of a “higher level” interest in information literacy in Australia which stems from the Mayer report (Australian Education Council, 1992). The Mayer report “explicitly condemn a behaviourist approach to competency.” (Johnston and Webber 2003) Click and Petit discuss the use of social media tools in libraries, claiming them to be “open, interactive, collaborative, and participatory,” and able to create online learning communities. They are however mainly concerned with how the library instructs and presents information using social media, not on the learning theory behind it. (Click and Petit 2010) There is a gap in the literature on how learning theories influence library instruction.
2.3.1.7 Mayer’s multimedia learning theory

Mayer’s multimedia theory uses constructivism as its basis and the concepts of dual processing and cognitive overload. Mayer makes three assumptions on how the mind works bases in cognitive science. (Mayer and Anderson 1992)

1. Dual Channel Assumption

Humans have two separate channels with which to process information, an auditory/Verbal channel, with which we process auditory input, and also verbal audio input, and a visual channel with which we process images and pictures.

2. Limited Capacity Assumption

Secondly, each of the above channels has a limited capacity. We can only process a limited amount in each of these channels at any one time. This is based on Cognitive load theory.

3. Active Processing Assumption

Thirdly, Mayer’s principle relies on the assumption that active learning has to take place to achieve meaningful learning. This active learning requires cognitive processing in both the aforementioned verbal and visual channels. The learner pays attention to the material, organises it in the mind and integrates it with prior knowledge to form meaningful learning. Meaningful learning is defined by Holmberg as that “which anchors new
learning matter in cognitive structures, as opposed to shallow learning that does not construct meaning. (Holmberg et al 2005)

<table>
<thead>
<tr>
<th>Assumption</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dual channel</td>
<td>Humans possess separate information processing channels for verbal and visual material.</td>
</tr>
<tr>
<td>Limited capacity</td>
<td>There is only a limited amount of processing capacity available in the verbal and visual channels.</td>
</tr>
<tr>
<td>Active processing</td>
<td>Learning requires substantial cognitive processing in the verbal and visual channels.</td>
</tr>
</tbody>
</table>

Table 2.1 Three assumptions on how the mind works in multimedia learning (Mayer 2005, p.35)

Mayer defines cognitive overload as a mismatch between the “processing demands” created by the learning and the processing capacity of the mind. Figure three is a model of how multimedia learning occurs, the working memory box is where processing occurs, and there is a limited capacity. Long term memory is created when prior learning is integrated with working memory. Mayer followed on with this research and his book “Multimedia Learning” (2001) outlines seven principles to be used in designing
multimedia learning. His seminal publication with Clark “E-Learning and the Science of Instruction: Proven Guidelines for Consumers and Designers of Multimedia Learning” was first published in 2003, and republished in 2011 to include more immersive technologies such as web 2.0, synchronous videoconferencing, and virtual worlds such as second life, and is intended as a manual for educational multimedia instructors. Clarke and Mayer base their seven principles of multimedia design on cognitive theory and also on research evidence.

Mayer’s Seven Principles.

1. **The multimedia Principle**

   The multimedia principle states that e-learning courses work better in terms of learning outcomes when they include words and visuals. Words can mean auditory speech or text, and visuals can mean static images or video. Clarke and Mayer define multimedia as a learning object that has both words and graphics. (Clark and Mayer 2011)

2. **The contiguity Principle**

   The contiguity principle maintains that when words are used along with visuals, they should be integrated. Audio words should be able to be heard at the same time as a corresponding image is viewed for example, and words in the form of text should be displayed next to its corresponding image.
3. The Modality Principle

There are better learning outcomes when audio narration with images or video is used instead of text.

4. The Redundancy Principle

Students learn better when words are presented in either audio or text format but not both. The best learning outcomes are from concurrent images or video and audio narration.

5. The Coherence Principle

The coherence principle asserts that students learn better when the multimedia object is uncluttered with any extraneous text, or images removed. The authors recommend a process of “weeding” to remove these items.

6. The Personalization Principle

A conversational informal friendly style of audio narration or text is preferable to a formal style. “Pedagogical agents” or on screen characters personalise the learning for the student, thus creating a positive learning outcome.

7. The Segmenting and Pretraining Principle

The segmenting principle is where you break a complex lesson into smaller parts. If a lesson is complex, cognitive overload can occur if the lesson is not broken down into smaller parts. Clark and Mayer recommend segmenting concepts, with a clickable “continue” button so that the user can process the material before continuing.
The concept of pretraining is simply where you explain key concepts or ideas before the lesson begins. This explanation can also include instruction on how to use the multimedia lesson. The advantage being that some of the cognitive processing is done before the lesson begins, and the student is familiar enough with key concepts to concentrate more on the more important material in the lesson.

There are multiple learning theories and there is an abundance of literature on how these theories relate to ICT in education. There is also significant research on learning styles and how they influence how we learn.

### 2.3.2 Learning Styles

There are various theories of learning styles in the literature, for example Kolb’s (Kolb 1984 (cited in Wang and Hinn 2001) theory classifies four different types of student: activists, reflectors, pragmatists or theorists, while Gardner (Gardner 1993) focuses on types of intelligence. The idea behind each theory is that once the teacher knows what learning style the student has, the instruction can be adapted to suit. Plass et al state that Mayer’s multimedia theory is one of cognitive psychology, but that the idea of a “learning environment” indicates that students have preferences for the type of information they access, and the order in which they process different types of information. They assert that some of the learning style theories over the years have made the distinction between visualizers and verbalisers. (Plass et al 1998)

Howard Gardner (Gardner 1993) developed his theories of multiple intelligences in 1983. He claims that there are at least eight different types of intelligence, and that this is why
it is important to provide teaching tools in a variety of formats. The intelligence groupings are:

- Verbal-linguistic: Skilled with words and language
- Logical-mathematical: Numbers, Logic and abstract patterns
- Visual-Spatial: visually skilled. Can recognize spatial dimensions
- Boy-Kinaesthetic: physical motion
- Interpersonal: spiritual inner state of being; self-reflexion and awareness.
- Naturist: ability to recognise and categorise features of the environment.

Dewald concurs with Gardner stating that library information being offered “in more than one medium helps students. Some students learn very well through an auditory, or listening channel, such as a lecture, while other students learn best through a visual channel.” (Dewald 1999b)

Clark and Mayer dispute Gardner’s theory of learning styles for some situations, adding that the constructivist approach is more effective. (Clark and Mayer 2011) Gardner’s theory is in fact incongruous to Clark and Mayer’s multimedia learning theory because if one was to accommodate all learning styles in a multimedia learning object, audio and textual words would need to be included, which is the opposite of what Clark and Mayer’s redundancy principle advises. (2011)
2.4 E-learning Theory

Zhang asserts that the way people learn is changing due to the way the internet has enabled remote learning without time constraints. Remote learning has changed the way student’s access education; therefore student needs are also changing. Students expect e-learning support, whether they are remote students or not.

“The concept of traditional education does not fit well with the new world of life-long learning, in which the roles of instructor, students, and curriculum are changing”

(Zhang and Nunamaker 2003)

There are differing definitions of e-learning, distance learning, online learning etc. Moore et al attempt to decipher these vague terms, and state that the confusion leading from the ambiguity of terms impacts negatively on designing and delivering courses. (Moore et al 2011)

Zhang defines e-learning as

“to any type of learning situation when instructional content is delivered electronically via the Internet when and where people need it.”

(Zhang and Nunamaker 2003)

Melling expounds on the problems caused by the inconsistent definition of e-learning and then defines it as learning that is supported by the use of ICT. (Melling 2005)
2.4.1 Distance learning

Traditionally distance learners were at a geographical distance from the university, supported in their studies by either print or electronic media or phone. This electronic media could have been in the form of CD-ROMs or posted printed resources. These students sometimes physically came into the university for tutorials or induction programmes. The instructor would very often deliver teaching at times when would not necessarily suit the learner.

The most accepted definition of distance learning is by Keegan who in 1996 defined it as “a form of education” characterized by a separation of learner and teacher within an educational organization while using media and communication to provide content and to unite teacher and student. He adds that people are usually taught individually rather than in groups, except for “occasional” meetings. (Keegan 2004, p.36)

Holmberg accepts this definition as the “most lucid” and writing in 2005 adds that if Keegan was to define distance learning today, he might add “collaborative learning” which is made possible today with technology such as web 2.0 learning software. (Holmberg et al 2005) Holmberg implies that Keegan’s definition is still relevant today with some minor changes.

As the internet developed, the term “distance learning” evolved into “online learning, e-Learning, technology, mediated learning, online collaborative learning, virtual learning, web-based learning, etc.” (Moore et al 2011)
The ambiguity in the definition of terms often occurs during periods of technological change. (Bernard et al 2004) A widely accepted definition comes from a JISC report from 2004 which defines e-learning as “learning facilitated and supported through the use of information and communications technology.” (JISC 2004, p.10)

In light of these changes, the next section will address changing student needs.

### 2.4.2 Changing student needs

In recent years there has been a move from the traditional young adult school leaver physically attending third level colleges to more diverse types of students. Millions are accessing education in the form of MOOCS (Massive Open Online Course) on websites such as Coursera and edX, often supported by learning management systems. The growth of e-learning and mass education has meant that sometimes the non-traditional student type is becoming the norm. E-learning affords opportunities to people who would not normally be able to avail of education due to work or family commitments or physical or geographical limits. Non-traditional students have typically been seen as the “adult learner” but this has expanded to include

“a different, more heterogeneous, composition of students in terms of previous education, social and family background, gender, age, life-situation, motivation to study, current and future occupational profiles.” (Schuetze and Slowey 2002)

The “non-traditional” student is also now defined by both the type of student he or she is, and also by the different “models of participation” or types of e-learning they attend.
Schuetze et al (2002) maintain that these changes create challenges to Universities who struggle to fulfil the needs of these diverse groups of students in providing open and flexible access to learning resources.

Dewald argues that it is not just the “non-traditional” student that needs to avail of open and flexible learning, but that there is a “blurring of the lines” between the traditional and the non-traditional students in terms of needs and that some traditional student are not meeting the “same life demands” as the non-traditional student. The next section details the different types of e-learning. (Dewald et al 2000)

2.4.3 Types of e-learning

There are many different types of e-learning, the most common being asynchronous or synchronous, and the third being a hybrid of the two. There is a recent trend also for large open source online courses (Massive Open Online Courses) or MOOCS. In September 2012 the Massachusetts Institute of Technology (MIT) for example had three hundred and seventy thousand students enrolled in what were some of the first “official” MOOCS available.(Pappano 2012) Institute of Technology Sligo (IT Sligo) held its first MOOC in November 2013 and had over 1600 registrations.

2.4.3.1 Asynchronous

According to Clark and Mayer asynchronous e-learning is designed for “self-paced individual study.” (Clark and Mayer 2011) The students work at whatever time suits them, and at their own pace. Thomas states that this form of e-learning is particularly suited to someone in the workplace who needs to study in their own time. (Thomas 2013) This is
one of the main reasons why some students enrol in e-learning courses. Asynchronous e-learning uses e-mail, wikis, websites, blogs, and chat rooms either independently, or embedded into a learning management system. Dalsgaard refers to these tools as “Individual personal tools” which can be individual or collaborative and that support a student’s “independent work process”. (Dalsgaard 2006) They support learning in the framework of social constructivist pedagogy, Hrastinski outlines that the main benefits of asynchronous e-learning are information processing, stating that it is most suited to non-complex learning where the student has more “time to comprehend a message because an immediate answer is not expected.” (Hrastinski 2008)

2.4.3.2 Synchronous

Synchronous e-learning is instructor-led, and is usually a live broadcast of teaching, using videoconferencing. Hrastinski asserts that this type of learning is suited to more complex learning, where the learner is less isolated and more of a participant. (Hrastinski 2008) The learner feels more engaged, and more motivated in synchronous learning. Moore defines distance education according to the types of interaction that takes place, listing three main types of interaction:

- learner-content interaction
- Learner-instructor interaction
- Learner-learner interaction.

(Moore 1989)
These types of interaction are similar to the division of synchronous and asynchronous e-learning, with the addition of social constructivist methods of learning, for example using web 2.0 and social media for peers to interact. Moore states that it is easier to define the different types of distance learning by interaction because there are so many diverse types of media and distance learning available.

2.4.3.3 Blended or Hybrid learning

Blended learning is a combination of face to face with either synchronous or asynchronous e-learning. As the use of technology expands, there is a growing blurring of the lines between face to face and e-learning environments. Osguthorpe et al emphasise that the advantage of e-learning is its flexibility, but that its disadvantages include student isolation, and lack of motivation. (Osguthorpe and Graham 2003) They concur that there are advantages and disadvantages to both learning environments, and that the ideal for blended learning is to find a “harmonious balance” between the two. The benefits of blended learning are that it can add to the “pedagogical richness” promote social interaction, and yet give students a “personal agency” or self-directedness to their learning thus making the learning more student centred. (Osguthorpe and Graham 2003; Martin 2009)
2.5 Information Literacy in the curriculum

The majority of the literature states that information literacy should be incorporated into the ethos and curriculum of the educational institute (Bruce 2004; Montiel-Overall and Grimes 2012)

Information literacy has traditionally seen to be the realm of the library, with librarians who are not trained teachers delivering information literacy training, often in the form of student induction or tutorials. There have been recent moves to incorporate information literacy training into the curriculum, with “learning to learn” modules being written for courses, but librarians are not often involved. There is a perceived difference in the role of the librarian and the academic faculty, with librarians being seen as in a support rather than a teaching role. There are many factors for this, one being the ethos of the institution and IL not being seen as a priority, another being practical issues such as time constraints. (McGuinness 2006) Bruce states that it is important for information literacy training to be incorporated into the curriculum, as this makes the skills learnt transferrable into “professional, civic and personal life.” (Bruce 2004) Parker admits that the integration into the curriculum is often difficult and not “always feasible” due to older courses with “overloaded curricula.” (Parker 2003) The Open University created flexible generic resources in the form of online tutorials. Their online information literacy tutorial is called SAFARI and can be accessed by anyone online. Indeed this trend for online information literacy tutorials is replicated by many educational institutions. They mainly follow either the ACRL framework, which is usually adapted to fit the needs of the organization.

30
2.5.1 Assessment of IL Teaching

Assessment is a necessary part of the “feedback cycle of learning” and “solidifies” long term learning. Deep learning occurs when learning is assessed, both by allowing the student to “gauge” their learning and by getting them to “demonstrate the practical application of skills acquired.” (Sonley et al 2007)

Assessment is most effective for long term learning when students get feedback, revise and reapply their learning in a new way. (Burkhardt and MacDonald 2010) According to Webber and Johnston, the ideal university model is one in which all students, teachers, researchers and administration are information literate. They list some barriers to this ideal, one being that information literacy is a complex subject and is not academically recognized, and another being that librarians have little status within the Universities, their “Sphere of influence” amongst the faculty is small, therefore IL is “marginalized by staff and students” and not often embedded into the curriculum. (Johnston and Webber 2003)

Webber and Johnston outline a cyclical process for course design:

1. educational objectives
2. course design for teaching learning and assessment
3. course evaluation, modification and improvement
It is important that IL instructors use proper educational assessment techniques. The Literature states that IL needs to be embedded into the curriculum in order to be effective and to create Information literate lifelong learners, (Montiel-Overall and Grimes 2012) if that were to occur the courses would have to be credit bearing. Credit bearing courses are rare, (Mayer and Bowles-Terry 2013) and mainly based in the United States. This is partly due to the barriers as listed previously and also because librarians “need more education about learning and teaching” and also due to information literacy being only one part of a librarian’s duty. (Johnston and Webber 2003) In an Irish study by Russell in 2008 it was found that librarians had a very “low level of awareness” of educational theory. (Russell 2008) In a survey of “twenty two academic librarians in Irish third level institutions” Russell found that 29% of “respondent’s information literacy programmes were neither assessed nor evaluated.” Russell also found that use of ICT for assessment in the form of
“online assessment tools, online bulletin boards and computer aided learning materials” is not being used. (Russell 2008)

Iannuzzi highlights some reasons for the lack of assessment in IL programs, stating that librarians do not want to be seen as being accountable, and that assessment needs to move beyond the realm of the library into “collaborative efforts of faculty, librarians, and administrators”. (Iannuzzi 2000) Iannuzzi observes that IL needs to be part of the campus culture, and that information literacy needs to be embedded in academic programmes.

Some libraries have started using standardized Information Literacy tests such as SAILS (Standardized Assessment of Information Literacy Skills) or iSkills which are multiple choice tests, the first was developed by Kent State University and the latter by European Test Symposium (ETS). They are now commercial products. They are used to find out how information literate a student body or groups of students are so that IL programmes can be adapted and also to provide “tools for readers to advocate for information literacy’s place in higher education curricula.” (Blevens 2012) The tests are largely based on the ACRL competency standards. The results can be benchmarked between cohorts, or between colleges. The problem with using standardized tests is that there needs to be plenty of support within the institution, the results of the testing need to be incorporated into IL planning. There needs to be data analysis support also, so that administrators can properly interpret findings. (Lym et al 2010) Grossman and Latham advocate the use of these tests, stating that local level assessment has its place and are useful to access student learning but that a standardized test is particularly useful in objectively measuring student skills and benchmarking at national levels. (Gross and Latham 2012)
There is a growing trend in libraries using assessment tools such as rubrics and portfolio assessment with their information literacy training. Samson defines these as “course specific strategies. (Samson 2010) Rubrics are used to define learning outcomes, criteria that students must meet, and the grading system. Knight asserts that rubrics are ideal in the assessment of IL because they are flexible and adaptable to Information literacy standards. (Knight 2006) Rubrics measure the amount of learning attained, and provides feedback to the students. Portfolio assessment is a collection of student’s work, and in terms of information literacy usually includes a search strategy, an assessment of resources, and a compiled bibliography. Electronic portfolios have the advantage of allowing learners personalise their learning, and provide an opportunity for reflective learning. (Beetham and Sharpe 2013) Electronic portfolios along with rubrics have been successfully used in assessing information literacy. (Samson 2010)

2.6 Advantages and Disadvantages of ICT in education

There is a debate in the literature regarding the benefits of ICT in education. The debate being whether “media or pedagogy makes technology-mediated learning more or less effective.” (Lou et al 2006) Richard E. Clarke argues that media does not influence learning and that

“media are mere vehicles that deliver instruction but do not influence student achievement any more than the truck that delivers our groceries causes changes in our nutrition.” (Clark 1983)

He emphasizes that it is the “method of instruction” and not the media that enables learning. He states that the “novelty effect” of using new media, increases learning, but only in the short term and that this effect wears off as the user becomes more familiar
with the media. Clarke states that what is important is not the type or comparison of media that is used, but the pedagogy. (Clark 1983) Clarke invites a debate on the topic, and Kozma rose to the challenge, thus creating the Kozma-Clarke debate of the early nineties.

Kozma (1991) disagrees with Clarke’s hypothesis, stating that the use of ICT creates cognitive processes which construct meaning. He states that when we use ICT, we create “mental representations” from the symbols or processes used in the media, and that this enable those with little prior knowledge to construct meaning. (Kozma 1991) He disputes Clarke’s theory that media does not influence learning and asserts that the learner actively collaborates with media to construct learning, and that unlike the analogy of Clarke’s truck, instruction is not simply “delivered”

Clark and Mayer assert that in their review of the literature there are no differences in achievement rates between face to face learning and e-learning. (Clark and Mayer 2011) This is collaborated by Hrastinski who confirms that there are “no significant differences in learning outcomes.” (Hrastinski 2008) They also however state what might seem obvious; that students fare better in attending well designed e-learning courses rather than badly designed and implemented ones. Mayer and Clarke agree with Clarke’s hypothesis that it is “not the delivery medium but rather the instructional methods that cause learning. (Clark and Mayer 2011) In contrast Lou et al, in their meta-analysis of the literature on media and pedagogy, find “that interactive technologies may function in different pedagogical ways from non-interactive technologies.” (Lou et al 2006) Their research defines the different types of e-learning, for example synchronous and asynchronous learning, and they found that students fared better on courses where the media and the pedagogy supported student and teacher interaction rather than self-directed learning with
media with no interaction. It would seem that good instructional design needs to have a good pedagogical basis.

Katz emphasizes the benefits technologies have made to online education emphasizing that greater interactivity leads to “active engagement” and “improved academic achievement”. (Katz 2002)

While the advantages of using ICT are somewhat obvious, in terms of student engagement and flexibility, the literature does seem to concur that there is no difference in student outcomes, whether ICT is used or not. (Oppenheimer 1997; Clark and Mayer 2011) The main benefits seem to be that technology adds a flexibility which enables those who would not normally be able to attend third level courses, to do so. It would seem that good pedagogical methodologies need to scaffold learning regardless of the use of ICT in order to achieve good learning outcomes. ICT is seen by Oppenheimer as an “amplifier” for either good or bad instructional practice. (Oppenheimer 1997)

One of the problems with the use of ICT in Education is that due to rapid advances in technology, pedagogy and theory is often lagging behind. E-learning and therefore the use of ICT whether it is synchronous, asynchronous or blended, has “outpaced the research, due, in part, to the rapid increase in both the quantity in use and the sophistication of technology.” (Donnelly 2010)

Kozma believes that you can no longer discuss ICT or learning as separate entities, the use of ICT is so ubiquitous that we “cannot disentangle it” from learning. (Kozma and Johnston 1991)
It would appear that certainly there is a blurring of the lines between e-learning and traditional learning where school leavers expect a form of blended learning to take place. Eventually ICT in education will be the norm and that traditional “talk and chalk” “bricks and mortar” teaching will become the rarity. Traditional learning is now being augmented and administrated by learning management systems that incorporate many of the tools for social constructivist learning such as wikis, chat rooms and RSS feeds, and the popularity of MOOCs has meant that there are millions of students enrolled in informal learning courses. (Pappano 2012)

There are some very practical disadvantages to the use of ICT in learning, firstly the cost can be prohibitive, secondly, it can be time consuming to create e-learning packages, and thirdly there are training issues involved, with not all teachers or students being information or ICT literate. (Baylor and Ritchie 2002) Kozma and Johnston (1991) state that using ICT is not a simple task; the effective use of ICT depends on juggling good pedagogy, computer software, student and staff literacies, learning goals and learning environment. (Kozma and Johnston 1991) Technological demands and training issues continue as the changes in ICT are not in stasis.

### 2.7 Online Tutorials

Typically information literacy is taught by librarians lecturing, doing presentations, or developing online tutorials. (Detlor et al 2011) Russell observes that only a few libraries in Ireland have created online tutorials teaching IL and that none had tutorials specifically aimed at distance learning students. (Russell 2008) Dewald postulates that the web can be used in conjunction with sound pedagogy, to create “active and creative online learning
experiences for students.” (Dewald 1999a) Dewald observes that the lack of time constraints involved in using the internet for IL instruction means that librarians are no longer constrained to “one shot” fifty minute classes. The internet has changed the way information literacy training has been approached by librarians. Librarians have embraced web 2.0 technology to such an extent that the term “library 2.0” was coined. Beginning with library websites; growing into detailed subject pages; online handouts; “Powerpoint presentations; sound and video and finally interactive features”. Dewald claims that content was created just because it could be. (1999b) She argues that there needs to be a sound pedagogical reason for creating any information literacy instructional content. (Dewald 1999a) Web based Information literacy or library instruction can be used for stand-alone learning or to complement and support traditional teaching. Dewald et al advocate the use of online tutorials, stating that they resolve the problem of library understaffing, and the need for students to access training at times and places that are convenient to them. These students can “exercise a more independent style of learning.” (Dewald et al 2000)

Using Dewald’s (1999) characteristics of good library instruction as its pedagogical basis, Waterford Institute of Technology created an online tutorial titled “OLAS”. Hegarty et al in their findings of a study of over a thousand undergraduate students needs that “on-campus, face-to-face library training does not cater to every student’s needs.” (Hegarty et al 2004)

The trend for creating online tutorials for Information literacy instruction can be seen as an answer to the problem of Information literacy not being embedded in the curriculum.
The trend also addresses the need for autonomous learning at the learner’s convenience thus promoting self-efficacy. (Dewald et al 2000; Hegarty et al 2004)

Some notable Information literacy online tutorials are RIO (University of Arizona), PILOT (rebranded as STUDYSMART IN 2011) (Queensland University of Technology) and SAFARI (Open University). There is an Irish graduate information literacy skills guide which was created with Strategic Innovation Funds (SIF) from the Higher Education Authority (HEA). There is a growing trend to create small reusable learning objects within education. “small discrete learning objects that can be reused in a variety of disciplines or learning environments have emerged as a significant approach to e-learning.” (Kammerlocher et al 2011) Institute of Technology Tallaght have created a collection of Reusable Learning Objects (RLO’s) which are in the form on small online tutorials, and have made them available to the higher education community via the National Digital Learning Resources (NDLR) facility. They have also used the learning objects to embed IL training into the curriculum. (Russell 2013)

2.8 Designing for Accessibility

While the use of online learning or online learning objects can increase learner flexibility, it is important to enable access to those with cognitive, sensory or physical disability. David Rose in discussing new learning technologies states that

“Unfortunately, most of these learning technologies are not being designed with students who have disabilities in mind. As a result, these new technologies are likely to create new barriers for students with disabilities” (Rose 2001)
Rose asserts that universal design, which is the concept of “of building accessibility into the technology from the start” needs to be adopted instead of creating learning objects, and thinking about accessibility later.

Brophy and Cravan list two important elements in creating accessible online information, “through the use of access technology and through adopting good practice in interface design.” (Brophy and Craven 2007)

While assistive technology such as screen readers or refreshable braille can enable online text to be read, the learning object or web page needs to allow and enable that to a certain extent in its design. A screen reader will only “read” what it has access to on a page, also the order in which it reads has to be designed for.

Designing for those with a learning difficulty such as dyslexia means taking into account that dyslexic students might need to manipulate text in order to read it, or be able look up the meaning of words. The use of menu systems, or symbols or icons needs to also be considered. People with hearing impairments would need captions provided for any audio.

Keyboard controls will only work for those with physical disability if the feature is enabled properly the website first. In light of this it is vital that accessibility be considered.

Another important consideration is usability testing, “it is important to involve users” and to test learning objects with real people for accessibility. (Kerkmann and Lewandowski 2012)
2.9 Conclusion

Based on the review of the literature it is clear that the role of the library is changing. The emergence of ICT as a ubiquitous tool with which we access information has had a knock on effect for teachers of information literacy. Librarians are seen as a separate entity to the teaching faculty in the role of teaching and there is a lack of emphasis on pedagogy in IL teaching.

IL instruction needs to use good pedagogical practices and learning theories in order to create good instructional design. Online tutorials and web 2.0 technologies have been seen as a panacea for some of the issues but librarians need to consider pedagogy, learning styles and multimedia principles before designing instruction. Feedback and assessment also need to be incorporated into this design.
Chapter 3  Methodology

3.1 Introduction

This chapter identifies the research methodology used for this study. An outline of the background of the research will be given. Several research methodologies shall be examined, and presented along with a justification of the chosen research methodology.

3.2 Rationale for this research

Due to the expansion and complexity of online sources, as mentioned in the literature review, teaching IL to all students is increasingly important. Due to lack of resources and increased student numbers this can be difficult to achieve. A large proportion of students enrolled in third level never visit the campus, are wholly online students, and even those students who are on campus do not always get taught information literacy.

A solution to this problem is to create an online information literacy tutorial. The author has seen how effective these online tutorials have been in teaching IL in other institutes, in terms of the following educational values:

- The use of an online tutorial can improve the learning experience for the student; this is based on learning theory as discovered in the literature review.
- An online tutorial helps the student access their learning at a time and pace that suits them, thus keeping in up to date with changing student needs.
- The use of an online tutorial promotes self-efficacy and enables the student take ownership of their learning.
3.3 Research Setting

The library has nine staff in total, three of which are librarians who aim to deliver information literacy training to the whole student body for every year they are in college. There are also single tutorials which the student’s book themselves with those librarians, follow up single sessions after group tutorials, and follow up group tutorials. It should be mentioned that all library staff are constantly available to help the students at the information desk which in a less formal way in terms of information literacy and library skills. Typically (but not always) information desk queries are short in nature. Considering that IT Sligo is currently “providing programmes to over 6,000 students”, it is quite an aim to attempt to teach them all IL. (Sligo 13-03-14) The problem is that while a good attempt is made at delivering a tutorial to these students, some classes get missed, and the online students do not typically get an IL tutorial.

Some years ago the library adopted the ANZIL framework under the recommendation of WIGL.

The Library at IT Sligo has created an interactive online tutorial which teaches standard two of the ANZIL framework. The online tutorial aims to deliver learning based on the ANZIL framework to students of IT Sligo.

**Standard Two:** The information literate person finds needed information effectively and efficiently (Bundy 2004)
It is envisioned, that the online tutorial will be provided to all students, and will supplement or in some cases perhaps be a replacement for traditional IL teaching by these librarians. It is hoped that in time, all seven ANZIL standards will be used to create an online tutorial which will be available online.

3.4 Research Questions

The purpose of this study is to investigate whether or not an online tutorial can be as effective as a taught tutorial, and also to develop best practice on how to improve and implement it. This study will ask in more detail the following questions:

5. Does effective learning occur when an online tutorial is used for IL teaching?
6. What is the value of an online tutorial to the staff and students?
7. How should the online tutorial be used by staff and students of IT Sligo?
8. How can an online tutorial be improved for more effective learning?

3.5 Overview of Research

Creswell defines research as a series of steps “used to collect and analyse information to increase our understanding of a topic or issue” and he clarifies that although research is seen as something teaching staff or students do, it is also conducted by “personnel in other educational settings”. (Creswell 2012, p.3)

The reasons we conduct research is that it adds to our knowledge, helps to improve practice or changes policy or procedure. There is a consensus in the literature that while we traditionally see research as being conducted by professional researchers, we are all
in fact informally conducting research in our ordinary lives. (Mallick and Verma 2005; Creswell 2012)

Creswell simplifies research and states that it is a process within which we:

1. Pose a question
2. Collect data to answer the question
3. Present an answer to the question

(Creswell 2012)

There are two main dichotomies to research, the first being between qualitative and quantitative, and the second being between pure research and a more interpretive approach.

According to Campbell et al, educational research is almost always qualitative in nature because it studies interpersonal relationships. (Campbell et al 2004) Quantitative research deals with numbers and statistics. The choice between qualitative and quantitative depends on the research project to hand.

3.5.1 Research Paradigms

3.5.1.1 Positivism

The positivist tradition is one in which “natural events are properly to be explained by reference to empirically observable concrete phenomena.” (Campbell et al 2004)

Positivism was coined by the French philosopher Auguste Comte in the nineteenth century. Seen as progressive in its time, positivism uses “methods of the physical sciences (precise observation, numerical measurement, the search for patterns of casual explanation) should also be used in the social sciences.” (Bruce and Yearley 2006, p.237)
Positivism describes the social scientist as being an objective observer of social reality.

The main problem with positivism is that it is extremely difficult to apply the laws of natural science to human behaviour due to the “immense complexity of human nature and the world”. (Cohen et al 2000, p.33) Positivist Research is rational empirical and subjectivist in nature. Positivist research methods are most commonly used in quantitative research.

3.5.1.2 Non-positivism

Qualitative researchers tend to use a non-positivist approach to research, because it enables them to explore human interactions and their understandings. (Campbell et al 2004; Silverman 2010; Creswell 2012)

The author favours this non-positivist view that knowledge is personal, subjective and unique to the individual.

The choice of epistemology influences the choice of methodology and subsequently data collection and instrumentation, (Cohen et al 2000, p.5) therefore the methodology is qualitative in nature.

3.5.1.3 Educational Research

Educational research is of importance to librarianship due to the educational aspect of the job. The majority of academic librarians have a teaching role. The research question pertaining to this study requires an exploration of the relationship between student and
teacher (both lecturer and teacher-librarian) and student and technology. The ultimate aim of educational research is to benefit the end user, which in this case is the student.

### 3.6 Research Methodology

The literature review identified various elements regarding the teaching of IL in third level. This has provided the author with a detailed knowledge of the different issues regarding IL teaching. According to Silverman, “research methods should be chosen based on the specific task at hand.” (Silverman 2010, p.25) Several research methodologies were explored, and the next section will outline them, and how the author came to choose an appropriate research strategy and research methodologies.

#### 3.6.1 Action Research

Action research as an approach is ideal for a local setting where an improvement or a change of strategy is needed. It is also known as practitioner based research. It is most traditionally used in health and social sciences, and more commonly in later years in educational settings. Reason and Bradbury assert that action research starts with the question “how can we improve the situation” (Reason and Bradbury 2001, p.11) Bell defines it as applied research, carried out by a practitioner who has recognized a need for change or improvement. (Bell 2010, p.6)

**Action Research in Libraries**

Watson-Boone states that practitioner research by academic librarians has grown in recent years and hypothesises that one of the reasons for this is that due to the changes in our
“information driven world” have meant academic librarians have had to adapt, change work practices and learn new skills and techniques, and that in order to do all this, research has to take place. She asserts that most academic librarians are no longer doing the jobs for which they have been trained due to the changes in the ways we access information. (Watson-Boone 2000)

Thus there appears to be a growing trend in libraries towards action or practitioner led research.

3.6.2 Case Study Research

Case studies have been identified in the literature as the best research strategy for investigating “something that already exists.”(Denscombe 2010, p.54)

Because so many variables reside within a case study, it is important to use different methods of data collection. A case study typically uses a mixed methods methodology, with quantitative and qualitative data being collected. Bryman asserts that case studies can be qualitative or quantitative in nature, or mixed, but that where the case is primarily qualitative the relationship between theory and research is inductive. (Bryman 2012, p.69)

According to Eisenhardt, case studies can be used in the description of a situation, the testing of a theory or the creation of a theory. (Eisenhardt 1989)

Cohen et al explain inductive reasoning in context. We either try to understand the world around us using deductive, inductive or a combined inductive-inductive approach. Deductive research occurs when existing theory is tested, whereas inductive research is
more of a grounded theory approach which attempts to create theory. (Cohen et al 2000, p.624)

Yin defines different types of methodology according to characteristics. According to Yin there are three different types of methodology, and therefore case study, those which explore, describe or explain a phenomenon. (Yin 2009, p.32)

Which type of methodology is chosen depends on the amount of control you have over behaviour, and your research questions.

According to Yin, if your research questions ask how and why questions, and if “relevant behaviors cannot be manipulated” your methodology should be explanatory, therefore case studies are an appropriate methodology. In other words a case study is ideal for researching an ongoing event within which you have little control.

3.6.2.1 Case studies - Advantages

The main advantage of case study research is the ability to examine phenomena that already exist, in great detail. Also, as Yin states that a “major strength” of case study research is the ability to collect data from multiple sources of evidence. This is known as triangulation. The benefit of which is to create “converging lines of enquiry” which in turn improves reliability. (Yin 2009, p.199)

3.6.2.2 Case studies - disadvantages

One concern or critique of the case study approach is the difficulty in making generalizations from one specific case. How can one case be representative so that its
findings can be applicable to broader outside populations? (Bryman 2012, p.71) Yin however states that the purpose of the case study is to “expand and generalize theories” and that they are “generalizable to theoretical propositions and not to populations or universes.” (Yin 2009, p.45)

Silverman explains that sampling procedures are usually unavailable when conducting a case study due to the fact that

“it is unlikely that these cases will have been selected on a random basis. Very often a case will be chosen simply because it allows access” (Silverman 2010, p.156)

Cohen et al also dismiss the concerns over generalization in case studies, and states that case study research adds to a “growing proof of data” where “multiple case studies” all add to a greater degree of generalization. (Cohen et al 2000, p.320)

Other concerns are the length of time a case study can take, the unwieldy amount of data gathered.

### 3.6.3 Methodology Chosen

A case study approach was chosen, as the author wishes to investigate a situation that already exists, within a short timeframe. The author wishes to investigate the behaviour and phenomena that occur within a particular setting, therefore case study approach was chosen, and questionnaires, focus groups and interviews used to collect data.
3.7 Sample Group

The sampling frame is defined by Bryman as “the listing of all units in the population from which the sample will be selected.” (Bryman 2012, p.187) In this case the sampling frame includes the teaching staff and the students of IT Sligo.

3.7.1 Limitations of Sample Group

It is very difficult and beyond the scope of this research to have a representative sample of the thousands of students and hundreds of staff who attend and work in IT Sligo, therefore probability sampling was not used. A convenience sample has been used for the questionnaires and the interviews. The author recognises that the research is not generalizable. The findings are also not generalizable due to the fact that it is a case study, and also because the author was interested in participant’s feelings and opinions, therefore the findings are largely subjective. Random sampling techniques were used to choose the classes and years for the students who filled in the questionnaire on the taught and online tutorial in the classroom; however these classes were all within the school of Science only as that is the school the author teaches in. The author recognises that the sampling is also purposive in nature.

In terms of the questionnaire regarding the online tutorial that was not completed in class, an e-mail was sent to the student body but got a very poor response rate. The author had to use a “snowball sample” which according to Silverman “uses the social networks of one or two initial informants.” (Silverman 2010, p.210) One of the lecturers had some
interested students for example, and one of the students used their own Facebook page to get responses.

The URL to the online tutorial was given out randomly to students at the library information desk.

3.8 Research Instruments

As a critique of the case study approach is often validity, triangulation of data was paramount to the research methodology. As Yin states, case studies should rely on “multiple sources of evidence, with data needing to converge in a triangulating fashion” (Yin 2009, p.50)

Data was gathered using both qualitatively and quantitatively, using a variety of research instruments, namely questionnaires, focus groups and interviews.

3.8.1 Questionnaires

Questionnaires are used in order to obtain data from a large number of respondents, they are often used as part of marketing or survey research, and when used appropriately can collect “vast quantities of data from a variety of respondents” (Wilkinson and Birmingham 2003, p.8)

Questionnaires can be inexpensive to create and manage, and can be administered via a range of method such as by mail, using email, the internet or social media.
However one point to remember in using questionnaires is that they have to be designed well. Poor questionnaire design will not only influence the answers, but will contribute to a poor response rate. Bradburn et al assert that

“The precise wording of questions plays a vital role in determining the answers given by respondents. This fact is not appreciated as fully as it should be, even in ordinary conversation.” (Bradburn et al 2004, p.8)

They go on to describe the “ambiguities of language” and the role of context as being strong influencers in the creation and interpretation of questionnaires.

Wilkinson and Birmingham (2003) outline the types of questions that are typically asked in a questionnaire, and the advantages and disadvantages of each, they also outline a number of ways response rates can be increased, such as:

- the use of a cover letter explaining the research
- The use of an incentive
- Keeping the answers short
- Using good questionnaire design and piloting the questionnaire in order to find errors.
- Placing any questions on age at the end of the questionnaire.
- Using clear unambiguous language

Cohen also suggests a number of methods for increasing response rates, such as follow up reminders, personalising the e-mail or cover letter, and promising anonymity.

In this study, two separate online questionnaires were administered. The first questionnaire was administered to students in a classroom setting directly after they had a taught class in IL. This occurred on two separate occasions, after a taught class with first year undergraduate students, and after a taught class with fourth year undergraduates.
An URL shortening service was used to print the questionnaire on strips of paper and then given to all students in the class. The students entered the URL into a browser address bar and completed the questionnaire.

The two questionnaires differed slightly, in that one collected data pertaining to a taught class in information literacy, while the other collected data concerning the use of an online tutorial that taught information literacy.

The second questionnaire was administered in three different ways. Firstly an e-mail was sent to the entire student body with a link to the questionnaire.

Secondly a link to the questionnaire was placed on Facebook, and on the library website.

Thirdly small business cards with the link to the questionnaire and a short explanation was printed and given out randomly to students.

Fourthly, in a classroom environment using a link on the library website a class of third year students accessed and used the online tutorial before using the link that was inserted in the end of the tutorial to access the questionnaire.

The questions were similar in both questionnaires, and used a variety of multiple choice, Likert scales, mainly closed but some open ended questions. The primary aim of both questionnaires was to test the amount of learning that occurred in a taught class or using an online tutorial, however some open ended questions and likert scale questions were also used to acquire a more holistic view of the subject.
3.8.2 Interviews

The purpose of the interview is to ascertain how a particular group of people “perceive things.” (Silverman 2010, p.206)

Cohen et al describe the interview as an exchange of views which occurs between two or more people that results in the construction of knowledge. Interviews allow respondents to discuss their perception of the world, and as that is an important concern of the author, this is why they were chosen as a data instrument. (Cohen et al 2000, p.435)

It is very important when conducting interviews that the interviewer is able to direct or control the interview to a certain extent, so that the interview does not go off topic for example, so that any bias or knowledge on the part of the interviewer does not influence the interviewee’s behaviour or answers. However it is noted by Bryman, that going off topic slightly at times, in listening to the interviewee can elicit further or better responses. (Bryman 2012, p.478) Sometimes the interviewer needs to ask further probing questions, or needs to restructure the way a question is delivered, and when this is done it can be difficult not to “lead” the interviewee to answer in a certain way

The author interviewed three students after they had used the online tutorial. A semi structured interview was chosen because the author wished to find out how the students felt about the online tutorial and a questionnaire was too structured. The author wished the students to go off topic to a certain extent, in order to gain a more holistic view of how the students felt about the teaching of IL and the online tutorial. Questions were written more as guidelines so that the interview would not go too far off topic. Two of the interviews occurred over the phone, at a prearranged time that suited the interviewees,
and one occurred face to face in a staff office. In the case of the face to face interview, refreshments were provided for both interviewer and interviewee in order to make the setting seem informal and comfortable, also mobile phones and work phones were turned off. The online tutorial was opened on a computer screen for reference purposes. Each interview was recorded, and lasted between twenty and forty minutes.

Interviewees were given a link to the online tutorial a week in advance so that they could look at it, and use it.

At the start of each interview an overview of the research was given. It was made very clear to each interviewee that it was important to be honest in any observations they made regarding the online tutorial, that one of the research questions was to find out how to improve the online tutorial and therefore any negative comments would be seen as constructive.

While there were specific questions that the interviews followed, often they were rephrased, the order of questions changed, and answers probed.

### 3.8.3 Focus Group

A focus group is a type of group interview where the participants interact with each other rather than the interviewer whose role is to ask guiding questions. Focus groups occur with small groups of people who “focus” on discussing a mutual topic of interest. Focus groups can create a large amount of data, and are used to gather “data on attitudes, values and opinions”.

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The advantage of focus groups is that they “empowering participants to speak out, and in their own words” (Cohen et al 2000, p.462)

There is disagreement within the literature on the ideal number of participants for a focus group, with some stating that the ideal group is between four and twelve, others agreeing on between six and eight. (Cohen et al 2000, p.463)

Wilkinson and Birmingham maintain that focus groups can contain any number of participants, but that less than four may not create a group dynamic, and more than twelve becomes unwieldy. (Wilkinson and Birmingham 2003, p.98)

One common issue that occurs within a focus group is that one dominant personality assets itself, therefore one voice can be heard above others. Likewise, some participants do not participate, or participate very little therefore, do not get heard. The onus is on the interviewer to manage these issues.

In this study, three focus groups were conducted. The focus group was chosen because due to time constraints the author wanted to gather as much information as possible in a short space of time, also the author wished the teaching staff to discuss together the issues surrounding the topic, in order to gain a more holistic or overarching view. The focus group research instrument was chosen for the students in order to encourage them to speak honestly, give them more confidence and also again to gain a more holistic view of their experiences and views. The first focus group was with students, and the second two with staff. The setting for each focus group was a seminar room in the library. The room has a large table in the centre for participants to sit around. There is an electronic whiteboard in the room. An explanation of the research as well as current practice in IL teaching
within IT Sligo as well as in a broader sense was given, and a demonstration of the online tutorial took place. Care was taken to show all the different types of slide, interaction and quiz within the online tutorial, and it was repeatedly explained that any criticism would be deemed constructive, as it was something the library wished to develop and improve on.

For the student group sweets were provided in the middle of the table, and participants were told they would be bought a tea or coffee and a snack afterwards. The student focus group took place in the evening from seven o’clock, and took one hour. The two staff focus groups occurred during the day and followed the same structure and the same questions. Both students and staff were told in advance that their conversation would be recorded.

3.8.4 Observation

Observation techniques are used to positive effect when it is necessary to collect data on the social behaviour of a group. The author of this study observed 18 students using the online tutorial in a computer lab. The focus of the study was to discover how effective the online tutorial would be if used in this way. Another focus for the observation was to see if students once told part way through that they could leave after the online tutorial was completed, would rush to finish the online tutorial, or see the value in it, and keep at the pace they started with. The observation log was also used to discover any technical difficulties the students encountered when using the online tutorial.
3.9 Reliability and Validity of Research

Several different methods of research instrumentation were used in order to ensure triangulation of data. This ensures that the data obtained from each method can be cross checked to improve the reliability in the findings.

The questionnaires were designed mainly using close-ended questions in order to limit ambiguity.

As there is a quiz embedded in the questionnaires, the purpose of which was to ascertain the difference in learning between a taught class and an online tutorial, careful attention was make to ensure the content of the taught class was similar to the content of the online tutorial.

The author was aware that the students involved in the focus group might be nervous that they have to only giving the “right answer” therefore attention was given to encouraging the students to be honest and also to making them feel comfortable doing so.

3.9.1 Limitations of the Research

The main limitation of the research as stated is that the sample group is not representative of the population of the staff and students of IT Sligo.

Also to a certain extent in terms of questionnaires, focus groups and interviews, one could argue that only those students and staff who are “interested” in the library, and who are library users contributed. This is not strictly true of the classroom based questionnaires which the students were asked to do in class, as this was mandatory.
Also in terms of the interviews, the three interviews were with male students, and the three were mature students, none of the undergraduate students contributed.

The student focus group was mixed in terms of gender and course, but the dynamic was more like group interview than a focus group with participants in the main directly replying to the interviewer instead of discussing the issues with each other.

Another limitation was the amount of research done on accessibility which was felt to be too large an area for the purpose of this research, and which should be investigated possibly in the form of an action research project.

3.10 Data Analysis

Findings of the research were inputted into Excel 2013 for data analysis. This allowed for the creation of pivot charts, tables and statistical analysis. The online software (Wufoo) was also used to generate statistical reports.

3.11 Ethical Considerations

Prior permission was granted by the head of the school of Science to conduct the research. Due to the fact that some of the students involved in the research could be under the age of 18 and therefore officially children, a parental consent form was made available. It was linked to all the questionnaires. Also, printed versions were brought to all classes, and it was announced that they were available. All students and lecturers involved were made aware of the nature of the research and the background before involvement. Students were
also told that the quiz results were not going towards any grade and that they would be kept confidential.

All students and lecturers involved were asked in advance if audio recording was permitted. They were also informed that the audio recordings would be deleted once the transcripts were typed up. Participants were made aware that initials or nicknames would be used instead of their real names, and that if sensitive information was spoken of within the interview or focus group, that it could be redacted from the transcript and summarised or left out if necessary.

Due of the nature of the college life, it was very important not to interfere with the daily lives of the students or staff especially around exam time, when they had projects and assignments to hand up or when the staff were particularity busy with exam board meetings for example. Therefore the data collection attempted to be non-intrusive and not time consuming. Where students used the online tutorial only, they have also been offered a taught class after the research is completed. Any students who intimated that they need help with information literacy skills within the focus groups or interviews have been offered help since.

3.12 Summary of Methodology

This section outlines the methodology chosen for this study and the research instruments used to collect data. The research methodology chosen was case study research and both qualitative and quantitative data was collected using focus groups, interviews, questionnaires, and observation as research instruments. A limitation of the research is
that the sample group is not representative of the population of the staff and students of IT Sligo therefore generalizations to wider theory cannot be made. The ethical considerations of the study included confidentiality, an effort by the author for the research to be as unobtrusive as possible and also the proviso that future IL training be offered to participants in the cases where students revealed a training need.
Chapter 4  Findings

4.1 Introduction

The findings of the author’s research shall be presented in this chapter. For the purpose of clarity, the findings will be presented according to the research questions.

4.1.1 Questionnaires

Data was collected from two questionnaires. The first questionnaire was given to students after two taught classes in IL; the second was given to students after completing the online tutorial.

18 of the people who used the online tutorial did so in class. An observation log was used to record student behaviour.

4.1.2 Focus Groups and Interviews

Qualitative data was also collected from students and teaching staff. Data was gathered from a student focus group with 6 participants. There were also three separate student interviews, one face to face and two over the telephone with off campus students. Data was gathered from teaching staff using two separate focus groups, one which had three participants, one of which is a librarian who teaches IL, and another focus group which had 5 participants all of which were lecturers with ten years or more teaching experience.
4.2 Profile of Respondents

A total of 98 students were taught IL in either taught classes or using an online tutorial. 54 students were taught in computer labs, and 44 used the online tutorial. The students in the taught classes were all studying Science subjects, while amongst the students who used the online tutorial, half were studying Science, 27% were in the school of Engineering and Design, and 23% were studying either Business or Social Science Subjects. 83% of the taught class group were level 8 students studying an honours degree, while 17% were level 7 studying for an ordinary degree.

![Course Levels](image)

Figure 4.1 Course Levels

Half of the students in the taught class were first years, and the other half were fourth years. Figure 4.1 illustrates that 43% of the students who took the online tutorial were level 7, 54% level 8, 9% level 9 and 2% were another level, such as Erasmus students.
Figure 4.2 indicates that 57% of students who took the online tutorial were in third year, 25% in second year, 7% in first year and 9% in fourth year. 2% were in other years, in this case an Erasmus student from Brazil.

![Year of Course](image)

**Figure 4.2 Year of Course**

Figure 4.3 provides an indication of the age profile of the students with 81% of the students in the taught class group, and 70% of the taught class aged between 18 and 24. 13% of the taught class group and 27% of the online tutorial group were over the age of 24. In terms of combined age profile of the two groups 81% were under the age of 25, while 19% were aged 25 or over. 46% of those who completed the online tutorial were female, 43% male and 11% did not specify gender or name. 46% of the taught class were male, 20% female, but 33% did not specify gender.
In terms of previous IL training, 68% in total did not have previous training, and 32% had. Of the 32% who said they had previous training, 15% of which had a practical class in a lab, another 7% had a one to one tutorial with a librarian, and another 7% had been given a PowerPoint presentation. Of teaching staff involved in the focus groups six were female, and two male. One of the staff is a teaching librarian with one years’ experience teaching IL, the rest have all worked primarily in a teaching capacity for over ten years in IT Sligo. Of the teaching staff focus groups, four staff teach Science subjects, one teaches in the School of Business and Social Care, and two teach in the school of Engineering and Design. Of the staff, 75% are in the 35-44 age group. 56% of the students who participated in the focus groups and interviews were aged 18-24, 22% aged 35-44 and 22% aged 45-54. Within the group of students involved in the focus group and interview 67% were male and 33% female.
4.3 Findings by Research Question

4.3.1 Does effective learning occur when an online tutorial is used for IL teaching?

4.3.1.1 Quiz Results

The study showed that there was very little difference in the amount of learning by students who took the online tutorial or who attended the taught lab class. There were 11 questions given in the quiz, and the percentage of people in each group who answered correctly was calculated. The average of the percentage of correct answers for each group was exactly the same at 64%.

![Quiz Results](image)

*Figure 4.4 Quiz Results*
4.3.1.2 Perceived Skills

A Likert scale was used to ask the students how they rated their IL skills before and after they either had the taught class or used the online tutorial. The scale ranged from unskilled to highly skilled and students were asked to select what they felt their skill level was. Figure 4.5 illustrates that 18% of students declared that they were unskilled in the area of IL before they used the online tutorial and were moderately skilled afterwards. The same question was given to the taught class with 28% stating that they were unskilled before class. After the class 15% of these students perceived themselves to be moderately skilled afterwards, and 13% labelled themselves as skilled. Of the students who perceived themselves as “highly skilled” in IL, the majority scored very low in the quiz results with the majority getting over half the answers wrong.

![Perceived Skills before and after training](image)

*Figure 4.5 Perceived Skills*
4.3.1.3 Training Preference of Respondents

A Likert scale question was used in the survey and students were asked to give their training preferences in a way that allowed them to state the strength of their preference. Figure 4.6 shows that 27% of students who took the online tutorial strongly agreed that their preference is an online tutorial. The majority of respondents agreed that their preference was either a practical session or an online tutorial with library help.

![Training Preference Of Students Who Used The Online Tutorial](image)

Figure 4.6 Training Preference of those who used the Online Tutorial

Figure 4.7 illustrates that 35% of students who had the taught class strongly agreed that a practical taught class was their preference, while 54% agreed that a practical taught class was their preference, and 52% responded that they agreed an online tutorial with library help was their preference.
A Likert scale question was used in the survey in order to ascertain the overall satisfaction with both the taught class and the online tutorial. The highest satisfaction level used was “extremely satisfied”. Figure 4.8 illustrates that 4% of those who had the taught class were “extremely satisfied” with the taught class, while 30% were “very satisfied”. From those who used the online tutorial 7% were “extremely satisfied” and 27% were “very satisfied”. Of the students who had the taught class 56% were “satisfied”. Of the students who used the online tutorial 48% were “satisfied”.
4.3.1.5 Would the students recommend the form of training they received?

Students were asked how likely they would be to recommend the form of training they received. Figure 4.10 illustrates that 55% of those who took the online tutorial would definitely recommend it, while 52% of those who had the taught class would.
There was some dissatisfaction with buttons students and staff not always knowing where to click, inconsistent audio and various other technical aspects of the online tutorial.

### 4.3.1.6 Accessibility

Of the students involved in the interviews and focus group, 11% were dyslexic. There was a consensus that for dyslexic students the online tutorial was a good format due to the fact that they get easily distracted in class, and that sometimes they don’t understand the lecturer, but that if they use an online tutorial they can pause, and redo sections until they understand the content. (Student R) When asked which they preferred; audio or text, audio was a preference for one student who is dyslexic (Student J) and was referred to by them as a faster way of learning. The students with dyslexia who participated in the student focus group expressed that they did not know how to use the library website that using it was “difficult”(Student R) and that it was “hard to use”(Student J).
It was observed that within the group that took the online tutorial in class, a student with coloured lenses got confused with the words used textually in the tutorial. The word “synonym” which was used in the tutorial was mixed up with the word “pseudo name” which was not used. They asked for clarification from the librarian present.

4.3.2 What is the Value of the Online Tutorial to Staff and Students?

4.3.2.1 The value of IL Training

The findings of the study illustrate that students and staff place a high value on IL training. The students and staff confused the terms IL with library skills and with digital literacy. The study found that the students had difficulty keeping up with technological changes such as the move from print to e-books format and changes in versions of Microsoft products for example. The study finds that there was a tendency for the students to feel overwhelmed by information. The findings show that the teaching staff perceived the students as being “technically” digitally literate but that their digital literacy does not extend far beyond the use of social media. The findings show that the students agreed with this perception.

4.3.2.2 Suitability of Online Tutorial to the Subject

The study found that students and staff felt the actual topic of IL was more suited to an online tutorial than a taught class for the following reasons:

- The online tutorial was seen to be a less daunting from of learning for first years (staff member C and student M)
• It was stated that it would be better for students to use the tutorial when they have assignments due therefore it has more meaning.

• The online tutorial was seen as suitable for the teaching of IL by both the staff and students due to the fact that IL can be seen as a “dry” or boring subject. (Student G and staff member S) The general format of the online tutorial was seen to make it more exciting due to its interactivity. “typically students find all this very tiresome and .. boring! They do!” (Staff member S)

• The online tutorial was seen as a “version” of the librarian that could help the students permanently after the librarian left the taught class.(Staff member MH)

4.3.2.3 Suitability of the Online Tutorial for Different Learning Styles

• The study found that students liked the tutorial because it suited their own individual learning style and learning environment. They felt it was tailored to their needs. In the interview with student G he stated that it was “self-tailored”.

• Within the student focus group it was stated that it was of particular benefit to those students who are not feeling well in class, who miss a class or those who just were not listening. (Student M)

• Student R stated in the focus group that sometimes after 5 or 6 hours in class their minds are wandering and they are not taking any of the information in. With an online tutorial they could go home, relax, and then use the online tutorial and really take in the information.

• The study found that the students and staff liked the interactivity. One staff member (Staff member MH) stated that with an online tutorial the students feel
like “they have gone through a process” that it “makes them click”. One student (student S) observed that the interactions “keep you awake”.

4.3.2.4 Segmenting

There was an emphasis on the segmented nature of the online tutorial. 18 students took the online tutorial in class from start to finish, and one student commented that “There was alot to take in at once.” (Online tutorial student no. 45) In general students who used the online tutorial in the classroom took on average 18 minutes to complete it and fill in the questionnaire; however it was observed that not all the videos were watched in full. Students and staff did not feel the online tutorial was too long, as it could be done in parts. One student observed that you can “dip and dive into what you really need and get whatever you want out of it” (student R). Some dissatisfaction was expressed for broad programmes such as the “learning to learn” programme which is run through the college because the students felt that it should be more practical and focus more on for example “academic writing” or allow them to choose what they wanted to learn and therefore be more tailored. (Student S and Student R) The fact that you can skip certain sections of the online tutorial and focus on others was seen as a positive by the students. The idea of being “forced” to go watch something from start to finish was raised in the interviews, with (student G) observing that the online tutorial is better than a YouTube video because you can skip sections instead of being forced through it.
4.3.2.5 Reinforcing Learning

4.3.2.5.1 Quizzes

The study established that one of the main benefits from the student’s perspective was the ability to use the online tutorial again and again, repeating sections until they got the entire quiz right. One student said that when quizzes in this way you are “coding yourself” but of coding yourself but “inadvertently you are learning, because you are revising.” (Student K)

The study shows that the students like the quizzes. One student stated that they are “a bit of fun, we learn to do them when we are kids” (student K), and others agreed that they allow you to use your memory to get better at the subject and gain confidence. One student added that using quizzes “brings up problems that you might not realise you might have” (Student Ma) There was consensus that the quizzes need to be altered with one student stating that getting an answer wrong felt like a “slap to the back of the head.” (Student Mi) Student Mi suggested an approach that allowed for multiple retries, and that the quizzes be after each section instead of at the end. One staff member (staff member Mi) suggested that the feedback of the quizzes suggest areas for improvement rather than give a grade.

4.3.2.5.2 Repeating sections of the tutorial

Two students commented that if you don’t understand your lecturer in class or miss something that was said you are unlikely to ask them to repeat or clarify. One student who stated they were a confident person said she would be too afraid to ask.
“Often I miss things that the guy—the lecturer says, I’m too afraid to, don’t get me wrong I can talk in public, I can do anything, but some lecturers, you will not ask” (student R)

Student Ma replied that

” you don’t want to be like, “can you repeat that again?” but with a video you can go back yourself and listen if you want to”. (Student Ma)

Both students asserted that an advantage of the online tutorial was that you could pause it and repeat sections. Another student defined it as a “rinse and repeat” approach. (Student Mi)

4.3.2.6 General Response to the Online tutorial

The study shows that the general response to the online tutorial was good. It was described as "great", “grand”, “helpful”, “good”, “nice” and “friendly” by the students. One student in a telephone interview responded that it was “slicker and a bit more friendly than was expecting.” (Student G) In general students and staff seemed happy with the look of the online tutorial, with the colours being mentioned in a positive way in the Survey results and in the focus group. Teaching staff used terms such as “accessible”, “clear”, “good”, “nice”, “great”, “positive”, “useful”, “important”, “relevant”, “excellent”, “super”, “very good”, “ideal”, “love it”, “impressed”. There were some negative comments made also. One student (Student J) declared that he felt the animated character was patronising and aimed at a younger audience, while one survey respondent (online tutorial respondent no. 12) stated that it looked like it had been designed for secondary school students and adapted for IT Sligo. One of the teaching staff in the second staff focus group mentioned the animated character stating that the character should be more generic and less
Two of the students who were interviewed liked the fact that the character was generic and “relatable”. (Student G and Student M) Student M asserted that the more “bland” the character is the “more a person is able to project on to a character, the more they can relate to it, because it’s coming from their own personal experiences.”

In terms of content there was some dissatisfaction from the students with the content. One survey respondent (online tutorial respondent no. 21) wanted a section on scientific writing to be included. Another student stated that the content should be more focused for “academic purpose” such as writing papers, referencing, searching for papers rather than search operators. (Online tutorial respondent no. 12) One student (Student K) expressed dissatisfaction with the section on search operators, stating that for example the detail on wildcard searching was not relevant, because search engines don’t need you to use it. One staff member stated that the “icing on the cake” would be if the tutorial had a way for the students to demonstrate their learning by not “just ticking boxes” but by proving that “they can actually use the resources adequately” that it’s “actually learning by doing” (Staff Member J)

4.3.2.7 Lifelong Learning

The study has found that IL was seen as a lifelong learning skill. It was cited as being an essential part of one student’s hoped future job which has a research element built in. (Student Mi) Student G asserted that perhaps it was where he currently worked but that having IL skills were a “definite advantage”. He also implied that after college he would use the freely available open source journals that are available in Google Scholar. There
was a strong consensus in the student focus group that IL was a skillset that they would use outside college life. One student stated that it should be taught in secondary schools. (Student J)

4.3.3 How should the online tutorial be used by staff and students?

4.3.3.1 Integration into the curriculum

The study found that the teaching of IL should be integrated into the curriculum. There was unanimous agreement from all students and staff participants involved in the focus groups and interviews. It was stated by staff member G that IL is already integrated within the learning to learn modules that occur within the college, and that the lecturers teaching the online students also teach the subject. (student K) Student Ka observed that she had a very positive experience being taught the subject by her lecturers. It was suggested by staff that completion of the online tutorial be mandatory and a prerequisite for advancing in courses (staff member M and G) and that the ANZIL framework be kept obvious in the design of the tutorial. (staff member G) It was suggested by teaching staff that students might not necessarily take it upon themselves to complete the tutorial unless prompted. One staff member commented; “otherwise they just won’t do it, I mean, maybe build it into a communications module or something” (staff member Ma)

The study found that there was a high level of interest among the teaching staff in using the online tutorial in their Moodle pages. Two teaching staff members however expressed dissatisfaction with Moodle in terms of its user friendliness or ease of use for students. (staff member G and staff member J) One teaching staff member suggested that an online tutorial be created to teach students how to use Moodle. (staff member J)
In terms of who the online tutorial should be aimed at, there was a lack of consensus. Student S said it should be for all years, because even research students can forget the basics, but student N said it should be for third and fourth years, while staff member MH said it should be targeted for first years. Student K implied that it should be targeted towards for undergraduate students.

4.3.3.2 Assessment

The study found that the students and staff were in agreement that IL should be assessed. There was a lack of agreement and vagueness however in what the type of assessment that should occur. Staff agreed that the passing of a quiz in the online tutorial should be a requirement, while one of the students felt there should be formal assessment (Student R). When asked in the student interviews whether or not there should be formal assessment two students said no. One student stated that the “results should speak for themselves.” (Student G) And another who did not agree with formal assessment stated that “it’s the quality of peoples work and how well they are doing.” (Student Mi)

4.3.3.3 Blended Learning

During the student focus group participants were asked what they thought the advantages of a taught class were over just using the online tutorial. Student J stated that he would prefer a taught class and to be given a link to the tutorial via e-mail. Lecturer M in the second staff focus group expressed a similar opinion, except that instead of a taught class that a librarian would give a demonstration of the online tutorial and then let people use it. Student N suggested being given the online tutorial but having a library helpdesk open
at certain times of the day for extra help. Student Ka observed that the online tutorial would add to the learning experience of a taught class because it could be referred to afterwards. In The second staff focus group when asked which they thought was better a taught class or an online tutorial, lecturer A commented that “in an ideal world you would have a little bit of both”. It was suggested that the students also have contact with a librarian. A comment was made in the first staff focus group by lecturer G who felt there was a great need for the students to be inducted by librarians initially rather than be given an online tutorial. Lecturer C mentioned that there was a need for personal contact. She felt that ideally students would come into the library and get extra help from the library staff but that in her opinion the reality was that the students were not doing that. She also observed that students need to know a little bit about something before they will ask for help.

4.3.4 How can an online tutorial be improved for more effective learning?

There were a number of improvements or issues outlined by staff and students.

- Inconsistency in the audio. Each slide needs to have at least an audio introduction with instructions. Audio continuity is needed as it carries you through the tutorial. This was documented in the observation log, one student while using the online tutorial asked for help because he thought there was a problem with the audio, in actual fact there was no audio on that particular slide but the student expected it. This was also commented upon by student Mi.
• Improve navigation and menus. Make it obvious from the menu that you are using an ANZIL framework and what stage you are on that framework.

• Improve quizzes. Add to the number of questions. Improve usability of the quizzes. Remove any ambiguity. Improve the feedback students get after completing a quiz, perhaps instead of giving just a score pointing out their area of weakness.

• Explain any external links so that the user knows what it does. Remove any unnecessary ones.

• Improve general usability.

• Make character more generic and use characters in the online tutorial that are of different ethnicities and genders.

• Improve the accessibility of the online tutorial and aim for universal design goals.

4.4 Other Findings

4.4.1 ICT skills

When asked to introduce themselves in the student focus groups, students identified themselves as being either good or bad at using computers. A general view from the focus group was that they struggled with digital literacy. Lecturing staff stated that they felt that in general students were “technically” good at using technology because they used social media sites, but that they were not good at the “next level” which was to “apply it academically”. (Staff member C)
The study found a general reticence on the part of students to ask lecturing staff or library staff questions. Two of the students from either the focus group or individual interviews stated that they did not know they could ask for extra IL training at the library information desk, and make an appointment with a librarian.

4.5 Summary of findings

The findings of the research indicate that there is no difference in the amount of learning that occurs whether IL training is taught by a librarian in a computer lab or by the students using an online tutorial by themselves. Students who were taught IL in the lab reported a higher satisfaction rate than those who used the online tutorial.

The study found that some students favoured an online tutorial due to the adaptability to their own learning styles.

The study found that IL should be integrated into the curriculum and that the online tutorial should be available on Moodle.

The majority of those surveyed still wanted contact with a librarian or teacher and did not want to just be given a link to an online tutorial.
Chapter 5  Discussion

5.1 Introduction

This chapter discusses the research findings in context of the literature review. The discussion is presented by research question and will explore how the author’s study relates to the literature.

5.2 Discussion of Research Findings

5.2.1 Does effective learning occur when an online tutorial is used for IL teaching?

The literature concurs that there is no difference in achievement rates between face to face learning and multimedia learning. (Oppenheimer 1997; Clark and Mayer 2011) In this study this has been found to be true with no difference in the average number of correct responses. Hatranski collaborates this point and adds that poor results can be the result of poorly designed and implemented courses. (2008) The study shows that there is some difference in the percentage of correct responses for individual questions according to the type of class, with students using the online tutorial getting a much better grade for question 11 for example than the taught class. There are a couple of reasons why this might have occurred. Firstly, the students using the online tutorial were able to double check their answers from the online tutorial. Secondly perhaps the topic in question was left out by mistake as a teaching point in the class, or not enough emphasis was placed on it. It would also be true that if a section of the online tutorial was badly designed that the learning outcome based on that section would be poor. There was a better learning
outcome in the taught class to question number 6 which was to do with Boolean operators, and this could be due to the fact that the students in the taught class actually used Boolean operators in a search engine in the class. There was a “learning by doing” element to the class.

5.2.1.1 Higher Level Knowledge

Saloman and Perkins in discussing learning theory and in particular social constructivism state that a higher level of knowledge, what they coin as “high road knowledge” can occur more easily when meaning is socially constructed. (1998)

There is no way of knowing from the study what level of knowledge was gained, however there were indications from the study that some students were using the online tutorial in a more behaviourist way, repeating sections over and over and there was a suggestion from a student that you can take the quizzes over and over again and trick yourself that you are getting it right. The student went on to add that you are inadvertently learning by repetition this way. The fact that the students will be using what they learn from the online tutorial or taught class for their assignments means that they will be learning by doing to a certain extent afterwards. While as one staff member put it, the librarian will be gone back to the library after delivering a taught class, there will always be a version of the librarian available as the online tutorial that the student can refer to when it is more relevant and therefore meaningful.

The findings show that the students and staff liked the interactions in the online tutorial, they were found to be fun and also helped keep the students from getting bored. Kozma argues that the use of ICT enables us to create meaning even if we have little prior
knowledge in the subject. We do this more easily using ICT according to Kozma because we create pictures in our head from the symbols or processes used in the media. (1991) This study found that there was an emphasis placed on prior knowledge by both the students and staff, who agreed that the online tutorial was a good place to start if students had no prior knowledge of IL.

Clarke disputes Kozma’s assertion stating that the use of ICT in teaching is simply a delivery method, and that there is no difference in the amount or quality of learning that takes place. (1983) This study found that students surveyed in general did not show a huge amount of preference for one mode of training than another, implying that they also see ICT merely as a delivery method.

The study found that there was an emphasis placed on the idea of “learning by doing” with one student stating that you remember things better if you practice real world examples.

5.2.2  What is the value of an online tutorial to the staff and students?

5.2.2.1 The value of IL training

The findings show that both staff and students placed a high value on IL, and that there is a definite need for IL training. The findings show that one of the reasons for this is the changing landscape of digital technology and the subsequent need for training and retraining. Grafstein blames rapid technological developments and the changes from print formats to online formats for the great need for information literacy training. (2002) The findings of this study reiterate and emphasise that need. One student stated that “there’s far more information online so you’re gonna get more lost online” and went on to state
that finding a book in a library is easy, you know that shelf number 536 has biology books for example, so you go to the same shelf all the time and you don’t go too wrong, but with online information when you’re at home researching you could end up “miles from the original proposal”. The findings from the study show that learners and teaching staff realise and acknowledge the change from print to online resources and the difficulties in finding and evaluating online sources.

The findings show that there was a confusion or overlap in the areas of library skills, information literacy and digital literacy as asserted by Horton. (1993) The study found that teaching staff and students had a tendency to amalgamate the concept of library skills and IL skills into one skillset, when they are in fact separate discrete skill sets. One student stated that he had observed mature students who had no idea how to find a book in the library or “had no idea of the Dewey decimal system” or that they could look up the books themselves, and even check them out using the self-service system who were willing to wait for quite a while for a library staff member to do it for them once the information desk opened, which would bring into question Knowles concept of the adult learner as independent, and favouring self-directed learning. Of the 98 students surveyed, 18% were between the age of 25 and 44, but only 1 student in this age bracket stated that they “strongly agreed” that their training preference was an online tutorial, with the majority of mature students favouring a taught practical session in a lab.

5.2.2.2 Digital Literacy

Previous literature on this generation of students finds that students born after 1993 use digital media without defining search strategies, without evaluating their sources, or
considering copyright. They want instant gratification in terms of results. (Rowlands et al 2008) The study shows that this was a common perception amongst the teaching staff and some students of IT Sligo. One staff member stated that “if you ask them about Facebook or twitter good God they could probably get a PhD” and one student stated but that they are not able to use technology at the “next level” which is for academic purposes. There is also an emphasis in the literature that this generation believe that they are information or digitally literate even though they are not. (Gross and Latham 2012) The findings of this study would concur with Rowlands et al regarding the information seeking behaviour of this age group, but repudiates the idea that this age group believes they are information or digitally literate. The majority of the student respondents in this study did not believe they were highly skilled in IL. However the study shows that the minority who did believe they were highly skilled in IL skills in fact when tested had a very low skill set.

In this study it was found that although students were able to use social media sites such as Facebook or Twitter, they did not necessarily know how to use ICT for academic purposes, and consequently did not feel they were proficient in IL. One mature student who used to train staff in industry argued that there has been a

“massive dumbing down of technology with a minimum amount of buttons to push, and the vast majority is social media, I think the vast majority of student’s don’t look to get past that and I think faced with a keyboard and all the options available they have no idea where to look… social media is the most forgiving form of technology” (Student Mi)

The study found that the reasons for the lack of skill in digital or information literacy was either lack of training or lack of appropriate training and also the rapid changes in
technology as defined by Grafstein. (2002) Findings in the study showed that this is a big issue for the students and that the students all identified themselves without being asked in terms of their digital literacy skills.

5.2.2.3 Lifelong Learning

The study found that students believed very strongly that IL is a lifelong skill that is already crucial in their current profession or in the profession they aspire to work in and therefore concurred with Bruce who asserted that IL skills are essential in the workplace. (2004) One student stated that it would be mandatory in his future profession which is Archaeology and stated that “there is a huge amount of book and desk research before a spade is ever turned.”

5.2.2.4 Changing Student Needs

A focus in the literature is the changing student needs. We are moving away from the traditional young adult school leaver to a more diverse type of student, with different backgrounds, commitments and life situations as emphasised by the previous literature. The findings in this study have found this to be true. 21% of the students surveyed and interviewed were over the age of 24. 12% of the students surveyed or interviewed were off campus students, however of that 12% almost half of them were aged 18-24 which collaborates the literature that younger students want the features of an online course. Schuetze and Slowey assert that idea of the non-traditional student being an adult learner is too simple, that there are many diverse types of student with different needs who wish to avail of e-learning. (2002) Dewald maintains that due to increased and changing responsibilities on traditional school leavers many of them also want to avail of e-
learning, this study strengthens Dewald’s assertion as found that some on-campus students would like the features of an e-learning course. (2000) This study also found that not all on-campus students are the traditional school leaver. One of the students in the focus group for example was a mother of two commuting weekly and staying locally for classes before going home at weekends. In terms of what the previous literature terms the “digital divide” (Horton 2008, p.44) the study found that some students currently enrolled have come from developing countries where their access to technology was limited therefore they “really struggle”. The study also found that the prior knowledge of some students even with access to technology was poor.

5.2.2.5 Learner Preferences

Knowles asserts that adult learners prefer self-directed methods of learning, that they need to know the value of the topic they are about to learn, and that they wish to apply their learning to real life problems. This study confirms that adults prefer self-directed learning in some instances, but the majority of adult learners surveyed as already stated did not show a preference for one type of training over another. The findings in this study would argue that learning preferences extend to students of all ages and is more based on individual learning style than age. The results of the survey on training preferences showed that the majority of students preferred the training they had just received whether it be an online tutorial or the taught practical. The study found that some students faced what is referred to in the literature as “cognitive overload”. This occurred when the students used the online tutorial from start to finish in one sitting. Cognitive overload was also described by the students as a regular occurrence in their taught lectures.
The students suggested that this “cognitive overload” would not have occurred if the online tutorial was used at their own pace, and in sections. It was also suggested that if their taught lectures were pre-recorded, they would be able to view them at a time when their working memory was not full and they had the capacity to process the information.

One student when discussing a previous taught class that was also made available as a recorded lecture stated that it was “fantastic, you could go home, sit in bed and you could watch it” once you “fizzle down”. The study found that students were not likely to use the entire online tutorial, but to use it in sections.

5.2.2.6 Tailored Study

There was a clear preference in the study for individual tailored study, which for the students not only meant being able to use an online tutorial wherever or whenever they wanted, but also being able to skip in and out of sections according to what they needed to learn, and not being “forced” to watch an entire video if it was not relevant. This study collaborates Dalsgaard’s concept of Asynchronous e-learning tools as being “Individual personal tools” (2006)

5.2.2.7 Interactions

Overall the students liked the interactivity of the online tutorial, stating not only that it kept them from getting bored, but that it was fun. When asked if they would prefer high quality videos with audio, they stated a clear preference for the online tutorial due to the interactivity. In the previous literature Katz emphasises the benefits that interactive technology have had in e-learning, and this study has found that to be true. (2000)
5.2.2.8 Learning Styles

In terms of learning styles, for example Kolb’s different types of student, (1984) or Gardner’s theory of difference types of intelligence (1993) students mentioned that they would tailor the online tutorial to suit themselves, with students stating preferences for either audio or text. One student mentioned that they liked to takes notes, and that the speed of the online tutorial suited him, but some staff stated that the audio at the beginning of the online tutorial was too slow. The study found that lecturing staff were concerned about not being able to pitch the online tutorial according to the prior knowledge of the students, with another teaching staff member suggesting that software prompts would be able to do that. This corresponds to prior literature such as the studies of Vygotsky on the zone of proximal development or to phrase it a different way the gap between what we know and what we do not know, (1978) and Holmes and Gardner suggesting that software prompts would bridge that gap. (2006) This ability to pitch to a certain extent is missing from an online tutorial, and although software prompts can replicate this to a certain extent, an online tutorial cannot be seen as a direct replacement for a teacher.

5.2.2.9 Advantages and disadvantages of ICT an online tutorial

The previous literature has shown that libraries have started to use online tutorials in order to meet the training needs of students because staff shortages and other work commitments have meant that there is a general lack of training in IL skills. (Dewald 1999a) This study has found this to be true, with only 32 % of survey respondents having had previous library training.
This study has found that the main disadvantage to an online tutorial to be the inability to be able to ask questions, but yet when asked if synchronous features such as a live help, or asynchronous help in the form of a chat room, most respondents believed it to be unnecessary. The study has found there to be a general reticence from the students to ask questions and seek extra help either from library staff or lecturers, and that this reticence is not age related. One staff member stated that it is difficult for students to ask for help if they have no prior learning in the topic, that they literally do not know what to ask, but this was not true in all cases.

5.2.2.10 Advantages and Disadvantages of ICT for teaching

Most studies on the use of ICT for education list the advantages in terms of flexibility, and greater student engagement, and this study also found those same advantages. (Katz 2002) The format of an online tutorial was seen as ideal in this study for a topic that was seen as “dry” or “boring” because it adds excitement in the form of interactions. However it needs to be noted that where previous studies found disadvantages to the use of ICT, so too did this study. Earlier research found that the creation of e-learning packages such as online tutorials takes quite some time, and also there are training issues which are prohibitive. One lecturer when interviewed stated that he would love to have the time and expertise to create such content, and that the library was lucky to have been allowed such a space. Another suggestion was that there should be an element of instructional design support for lecturers within the college. Other disadvantages included the fact that some users did not understand some of the software prompts and therefore would have needed to be shown how to use the online tutorial, but this was probably an issue of poor design
which would be rectified. Other practical disadvantages are the need for earphones when using the online tutorial in a classroom for example, or the internet speed.

5.2.2.11 Blended Learning

The results from this study indicate that far from an online tutorial being seen as a panacea for staff shortages and lack of library training time, the students want a “real” person to be able to help them learn IL skills. Surprisingly the results from this study illustrate the fact that the students want a taught class with the online tutorial as a backup. The teaching staff also suggested some form of librarian involvement whether to demonstrate the online tutorial before a class uses it, or to also give a class. One lecturer when asked which was better a taught class or an online tutorial stated that “in an ideal world you would have a little bit of both” (Staff Member A) There was concern from one lecturer who stated that there was a *great* need for first to be inducted by library staff and shown how the library works, that first years somehow need to be minded and nurtured rather than be just given a link to a website. Therefore this study strengthens Osguthorpe and Graham’s assertion that the ideal situation is to strike a balance between allowing students self-direct their own learning as well as giving them contact with a librarian and thus making them feel less isolated. (2003) Osguthorpe and Graham cite as one of the disadvantages of blended or hybrid learning to be lack of motivation. (2003) Indeed the lecturing staff interviewed in this study believed that unless the students were pushed somehow into doing the online tutorial they might not bother using it.
5.2.2.12 Suitability of the format of an online tutorial in teaching IL

This study had found that the subject of IL is suited to the medium of an online tutorial. Hrastinski states in the literature that asynchronous learning is suited for “non-complex learning”. This study has found that students and staff believed it an ideal subject to be taught using an online tutorial. One student stated that it was not ideal for “broader or more in depth education.” One criticism of the online tutorial format was that it was less suitable for teaching more complex topics and those with side issues; however the findings show that the screencasts were seen as a good method for teaching more complex topics within the online tutorial.

5.2.3 How should an online tutorial be used by staff and students of IT Sligo?

The study set out with the aim of discovering how the online tutorial should be used by staff and students.

5.2.3.1 Information literacy in the curriculum

Prior studies have found that IL should be embedded into the ethos and curriculum of academic institutions. (Bruce 2004; Montiel-Overall and Grimes 2012) The current study found that IL skills are already highly valued and already taught by both library staff and lecturing staff therefore already embedded in the ethos of IT Sligo. IL is already embedded in the curriculum to a certain extent in the form of learning to learn programmes, or individual modules, however the students cited some misgivings in the practicality of some of the content of the learning to learn programmes in that they would
prefer if the classes were elective so that they could choose what content to be taught. One student had a very positive experience of being taught IL skills by lecturing staff, but felt the online tutorial would only augment her learning. Another finding was that students do not always remember content of classes, if they are given at the wrong time of year and therefore have no immediate relevancy, no matter who teaches them or how they are taught. The example given in this study was by a student who was taught referencing in first year before it had any relevance to him, and now he still does not know how to do it. In one sense the study found that the online tutorial is ideal in this kind of situation because it can be accessed when needed and also because students can select “elective” sections to look at.

5.2.3.2 The role of the librarians in the college

Prior studies have found that librarians are seen to have support rather than a teaching role. This fact is lamented in the prior literature (McGuinness 2006) There was no indication of this perception to be true in this study.

It was found in this study that the actual support role that librarians have is actually teaching IL, and that this aids not only the students but also the lecturers. One staff member implied that it is difficult enough keeping on top of their own subjects without keeping on top of IL changes too. In fact one staff member stated that they could do with using the online tutorial themselves; while one student also mentioned that some staff should use it.

One staff mentioned in very positive terms the value of the library staff coming into their class and giving practical sessions on IL, but that when library staff left after class there
was nothing to fall back on, but as already stated the online tutorial in one sense is a permanent version of that support that is available all the time.

The prior literature asserts that it sometimes difficult to embed IL training into already established curricula (Parker 2003) however this study found that the teaching staff felt it could be done with ease. This study found that the lecturers in IT Sligo were very interested in using the online tutorial as a core academic requirement built into the VLE which is Moodle.

The previous literature found that IL frameworks have a positive effect in the teaching of IL (Foster 2006), and this current study found that teaching staff were more likely to buy into the idea of an IL framework that has been tried and tested. This is however dependent on reporting feature of the online tutorial being used with Moodle.

The results of this study did show that not everybody was happy with the idea of embedding the online tutorial into Moodle. One lecturer stated that he found Moodle difficult to use and not user-friendly, while another lecturer stated that some students found it difficult to use. This study therefore collaborates the findings of Blin and Mundo (2008) who stated that lack of training in VLE’s might be to blame. Other prior literature such as that from Daalsgard went further and suggested a move away from the VLE and more use of individual social media tools either used in tandem with the VLE or independently. (2006) Interestingly this study found that one lecturer was very interested in doing this, in using wikis or the creation of video in tandem with teaching, to get the student’s to convert knowledge from one format to another (print to video for example) and in doing so use a more social constructivist form of learning to reach a higher level
of knowledge or the “high road knowledge” as referred to earlier and coined by Salomon and Perkins. (1998)

5.2.3.3 Assessment

The present findings are consistent with other prior research which found that assessment is a vital ingredient in teaching and learning, buttressing long term learning. The students very much liked the quizzes built into the online tutorial and found them fun; they all recognised the benefits of doing quizzes particularly in the improvement of memory and to gain confidence. Interestingly one student observed that using quizzes highlights areas of weakness that students do not realise they have. It could be argued that the cause of this is lack of prior learning and again the concept that students do not know what the gaps in their knowledge are. The study found that while the lecturing staff were interested in using the quizzes for assessment, the students felt that assessment should occur more informally, and that the quizzes should be designed to boost confidence rather than quash it. The current study found that the teaching staff and students place a high value on the quizzes and on any subsequent feedback which should be tailored to highlight or help with weak areas.

5.2.3.4 The Online tutorial as a support tool rather than the only tool

As already stated this study has found that the clear preference of staff and students was for the online tutorial to be used in tandem with taught classes. This study has also found however that the online tutorial should be available on the library website for all students to use whenever they wish. The study found that the IL training tools should be all in one very visible place on the library website packaged with other forms of IL instruction such
as the YouTube guide videos the library has created. Perhaps a library marketing strategy should be used to let staff and students know where it is available.

5.2.4 How can an online tutorial be improved for more effective learning?

Previous literature has highlighted learning principles and theories that should be embedded into any instructional design, as well as multimedia principles which should be used when designing multimedia. One of the features of the current study is that both staff and students gave feedback on how the online tutorial should be improved. One improvement that should be made as already stated is to use software prompts to create a tiered learning approach so that the online tutorial can be pitched according to prior learning. Another improvement would involve the usability of the quizzes and to make the feedback more bespoke according to areas of weakness.

5.2.4.1 Improve the emphasis on socially constructed and problem based learning

The research to date has found that social interaction is critical to learning, that knowledge is socially constructed within a community. (Savery and Duffy 1995; Holmes and Gardner 2006) Previous research by Knowles further states that adult learners fare better when an element of problem based learning is embedded in courses. (1980) This current study indicates that perhaps an element of either social media or problem based learning needs to be embedded into the online tutorial somehow. One lecturer went as far as to state that would be the “icing on the cake.” (Staff Member J) It should however be noted that in terms of the problem based learning aspect of IL, because IL skills in finding and
evaluating information, students on completion of the online tutorial will be applying their skills in a very practical sense the next time they have to research for an assignment.

5.2.4.2 Universal Design and User Experience (UX)

Previous research has emphasised the need for instructional designers to aim for universal design. Prior research findings have shown that accessibility needs to be built into instructional design from the outset rather than retrofitted later. (Rose 2001) The current study did not find this to be a major criticism of the online tutorial; however accessibility was not built in from the outset. While the software allows for the tutorial to be made accessible, the whole area of accessibility and general user experience needs to be looked at more holistically. Collaboration needs to occur with the Access office and students and staff of IT Sligo to ensure appropriate testing occurs, and findings implemented in order to enable as near as possible the Holy Grail of design which is universal design. As Kerkmann and Lewandowski assert in prior research, it is vital to involve users. (2012) In this study it was found that two students with dyslexia liked the online tutorial because of the amount of audio, and also the ability to pause and replay sections. It was found however that within the observed class who used the online tutorial one student with dyslexia had difficulty with the text on the screen of the online tutorial. Students and staff of all types need to be involved in both the testing, but more importantly the design of the online tutorial, and should be made stakeholders of the process.
5.2.4.3 Improve the application of Mayer’s seven multimedia principles to the online tutorial

In previous studies on multimedia learning theory Clarke and Mayer have outlined 7 principles that should be adhered to when designing multimedia e-learning courses. (Clark and Mayer 2011) This study found that the suggestions for improvement that students and staff made for the online tutorial all slot into Mayer and Clarke’s 7 principles. This study would therefore add credence to the authority of Clarke and Mayer’s assumptions. (2011) The personalization principle was used to great effect in the online tutorial, and students responded to it, in particular online learners who found it “friendly”. Students found the online tutorial to be personalised and relatable. The segmenting principle was also used to positive effect, but further suggestions for improvement were made by the students such as improved menus or summaries. While the study shows that some of the principles which were built into the online tutorial worked, there was also room for improvement. The study shows for example that the modality principle which is to use spoken rather than printed text was not used consistently throughout the online tutorial, and this confused users. The redundancy principle was also not used, as there was no “weeding out” of extraneous content before the online tutorial was published, therefore some content was not seen as relevant by the users.
5.3 Summary of discussion

The study found that the online tutorial is an effective tool in the teaching of IL, but that it has added value when used in a blended learning environment in conjunction with taught practical classes. The study also found that although the staff and students of IT Sligo placed a high value on IL skills, there is a lack of appropriate training in general in this area. The study established that there is support from the lecturing staff and students of IT Sligo in using the online tutorial in the curriculum. After a collaborative process with staff and students and the improvement of the online tutorial this integration into the curriculum should be easily achieved. The improvement of the online tutorial should include universal design principles as well as improvement of Mayer and Clarke’s 7 multimedia principles. (2011) It would be appropriate to use a form of action research in the future development and implementation of the online tutorial in order to ensure maximum quality and therefore maximum value in the years ahead.
Chapter 6  Conclusion

6.1 Introduction

The study set out to discover the efficacy of an online tutorial when used to teach IL. If staff time and resources are to be spent on the further development of an online tutorial it needs to be of value to the staff and students of IT Sligo. We have a responsibility to recognise the need for IL training as stated by the Moscow declaration, and to provide it in an effective way to all students so that students can learn IL skills and bring them into the workforce. (2012)

This chapter discusses the author’s key findings according to research question and makes appropriate recommendations.

6.2 Is an online tutorial an effective teaching tool?

The study found that there was no difference in the amount of learning gained by those who used the online tutorial and those who were taught the same topics in a classroom. However there is no way to tell if the learning that was gained was high or low level knowledge as defined in the prior literature by Saloman and Perkins for example. (1998) It would be of great benefit if students were able to remember any skills gleaned from the online tutorial in the long term rather than the short term, and were also able to apply their knowledge.
6.2.1 Recommendations

While the interactive nature of the online tutorial according to Kozma enables cognitive processes which create meaning and therefore more effective learning. (1991) In order to promote higher levels of learning while using the online tutorial.

1. Real world examples need to be built into the online tutorial so that students can practice their skills immediately.

2. The online tutorial should be based more on social constructivism because according to Vygotsky higher learning is socially constructed. (1978) As suggested by one of the teaching staff, and the prior literature a wiki should be used in conjunction with the online tutorial. (Blin and Munro 2008)

6.3 What is the value of an online tutorial?

The study found that students placed a high value on IL skills in terms of what they hoped their future jobs would be when they left college. The study also found that these students themselves felt their IL skills were poor. The students also expressed dissatisfaction with their library skills and their digital literacy skills, often overlapping the terms. The students and staff all recognised the need for IL training due to technological change, the rapid change from print to online resources and the numerous ways in which to access huge amounts of information online.

Due to changing student needs and individual learner preferences the online tutorial was seen by students as an ideal format. The students placed great value on the idea that they could use the tutorial at a time, in a place that suited them, and that they could reuse it,
pause it and skip sections. The study found that while broad college programs, individual
classes and the wide spectrum that is library IL training all attempt to fill a need for IL
training, in fact they do not. There is simply not enough library staff available to deliver
IL training to all the students.

6.3.1 Recommendations

1. Students need to recognise that they need to be more independent learners. A
   library marketing strategy needs to be employed to get students to use the IL tools
   we have on the library website for them, especially the online tutorial.

2. The IL tools we have created over the years should be streamlined and packaged
together in a more modern way.

3. A short video or online tutorial needs to be created to explain to students how to
   use the library and the library website.

4. The librarians need to continue to communicate with teaching staff and try to push
   the agenda of IL training further and to constantly investigate new ways to deliver
   IL training.

6.4 How should an online tutorial be used

The study illustrates a number of different ways the online tutorial should be used. It
should be uploaded to Moodle as a SCROM package for the teaching staff to use. It
should perhaps be used as part of a broad programme of study such as the learning to
learn programme, therefore becoming part of the curriculum and being assessed in terms
of the quizzes embedded in it. The online tutorial should also be made available on the
library website for anyone to use.
The study found that there was a clear preference for a form of blended learning from the online tutorial.

### 6.4.1 Recommendations

1. The online tutorial needs to be packages for Moodle to include as many of the reporting features as possible.

2. The link to the online tutorial should be placed in a very visible place on the library website. There should be one computer dedicated to playing it in the library in order to promote its usage.

3. Business cards should be printed with the link to the online tutorial and it should become part of the library’s marketing strategy.

4. The online tutorial should be used in conjunction with traditional IL classes. If students used part of the online tutorial before class they would have improved prior knowledge and classes would be more meaningful.

### 6.5 How an online tutorial should be improved

Within this study students and staff gave several recommendations on how the online tutorial should be improved. In practical terms this encompasses improved continuity, usability, interactions and quizzes. This study also shows that the tutorial should be made available in different formats and that version 2 should aim for universal design.

### 6.5.1 Recommendations

1. The recommendations for the improvement of the online tutorial should be incorporated in the next release of the online tutorial.
2. The library should liaise with the Access office staff in IT Sligo in order to improve accessibility in the online tutorial.

6.6 Limitations/Recommendations for future study

As this study was limited to the use of an online tutorial in one academic college, its generalizability remains in doubt. The findings however did back up and therefore strengthen the prior literature on the topic. As the use of the online has not been developed in full, it would be of great benefit to the students and staff of IT Sligo and an addition to the literature on the subject if a period of action research was embarked on for the life cycle of the online tutorial, in order to keep improving and evaluating its usefulness. Due to the rapid changing nature of technology the online tutorial will need to be constantly evaluated, improved and evaluated again.
Bibliography


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Ofcom (2013) “Being online: an investigation of people’s habits and attitudes.”


Ozuah, P.O. (2005) “First, there was pedagogy and then came andragogy,” The Einstein Journal of Biology and Medicine, 21(2).


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Appendix A.

Permission to conduct Research
March 20, 2014

Aine Meehan

Ash Lane

Dr [REDACTED]

Co. Department of Science

Dr [REDACTED]

As part of my Masters in Digital Media Development for Education, I need to conduct research in the use of an online tutorial to teach information literacy to both on campus and off campus students. This shall require interviews, a focus group and questionnaires using both science staff and students. I shall take ethical considerations on board, and realizing that some of the students are officially children shall have a parental consent form available for each focus group/questionnaire. It is also not intended to interfere with the workload of staff, or students and the timing of any interviews etc., around exams or assessments shall be taken into consideration. The research aims to fully understand the use of ICT in education and particularly in the teaching of information literacy. It is my hope that the research once complete, will augment the teaching of information literacy in IT Sligo, in a pedagogically sound manner.

I am requesting your permission to conduct this research, and await a response (by e-mail is fine) or further questions requiring clarification.

Kind regards,

Aine Meehan

Systems Librarian
Hi Aine,

I do not have a particular problem with your request for a survey.

It would be good to inform the science HOD’s and I have cc’d them on this.

It should be explained to science staff/students prior to any survey being conducted.

Jeremy Bird, Ph.D.,
Head of School,
Institute of Technology Sligo,
Ash Lane,
Sligo
Appendix B.

Taught Class Survey Questions
We use the ALA definition of information literacy that to be information literate is to be able to find, evaluate and use information appropriately.

Please note that the information gathered by this form is to be used in the completion of a Master’s thesis. Your name will remain confidential. If you are under the age of 18, you will need to get a parental consent form filled in. Parental Consent Form

1. Name

2. Student Number

3. Would you be interested in being part of a focus group or take part in a telephone interview about the way the library teaches you these skills?
   a. Yes
   b. No

4. Thanks for that :)

   Please input your email address so we can contact you or your phone number

5. Gender
   a. Male
   b. Female

6. Type of Course
   a. Level 7 - Ordinary Degree
   b. Level 8 - Honours Degree or Higher Diploma
   c. Level 9 - Masters Degree or Postgraduate Diploma
   d. Other

7. If you answered "Other" to either of the last two questions, please type in details on your course and year here.
8. Age: What is your age (We only ask this to get an idea of your age profile, to figure out different student needs. You don't have to fill it in.)
   a. 16-17 years old
   b. 18-24 years old
   c. 25-34 years old
   d. 35-44 years old
   e. 45-54 years old
   f. 55-64 years old
   g. 65-74 years old
   h. 75 years or older

9. Have you already had some form of library training this year? (This could include a presentation, a one to one tutorial in a librarian's office, detailed help on using a resource at the information desk, or a practical tutorial in a lab.)
   a. Yes
   b. No

10. When did you have this training
    a. Within the last month
    b. 1 month ago
    c. 2 months ago
    d. October 2013
    e. September 2013
    f. Several times since September

11. What type of training did you receive?
a. One to One Tutorial with a librarian
b. Powerpoint Presentation (or similar) in a lecture hall
c. Practical Tutorial in a lab
d. Detailed help at the information desk on how to use a resource
e. More than one type
f. Online Tutorial (ILO)
g. Other

12. If you answered "Other" or "more than one type" to the above question, please tell us in your own words what training you received.

13. **Evaluate the following statements.**

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
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<tbody>
<tr>
<td>I prefer a practical session in a lab. I like being able to ask the librarian questions</td>
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</tr>
<tr>
<td>A PowerPoint presentation is fine</td>
<td></td>
<td></td>
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</tbody>
</table>

14. How skilled were you at finding and evaluating information before you were taught this tutorial?

a. Highly Skilled

b. Skilled

c. Moderately Skilled

d. Unskilled
15. How skilled do you think you are now? (after the tutorial)
   a. Highly Skilled
   b. Skilled
   c. Moderately Skilled
   d. Unskilled

16. How satisfied were you with the tutorial?
   a. unsatisfied
   b. Somewhat Satisfied
   c. Satisfied
   d. Very Satisfied
   e. Extremely Satisfied

17. Would you recommend this tutorial to someone else?
   a. definitely
   b. probably
   c. possibly
   d. uncertain
   e. possibly not
   f. probably not
   g. definitely not

Test your knowledge

Just answer the questions honestly. The result is not going towards any grade, and is just being used to figure out how much people learn from a tutorial.
18. One of the first steps in defining your search terms is to?
   a. Search a library database
   b. Find a book on the topic
   c. Scribble down your keywords

19. Books will give you ...
   a. a short summary of a topic
   b. A detailed analysis of a topic

20. Identify the keywords from the following assignment.
    "Discuss the prevention of influenza in Africa"
    a. Influenza, Prevention, Africa
    b. Discuss, Prevention
    c. Africa

21. A synonym is?
   a. An abbreviation of a word
   b. a different way to spell a word
   c. a word or phrase that means exactly or nearly the same as another word or phrase in the same language

22. Using OR in your search narrows the search results
   a. True
   b. False

23. Using AND in your search...
   a. ...broadens your search
   b. ...narrows your search
24. Using NOT in your search narrows your search by eliminating keywords or phrases
   a. True
   b. False

25. If a journal is peer reviewed it means..
   a. That your friends recommended it
   b. It only contains reviews
   c. The content has been reviewed by experts in the field

26. Information on the internet is always reliable and up to date
   a. True
   b. False

27. Which of the following is a type of reference book? (Check All That Apply)
   a. Dictionary
   b. Almanac
   c. Encyclopaedia
   d. Atlas
   e. General text book

28. Please select the meta search engines from the options below (Check All That Apply)
   a. Google
   b. Dogpile
   c. Yahoo
   d. Mamma
29. Any feedback or Opinions? (Don’t worry about putting in either positive or negative feedback. We are trying to improve what we do, so we appreciate your honesty. :))
Appendix C.

Online Tutorial Survey Questions
We use the ALA definition of information literacy that to be information literate is to be able to find, evaluate and use information appropriately.

Please note that the information gathered by this form is to be used in the completion of a Masters thesis. Your name will remain confidential. If you are under the age of 18, you will need to get a parental consent form filled in. Parental Consent Form

1. Name

2. Student Number

3. Would you be interested in taking part in a 15 minute interview about the online tutorial?
   a. Yes
   b. No

4. Thanks for that :)

   Please input your email address so we can contact you or your phone number

5. What school are you in?
   a. Science
   b. Engineering and Design
   c. Business and Social Sciences

6. Gender
   a. Male
   b. Female

7. Type of Course
   a. Level 7 - Ordinary Degree
   b. Level 8 - Honours Degree or Higher Diploma
   c. Level 9 - Masters Degree or Postgraduate Diploma
8. If you answered "Other" to either of the last two questions, please type in details on your course and year here.

9. Age: What is your age (We only ask this to get an idea of your age profile, to figure out different student needs. You don't have to fill it in.)
   a. 16-17 years old
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   e. 45-54 years old
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   g. 65-74 years old
   h. 75 years or older

10. Have you already had some form of library training this year? (This could include a presentation, a one to one tutorial in a librarian's office, detailed help on using a resource at the information desk, or a practical tutorial in a lab.)
   a. Yes
   b. No

11. When did you have this training
   a. Within the last month
   b. 1 month ago
   c. 2 months ago
   d. October 2013
e. September 2013
f. Several times since September

12. What type of training did you receive?
   a. One to One Tutorial with a librarian
   b. Powerpoint Presentation (or similar) in a lecture hall
   c. Practical Tutorial in a lab
   d. Detailed help at the information desk on how to use a resource
   e. More than one type
   f. Online Tutorial (ILO)
   g. Other

13. If you answered "Other" or "more than one type" to the above question, please tell us in your own words what training you received.

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14.

15. How skilled were you at finding and evaluating information before you were taught this tutorial?
   a. Highly Skilled
b. Skilled

c. Moderately Skilled

d. Unskilled

16. How skilled do you think you are now? (after the tutorial)

a. Highly Skilled

b. Skilled

c. Moderately Skilled

d. Unskilled

17. How satisfied were you with the tutorial?

a. unsatisfied

b. Somewhat Satisfied

c. Satisfied

d. Very Satisfied

e. Extremely Satisfied

18. Would you to recommend this tutorial to someone else?

a. definitely

b. probably

c. possibly

d. uncertain

e. possibly not

f. probably not

g. definitely not

Test your knowledge
Just answer the questions honestly. The result is not going towards any grade, and is just being used to figure out how much people learn from a tutorial.

19. One of the first steps in defining your search terms is to?

   a. Search a library database
   b. Find a book on the topic
   c. Scribble down your keywords

20. Books will give you ...

   a. a short summary of a topic
   b. A detailed analysis of a topic

21. Identify the keywords from the following assignment.

   "Discuss the prevention of influenza in Africa"

   a. Influenza, Prevention, Africa
   b. Discuss, Prevention
   c. Africa

22. A synonym is?

   a. An abbreviation of a word
   b. a different way to spell a word
   c. a word or phrase that means exactly or nearly the same as another word or phrase in the same language

23. Using OR in your search narrows the search results

   a. True
   b. False

24. Using AND in your search...
25. Using NOT in your search narrows your search by eliminating keywords or phrases
   a. True
   b. False

26. If a journal is peer reviewed it means:
   a. That your friends recommended it
   b. It only contains reviews
   c. The content has been reviewed by experts in the field

27. Information on the internet is always reliable and up to date
   a. True
   b. False

28. Which of the following is a type of reference book? (Check All That Apply)
   a. Dictionary
   b. Almanac
   c. Encyclopaedia
   d. Atlas
   e. General text book

29. Please select the meta search engines from the options below (Check All That Apply)
   a. Google
   b. Dogpile
   c. Yahoo
d. Mamma

30. Any feedback or Opinions? (Don’t worry about putting in either positive or negative feedback. We are trying to improve what we do, so we appreciate your honesty. :))
Appendix D.

Taught Class Survey Results
The results of the taught class questionnaire is outlined below. The first set of results is the profile of the respondents, and the second is the quiz results.

### Age Profile

<table>
<thead>
<tr>
<th>Choices</th>
<th>Percentage</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>18-24 years old</td>
<td>81.48%</td>
<td>44</td>
</tr>
<tr>
<td>35-44 years old</td>
<td>7.41%</td>
<td>4</td>
</tr>
<tr>
<td>16-17 years old</td>
<td>5.59%</td>
<td>3</td>
</tr>
<tr>
<td>25-34 years old</td>
<td>5.56%</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>54</strong></td>
<td></td>
</tr>
</tbody>
</table>

### Gender

<table>
<thead>
<tr>
<th>Choices</th>
<th>Percentage</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>48.15%</td>
<td>25</td>
</tr>
<tr>
<td>Not Answered</td>
<td>33.33%</td>
<td>18</td>
</tr>
<tr>
<td>Male</td>
<td>20.00%</td>
<td>11</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>54</strong></td>
<td></td>
</tr>
</tbody>
</table>

### Year of Course

<table>
<thead>
<tr>
<th>Choices</th>
<th>Percentage</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Year</td>
<td>50.00%</td>
<td>27</td>
</tr>
<tr>
<td>Fourth Year</td>
<td>50.00%</td>
<td>27</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>54</strong></td>
<td></td>
</tr>
</tbody>
</table>

### Type of Course

<table>
<thead>
<tr>
<th>Choices</th>
<th>Percentage</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level 8 - Honours Degree or Higher Diploma</td>
<td>83.33%</td>
<td>45</td>
</tr>
<tr>
<td>Level 7 - Ordinary Degree</td>
<td>16.67%</td>
<td>9</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>54</strong></td>
<td></td>
</tr>
</tbody>
</table>
Have you already had some form of library training this year?

<table>
<thead>
<tr>
<th>Choices</th>
<th>Percentage</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>57.41%</td>
<td>31</td>
</tr>
<tr>
<td>Yes</td>
<td>42.59%</td>
<td>23</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td>54</td>
</tr>
</tbody>
</table>

When did you have this training?

<table>
<thead>
<tr>
<th>Choices</th>
<th>Percentage</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Within the last month</td>
<td>34.78%</td>
<td>8</td>
</tr>
<tr>
<td>September 2013</td>
<td>20.49%</td>
<td>7</td>
</tr>
<tr>
<td>October 2013</td>
<td>30.43%</td>
<td>7</td>
</tr>
<tr>
<td>2 months ago</td>
<td>4.35%</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td>23</td>
</tr>
<tr>
<td><strong>Unanswered</strong></td>
<td></td>
<td>31</td>
</tr>
</tbody>
</table>

What type of training did you receive?

<table>
<thead>
<tr>
<th>Choices</th>
<th>Percentage</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Practical Tutorial in a lab</td>
<td>60.87%</td>
<td>14</td>
</tr>
<tr>
<td>Powerpoint Presentation (or similar) in a lecture hall</td>
<td>26.09%</td>
<td>6</td>
</tr>
<tr>
<td>One to One Tutorial with a Librarian</td>
<td>8.70%</td>
<td>2</td>
</tr>
<tr>
<td>Online Tutorial (ILQ)</td>
<td>4.35%</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td>23</td>
</tr>
<tr>
<td><strong>Unanswered</strong></td>
<td></td>
<td>31</td>
</tr>
</tbody>
</table>
I prefer a practical session in a lab. I like being able to ask the librarian questions.

<table>
<thead>
<tr>
<th>Choices (Score)</th>
<th>Percentage</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Agree (4)</td>
<td>35.19%</td>
<td>19</td>
</tr>
<tr>
<td>Agree (3)</td>
<td>22.70%</td>
<td>29</td>
</tr>
<tr>
<td>Disagree (2)</td>
<td>5.59%</td>
<td>3</td>
</tr>
<tr>
<td>Strongly Disagree (1)</td>
<td>5.59%</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td>54</td>
</tr>
<tr>
<td><strong>Avg Score</strong></td>
<td></td>
<td>3.2</td>
</tr>
</tbody>
</table>

I prefer an online tutorial. I like being able to go through something at my own pace.

<table>
<thead>
<tr>
<th>Choices (Score)</th>
<th>Percentage</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Agree (4)</td>
<td>9.26%</td>
<td>5</td>
</tr>
<tr>
<td>Agree (3)</td>
<td>44.44%</td>
<td>24</td>
</tr>
<tr>
<td>Disagree (2)</td>
<td>40.74%</td>
<td>22</td>
</tr>
<tr>
<td>Strongly Disagree (1)</td>
<td>5.56%</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td>54</td>
</tr>
<tr>
<td><strong>Avg Score</strong></td>
<td></td>
<td>2.6</td>
</tr>
</tbody>
</table>

I prefer the online tutorial, would also like to be able to call into the library or phone for help.

<table>
<thead>
<tr>
<th>Choices (Score)</th>
<th>Percentage</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Agree (4)</td>
<td>16.87%</td>
<td>10</td>
</tr>
<tr>
<td>Agree (3)</td>
<td>52.62%</td>
<td>28</td>
</tr>
<tr>
<td>Disagree (2)</td>
<td>22.64%</td>
<td>12</td>
</tr>
<tr>
<td>Strongly Disagree (1)</td>
<td>5.86%</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td>53</td>
</tr>
<tr>
<td><strong>Unanswered</strong></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td><strong>Avg Score</strong></td>
<td></td>
<td>2.9</td>
</tr>
</tbody>
</table>
A PowerPoint presentation is fine

<table>
<thead>
<tr>
<th>Choices</th>
<th>Percentage</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Agree (4)</td>
<td>11.32%</td>
<td>6</td>
</tr>
<tr>
<td>Agree (3)</td>
<td>41.52%</td>
<td>22</td>
</tr>
<tr>
<td>Disagree (2)</td>
<td>33.98%</td>
<td>18</td>
</tr>
<tr>
<td>Strongly Disagree (1)</td>
<td>12.21%</td>
<td>7</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>53</strong></td>
</tr>
</tbody>
</table>

Unanswered 1
Avg Score 2.5

Perceived IL Skills before Taught Class

<table>
<thead>
<tr>
<th>Choices</th>
<th>Percentage</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skilled</td>
<td>32.09%</td>
<td>17</td>
</tr>
<tr>
<td>Moderately Skilled</td>
<td>32.09%</td>
<td>17</td>
</tr>
<tr>
<td>Unskilled</td>
<td>32.09%</td>
<td>17</td>
</tr>
<tr>
<td>Highly Skilled</td>
<td>2.77%</td>
<td>2</td>
</tr>
</tbody>
</table>

**Total** 53

Unanswered 1

Perceived IL Skills *after* Taught Class

<table>
<thead>
<tr>
<th>Choices</th>
<th>Percentage</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Moderately Skilled</td>
<td>50.00%</td>
<td>26</td>
</tr>
<tr>
<td>Skilled</td>
<td>46.15%</td>
<td>24</td>
</tr>
<tr>
<td>Highly Skilled</td>
<td>3.85%</td>
<td>2</td>
</tr>
</tbody>
</table>

**Total** 52

Unanswered 2

How satisfied are you with the training you received?

<table>
<thead>
<tr>
<th>Choices</th>
<th>Percentage</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Satisfied</td>
<td>33.35%</td>
<td>26</td>
</tr>
<tr>
<td>Very Satisfied</td>
<td>26.62%</td>
<td>16</td>
</tr>
<tr>
<td>Somewhat Satisfied</td>
<td>9.26%</td>
<td>5</td>
</tr>
<tr>
<td>Unsatisfied</td>
<td>3.70%</td>
<td>2</td>
</tr>
<tr>
<td>Extremely Satisfied</td>
<td>3.70%</td>
<td>2</td>
</tr>
</tbody>
</table>

**Total Entries** 54

Unanswered 1
Would you recommend this taught class?

<table>
<thead>
<tr>
<th>Choices</th>
<th>Percentage</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>definitely</td>
<td>57.83%</td>
<td>28</td>
</tr>
<tr>
<td>probably</td>
<td>25.93%</td>
<td>14</td>
</tr>
<tr>
<td>possibly</td>
<td>14.81%</td>
<td>8</td>
</tr>
<tr>
<td>uncertain</td>
<td>2.70%</td>
<td>2</td>
</tr>
<tr>
<td>possibly not</td>
<td>1.85%</td>
<td>1</td>
</tr>
<tr>
<td>probably not</td>
<td>0.68%</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>54</strong></td>
<td></td>
</tr>
</tbody>
</table>
# Taught Class Quiz Results

## Question 1

<table>
<thead>
<tr>
<th>Choices</th>
<th>Percentage</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scribble down your keywords</td>
<td>79.62%</td>
<td>43</td>
</tr>
<tr>
<td>Search a library database</td>
<td>20.37%</td>
<td>11</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>54</strong></td>
<td></td>
</tr>
</tbody>
</table>

Question 1: Correct Answer is **Scribble down your keywords**

## Question 2

<table>
<thead>
<tr>
<th>Choices</th>
<th>Percentage</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>A detailed analysis of a topic</td>
<td>85.19%</td>
<td>46</td>
</tr>
<tr>
<td>a short summary of a topic</td>
<td>12.86%</td>
<td>7</td>
</tr>
<tr>
<td><strong>Total Entries</strong></td>
<td>54</td>
<td></td>
</tr>
<tr>
<td>Unanswered</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

Question 2: Correct Answer is **A detailed analysis of a topic**

## Question 3

<table>
<thead>
<tr>
<th>Choices</th>
<th>Percentage</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Influenza, Prevention, Africa</td>
<td>100.00%</td>
<td>54</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>54</strong></td>
<td></td>
</tr>
</tbody>
</table>

Question 3: Correct Answer is **Influenza, Prevention, Africa**
Question 4

<table>
<thead>
<tr>
<th>Choices</th>
<th>Percentage</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>a word or phrase that means exactly or nearly the same as another word</td>
<td>77.36%</td>
<td>41</td>
</tr>
<tr>
<td>or phrase in the same language</td>
<td>7.55%</td>
<td>4</td>
</tr>
<tr>
<td>An abbreviation of a word</td>
<td>15.68%</td>
<td>8</td>
</tr>
<tr>
<td>a different way to spell a word</td>
<td>7.55%</td>
<td>4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>53</strong></td>
</tr>
<tr>
<td><strong>Unanswered</strong></td>
<td></td>
<td><strong>1</strong></td>
</tr>
</tbody>
</table>

Question 4: Correct Answer is a word or phrase that means exactly or nearly the same as another word or phrase in the same language.

Question 5

<table>
<thead>
<tr>
<th>Choices</th>
<th>Percentage</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>True</td>
<td>57.69%</td>
<td>28</td>
</tr>
<tr>
<td>False</td>
<td>42.31%</td>
<td>27</td>
</tr>
<tr>
<td><strong>Total Entries</strong></td>
<td></td>
<td><strong>54</strong></td>
</tr>
<tr>
<td><strong>Unanswered</strong></td>
<td></td>
<td><strong>1</strong></td>
</tr>
</tbody>
</table>

Question 5: Correct Answer is False

Question 6

<table>
<thead>
<tr>
<th>Choices</th>
<th>Percentage</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>...broadens your search</td>
<td>37.41%</td>
<td>31</td>
</tr>
<tr>
<td>...narrows your search</td>
<td>44.44%</td>
<td>24</td>
</tr>
<tr>
<td><strong>Total Entries</strong></td>
<td></td>
<td><strong>54</strong></td>
</tr>
</tbody>
</table>

Question 6: Correct Answer is Narrows
Question 7

<table>
<thead>
<tr>
<th>Choices</th>
<th>Percentage</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>True</td>
<td>83.33%</td>
<td>45</td>
</tr>
<tr>
<td>False</td>
<td>14.81%</td>
<td>8</td>
</tr>
</tbody>
</table>

Total Entries: 54
Unanswered: 1

Question 7 : Correct Answer is True

Question 8

<table>
<thead>
<tr>
<th>Choices</th>
<th>Percentage</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>The content has been reviewed by experts in the field</td>
<td>85.19%</td>
<td>46</td>
</tr>
<tr>
<td>That your friends recommended it</td>
<td>12.96%</td>
<td>7</td>
</tr>
<tr>
<td>It only contains reviews</td>
<td>2.85%</td>
<td>1</td>
</tr>
</tbody>
</table>

Total Entries: 54
Unanswered: 1

Question 8 : Correct Answer is The content has been reviewed by experts in the field

Question 9

<table>
<thead>
<tr>
<th>Choices</th>
<th>Percentage</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>False</td>
<td>94.44%</td>
<td>51</td>
</tr>
<tr>
<td>True</td>
<td>24.56%</td>
<td>4</td>
</tr>
</tbody>
</table>

Total Entries: 54

Question 9 : Correct Answer is False
### Question 10

<table>
<thead>
<tr>
<th>Choices</th>
<th>Percentage</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Encyclopaedia</td>
<td>59.26%</td>
<td>32</td>
</tr>
<tr>
<td>General text book</td>
<td>37.64%</td>
<td>20</td>
</tr>
<tr>
<td>Almanac</td>
<td>24.07%</td>
<td>13</td>
</tr>
<tr>
<td>Dictionary</td>
<td>20.37%</td>
<td>11</td>
</tr>
<tr>
<td>Atlas</td>
<td>18.07%</td>
<td>9</td>
</tr>
</tbody>
</table>

**Total Entries**: 54

**Unanswered**: 2

The correct answer for question 10 was to select Encyclopaedia, Almanac, Dictionary and Atlas and Nothing else. 4% of the taught class got this answer correct.

### Question 11

<table>
<thead>
<tr>
<th>Choices</th>
<th>Percentage</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Google</td>
<td>85.19%</td>
<td>46</td>
</tr>
<tr>
<td>Yahoo</td>
<td>20.37%</td>
<td>11</td>
</tr>
<tr>
<td>Dogpile</td>
<td>16.07%</td>
<td>9</td>
</tr>
<tr>
<td>Mamma</td>
<td>12.90%</td>
<td>7</td>
</tr>
</tbody>
</table>

**Total Entries**: 54

**Unanswered**: 1

The correct answer for question 10 was to select Dogpile and Mamma, and Nothing else. 7% of the taught class got this answer correct.
<table>
<thead>
<tr>
<th>#</th>
<th>Content</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>54</td>
<td>Could be more interactive with students. Maybe have exercises to see if they are using it properly...LE being able to learn from their mistakes,</td>
<td>2:50pm - 2014-02-11</td>
</tr>
<tr>
<td>50</td>
<td>There isn't enough being done to educate students about all the resources which are available in the library. These should be carried out regularly when a student is in First Year, shouldn't be necessary for Fourth Years.</td>
<td>2:48pm - 2014-02-11</td>
</tr>
<tr>
<td>45</td>
<td>Thank you</td>
<td>2:48pm - 2014-02-11</td>
</tr>
<tr>
<td>43</td>
<td>I found it basic, but we've done similar classes before. Good for beginners.</td>
<td>2:48pm - 2014-02-11</td>
</tr>
<tr>
<td>38</td>
<td>no</td>
<td>2:48pm - 2014-02-11</td>
</tr>
<tr>
<td>36</td>
<td>Very useful and not boring either. Didn't realize the amount of things that are available to us free of charge</td>
<td>2:48pm - 2014-02-11</td>
</tr>
<tr>
<td>25</td>
<td>Your abit too laid back, but your good at describing the information.</td>
<td>11:49am - 2014-02-04</td>
</tr>
<tr>
<td>18</td>
<td>Anne was very helpful and gave clear instructions on how to do a search in both the library database and Google scholar. I feel that I have a good basis to build on</td>
<td>10:10am - 2014-02-04</td>
</tr>
<tr>
<td>14</td>
<td>it was really informative</td>
<td>10:10am - 2014-02-04</td>
</tr>
<tr>
<td>11</td>
<td>Any feedback or Opinions?</td>
<td>10:49am - 2014-02-04</td>
</tr>
<tr>
<td>8</td>
<td>Learned a lot about the library and how to search for relevant information</td>
<td>10:48am - 2014-02-04</td>
</tr>
</tbody>
</table>

**Total 11**

**Unanswered 43**
Appendix E.

Online tutorial Group Survey Results
The results of the online tutorial group questionnaire is outlined below. The first set of results is the profile of the respondents, and the second is the quiz results.

### Age Profile

<table>
<thead>
<tr>
<th>Choices</th>
<th>Percentage</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>18-24 years old</td>
<td>70.45%</td>
<td>31</td>
</tr>
<tr>
<td>25-34 years old</td>
<td>18.18%</td>
<td>8</td>
</tr>
<tr>
<td>35-44 years old</td>
<td>9.09%</td>
<td>4</td>
</tr>
<tr>
<td>16-17 years old</td>
<td>2.27%</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td>44</td>
</tr>
</tbody>
</table>

### Gender

<table>
<thead>
<tr>
<th>Choices</th>
<th>Percentage</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>45.45%</td>
<td>20</td>
</tr>
<tr>
<td>Male</td>
<td>45.86%</td>
<td>19</td>
</tr>
<tr>
<td>Not Answered</td>
<td>11.36%</td>
<td>5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td>44</td>
</tr>
</tbody>
</table>

### Year of Course

<table>
<thead>
<tr>
<th>Choices</th>
<th>Percentage</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Third Year</td>
<td>56.82%</td>
<td>25</td>
</tr>
<tr>
<td>Second Year</td>
<td>22.73%</td>
<td>10</td>
</tr>
<tr>
<td>Fourth Year</td>
<td>8.69%</td>
<td>4</td>
</tr>
<tr>
<td>Other</td>
<td>6.82%</td>
<td>3</td>
</tr>
<tr>
<td>First Year</td>
<td>4.35%</td>
<td>2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td>44</td>
</tr>
</tbody>
</table>
### School

<table>
<thead>
<tr>
<th>Choices</th>
<th>Percentage</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Science</td>
<td>50.00%</td>
<td>22</td>
</tr>
<tr>
<td>Engineering and Design</td>
<td>27.27%</td>
<td>12</td>
</tr>
<tr>
<td>Business and Social Sciences</td>
<td>22.73%</td>
<td>10</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>44</strong></td>
<td></td>
</tr>
</tbody>
</table>

### Type of Course

<table>
<thead>
<tr>
<th>Choices</th>
<th>Percentage</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level 7 - Ordinary Degree</td>
<td>45.45%</td>
<td>20</td>
</tr>
<tr>
<td>Level 8 - Honours Degree or Higher Diploma</td>
<td>42.19%</td>
<td>19</td>
</tr>
<tr>
<td>Level 9 - Masters Degree or Postgraduate Diploma</td>
<td>0.99%</td>
<td>4</td>
</tr>
<tr>
<td>Other</td>
<td>2.27%</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>44</strong></td>
<td></td>
</tr>
</tbody>
</table>

### Are you an off campus student?

<table>
<thead>
<tr>
<th>Choices</th>
<th>Percentage</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>77.27%</td>
<td>34</td>
</tr>
<tr>
<td>Yes</td>
<td>22.73%</td>
<td>10</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>44</strong></td>
<td></td>
</tr>
</tbody>
</table>
Have you already had some form of library training this year?

<table>
<thead>
<tr>
<th>Choices</th>
<th>Percentage</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>81.02%</td>
<td>36</td>
</tr>
<tr>
<td>Yes</td>
<td>18.98%</td>
<td>8</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>44</strong></td>
<td></td>
</tr>
</tbody>
</table>

When did you have this training?

<table>
<thead>
<tr>
<th>Choices</th>
<th>Percentage</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Within the last month</td>
<td>50.00%</td>
<td>4</td>
</tr>
<tr>
<td>September 2013</td>
<td>37.50%</td>
<td>3</td>
</tr>
<tr>
<td>October 2013</td>
<td>12.50%</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>8</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Unanswered</strong></td>
<td><strong>36</strong></td>
<td></td>
</tr>
</tbody>
</table>

What type of training did you receive?

<table>
<thead>
<tr>
<th>Choices</th>
<th>Percentage</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Powerpoint Presentation (or similar) in a lecture hall</td>
<td>62.50%</td>
<td>3</td>
</tr>
<tr>
<td>More than one type</td>
<td>12.50%</td>
<td>1</td>
</tr>
<tr>
<td>Practical Tutorial in a lab</td>
<td>12.50%</td>
<td>1</td>
</tr>
<tr>
<td>One to One Tutorial with a librarian</td>
<td>12.50%</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>8</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Unanswered</strong></td>
<td><strong>36</strong></td>
<td></td>
</tr>
</tbody>
</table>
I prefer a practical session in a lab. I like being able to ask the librarian questions.

<table>
<thead>
<tr>
<th>Choices</th>
<th>Score</th>
<th>Percentage</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Agree</td>
<td>4</td>
<td>6.82%</td>
<td>3</td>
</tr>
<tr>
<td>Agree</td>
<td>3</td>
<td>54.55%</td>
<td>24</td>
</tr>
<tr>
<td>Disagree</td>
<td>2</td>
<td>36.36%</td>
<td>16</td>
</tr>
<tr>
<td>Strongly Disagree</td>
<td>1</td>
<td>2.27%</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td>44</td>
</tr>
<tr>
<td><strong>Avg Score</strong></td>
<td></td>
<td></td>
<td>2.7</td>
</tr>
</tbody>
</table>

I prefer an online tutorial. I like being able to go through something at my own pace.

<table>
<thead>
<tr>
<th>Choices</th>
<th>Score</th>
<th>Percentage</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Agree</td>
<td>4</td>
<td>27.91%</td>
<td>12</td>
</tr>
<tr>
<td>Agree</td>
<td>3</td>
<td>52.49%</td>
<td>23</td>
</tr>
<tr>
<td>Disagree</td>
<td>2</td>
<td>18.60%</td>
<td>8</td>
</tr>
<tr>
<td>Strongly Disagree</td>
<td>1</td>
<td>0.00%</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td>43</td>
</tr>
<tr>
<td><strong>Unanswered</strong></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td><strong>Avg Score</strong></td>
<td></td>
<td></td>
<td>3.1</td>
</tr>
</tbody>
</table>

I prefer the online tutorial, would also like to be able to call into the library or phone for help

<table>
<thead>
<tr>
<th>Choices</th>
<th>Score</th>
<th>Percentage</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Agree</td>
<td>4</td>
<td>20.45%</td>
<td>9</td>
</tr>
<tr>
<td>Agree</td>
<td>3</td>
<td>34.55%</td>
<td>24</td>
</tr>
<tr>
<td>Disagree</td>
<td>2</td>
<td>20.45%</td>
<td>9</td>
</tr>
<tr>
<td>Strongly Disagree</td>
<td>1</td>
<td>4.55%</td>
<td>2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td>44</td>
</tr>
<tr>
<td><strong>Avg Score</strong></td>
<td></td>
<td></td>
<td>2.9</td>
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</table>

A PowerPoint presentation is fine

<table>
<thead>
<tr>
<th>Choices</th>
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<th>Percentage</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Agree</td>
<td>4</td>
<td>11.36%</td>
<td>5</td>
</tr>
<tr>
<td>Agree</td>
<td>3</td>
<td>50.00%</td>
<td>22</td>
</tr>
<tr>
<td>Disagree</td>
<td>2</td>
<td>27.27%</td>
<td>12</td>
</tr>
<tr>
<td>Strongly Disagree</td>
<td>1</td>
<td>11.36%</td>
<td>5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td>44</td>
</tr>
<tr>
<td><strong>Avg Score</strong></td>
<td></td>
<td></td>
<td>2.6</td>
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</tbody>
</table>
### Perceived II Skills before using Online Tutorial

<table>
<thead>
<tr>
<th>Choices</th>
<th>Percentage</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Moderately Skilled</td>
<td>61.36%</td>
<td>27</td>
</tr>
<tr>
<td>Unskilled</td>
<td>18.18%</td>
<td>8</td>
</tr>
<tr>
<td>Skilled</td>
<td>13.64%</td>
<td>6</td>
</tr>
<tr>
<td>Highly Skilled</td>
<td>6.82%</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>44</strong></td>
<td></td>
</tr>
</tbody>
</table>

### Perceived II Skills after using Online Tutorial

<table>
<thead>
<tr>
<th>Choices</th>
<th>Percentage</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skilled</td>
<td>59.09%</td>
<td>26</td>
</tr>
<tr>
<td>Moderately Skilled</td>
<td>26.55%</td>
<td>13</td>
</tr>
<tr>
<td>Highly Skilled</td>
<td>11.36%</td>
<td>5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>44</strong></td>
<td></td>
</tr>
</tbody>
</table>

### How satisfied were you with the online tutorial?

<table>
<thead>
<tr>
<th>Choices</th>
<th>Percentage</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Satisfied</td>
<td>47.72%</td>
<td>21</td>
</tr>
<tr>
<td>Very Satisfied</td>
<td>27.27%</td>
<td>12</td>
</tr>
<tr>
<td>Somewhat Satisfied</td>
<td>11.36%</td>
<td>5</td>
</tr>
<tr>
<td>Extremely Satisfied</td>
<td>6.02%</td>
<td>3</td>
</tr>
<tr>
<td>Unsatisfied</td>
<td>4.55%</td>
<td>2</td>
</tr>
<tr>
<td><strong>Total Entries</strong></td>
<td><strong>44</strong></td>
<td></td>
</tr>
<tr>
<td>Unanswered</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

### Would you recommend the Online Tutorial to somebody else?

<table>
<thead>
<tr>
<th>Choices</th>
<th>Percentage</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Definitely</td>
<td>54.55%</td>
<td>24</td>
</tr>
<tr>
<td>Probably</td>
<td>18.18%</td>
<td>8</td>
</tr>
<tr>
<td>Possibly</td>
<td>15.91%</td>
<td>7</td>
</tr>
<tr>
<td>Probably not</td>
<td>4.55%</td>
<td>2</td>
</tr>
<tr>
<td>Definitely not</td>
<td>2.27%</td>
<td>1</td>
</tr>
<tr>
<td>Possibly not</td>
<td>2.27%</td>
<td>1</td>
</tr>
<tr>
<td>Uncertain</td>
<td>2.27%</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>44</strong></td>
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</tr>
</tbody>
</table>
### Online Tutorial Group Quiz Results

#### Question 1

<table>
<thead>
<tr>
<th>Choices</th>
<th>Percentage</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scribble down your keywords</td>
<td>72.09%</td>
<td>31</td>
</tr>
<tr>
<td>Search a library database</td>
<td>27.91%</td>
<td>12</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>43</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Unanswered</strong></td>
<td><strong>1</strong></td>
<td></td>
</tr>
</tbody>
</table>

**Question 1**: Correct Answer is Scribble down your keywords

#### Question 2

<table>
<thead>
<tr>
<th>Choices</th>
<th>Percentage</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>A detailed analysis of a topic</td>
<td>84.09%</td>
<td>37</td>
</tr>
<tr>
<td>a short summary of a topic</td>
<td>15.91%</td>
<td>6</td>
</tr>
<tr>
<td><strong>Total Entries</strong></td>
<td><strong>44</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Unanswered</strong></td>
<td><strong>1</strong></td>
<td></td>
</tr>
</tbody>
</table>

**Question 2**: Correct Answer is A detailed analysis of a topic

#### Question 3

<table>
<thead>
<tr>
<th>Choices</th>
<th>Percentage</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Influenza, Prevention, Africa</td>
<td>97.67%</td>
<td>42</td>
</tr>
<tr>
<td>Discuss, Prevention</td>
<td>2.33%</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>43</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Unanswered</strong></td>
<td><strong>1</strong></td>
<td></td>
</tr>
</tbody>
</table>

**Question 3**: Correct Answer is Influenza, Prevention, Africa
### Question 4

<table>
<thead>
<tr>
<th>Choices</th>
<th>Percentage</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>a word or phrase that means exactly or nearly the same as another word or phrase in the same language</td>
<td>66.67%</td>
<td>28</td>
</tr>
<tr>
<td>An abbreviation of a word</td>
<td>22.81%</td>
<td>10</td>
</tr>
<tr>
<td>a different way to spell a word</td>
<td>9.52%</td>
<td>4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>42</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Unanswered</strong></td>
<td></td>
<td>2</td>
</tr>
</tbody>
</table>

**Question 4:** Correct Answer is a word or phrase that means exactly or nearly the same as another word or phrase in the same language.

### Question 5

<table>
<thead>
<tr>
<th>Choices</th>
<th>Percentage</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>False</td>
<td>63.64%</td>
<td>28</td>
</tr>
<tr>
<td>True</td>
<td>36.36%</td>
<td>17</td>
</tr>
<tr>
<td><strong>Total Entries</strong></td>
<td><strong>44</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Unanswered</strong></td>
<td></td>
<td>1</td>
</tr>
</tbody>
</table>

**Question 5:** Correct Answer is False.

### Question 6

<table>
<thead>
<tr>
<th>Choices</th>
<th>Percentage</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>...broaders your search</td>
<td>72.73%</td>
<td>22</td>
</tr>
<tr>
<td>...narrow your search</td>
<td>27.27%</td>
<td>12</td>
</tr>
<tr>
<td><strong>Total Entries</strong></td>
<td><strong>44</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Unanswered</strong></td>
<td></td>
<td>1</td>
</tr>
</tbody>
</table>

**Question 6:** Correct Answer is Narrows.
### Question 7

<table>
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<th>Choices</th>
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<th>Count</th>
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<tbody>
<tr>
<td>True</td>
<td>84.09%</td>
<td>37</td>
</tr>
<tr>
<td>False</td>
<td>13.64%</td>
<td>6</td>
</tr>
</tbody>
</table>

**Total Entries**: 44  
**Unanswered**: 1

**Question 7**: Correct Answer is True

### Question 8

<table>
<thead>
<tr>
<th>Choices</th>
<th>Percentage</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>True</td>
<td>84.09%</td>
<td>37</td>
</tr>
<tr>
<td>False</td>
<td>13.64%</td>
<td>6</td>
</tr>
</tbody>
</table>

**Total Entries**: 44  
**Unanswered**: 1

**Question 8**: Correct Answer is The content has been reviewed by experts in the field

### Question 9

<table>
<thead>
<tr>
<th>Choices</th>
<th>Percentage</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>False</td>
<td>83.18%</td>
<td>41</td>
</tr>
<tr>
<td>True</td>
<td>6.82%</td>
<td>3</td>
</tr>
</tbody>
</table>

**Total Entries**: 44  
**Unanswered**: 1

**Question 9**: Correct Answer is False
Question 10

<table>
<thead>
<tr>
<th>Choices</th>
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<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Encyclopaedia</td>
<td>75.00%</td>
<td>23</td>
</tr>
<tr>
<td>Dictionary</td>
<td>47.73%</td>
<td>21</td>
</tr>
<tr>
<td>Almanac</td>
<td>47.73%</td>
<td>21</td>
</tr>
<tr>
<td>General text book</td>
<td>24.09%</td>
<td>15</td>
</tr>
<tr>
<td>Atlas</td>
<td>29.53%</td>
<td>13</td>
</tr>
</tbody>
</table>

Total Entries 44
Unanswered 1

Question 10: The correct answer for question 10 was to select Encyclopaedia, Almanac, Dictionary and Atlas and nothing else. 11% of the students who used the online tutorial got this answer correct.

Question 11

<table>
<thead>
<tr>
<th>Choices</th>
<th>Percentage</th>
<th>Count</th>
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<tbody>
<tr>
<td>Google</td>
<td>63.64%</td>
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<tr>
<td>Dogpile</td>
<td>40.91%</td>
<td>18</td>
</tr>
<tr>
<td>Mamma</td>
<td>40.91%</td>
<td>18</td>
</tr>
<tr>
<td>Yahoo</td>
<td>32.62%</td>
<td>14</td>
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Total Entries 44
Unanswered 1

Question 11: The correct answer for question 10 was to select Dogpile and Mamma, and nothing else. 30% of the people who used the online tutorial got this answer correct.
<table>
<thead>
<tr>
<th>#</th>
<th>Content</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>47</td>
<td>This tutorial is very helpful and gives lots of information that can help us in our projects.</td>
<td>9:40am - 2014-02-20</td>
</tr>
<tr>
<td>45</td>
<td>There was alot to take in at once.</td>
<td>9:39am - 2014-02-20</td>
</tr>
<tr>
<td>31</td>
<td>Nope</td>
<td>9:59pm - 2014-02-18</td>
</tr>
<tr>
<td>23</td>
<td>I think it was ok for most of it but got boring and a bit drawn out in parts</td>
<td>5:54pm - 2014-02-13</td>
</tr>
<tr>
<td>21</td>
<td>Great tutorial. I would also like to see an element of scientific writing to be introduced to the tutorial. This way, when information is found it can be communicated effectively by the student. One of the answers in the quiz of end could not be selected when I was doing the tutorial.</td>
<td>10:00am - 2014-02-13</td>
</tr>
<tr>
<td>20</td>
<td>The wifi is wayyyyy too slow in the library.</td>
<td>2:31pm - 2014-02-12</td>
</tr>
<tr>
<td>12</td>
<td>I'd like to criticize it. it have visual and audio material and nice layout, but I'm curious who is target for this online tutorial. I can't find core point to use in the college. In my humble humble opinion, I think the original tutorial has designed to secondary school, then it has just little bit modified to the college. It should be more focus to academic purpose, like as, The Essential Guide to Writing English Papers, Bibliography, Citation, Endnote, how to search papers, journals in college or other colleges library, etc... rather than how to use google search with and, or * etc..</td>
<td>5:48pm - 2014-02-05</td>
</tr>
<tr>
<td>11</td>
<td>none</td>
<td>8:16pm - 2014-02-04</td>
</tr>
<tr>
<td>6</td>
<td>I answered all from my knowledge, information public without reference to any source, according in my perked memory, and I wishing you hit may end. thanks</td>
<td>4:14pm - 2014-02-04</td>
</tr>
<tr>
<td>5</td>
<td>Colours are good information is easy to understand</td>
<td>3:35pm - 2014-02-04</td>
</tr>
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</table>

**Total:** 10

**Unanswered:** 34
Appendix F.

Observation Log
20 February 2014 Time: 9am

Background

18 students using online tutorial in class. Third Year Science. Were asked by their lecturer to bring in earphones, brought 8 sets from library. They only used 1.

Observations Recorded

Students were all asked if they had any questions as they left. None had except there was one question from student regarding the meaning of the word “synonym they had got mixed up with another word (pseudoname). Student was wearing coloured lenses. They were one of the last to leave therefore only asked the question when their lecturer was back in the room and most students were gone-only 2 left or leaving.

Students read the summaries. Didn’t skip too much. Didn’t watch all the videos in full. Took it seriously. Did not all rush through it and leave. (2 did-they were the first 2 to go-they are friends and went together)

Technical problems: on 1 computer the audio did not work

Other issues: late students looked flummoxed when they walked in to the dark room with all the lit screens. Had to explain it all again, and show them how to get into the tutorial.

It was a 9am class.
### Times the questionnaire was completed online

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<thead>
<tr>
<th>Time</th>
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<td>9:29</td>
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<tr>
<td>9:50</td>
<td>1</td>
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<td>9:50</td>
<td>1</td>
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### Time Stamp and Log

<table>
<thead>
<tr>
<th>Time</th>
<th>Event Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>9.15 AM</td>
<td>Began. Lecturer left. Explained research. Explained how to access tutorial. Turned off main lights. Made myself visible and explained I would help if the students had difficulties.</td>
</tr>
<tr>
<td>9.29 AM</td>
<td>All quiet. All have earphones on and are quietly going through the tutorial. Students are not skipping too much content. Most skipped the instructions page. Students told they could leave when questionnaire filled in. First student left the lab</td>
</tr>
<tr>
<td>9.31 AM</td>
<td>2 students are whispering.</td>
</tr>
<tr>
<td>9.33</td>
<td>One student asks for help. Expects audio thinks earphones are not working. I explain there is no audio for that slide.</td>
</tr>
<tr>
<td>9.35</td>
<td>3 students need help with quiz. 2 don’t know where submit button is. 1 does not know to click on the screenshot.</td>
</tr>
<tr>
<td>9.39</td>
<td>11 students still doing tutorial. Taking it very seriously. quiet</td>
</tr>
<tr>
<td>9.40</td>
<td>8 still doing tutorial-2 students are chatting</td>
</tr>
<tr>
<td>9.43</td>
<td>6 still doing tutorial quiet serious. Heads down.</td>
</tr>
<tr>
<td>9.45</td>
<td>4 still doing tutorial</td>
</tr>
</tbody>
</table>
Appendix G.

Student Focus Group and Interview Questions
1. Which do you think is better? A taught class or an online tutorial?

2. What are the advantages of a taught class?

3. What are the advantages of ILO?

4. What do you think of the Interactions?

5. What do you think of the Screencasts?

6. What do you think of the Quizzes?

7. Do you prefer Audio or text?

8. Is the length (30-40 minutes) a problem?

9. Who do you think it is aimed at? Who is the target audience?

10. Is IL something that you will use in college only, or will you use it when you leave college?

11. What content should be covered by us?

12. Can you see us adding content the lecturers give us?

13. Is digital literacy an issue for you?

14. Do you think IL should be embedded into the curriculum?

15. Do you think IL should be assessed?
Appendix H.

Transcript of Student Focus Group
Participants

Interviewer/Facilitator I

1. Student R
2. Student N
3. Student S
4. Student M
5. Student K

(Emphasis on words is shown by bold and italic text)

I : I suppose I’ll ask you to introduce yourselves, ok, Ill introduce myself, I’m A, and I’ve worked here 14 years. This was my first real job. I’m married to a lecturer, and I have 2 small children under the age of 5, which means doing research is difficult, (laughs), but, I have got used to selective hearing at this stage.

R: laughs

I: does anyone else want to go? Come on?

(Nervous laughter from all)

N: ehh, I’m N from , em, I’m fourth year em, from Monaghan originally, hobbies.. I like books, reading, and, ya that’s about it.

I: and yourself?

J: I’m J, I’m a third year student, I like old stuff, and I’m not good with computers.
I: ok

K: I’m K, I’m fourth year social care, and I’m from [redacted] originally…emmm

(Laughter from group)

I: you can say as much or as little as you want

(Laughter from group)

M: I’m M, I’m early childcare, from [redacted] as well and, I’m no good at computers or anything like that so.. That’s me

R: My name is R, and I’m a mature student, 36 years of age, I have a daughter 18 and a son of 12, originally from [redacted]. I travel to [redacted], I stay from Monday to Friday, I’m quite computer literate, but when t comes to things like this I’m very illiterate I have to say I’ve never once used the library website to find anything, cause I found it very very difficult, so I’m welcoming this, em I’m studying biomedical science and I’ve found it very challenging, I’m in fourth year now, along with N and S, as I said I did come into the library and try to use your website but I found it extremely difficult

I: Yes?

R: nobody has ever shown me and I can talk for other mature students as well, they had the exact same problem

I: ok?

R: you know
R: my generation, being almost twice the age of everybody here, we never had formal training on searching or anything like that, so you know what I mean, and I find it extremely difficult apart from Facebook and emails, you know, going into something like this I find it very very difficult, I’ve never used an eBook in my life, and I’ve never used that website, like I always get help from my friends, and it is a big problem in this college, because I’m , I think there’s 3 or 4 different, em mature students in my class, and they are exactly the same, they just don’t know how to use the website, its difficult.

I: does anybody else find that a problem?

J: yeah, em I never seem to find my way around, any of the IT’S websites, or anything like that, I can never use the e-mail.. It’s..I don’t know that’s slightly off topic.. but

I: no no, whatever, it doesn’t matter. Go on.

J: but I , eh, yeah I agree, the IT’s website is hard to use, and I tried finding em articles in JSTOR as well, every time I searched something they’d come up empty and I even it being quite a broad topic, something that you would at least find a chapter of somewhere, but em, Whether I was searching the wrong things, or whatever.

I: do you think you would learn better from something like this, and online tutorial, or that you could spend time going through at home, or do you think it would be better if you had a small tutorial with a librarian?

R: this reminds me of last year’s studying, again slightly going off topic here we had a lecturer and he didn’t do lectures With us, he gave us the lecture and we brought it home and we studied it at home, exactly the same principle perhaps some time during the day your brain is so wrecked after going through hours and hours of tutorials or lectures,
whatever the case might be, at least if you go home and you fizzle down, you’ll take in
that information rather than being hauled through hours and hours, and it being at your
leisure rather than it being perhaps you might now you know take it in during the day if
you come in and you give us a tutorial on that, this is a far better, you know way of
learning, because you can always revert back to it and you can write it down and its real
time do you know what I mean? Or you could do it in real time you know, I just find, I
find that dealing with lectures as well I prefer recorded lectures rather than real time
lectures, because you can go over it again and make yourself familiar with the information
if you miss something, you can always revert back to it so this would be a very good idea.
(short pause) in my opinion

I: does anyone else have an opinion on that?

M: I agree I think it would be better. again, if you’re at home, if you happen to miss that
class or you’re not feeling well or just went listening (quiet laugh from someone) that
you can go over.. Watch it again.. (pauses)

I: don’t worry I understand

(Everyone laughs)

M: Yes, not even bothered listening, and go back, and just go back yourself, and if you
have questions you’ll just kind of look around yourself or kind of. Have your own time

R: I agree

S: Yeah go at your own pace like

R: Yeah
**I:** what do you think the advantages of a taught class are over this then?

**J:** oh well, id like, ideally I think you should have a like a maybe a one or a two hour class, not too long, and then give everyone, like give email everyone the link into it so that they can go home and check it after if they want, I dunno if eh other modules do it but in [redacted] we had a em learning to learn class…

(loud audible sigh from R and S and sniggers from all others- Raising of eyes, and general mirth)

**J:** in first year

(Laughter from N)

**J:** I know it’s such a bad name (emphasis)

**R:** ridiculous, ridiculous, (looking at S), yeah it was ridiculous

**I:** is that just science learning to learn is through, or is it other departments?

**R:** it was a reflexion of..

**I:** I’ve been asked to come in on the learning to learn a few times

**N:** em

**R:** in my opinion, in first year, it was a waste of

**S:** It was (agrees with R)
R: we should have been given scientific writing in you know because we would have used as opposed to sitting down and reflecting and drawing pictures of ourselves and diagrams.

S: we actually should have been able to choose what we wanted to do

R: Yes

I: depending on your skills is it?

S: exactly yeah

R: absolutely

I: ok

I: in terms of just to go back to the taught class, what do you think the other advantages are?

N: well the main advantage of a taught class would be that you are able to ask questions that you don’t understand, em but in saying that using the online system you might be able to em, this is only in theory though eh, hypothetically that you might be able to use the online system to teach a person and then have a eh, how would you put it, not a class as such but a

I: a live version?

N: yeah a live version or a designated

R: like a stream?
I: like where you could ask questions while you are doing the online tutorial is it?

N: yes and no, what I mean is you could have a designated section in the library that you could go in, you know like the it services, where they are.. For an hour at a certain time each day

I: that's what the information desk is supposed to be for (laughs)

N: right, em, oh right (laughs)

I: Would a reference desk be useful?

I: The way the information desk is supposed to work is that you’d ask these questions at the desk if the person on the desk doesn’t have time they are supposed to refer to someone else and they will sit down for an hour with you, that’s the way it’s supposed to work (9.10)

R: right

I: In terms of the advantages of the taught class, being able to ask a question if you don’t understand, that’s the main advantage is it? Are there any others?

K: yeah, em, I’ve been lucky em through the last 4 years our lecturers have done just kind of classes like themselves with it, they’ve had to do it at least 2 or 3 times in the last 4 years, as it is hard to grasp, but

I: so your lecturers are teaching the same topic?

K: yeah, and it’s been great, you know you can like ask them whatever questions your want and stuff and then go home yourself and mess around with it and try out what they
told you, but having that to refer to afterwards, it’s only going to add to it as well if we had both

I: do you think it would be helpful so if we provided something like that for the lecturers to put on their Moodle pages?

K: yeah, definitely

I: we’ve covered some of the advantages of the online tutorial over the taught tutorial and they seem to be, from just what you’ve said being able to look back on it yourselves at a later time, the other advantage is that when you’re tired at certain times you might not like to look at things, are there any other advantages that you can think of now?

K: for the online is it?

I: yes

M: I think you know you can pause videos, something you don’t understand the teacher saying in class, you don’t want to be like, “can you repeat that again” but with a video you can go back yourself and listen if you want to.

I: ok, who do you think the target audience of this particular one that I showed you is?

R: people with dyslexia. I would happen to be dyslexic

I: ok?

R: and I, very very often I miss things that the guy, the lecturer says, I’m too afraid to, don’t get me wrong I can talk in public, I can do anything, but some lecturers, you will not ask

not ask
S: emm (noise- in agreement)

R: and I’m not saying that in a bad way but it’s just..

I: I’ve been a student too.. (to encourage and let know its ok what they say)

R: you know so (laughter) my point is a lot of them perhaps wouldn’t explain it as good
as an online tutorial that you can revert back as I said, one lecturer in particular last year
has an online lecture and it was fantastic, you could go home, sit in bed and you could
watch it, and if you didn’t understand it, go right back, remember?

S: emm

R: and it was fantastic, everyone learnt at their leisure instead of sitting in class, and then
you’re sitting, or your looking out the window, or there’s some kind of noise especially
if your dyslexic, your wandering, your minds wandering, and if you’re sitting for an hour
in a science lecture, I’m not sure if it’s the same for social sciences and childcare, you
know you might be in lecturers for 5 or 6 hours a day, and your sitting there saying, oh
what time is it and you can’t wait to get home, and what they are saying is blah blah blah
blah blah, you don’t know what they are saying but your there because of attendance to
write your name down, and you know you might as well not be there but with the online
as I said..at your leisure, you can sit down and you can go over it and over it until you get
it

I: do you think if your classes were all online you should have to attend, do you think it
would be better if some of your classes if you didn’t have to attend and actually do it online?
R: Yes

I: who do you think the target audience is as well, is it for example, mature students? First years?

J: I think the cartoon is a little patronising

I: ok

J: I’m really sorry but, but I just didn’t like it

I: do you think it would be better to have, I have seen cut out pictures of someone speaking, for example a little square with someone saying.. a video of a real person speaking, what do you think?

J: Well I don’t think it’s too necessary to have a video of someone there, em I like the voiceover idea, I think that’s grand, and there were some parts in it that you were showing us there where they had the website open and you were using the mouse and you were clicking around, and you were actually, in the video itself you were actually showing it, I thought that was more helpful

I: the screencast?

J: yeah the screencast, but eh, I wouldn’t be a big fan of that ole animation at all

I: Do you think that instead of something like this, and online tutorial, do you think we should just put screencasts in YouTube, in good high quality video, instead of all that: I suppose that would help, I em

I: do you think it would be better, does anyone?
J: well id like the audio with it

I: The audio would be on it.. it would be a video with someone saying this is how you access science direct, then click here and then you click there, and then it would be on YouTube, do you think that would be better than something like this that has interactive

R: no

S: I think it’s much better interactive really

R: this is way better

R: and I like animation

J: eh I don’t

S: laughter

R: so there (joking)

R: that’s how I got through maths

J: J says something about maybe he shouldn’t have said he didn’t like animation (can’t hear)

I: No you have to be able to say what you think. I had issues with the cartoon character myself in the beginning I wasn’t sure about it. Would it make any difference if the character was a photograph, is it just the fact that it’s an animated character?

R: could be the fact that it’s a woman is it? (Joke)

J: no no (laughter)
I: I did try to

S: tread carefully there

J: I just don’t like the animation, I like the, interactiveability with it yeah I think that’s grand I just don’t think there’s much need for the little animated character

I: ok, so target audience, in your opinion it’s patronising? And it would suit kind of

J: it looks kind of like it was made for a younger audience rather than..

I: ok that’s no problem

J: that’s my opinion, that’s just mine

I: that's a very valid point does anyone else agree

S: yeah but overall, whatever it looks like I think it’s helpful for anyone cause it’s so broad, it covers like a lot of things

I: can you see a research student doing a PhD sitting down and covering that

S: I think it could be helpful, like if you forget the basics like, and if you’re in first year like, you wouldn’t know the more advanced stuff I think you can just click into it and click out it would be helpful for anyone

N: a lot of the 3rd year, in my personal opinion it’s more targeted to research or 3rd years or 4th years and up because eh with first and second years, em a lot of the stuff that you research doesn’t necessarily have to be peer reviewed. But when you reach third year and fourth year for a lot of your assignments a lot of it has to be peer reviewed
I: we have noticed a difference, this year. That used to always be the case until this year, we noticed that there were a lot of first years looking for peer reviewed.

R: really!

I: yes

I: I just want to point out that the 7 steps kind of go from basic to advanced anyway, steps 1-4 are sort of about finding information, and as you go higher it's more to do with ethic and copyright issues and referencing etc, so it gets more complicated as you go on.

I: another question is, do you think it's too long, 30-40 minutes?

All: no or nodded heads to indicate no

S: no, you can click through it anyway; you don’t have to watch the whole thing

R: yeah

M: you don’t have to watch it all anyway you just click what you need

I: do you think that people would know that.. They would. (someone nodded)

S: yeah

S: I think so yeah

I: so the labelling on the side would be important, to get the text right?

S: yeah
I: so is there any other content, say the likes of this, searching and finding information, any other content that you would like covered?

R: referencing, how to reference properly

S: yeah

J: yeah

J: I was just going to say, referencing, that was the main thing we did in learning to learn in first year, and I can tell you now I still wouldn’t be able to reference properly, I actually use a generator online and so I’ve never really had any problems with that but maybe em something on referencing as well

I: Anything else?

R: I just think computers in general

I: so digital literacy as opposed to information literacy?

R: graphs and stuff like that. Excel. It’s a big major problem; I know that we were taught it going back

I: YouTube is great for that?

R: yeah I know but as I said if someone’s not actually, we did we went through it today, we didn’t find it very.. Somebody else had to come and show us, because there’s newer is it 2013, it’s so much different than the older one
I: that’s going to be an issue with this as well, in that websites changes, everything changes, information changes, it’s important to keep everything up to date, so the only library content is finding info and referencing. What about evaluating information?

R: that too, that would be very important for research wouldn’t it

N: yeah, especially for (names their course) students when we’re doing our dissertation this year, that’s very important

I: do you think it needs to go into more detail about comparing the literature and doing literature reviews, you see the lecturers do that.

S: that could be like a footnote if you don’t want to go into it. (So they want it?)

I: what about if we got content from the lecturer and put the content from the lectures into this as opposed to us

R: that’s a good idea, I’d like that

J: yeah that would be very handy

I: ok. which do you prefer Audio or Text

N: the tutorial, the text slides or the ones with video and audio: I think both is actually quite relevant, because when I was on work placement during the summer with a particular employer, in their system they had both audio and video and also further down the line they had text to clarify points that would take, that would be more confusing than just spoken. Visual text rather than just say what it is.
I: Ok if there was audio and text at the same time running simultaneously, what do you think about that?

S: you can mute it

J: if that was an extra option id say it would be good, I myself I’m, like if you were to give me something to read I take ages to read it, and I probably wouldn’t remember half of it I’m dyslexic as well, but em, if something is spoken to me ill pick it up much faster, immediately

S I’d say the audio is a good idea. Plus with the text it wouldn’t be too bad

N: there was no option that could be done where after the video you highlight the key topics and after, following the audio, you could hover your mouse over it and it brings up a text box? Illustrating the points

I: a summary is that what you mean?

N: yeah, a summary

I: what we are hoping to do, is introduce some of the slides with just a little bit of audio, like this is where you click and then have them either text or the other and then have the transcript, you see it says notes, when you click on this it gives you the transcript of that particular video or audio.

I: the interactions, did you like them

R: Yes (all)

S: it kind of keeps you awake
I: do you think they’d get annoying after a while, if there was too many of them

S: I doubt it because like we said you wouldn’t be going through the whole 40 minutes of it anyway

R: you can dip and dive into whatever you really need and get whatever you want out of it.

S: you don’t have to choose to be interactive either do you?

I: you can skip through if you want but you might miss out as a lot of the content is interactive

J: you can’t just leave it and it will play through everything will it?

I: most of it, on some slides you have to click next or others

J: well then (is satisfied)

I: what do you think of the quiz?

R: very good, very good idea?

I: why do you think the quiz is a good idea?

R: because you can revisit it and get better at it, and you know, use your memory

M: yeah

I: what benefit is the quiz to you as a learner?
M: can be practiced, you know, like do I really know how to do this? or do I just think I do, and then you go oh how do I get out of this again, so it kind of brings up problems that you might not realise you might have if you’re doing it yourself like

J: ah ha (in agreement)

I: do you think the subject of information literacy should be part of the college curriculum… whether it be taught by a lecturer or a librarian it doesn’t matter?

J: I’d say yeah

R: I’d say yes

S: yeah

K: nods

R: definitely

I do you think it should be assessed formally?

R: absolutely

I: can you see information literacy being a skill that you would just use in college or would you use it outside college?

S: oh you’d use it outside

R: outside

(Strong Consensus from everyone that it would be used outside- all nodded or said yeah as if it was obvious)
J: I think you should nearly teach it in secondary, the earlier the better

S: yeah

R: absolutely

I: in America it’s taught in secondary schools

S: there’s no way you can go anywhere without having to use a computer, or very few places (blurring of the lines between digital and information literacy)

I: does anyone have anything in general that they want to add to the discussion?

J: there’s a point that I meant to add earlier, was to leave out business card with eh say the librarians name and contact name on it, well if you were to put in, the link to the tutorial on the card as well, because I know myself if I were to go home myself to try to find it, I’d never find it.
Appendix I.

Student Interview 1 Transcript
Participants

1. Interviewer/Facilitator I
2. Student K

I: It’s a growing trend in libraries to create these online tutorials, and one of the reasons we did it is because we have all these online students who aren’t physically coming into the building. Normally what we do with the students who are physically here is we go around the classrooms and we teach them, so we try to get them in every year, whether it be first year, second year, third year, fourth year we get the research students and sometimes we used to try to get the staff as well.

K: ok

I: and what we do is, it can be pretty basic, it can be Boolean operators in Google and it can go into advanced searching then in science direct or in emerald or one of the databases.

K: Yeah

I: and then what we decided to do was, there’s an Australian framework for information literacy, so it’s to do with finding, evaluating and using information effectively, and we decided to create an online tutorial as a once off trial of standard number 2, just standard no 2, which was just finding information, and that’s what the online tutorial was basically.

K: no bother
I: but we know its not perfect, so feel free to say whatever you want about it, the more honest you are the better, to be honest with you, so

K: yeah

I: so I just have a list of questions that I will just ask you

If that’s ok with you is it

K: it is of course, go ahead, no panic

I: the first question is, what did you think of the online tutorial?

K: I thought in general it was very good.

I: ok

K: now it did stall a few times, but I don’t know, I was watching it on a tablet, and I subsequently watched it on a laptop

I: ok, was it an iPad?

K: well it’s a blackberry

I: ok

K: eh, for example, your section introduction, the Boolean search engine comes up, and it stalls, where that isn’t relevant until section 10, did you notice that yourself?

I: eh.. the Boolean

K: diagram, for and or not, that comes up at introduction, and it freezes at introduction
I: ok

K: I noticed that, and I thought it was me, maybe it was that you were using the html 5 version, that you don’t have flash on your blackberry, anyway, that’s good to know that there’s technical issues, because like any technology there is, did you look at it on a normal laptop then at all?

K: I did, it did the same, this is a 64gig blackberry, its 4 times more powerful than my laptop

I: ok ok

K: it’s a, mental yoke

I: so it was on the introduction, I’ll have to go into it and find out

K: im going into it now actually, I’ll do it right in front of you, and it’s up again

I: ill go into it now as well here

Under search tips, Boolean searching, wildcard and the purple keys don’t respond to any input

I: ok, so this is slide number 10 is it?

K: slide no 2, introductions

K: instructions sorry

I: oh, instructions, oh yeah ok that didn’t, that did confuse somebody, the buttons aren’t supposed to do anything, it’s the little roundy things that are supposed to do something,
K: oh, this is how the main content works, explain,

I: yeah,

K: I see that, the asterisks are the input key, right

I: ok, so that’s confusing, well that’s good to know.

K: now press next, so in other words it’s an introduction rather than instruction

I: That’s obviously something we need to fix, (laughs), so thanks for that.

K: Boolean is a mathematical term, it’s an algorithm, its and or not, it’s all got to do with logic, and it’s obviously where they got that.

I: yeah?

K: but yeah, not to worry

I: but eh, in library terms we still would use Boolean operators, we would still call them that.

K: yeah, it is a mathematician that links things together

I: so to continue

K: you go ahead

I: so what else, did you think about it

K: I thought toward the end with the advanced search tips for example, where you had substitute letter, Or possible substitute a group of letters using an asterisk, I don’t think
that’s really relevant most of the time, maybe for school projects or something, like that but, at graduate level, at least people do know how to spell in office, you have the automatic spellcheck and in Google also, you have pre-emptive spelling, “did you mean to spell like this for example”

I: yes

K: you can put in a word backwards and it will spell it correctly for you, so in terms of it broadens the search too much if you were to use the asterisk feature, now I’ve never used it, in terms of the inverted commas, em, what we would always do, when you teach yourself computers essentially, and if you wanna know a synonym or a definition, and you don’t want to do wiki and you don’t want to do jeeves or anything, ask or anything, or popup stuff, that wrecks your head, if you go define colon and the word, it will give you that anyway, and it’s possibly an easier system for people to use and if you put in definition – colon-word you’ll get it straight away without the word popping up all over the place as a random word, do you know what I mean?

I: yeah

K: like for example when you go into an author search in emerald or PubMed or any of those and you put in the authors surname, and middle name initial, and very often they use middle name initial and it seems to be a fashion in the States, if you put in Atkinson R. J. for example and you pressed, you might met 200 search results, but the r and the j are joined, and your thrown all over the place, do you follow me?

K: so what I do is I put in their full Christian name and that narrows it down a lot, but obviously you don’t get the full Christian name from references, if you go to a
bibliography in a paper and its abbreviated first and second name, and you’d have to download the full file in pdf to get the full Christian names, and that greatly narrows down searches, .. if you are searching by author.

I:  ok so are you saying that in terms of content we have missed the mark a little bit on it?

K:  well, it’s just, it’s just a technique that I use, and it seems to narrow down my searches a lot

I:  I’ll get more details of those techniques that you use again, if that’s alright with you and I’ll send you an e-mail and that would be really helpful, I can add them to a list, so in terms of..

K:  like I’m researching for a PhD at the moment so..

I:  Yeah?

K:  a PhD thesis proposal, and there’s a Spanish chap and he’s working up in [redacted] and his surname is [redacted]

I:  okay

K:  so when I enter his surname I only get this stuff because its an uncommon surname, but when I enter his colleges, or the Japanese surnames,  

I:  I understand

K:  there’s an awful lot of Lu’s (8.43), and a lot of Chen’s, and it would be like them putting in O’Sullivan or McSweeney in Ireland

I:  yeah
K: or Smith in England, and its probably just a thing that needs to be tightened up,

I: well there’s

K: there’s word that you join, because if you put in Atkinson or jr Atkinson, it will still give you the same thing because, it’s not joining (not sure)

I: so are you saying we need more detailed search tips within the tutorial that might help Ph.D. or masters level search for authors?

K: yeah, under the author sometimes I find no there’s far too much information if you put in the initial of the Christian name you get too much information because for example, A, you know so many papers begin with the letter a, and if you put in the Christian name it will highlight a in yellow, it’s just a thing that I found recently which is annoying, you have to read down through loads of them, and then you’re saving your searches, and and its unusual obviously they use their middle names, with narrows it down further, because obviously less and less people have the same middle name, but they don’t seem to be joined you know?

I: yeah, I think in web of science you can do more detailed author searches can’t you?

K: you can, you can use advanced search, I do use that, and then when you’re typing it you can put in the year, like I go for 2006 upwards

I: okay, and what about Google Scholar, have you used that at all, im going off the point a bit

K: I used to always use it, but if you do an ordinary google search you get the same information
I: you do, I’ve noticed that as well,

K: (interrupts) now you get your abstracts, and often the abstracts are enough, if you want to allude to something

I: yes,

K: according to Dickenson 2010, he said this that or the other, and then get your reference, and then stick it down and Dickenson 2010 but that’s only to allude to something or to reinforce a point that’s already made

I: yes

K: but that’s already there without a library database, that’s free information as far as I can see

I: so in terms of the screencasts, the videos that were within the tutorial then

K: they were clear, no problem,

I: and then the interactions, when you went further on? Were you able to use them?

K: yeah, they were no problem at all, and apart from cloud backup, I don’t know what section you had that in at all

I: yeah, cloud storage? yes

K: 15, cloud storage, section 15, just after 15, now obviously you can save your searches in science direct and you can click your save and you can set up you mailing lists and your updates and your favourites, or just as a hobby if you are interested in something, that you are reading or whatever, but in terms of the cloud storage, and some of the tutors
are using box at the moment, and they were uploading stuff to us, what they had in their box files, and the theory was that when we clicked on the link, we would be directed to their box files but it wasn’t working.

I: so do you think more detail on how to use one of these would be helpful.

K: I do, now there’s 4 of them there you have 4 of them listed, and I know students get a bit bored and a bit confused, and say ah sure Google Drive, I know that what’s this fire thingy here and what’s this box drive, and I’ll go to that and nothing comes out of it, like box drive its basically file and folder tasks under a different name, if you want to group things together they are there, but I know from us downloading stuff online that was presented to us last week on 4 of the video clips that were uploaded to the Moodle area, I: yeah?

K: we couldn’t access files that were stored in the box and we had to contact (coughs) the teachers concerned, and they would upload them directly.

I: ok so do you think there should be less choice there and more detail in how to use one of them?

K: possibly yeah.

I: as well as that, when it goes into the, em, you know the little cartoon character of the woman?

K: Yeah

I: what did you think of that?
K: yeah, well it’s, she’s easy to understand, and it’s not confusing and it’s clear, its, the voiceover is very clear.

I: ok

K: I found her both no problem, yeah

I: and would you prefer the voiceover to text normally? For something like this?

K: Yes, even though things are online people still want to have some form of eh human integration, for example, let’s say, and this is probably a general comment on online and online learners?

I: that’s great, go on

K: if someone uploads pre-recorded videos, because of time constraints or possibly out of (laughs) various other reasons or if somebody was in a different country, like one of our tutors is abroad at the moment so he’s in a different time line, and he’s got his 3 kids with him, and he’s living over in Japan, and that’s fair enough cause he’s 8 or 10 hours in the difference and obviously he can’t be expected to be answering all our e-mails, and he’s working for an engineering company, so there’s a bit of lee way as far as that’s concerned but if someone is living in Sligo and they are a full time lecturer

I: yeah

K: it’s more personal if they are doing a live lecture, because you have the integration, you can ask the question there and then you do feel, like it’s a virtual learning environment, it’s a virtual classroom but you feel as if your part of it when your part of
it, and there’s 8 or 10 or 15 other group members, but if you’re watching pre-recorded videos on your own

I: yes?

K: so my personal experience, you’re not as interested in them because they are less personal.

I: ok, so in that case you think the cartoon character is appropriate?

K: and the voiceover it’s more personified, that’s exactly the word I am looking for yeah, yeah

I: do you think we should have some sort of a helpdesk, a “live” helpdesk or em, a thing that you type into and you get a reply the next day, something embedded?

K: eh, maybe in a further question section or something, possibly or tech support, or help, .. eh you might and you might not, it depends on the students interest, a lot of the students might, say, I did this already, I know how to use this

I: yes

K: I mean were doing a course in teaching us how to use Google, and he’s teaching us how to use stuff we’ve been using for 10 years, if the students feel, “sure I know that already”, then they are not going to ask the question, and they are not going to interact, on the other end of the stick if you try to teach them too much, with the and and the not and the asterisk and the or..they say, ah no that’s too American, I know Americano is seeping into to us all the time, I got a book off recently, and the definitions and the terminology in it are totally at odds with our culture,
I: yes I understand

K: you know? Like a masters thesis, a MPhil thesis should contain between 30 and 40,000 words, but there’s not a person in Ireland who wrote a thesis that length, the difference between what is a discourse, what is a dissertation, and what is a thesis

I: yes, they are very fuzzy

K: they are always trying to redefine someone else’s opinion anyway

K: but if we all know what a dissertation is, and to us a discourse is too French men having a long conversation

I: yes (laughs)

K: but that’s what the word means, but sometimes Google and sometimes all these others they try to Americano things too much, people but up their own, eh shields and say, im not bothered with that.. Possibly,

I: yeah, but then it’s very hard to get away from Google these days isn’t it?

K: oh I know it is, but if you try to teach American, I think sometimes people can’t be bothered, I know you have your examples, in your synonyms, of bachelorette party, and things like that, and that’s fair enough, but if we use word, and we use works, in the UK version, there’s not a whole lot, you have spellcheck, there’s not a whole lot, they have a “z” instead of an “s” (18.10). you know which I find REALLY annoying to realise something didn’t permeated into the literature.. and science, because a lot of the top scientists were
I: You have to remember that a lot of our databases are American based, so a lot of the articles.

K: exactly

I: just to go back to the online tutorial, what did you think of the quizzes?

K: I didn’t get that far, or did i?, oh I did a couple of them, oh ya, yer man was online, and you had to figure out what was wrong.

I: (laughs) what did you think of the idea of a quiz in general in the tutorial

K: people enjoy quizzes, because it’s a , it’s sort of a self reward, so I think having quizzes is generally a good idea, like even if we did a chapter, or a module, the tutor might fire up sample quizzes, and it’s not part of the overall, and say try it as many times as you want, and you try it 3 days later, and you get more answers right because you can remember the answers from 3 days ago, but your sort of coddling yourself but you see inadvertently you are learning, because you are revising

I: that’s right yeah.

K: your reinforcing your learning that’s another reason for quizzes, now when I was, when he had put in the lower case honey bee and uppercase I can’t remember, but obviously you can’t go lowercase higher case, and separate the two, it was frozen, I can’t comment on that particular quiz, but quizzes in general make people interested and they are a bit of fun, we learn to do them when we are kids, and it’s a way of revising as well

I: ok jus another 3 4 questions and we will finish up, thanks a million,
K: yeah, no problem,

I: do you think Information literacy training should be part of the curriculum?

K: in general I would, it’s so, like, because the network, the internet, because there’s so much ..it’s so easy to go off on a tangent, because there’s so much of a particular topic, and especially if you have a deadline that’s 3 months or 4 months away, you’re not under any pressure, and you say this is grand, and I’ll download a few papers today, and you might spend 2 hours downloading pdf’s or something like that and creating your little file, and because you’ve actually downloaded you feel as if you are after achieving something now, and you actually are, but you haven’t read them

I: eh, been there,, done that (laughs)

K: and you’re going through your files 3 years later and you say, what’s all this junk, and you open up your files, and you say feck it, I forgot to put that into my essay, and delete delete delete, so the action of downloading people tend to con themselves into they are working so when you downloading something, and let’s see, let’s say PubMed shows up similar articles to this, and you click, and read down, and you say who wrote that? and you go to the bibliography and you say “sure this fellah did that in 2007” and then next thing you’ve gone off in a spider web of attachments, and your real core issue has been lost, and you want to generate a huge bibliography, it’s actually brainstorming, what your actually doing is brainstorming, but it’s not quality, it’s not quality, because you’re going off in tangents, so if somebody had a defined path, and a strict deadline, students don’t follow deadlines, unless they have to.
I: so are you saying that maybe the content of the tutorial on file management and taking notes etc.?

K: without being too strict because half the fun of browsing is browsing

I: yes, but it would be just a plan, I’d say there must be something out there, you know how I was saying that the ANZIL tutorial has 7 steps, well we only focused on 1 step, so it’s supposed to get harder and more detailed as we go on, so there would be stuff on file management, there would be stuff on referencing, the ethics of information, saving images, and that kind of thing, copyright would be included in all that

K: ok

I: so eh, but just to go back to that question, you think it should be part of the curriculum because you know it would help people not get lost in too much information?

K: well we are doing a module called [student name], which is the ? and I think it’s a good idea in that instance

I: yes?

K: its surprising how many people don’t use periodicals or never subscribe to a periodical whether there online or in paper,

I: ok, do you

K: and not a lot of people use the library, I mean I’ve requested books off [student name], and I think I’m the only borrower (he isn’t- not by a long shot- I don’t want to influence his ideas and preconceptions- I need to know what he knows)
I: yes

K: like you work there, there’s books coming in there that are 2-300 euros that are on the shelves for years!

I: yes, our book borrowing is down

K: and that’s the virtual age taking over, but I know we are more or less the same age group where you grow up with a book and then next thing you have a tablet or a laptop and you like to be able to turn a page, and it’s hard to read from top of the page to the bottom, and you go back a bit, and then you get a bit bored, and then you have to highlight this or that but you have to teach yourself that virtual learning, now if your course is the same, there’s still more reward in a book, but they are becoming less and less fashionable, and practical obviously, so people .. Because there’s far more information online so you’re gonna get more lost online

I: yes

:and you go off then into a tangent, but if you get into the library and you go to shelf 536 which is only biology, you’re not going to go too wrong, but if you’re at home for 3 or 4 hours online you could end up a thousand miles away from the original proposal.

I: just one question, should information literacy be amalgamated to a certain degree with research methods, is there a cross over there?

K: what we are doing is basically information literacy in our module

I: ok
K: but I don’t know if that’s for quality or if that’s for the MSC for industrial

K: but for a full module obviously it’s going to take up a lot of space, but for an undergrad, something similar to the ILO, I’m sure it’s quite adequate

I: do you think anybody at your level would use it?

K: we are already using it through the research methods

K: because, obviously your staff so you can put it on the home page you know and that’s fine, now if a student came to you, someone in their second year business management or something and wanted to set up a link and the vast majority of the students would look at that and say I’m not bothering with that, em, so

K: what I’m saying is at a postgrad level people should already be skilled (but they are not)

I: ok

K: in the area, I think they should be anyway

I: ok

I: thanks K
Appendix J.

Student Interview 2 Transcript
Participants

1. Interviewer/Facilitator I
2. Student G

Interview is by telephone

- Name: G
- Online student
- Dublin
- school of Business and Social Sciences
- Level 7 - Ordinary Degree
- Third Year
- Age 35-44 years old

I: G, does it suit you to speak now?

G: yeah yeah sure

I: can you hear me ok?

G: yeah, can you hear me ok?

I: yeah perfect now, I have you on loudspeaking. You know I’m recording the audio is that ok with you?

G: sure Yeah

I: and your name, you know I will just use your initial, I won’t have your name on it or anything like that.

G: OK
So I just have a few open ended questions…. Goes on to explain the purpose of the interview is to discuss the online tutorial , and edtech in general

I: the first question is a general one, it’s what did you think of the tutorial in general?

G: em, I thought it was pretty good actually, em it was a bit, it was a bit slicker and a bit more friendly than I was expecting, em it’s like the cartoon character was kind of welcoming, em yeah, I liked it.

I: ok, would you have used a tutorial like this before? At work or in college or anything at all?

G: em, I’ve used similar tutorials at work yeah, without the cartoon character, but the same kind of general format, of you know menu down the side and animations and clickable links as well

I: ok, what course are you doing?

G: I’m marketing applications

I: but you’re doing it off campus though?

G: yes

I: do you think you would learn better from something like this, and online tutorial than a taught class?

G: emm… I think it kinda depends on the subject

I: ok
G: something’s probably would be more easily learnt from this, and some things would be better in a classroom, em one of the things that I have noticed being kinda lacking when your off campus is just that interaction between students.

I: ok

G: you know were learning just from the web page which is kinda one-directional, you know that there’s a lot more other people in like this in the same thing that might have opinions or questions or things just don’t come up so I think depending on the content, it’s a great way to kinda present it.

I: and in terms of the content that we covered, which is information literacy, do you that that’s appropriate?

G: yeah absolutely

I: em..

G: In fact I think it’s probably better in this format than in a class

I: why would that be?

G: em, I think it can be a bit of a dry subject to actually lecture on (3.53)

I: yeah

G: do you know what I mean?

I: I do yeah (laughs)
G: whereas when you have something that you can click through, and actually skip
sections and say, “I know about that I can move on to the next bit” it’s a bit more tailored
if you like or self-tailored

I: ok, and when you are tailoring then, do you think that it’s ok to have generic examples,
or for you who is in the school of business should they be more tailored towards your
subject area?

G: no I think generic examples are fine, you know it was quite easy for me going through
it anyway to pop in you know ”information security” instead of archaeology in the
examples because just it’s the same kind of theory with keywords

I: ok, and what do you think the advantages for you are in using something like this?

G: well, you know besides the tailoring bit; that they are in segments that I can jump over
and the sections that I can kind of hone in, on in fact there was one or two pieces that I
repeated just to make sure it got in ok, em, so I suppose the advantages is really that you
can repeat and jump around between sections

I: ok and what would be a disadvantage?

G: em, I’m not really sure, em

I: no don’t worry about it, em, who do you think the target audience is? Do you think its
first years, do you think its third years, do you think its research, staff whatever?

G:em, I think really everyone should do a tutorial like this, so whether it’s first time as a
first year, or first time coming in as a Masters student you know I think everybody should
do it at least once.
I: ok, em, what did you think of the interactions?

G: yeah, I think that was pretty good, you know it wasn’t always clear to me whether I should be clicking on things, do you know what I mean, so I think at the start there’s one or two videos that just played.

I: ok

G: Whereas, I wasn’t sure if I should be clicking on links or

I: ok, was one of those maybe the introduction slide where it gives you the instructions?

G: yes, I think it was

I: and obviously there was a video that just played as well, without you clicking play

G: that’s right

I: ok, em, the ..did you have any more comments about the interactions?

G: that was about all

I: the other thing was the screencasts, they were the videos where it shows you how to go into Science Direct etc. what did you think about them?

G: em, again thought they were very useful, because you can follow step by step from start to finish, the only thing I think you mightn’t even realise when you were recording it was that sometimes the bit that you were typing in was off the screen? So it wasn’t in the captured area.
I: Yeah, I had a big problem, with em, because of .. (laughs) it was to do with the screen resolution, and I had a big problem to fit the video into the same size

G: sure

I: and then it was..yeah, there’s an improvement that needs to happen

I: do you think that instead of creating an online tutorial like this that we would be better off creating like this, we would be better off creating really good screencasts, and putting them on YouTube, in good quality, instead of. .instead of the online tutorial?

G: em, no, I think I prefer having things to click on you know and some of the information sources, like I knew like what newspapers were so you know I didn’t have to click on that whereas just something like that on you tube you would have to play through the whole thing from start to finish, maybe that’s just me like I said earlier on that I like to jump around, rather than being kind of kind of forced to take it through from start to finish.

I: yeah, what did you think of the cartoon character?

G: I liked it, I thought it was a good way to get people interested, to connect, it’s a hood hook, if you know what I mean, it looks quite em, em kinda professional and market, it’s the kind of thing you’d see for some kind of a product demo

G: it seems kinda like a corporate mascot kind of a thing

I: ok, do you think the character should be a photographic image of somebody instead of a cartoon?

G: no.. no I think a cartoon is much more, em generic and relatable
I: ok, em, what did you think of the navigation?

G: I thought it was ok. I wasn’t always sure about the numbering, because it seemed like something’s were numbered and some weren’t, and the kinda menu system collapses or folds up but the sequential numbers in the next section, so that didn’t really follow for me

I: ok

G: em, part one starts at number 4

I: yeah, they are kind of supposed to be headings, but it didn’t quite..

I: L what about the quizzes then?

G: Yeah, I did like them, well just in terms of usability, em that what was it, there was a particular point that I had about the questions?

I: yeah, it was a submit button was it?

G: I think it was the submit button yeah

I: that you didn’t know where it was?

G: yeah, and then for some of the multiple choice questions em, it was very hard to click on each of the different sections

I: yeah yeah

G: so you’re tapping away but it doesn’t actually put the tick in the box

I: yeah, in general the quizzes though, do you think it’s a good idea to have quizzes in something like this?
G: yeah definitely because it shows you that you’ve understood it properly, so you walk away from the whole tutorial with some kind of confidence that you’ve picked it up properly

I: ok

G: do you know what I mean?

I: I do yeah

I: Do you think the quiz was too easy or was it pitched right?

G: em, I think it was pitched just right, em it was maybe a little bit easy, but then you know, I suppose it is there really just to give you confidence rather than to actually test them em, actually that was one thing, sorry I’m just having a look at it here if I when I if I get one of the questions wrong, the percentages didn’t seem to calculate properly

I: yeah, I have to have a good look at the questions, at the very end you can print your results, do you think it would be a good idea to have a certificate or something at that stage?

G: I think that might be a little bit much, you know, just print results is probably fine

I: do you think you would use the skills learnt in the tutorial outside college?

G: yes definitely, again it might be just because of where I work but having knowledge of things kinda outside of mainstream media is a definite advantage, you know so there are things like peer … peer journals, that was a kind of a big winner for me

I: ok, would you have known about all that before you took the tutorial?
G: well, I knew what peer reviewed journal were, and I used Google scholar once or twice but not really with a clear understanding of this where, this was just easily available searchable information

I: yeah, and an awful lot of it is free

G: exactly yeah, so these are things I will definitely take away and use in future (free resources are available after he leaves college—that’s what I meant)

I: do you think IL training should be part of the curriculum in IT Sligo?

G: em, yeah id say it should be part of the curriculum for first years and that yeah, yes.. I dunno if it’s, a full examinable subject but..

I: do you think it should be assessed formally?

G: em, no I don’t think so, I think it’s something that.. the results should think for themselves, if people are producing theses and dissertations with good references (14.36) and a wide range of sources, then that would be kind of evidence that it was successful.

I: do you think that there should be some sort of a “live” element built into the online tutorial? like a live chat or something like that?

G:em, I, no I don’t think so, I think maybe the best thing would be a couple of links at the end to say “why don’t you go try it now” Do you know, something like that as a suggestion to just take it away and try it and do it now

I: Do you think the length is a problem? Its 30-40 minutes long?

G: no that’s fine, that’s fine, I’d expect most people would..skip sections
I: ok

G: I don’t mean that in a bad way, and I’d expect that people would kind of jump one or two points, so I think the length is fine.

I: would you prefer if there was more audio than text in it?

G: em.. no I think it’s a good mix as it is, again it could be a personal preference, but I prefer text to audio anyway, so I think what’s there is just about right.

I: ok. Do you think digital literacy is an issue for students, as in how to use computers, do you think the students in general, that the students IT skills are poor or good?

G: em, it , I’d expect for the younger generation, you know those going in directly from school, digital literacy shouldn’t really be a problem, and the necessary extension of the skills that they have should be easily covered in a tutorial like this (17.03) because most of them are used to searching Google and Facebook and Twitter and so it’s really just the next level, the way in which proper searches should be done for college work, that would be the next step of the required piece of information. I think probably for people like me who are coming back to college it’s probably even more important you know, especially for distance learning where I don’t actually have physical access to the library. Really the access I have through the web is pretty much the only thing that I have without a 4 hour drive.

I: Did you get any sort of training when you were here to register or anything like that?

G: I got nothing
I: would it be helpful, and this is a little bit off but, would it be helpful if there was some sort of a shared screen, I presume whoever lecturers you, you can see them live at a certain point, would it be useful if there was a live person clicking on something and you could see like at night time, in the evening or something like that, as an added help for online learners, like using go to my pc or something like that, or do you think something like this is ok?

G: em, I think it probably is ok just as a tutorial, unless maybe it’s part of a broad like induction piece

I: well, there’s seven steps altogether in the framework we are using for this. This is only step 2 that we did, so eventually hopefully there would be more detail on information sources, more stuff on database help, there would be referencing, how to reference, and how to use endnote web, that kind of thing.

G: ok

I: And that’s probably the next module we will probably do, because it seems to be the one that people want most. In general can you think of anything that would improve the online tutorial?

G: em, in general no, sorry that’s probably not the answer you want

I: whatever answer you have is the answer I want (laughs), no or yes, it doesn’t matter

G: (laughs) yeah, I think everything is fine, it’s just those small things that we talked about already, just the framing and the numbering and stuff I think it still achieves the goal even when it felt a little crippled
I: and did you, was there a lot of stuff in it that you didn’t, was there a lot of stuff that you didn’t realise..

Summary of next bit:

G said there was information on additional search engines, and meta crawlers that he dint know about and that he felt has Google taking everything over and that it was a nice reminder that there’s other search engines.

I also asked him if he knew about our book postal system, and he didn’t so I sent him the details.
Appendix K.

Student Interview 3 Transcript
Participants

1. Interviewer/Facilitator I
2. Student M

Name: M

Age: 40-50 mature student

3rd year science

M has written down some points about the online tutorial first that he wanted to talk about.

M: first of all general impression was great…

I: and to know you can say whatever you want, just be honest

M: well look anything here is constructive

I: Yes, but nobody will mind if you slate it either

M: it’s not for slating; it gets the point across, the presentation, the colour, the flow..grand, em, just on the flow, em, one from the other, there were a couple of points where you.. people like to be lead ; now maybe people don’t want to hear that but em when you are in that kind of mode for example, it will say to you “ click on the next screen” so you follow a verbal instruction but you go to a screen that doesn’t have any verbal instructions.

I: yes I understand

M: so there’s a disconnect there
I: yes, I feel that I have been looking at it so long that it has become a bit unwieldy, but what I did then is I put headings in, but I am aware that there is certain em, for example, do I keep the audio all the way through, do I.. you know it was very hard to make that.. and it’s not.. its still in its infancy do you know what I mean?

M: the audio is grand

I: and I will need to sit down with people and literally go through each screen one at a time you know that kind of way?

M: yeah

I: and figure out what bits we need to fix, I mean we have got great feedback from people on it you know

M: good stuff, but no the audio is grand, and it’s the fastest way to get information across, especially when you are looking at it as well

I: I think I know what you mean, this slide here (showing a slide on the pc) has an audio intro, but the rest is textual so what you are saying is that it should be all or one or the other?

M: There should be at least because people are used to audio instructions, there should be at least a comment

I: on each of the slides at the beginning, even if they are clickable text only versions?

M: Even if its clickable text, because it, the initiation is a verbal instruction, to click on the button, when they do, they are waiting for the sound
I: yes

M: you know?

I: so for example on this screen here?

M: yeah, no audio on that one, even though they were told to go there, by audio, you go there by audio, you go there then you think ok what I am going to be told to do next, or what will be introduced, and you know that kind of thing

I: so what you are saying is that a little audio intro to each of these interactive screens, but that it doesn’t need to be all audio just the introduction?

M: or even just instructions, one or the other, but the audio just so that people hear where they are, they are carried, the continuity is there

I: ok

M: em another thing was, and I do apologise for just picking out points..

I: no no no no, this is great

M: a lot of it was and I have to say, I needed it, em there were a couple of things, synonyms and acronyms, although they were introduced, they weren’t explained

I: ok how could you..

M: in, well in other locations for example, when you hover over the button you get a small sentence, saying this is what this does, if you has similar for saying “well this is what this is”
I: em

M: so if there was something there

I: so more on this bit (opens up slide on synonyms), so is it to show it in context is it?

M: I did not encounter that… (he missed a slide or an interaction)

I: ok

M: …in what I did. That would have been fine, that would have been fine

I: so you were missing a step somewhere?

M: yeah (5.10) but continuity I think is key, now another thing that occurred to me was, do I have enough time to go through this now, and I didn’t have an indication at the start saying, this will take approximately 20-30 minutes, 5 to 10, that kind of thing.

I: do you think 30-40 minutes is too long?

M: well it depend, as long as it delivers bang for your buck, then no, em and like it’s essential information, it does help people do better in their own work, I mean this is not for anyone else other than the people going through it, every lecture they face every day is longer than that, you know this is possibly the shortest academic point of learning they are going to encounter, or I’m going to encounter so with that kind of point of reference, then no I don’t think its too long

I: this is only module 2 in a series of 7 modules, in information literacy (we will prob

M: ok
I: so it starts off, for example module 1 would be information sources, now what I did do is I stuck some of the information sources from module 1 into this to make this a standalone product because otherwise it didn’t make sense, and then (6.52) finding information, and then the next one, I can’t remember, but then it goes into referencing, ethics, copyright and all that, so this is only one module, so this is only one module of possible 7 different versions of this you know? So then people could just go in and watch whatever one is relevant to them at the time I suppose.

M: it’s essential, it’s also essential from the point of view of the credibility of the online services, em students are em fairly consistently using spurious online sources, and the whole thing loses its credibility with lecturers, who in certain instances insist on written information only as sources.

I: as opposed to website?

M: as opposed to websites because

I: yes, I’ve come across that

M: student don’t have the education to nail down the differentiation between the should or shouldn’t, or we should or shouldn’t. And also ..lecturers (Decided to redact this as M asked not to tell what he said directly.)
Basically he intimated that some teaching staff might need the online tutorial too because of the way the information landscape has changed so rapidly.

I: just to go back to the flow, was it just the audio intros or was it the general flow from one slide to the next?

M: I think the flow in the slides was grand, the it’s just that when you start and get into a mode, so your following audio instructions, with a visual display, if that’s always there then there’s and easier continuity throughout it

I: I understand ok

M: again it was section 7, different information sources, there was nothing verbal there, there was another point where similar to my difficulty with synonyms and acronyms, I had a difficulty when I clicked on one of the points, I didn’t get an explanation of the point, I got a form to fill out, which is a another kind of a serious disconnect because it distracts people from where they were, now apologies, I didn’t note

I: it doesn’t matter, I will have a look at it again anyway

M: it was to an external link and there was a form to fill out, so possibly some of the online

I: some of the external links maybe, perhaps they are distracting?

M:Well if the external link does what it says on the tin, and explains to the people that’s fine, but I think what happened was the external link was to the correct website, but the website insisted on people setting up an account before they could get access
I: the bubblus account yeah, the mind map tool I suspect, so maybe that should be in the resources?

M: Yeah, it pulls people away from the flow again, that was generally it, other than that I was very happy to go through it, and I know I have to go through it again, it’s not em,, it’s more of a “rinse and repeat” for reinforcing what’s in there

I: have you used a tutorial like this before?

M: nothing that comprehensive.

I: do you think you would learn better from something like this, or if I was to come into the classroom and run through the same content with your class?

M: in respect of general introductions, which possibly this would go under that heading, em I think this would be better, I think for broader or more in depth education, the person would need to be there because very very easily otherwise people can go off thread, they don’t have a facility to ask a question, to get back on track, you know, to see where they are.

I: ok do you think then that something like this should incorporate live chat from a librarian, or some kind of a call back system where they could actually enter a question for example, and that it would be replied to say the following day

M: I can only answer that on a personal basis. I have always felt that em some of the reply I get from a person is in their chosen method of reply, the way they reply, something other than verbal, and I think most people would need that, and certainly I would so I prefer to ask a person face to face a question other than em post something I may not get the
answer to straight away and may not fully understand the answer because I’ve forgotten
the question by the time I get back to it, even if it’s only say a 5 or 10 minute delay0 I
would have already moved on, either inside the tutorial or shut down possibly and I
wouldn’t see that reply until a later date, so I would say the least evil possibly if I could
use that phrase would be live chat but I would prefer to ask questions outside that forum.

I: are you aware that you can come into the library and make an appointment with one of
the librarians and get a one to one tutorial in this area or project help or anything like that
at any stage?

M: I have to honestly say if I was aware, I had forgotten.

I: what would be the advantages of this over a taught class for you personally

M: the advantages of that over a taught class is that it would exclude any distractions
(14.44)I would have this, I would be channelled through it, I would get what I need form
the point of view of a general introduction eh, there was plenty of time in it for me to
take down the odd written note em, as it was moving through, the speed of it was fine, it
wasn’t too fast which is a huge criticism for my learning speed, but again that’s a personal
thing, not he speed of 0 it was fine for taking notes, that I could go back or look elsewhere
for some of the points mentioned. Em, ya, I would prefer an introduction like that to an
introduction, in for example, day one , em in a lecture hall of 150 or 160 people em em.
(thinking) day one your being introduced to everything and everyone, and you’re not fully
focused on any one given subject, so that would be better

I: and I think you’ve covered the advantage of the taught class, you mentioned earlier that
you could ask a question and that you don’t go off track?
M: yeah and it allows a broader and more in-depth approach, and the questions are there for me so that I would know that I am picking up the person correctly em, you know especially on some of the side issues, that may or not be relevant, but possibly are, and the depth of it as well

I: a lot of the time when we do the taught classes we try to get people in a lab, so that they can log into a computer and do their own examples, and practice their search according to their own projects, in terms of that then the advantage-disadvantage, would that change things?

M: I think that would be best, because I have found myself from my own experience as a tutor that peoples fingers remember some of what went on as well as people’s minds, em so when they are sitting at a machine again, they will remember far more by association and by repetition than in just a general discussion class.

I: who do you think the target audience of this is? Do you think it’s first years, third years, research, pHd.

M: no I think its first years. Yesterday I encountered 2 people standing. I was just using the stapler, and , I encountered 2 guys, both mature students, one wanted to return a book and was waiting patiently, I told him that the desk opened at 10,and he still waited patiently, so I then told him that there was a machine right behind him that would receive his book back, and em, the other guy literally wanted to find a book, and you would imagine that quite a lot of students possibly think the library is alphabetised by author or by subject or what have you, has no idea that there were 2 machines there dedicated
to catalogue searches, and no idea what the numbers were, so an indeed the broad span of what a catalogue search will give you, which is in here as well

I: the summon search?

M: yeah, so I would say definitely first years, in the sense that it would improve everything

I: do you think if they miss out in first year that they would need it in second year?

M: well if they miss out in first year, I think their work will suffer. It will enhance everyone’s work (19.03) you know without doubt, it will give them the information they need whereas otherwise they might not find it, and if they do find it without this methodology then it’s by chance you know, so I think first year and one they have it it’s there, it should stay in first year

I: ik. What did you think of the interactions within this

M: I thought they were grand and I think interaction is essential to keep people focused.

I: ok

M:

I: then the screencasts what did you think of them?

M: I thought it was grand where you have possibly a complex number f movements or where directions aren’t easily given, its far easier to see how to go through the process of doing something.. Absolutely
I: do you think there should be more of them in this?

M: that’s not something that occurred to me before now, em, so I could honestly say no, I don’t think so, it worked quite well in that respect I have to say, I did like and I do think that interaction keeps a person’s concentration there, you know it keeps them involved.

I: ok, so do you prefer the interaction to the screencasts?

M: Where possible yeah, but where there’s any chance of confusion I would say screencasts definitely

I: what did you think of the character?

M: I thought the character was grand, to be honest with you, after the kind of, after the introduction, it, it really isn’t a focus, and I really wasn’t focused on the character.

I: ok

M: it was the information provided, you know, there was absolutely no problem with the character, because everything the character said would happen, happened, so there was an implicit trust when you went through it so anything that the character asked you to do, and you did, there was no issue there

I: do you think it would be better if the character was not a cartoon, if it was a photographic image of a person?

M: no.

I: why?
M: because let me see, for most person, there more definition a person gets the less they relate to it, em I think for something like a cartoon character, people, if they want to, can project on to that you know? And it leaves that person to it, it possible keeps them interested or what have you, but no I think the cartoon character is

I: is that like reading about a character in a book that you put your own interpretation on what the character is like?

M: well, I would relate to projection, more in terms of sales, where you allow people to project, you don’t give all of the information, so people for example see the floor they like, but if they got all the information on it, they would have too much to make a decision, so you allow them to project and they buy the floor they want, that kind of thing, its kind of like selling the sizzle not the sausage type of thing you know, so it think the more ..”bland”, but more a person is able to project on to a character the more they can relate to it, because it’s coming from their own personal experiences.

I: ok just do you think the speed of the audio is ok, too fast or slow in parts?

M: I found it easy enough to take notes, there was only one pace of possible impatience, and that was where the audio finished I think on an introduction screen halfway through the play, so the play continued on and I was waiting for more audio, wondering what was going to happen.

I: I understand (seekbar)

M: I did notice that there was an external distraction, and I paused it and I went back, and I went back 1 stage, on purpose just to follow through so I had that continuity again, and
that stage when I went back to it had recorded the fact that I had played it to the end rather than was sitting waiting for it to play through again, so I couldn’t actually start it again.

I: understand. This is really helpful M thanks a million

M: not at all

I: the navigation was that ok, or how could it be improved.

M: no I don’t think it could be improved, because it’s not, there’s nothing to be learnt by making it more complex navigation, and its wonderfully linear, the only problem was the previous point that when I went back to play again

I: what about the quizzes in it?

M: the quizzes – again I would be wondering why there is no audio

I: shows first quiz on pc

M: I actually searched the entire screen for the submit button and then I went over to click the word submit. (he couldn’t find the submit button because it looks like the next button)

M: ok I didn’t get the second one, generally in those quizzes, you get a second chance to submit

I: what I would hope to do is have the review a little bit more meaningful in terms of what content you get so you can try and retry
M: a format that an awful lot of students not myself, but a lot of student in engineering and science are becoming familiar with is the Moodle quiz, which will not allow you to submit incorrect answers. You keep going until you get all the answers right,

I: and do students like that do you think?

M: I think it helps them, it reinforces the correct answers, em, and again this is, this would be, slightly 0 off from that, if there is continuity in the learning principles I think it’s easier to get a message across.

I: this can be embedded in Moodle and the quiz results can be posted, so some of the lecturers have expressed an interest in using something like this embedded in their courses. So we will be continually doing work on it, and will be developing the quizzes, developing question banks, and chatting to the lecturers and students about types of quizzes and their experiences.

M: I’m not sure what the principle is called, but you could call it the hammer in principle, they just want to hammer in the correct answers and information into the students.

I: you can see that it does give you a little bit of information when you pick the incorrect answer, (review feature) but it does need to be developed. (31.00)

M: yeah, I think f that was after each incorrect answer was given perhaps students would see it as less of a criticism, em again reinforcing

I: could we improve on the language we use?
M: no I find the language fine to be honest, but just the sequence, I did get that kind of a slap at the back of the head I remember my Dad giving me when I saw the message coming up that it was incorrect

I: ok. Do you think the quizzes need to be harder?

M: I think if they are, then progressively so. So that the person can get into it, if the quizzes are for the students own education then I think they need to be as hard as necessary, but given that this is at a voluntary point then the interest needs to be kept for them.

I: and what about a tiered version, pick your quiz, easy medium and hard?

M: No. not unless it was like a marketing approach, and when they clicked easy every time they all got the medium one, because this is one of the cornerstones of what students need, and if it is voluntary I think there can’t be a disconnect at any point where people leave it.

I: I understand.

M: if it’s mandatory, then it’s a separate issue, it’s on academic achievement.

I: would.. do you think these skills are for just while you’re a student, or would you use them after, outside college.

M: in the profession that i am hoping to pursue it would be a mandatory requirement.

I: which is?
M: archaeology, yeah because there is a huge amount of book and desk research before a spade is ever turned.

I: so is there a research element to the job?

M: absolutely, every much so, every single time

I: in terms of your everyday life would you use it?

M: no, not at the minute, I have worked to organise my life so that I can cope with all aspects.. so currently I am not even buying any books outside the course to be honest, and again that’s to achieve as best possible on the course, and the rest of the time, it’s family, extended family, house maintenance etc.

I: do you think IL training should be part of the curriculum?

M: yes, it makes learning first possible, and then easier.

I: I: ok, do you think it should be assessed?

M: independently, I don’t think so, I think this is , it will be assessed, it’s assessed at the minute, it’s the quality of peoples work and how well they are doing

I: do you think instead, of doing this we should just create screencasts on how to do things on the library website and put them on YouTube, now they are there already, but a better quality, kind of a better project.

M: No, I think an integrated approach is better, because if it is dispersed, then people may be through random motion not find ever find the bit they need to know

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I: do you think the students in general are digitally literate

M: I don’t think so, I think there has been a massive dumbing down of technology with a minimum amount of buttons to push to… and the vast majority is social media, em I think the vast majority of student don’t look to get past that and I think when faced with a keyboard and all of the options available they have no idea where to look.

I: so are you saying they are proficient in social media but not other technology?

M: yes, and social media is the most forgiving form of technology.
Appendix L.

Staff Focus Group Questions
(The order of the questions was moved around and some questions were rephrased)

1. Which do you think is better for the students? A taught class or an online tutorial?
2. What are the advantages of a taught class?
3. What are the advantages of ILO? for the students
4. What are the advantages of ILO? for the teaching staff
5. What do you think of the style of ILO?
6. What do you think of the interactions
7. What do you think of the Screencasts
8. What do you think of the Quizzes
9. Is the length (30-40 minutes) a problem?
10. Who do you think it is aimed at? Who is the target audience?
11. Is IL something that the students will use in college only, or will they use it when they leave college.
12. What content should be covered by us?
13. Can you see us adding content you give us?
14. Is digital literacy an issue for students?
15. Do you think IL should be embedded into the curriculum?
16. Do you think IL should be assessed?
Appendix M.

First Staff Focus Group Transcript
Participants

1. CP
2. G
3. C
4. I: interviewer/facilitator

I: Introduces the focus group, explains what we do with IL, with 3 staff etc. explains drop in clinics etc. trend in libraries-online tutorial. Shows online tutorial.

I: first question is what do you think of it?

**CP:** well I really like it, as a librarian, I’ve used a few different ones I think it’s quite easy to click through the different parts, and if you want to go back to it later you can go back, because a lot of the times you have to watch the whole section, to get to the part you want to do, and I don’t think students like that particularly, when they are under pressure they just want it now, so they just want to see the 5 minutes they want to watch, so this allows you to do it.

**G:** Yeah, it looks fairly simple to navigate, em I kind wonder whether like you said students are always in a hurry to do stuff but when you’re talking about, no I just wonder, that this is the idea, to replace the idea that you don’t get to talk to the students in person, so they don’t get this kind of run through and I think there’s a huge need for them to be kind of, you know to be taken (moves arms in to herself’) into that and somehow inducted if you know what I mean, you know initially rather than in response to when they need
it, they need both obviously. But I thought there was great scope, and I love the idea that you have little quizzes and stuff, and I suppose going through my head was that there’s like, almost every course has a learning to learn module now in first year, or something like that and then there’s a communications modules throughout or in a lot of them and that there are elements of that which could just be CA requirements for those courses, to have completed your quiz on that for example, and gone through, could be used really effectively and easily for that, because it’s nicely set up, you know taking you through those kind of things.

I: so what your saying is with a bit of “tinkering” it could be given to lecturers and used as part of the curriculum perhaps?

G: yeah, it could be just, yeah exactly, like this is a basic requirement for learning to learn, that you’ve completed the information literacy level 1 or you know whatever quiz, in other words that you know where everything is in the library, you can search, you know what a journal is ..maybe in third year the requirement could be quiz part 2, which is more to do with, you know more of a elaborate search, but you know it’s really nicely laid out..

C: yeah, it’s really really clear, I think that, I mean what strikes me about it is that there’s a lot of different levels coming at you, I know you ran through it to give us a broad view of everything but I’m thinking of first years coming in I suppose, a lot of that information would be daunting when it was hit all at once like that but having said that its stuff that you don’t want them getting out even of first year without knowing how to do this, and that is what happens certainly in our course. I suppose there’s bits that would be tailored differently for different courses, like we have a lot of problems with image referencing,
because they would use images from first year, you know referencing buildings or whatever, and they don’t put any sources on them whatsoever, you know so it’s.. you know maybe it’s something that they could jump to that, but even know that they are able to jump to that, so you know so I think that personal contact is probably important as well, so whether its ya that we are brought up to speed as the lecturers or they do still have , em, cause I know ideally they would come in and you mentioned em, that they have follow up appointments or whatever, that they could come in and do that but in reality I don’t think they are doing it, so it’s kind of they need to know what they are looking for before they come in you know, em, but visually it’s very clear, and I like the way, I like the glossary, and the way everything can be read, you know without the (purple?) as well

I: do you think it’s better to have audio than text or text rather than audio?

C: I think all the options is good but em, yeah

G: I think the audio is nice, I think a lot of people just sit back with their headphones on and listen to it and they don’t want to eh or yeah you know

C: yeah it’s harder work to read I suppose

I: do you think information literacy should be part of the curriculum, do you think it should eb assessed you know?

G: absolutely, well it is in ours I know to some extent you know, I mean but yeah, well the idea in Science I suppose is that the learning to learn modules were all, and I’m sure others, I think other schools have them now in first year, em they, that was you know,
initially to help people do this kind of stuff among other things, but em and then almost all courses I think have some kind of communication module or something like, (23.04)

**C:** integrated ..depending whether in first or third year or whatever, but even in fourth year there’s professional practice modules and there’s projects and there’s all, there’s load of places where it’s incorporated and it’s accessed to some extent but I think there’s a real requirement to have it assessed, like this is a framework that exists in terms of information literacy.. I don’t think that that’s necessarily built in that structured way; and it would be great to have a way of doing that easily, cause obviously if your you know lecturing in Science, or some science subjects you’re not going to be (23.58) you know you your (impression is here that she’s saying that the lecturers wouldn’t have tie to keep up with IL changes etc.-enough to do with the science subjects-but I’m not sure)

**C:** yeah in terms of there, they are just not, unless like you know you were saying (to CP) they were in a hurry to get something done for an essay or whatever and now they come in and madly try to learn it all together which is, that would avoid that by having it integrated into the or assessed in some way

**G:** emm, but also there’s that idea that if there is a framework that people know, that I have met the requirements for information literacy, this is something I can put on my CV, this is, you know what I mean, or this is whatever.. that’s massive and you can get credits for those kind of things in professional practice modules or you know I mean in kind of modules..

**C:** or even if it’s just integrated into modules in terms of the quizzes integrated into it, you know it could just be ticking boxes that they’ve reached a certain level, and they just
come back with a sheet or whatever in the class to say that’s it done, so its in the website, it’s contained within it,

I: this would be available as a scorm package for Moodle as well, so it’s embeddable in Moodle, so it could be either way for lecturers to use it, em, do you think that we’ve covered, in terms of the 7, is there any other content that you think should be covered, what do you think our next priority to cover should be?

C: you mentioned referencing there is there a detailed part of it that goes into different types of referencing like that?

I: this is the only module we’ve done yet, but number 7 I think is referencing isn t it? (to CP)

CP: Yeah

I: from the ANZIL framework

C: ok, so that’s, ok

I: yeah, what do you think, em, do you think digital literacy is an issue, digital literacy as opposed to information literacy, do you think it’s an issue for the students, in terms of their ability to use computers and technology?

C: becoming less so, but I suppose to tailor it towards academic you know purposes is different to what they are using it for every day but there’s still a lot of mature students who are you know, would struggle a little bit with it definitely, but it’s becoming less of an issue I suppose
G: what do you mean exactly when you say..

I: do you do think that students, whether they be mature students or the 17 year old and 18 year olds that come in, do you think that they know how to use computers?

G: em, no, I’d say once they have motivation to use it for something particular than it’s ok, but I think sometimes they might not be fully aware of how to use them most effectively

C: to apply it academically

G: it’s kind of like a really simple example would be like outline in word or something, like your trying to create a project in the beginning, or to set up a document, that you can avoid a lot of hassle later, those kind of things

CP: but we get a lot, we get a lot of phone calls about trying to do that, that they wouldn’t know how to change a word document into even to save it as a pdf, and that’s just clicking a dropdown, so I think there is, and even at the desk we’ve had a problem, that they can’t open it or they can’t, and even just sticking a usb key in, you know it’s very basic

G: yeah

G: And you know that there’s increasingly. We have a much more diverse student population now, and a lot of African students and students from places where they wouldn’t have had the same technological background and some of them really struggle definitely, I know from some of the first years that even, Moodle, and doing tests online, anything like that, there is definitely

I: Do you think the length, 30-40 minutes is a problem?
Its 30-40 minutes long, and that’s just one module

C: I think it’s probably something that students, they are able to come into and click out of are they? To look at? or would they do that whole section together?

I: it’s up to them

C: well then I think that’s fine then, it probably is something that’s like that then, if they had a particular search in mind or you know, then this makes sense, and sequentially it makes sense, but again, if they were in a hurry and they were looking for a specific thing they could jump to that and just learn that much

I: do you think in your opinion from using this kind of thing do you think a student would learn better from something like this, or from say me teaching them this? It doesn’t have to me, any of us?

G: no I think this is really good, because when you are learning this, you need to be actively clicking through the stuff and whatever, and if you’re not doing that, you’re wasting your time almost but that I suppose in the kind of setting, most value would be if they were all in the room going through he tutorial, and if there was someone available to kind of consult if they got stuck or if there was something they

C: yeah whether it defeats the purpose if they are introduced to this first, and then they do it

G: yeah
C: like a little bit like you know what you did there, (she means the demo I did) and then we can play around with it and see how to use it but maybe that is just is time consuming and defeats the purpose of it (29.43)

I: Can you see us? Were nearly finished actually, we covered a great amount there…can you see us adding content to something like this that the lecturers give us, so as opposed to us writing content, maybe adding bits that the lecturers give us, and adding almost bespoke tutorials to it?

C: yeah I think that would be great..

G: yeah

C: Tailoring it towards different levels and stuff

I: so do you think

C: well whatever, in terms of the referencing and stuff

I: but even for example, research methods, that you would teach, putting some of that content, that we don’t teach, we wouldn’t, you would be more expert, adding that information in here for example

C: so there would be options for it in different disciplines for..

I: eh yeah

G: or linking to you know kind of pages where.. key journals in particular disciplines

C: yeah
I: so in terms of that what your saying is it should be subject specific, rather than using generic examples or eh

C: well earlier on I think generic examples is fine, but as they go through more applied

C: yeah, even those search engines, there are some that we just wouldn’t really look at at all you know, and it’s to guide them towards that earlier on, but that, that could just be .. it is snowing

I: oh the kids will be delighted (laughter)

I: what do you think of the cartoon character?

C: I mean I suppose it makes it accessible, you know, the way she is situated in the, in here (means the library backgrounds) , its cool, it’s nice you know …

G: I got to like her more as we went on…

C: Yeah, its hard, it’s very hard I know for ye to pitch how fast to speak, and how slowly to speak, you know, I found it a little bit slow at the beginning but then if your clicking along as you going, and then there, that’s the way it’s so be used so

G: Yeah, I think at the very beginning I think it’s the same thing, but then she starts talking in more normal modulated pitch

C: yeah

G: whereas I think in the beginning..

I: that we me… (laughter)
G: I know (bit laughs)

I: it’s very hard yeah, it’s very difficult to get it right

G: its very clear

C: look they’re used to computer games, so its.. it’s accessible

G: overall it’s a positive (other voices)

I: ok, the screencasts, that are the parts where you are seeing the video of the person going into Science Direct for example, and they are clicking here there and everywhere, do you think it would be better if we just created really good quality high definition you tube videos, this is how you use science direct, this is how you use.. Do you think that would be better than this?

C: showing someone how to do it?

I: It’s literally putting say 10 videos on YouTube, you know showing, I’ll just go into our one and show you, instead of just talking about it. Em.(shows the YouTube channel and video)

C: they are very useful those screens I think

I: this one here..

C: you know differentiating between the standards of different websites is something that the students wouldn’t.. well first years again wouldn’t,

I: sorry I’ll mute that, I didn’t mean to interrupt you there..
I: sorry, continue

C: no just that you know that they do a Google search or whatever, and they grab whatever, whatever they see, and the name of an architect or whatever it is, and they’ll just grab that, that website and images and whatever off it, whereas this would give you the opportunity to discriminate between those and see what’s academic and what’s not so that they are aware of where they are getting things from

I: I don’t know if you are familiar with this YouTube channel.. this is YouTube and this is a video on “how to download a book using ebrary”

I: so this is what I mean, so having, better quality than this ok? Video on how to do certain things on the library website would be better than creating an interactive online tutorial on information literacy?

G: you mean like forget about everything we’ve seen and just do a load of these?

I: yeah

G: nnn…

C: No- I think these are isolated things…

G: no..

C: I think the process that you went through with it, is important and relevant but these are useful you know then as supplementary if they are you know, again if they’re just looking for something specific maybe
G: it would be easier to use them when you are more directed in your, when you know, you know the landscape already (prior learning?) and then you want to go in and you want to say “oh how do I do that” but if you don’t know the landscape which I think is what the tutorial is for predominantly, or to help you to understand the whole information landscape..

C: Yeah

G: and to navigate it, then, but if you don’t know..

C: yeah that’s much more specific, you know what you want to look for

G: you can’t actually get a step off the ladder you know to do this… unless you are being directed specifically which I suppose you are from your class or eh whatever

I: I just have one more question and that is how can the online tutorial be improved? Just off the top of your head.

G: It’s hard without looking at it again

I: Oh I’ll go into it again don’t worry..

C: so sorry is this just, is this, this isn’t IT Sligo specifically, I mean the content is, but the website itself, the ILO the..

I: Yeah, that was just a logo that we came up with

C: So it is Yours?

I: Yes it’s ours
C: So is it the fish, is it the Salmon of knowledge outside?

I: em, well Yes, and the whole fish eating information thing

C: ok

I: But like I said, if you don’t like the style (encouraging to be honest)

C: I do like it, I do like it, it’s just that… It’s not immediately obvious what that is I guess, but I do like it

I: It’s “information literacy online”

G: Is this a CUA alliance thing?

I: it’s not yet, but what we would hope to do with it actually is to make it as a reusable object, so all of the text etc. would be in a PowerPoint that could be downloaded, and probably put in the HEA repository, that what, em, IT Tallaght have done a version of this as well and that’s’ what they’ve done with it, so we have no issue sharing what we have, although the only problem is that we will have to make sure that the copyright is ok on it, so we would need to write to all the individual image owners and get permissions and all that kind of thing, for example the image of ?. The rest of the images are ok, because we have created them.

G: ok

I: we have created the logo ourselves and all the rest

G: so this is summary part 3, so what’s part one?
I: yeah, em, initially it was part 1, 2 and 3, and then it was summary part one two and three, and we were going to have 3 quizzes, but then I felt that it was bit all over the place, So I made it 1, 2, 3, 4, 5, 6,7(laughs)

G: ok so that yeah I’m not really sure

C: if there was a title or something to say that this part of the website is looking at, and then

I: yeah, cause you can actually have the menu item expand and contract you know? So you could have headings, and them the little sections underneath

C: Yeah, like the 7 sections that you describe (segmenting) if there was something that could..

I: the first section is actually and introduction, then define your search terms, and create a search strategy, save your searches is the last bit, so there is actually probably supposed to be 3, so that would be better, is that what you are saying, to have it more

C: just to tell them what

G: to be honest that information literacy framework, to keep that framework somehow obvious in terms of its hierarchy where now you are in that, that would be..

I: ok

G: because if that’s a standard then it is a kind of international standard then people, then it’s always comparative, do you know what I mean?..to other places, and also, it will build on language in terms of their understanding of information literacy
I: actually that define search terms is actually standard 2 part one, but I don’t have that in do you know what I mean, and actually standard 2 part 2 then is create a search strategy, so it’s that one, that one and then kind of save your searches..

C: even if they were a different colour you know, that they were made..

I: yeah ok..

C: …like kinda orange or something like that that caught your eye for each of those, that they were the stages sort of and then within creating a search strategy you’ve got your information sources, website evaluation and all that stuff

I: what I’ll do is I’ll send you a link afterwards actually with a version of it that has been done with the actual headings, just to see if they make sense to you, because something when your looking at something so long you can’t see the wood from the trees you know that kinda way, and it all gets..you know..eh, I’m going off the point a little bit, em..

Is there anything else that’s immediately obvious?.. in terms of the content even not necessarily. Em I suppose you would need more time… but if you think of anything… will you e-mail me, .. I suppose we will finish up

G: so this will be available?

I: I would hope to make this available, I would hope to put it on Moodle and link to it, and have more quizzes eventually, so that the lecturers can get the results of the quizzes, because I think that if it is a SCORM module it should work, we will probably always have a permanent version somewhere on the library website so that you could have a direct link to it.
C: Yeah

G: yeah

I: and then what we can do, is, you see it doesn’t report back the names or anything like that but we can always use an online form or something to do something like that, and then we will probably pick the next most popular one, which probably will be referencing, we might not necessarily do it in order,

C: will you make it available as you do each section?

I: yes, we hope so, now we will have more testing to do, there are a few lags when you click buttons, and the video quality would need to be fixed
Appendix N.

Second Staff Focus Group Transcript
Participants

1. MH
2. S
3. M
4. J
5. A

Explains background to us teaching information literacy and background to ILO being created. Explains ANZIL standard, and how there are 7 sections. Explains standard no 2, explains that it is still a work in progress, and that we want to know how to improve it.

Gives demo of ILO, and gives them the link.

Goes to ask people to be quiet in next room (I leaves the room) (6.33)

A: super yeah

M: it’s excellent

S: I think they’d really get into it

J: very good

A: and they could go at their own pace

MH: Exactly, especially the bits that they are not sure about, acronyms, etc., they sometimes get afraid of words like that. It’s really good

I: so basically you click on the postits and it brings up the little examples
I: and this is very much you know what I do in the classroom with them, I’ve used the same language and examples that I would use, ok? So, where am I at then..

Goes on with demo

M: can you track, em people’s usage through it?

I: I can, when it will be embedded in Moodle, so I can either track the quiz results or the amount, I could also use Google analytics, but that will only track the hits

M: but can I use this as an exam, and they need to pass the exam before they go on..to do em, em,. Research

I: yes, as a scorm package it can be used like that

A, em

M: yes

M: so you could tell your students to make sure to take it

I: Yeah

M: or as part of a research project

I: yeah

A: that’s a good idea

I: there would need to be a bit of work done on it before
M: yes

I: I’ll just show you an example of a screencast, I’m just trying to show you different.. to show you

M: that’s great

I: this is the video I did on academic journals (still showing demo)

I: and then I can print the results

Shows quiz, and explains features that could be added in terms of the quiz review (adding meaningful data, or another way of explaining something)

I: not just give them the results, but give them a different way of looking at it

I: do you know what I mean?

M: yeah

I: explains glossary, academic language, script etc.

I: The first question is.. which do you think is better for the students? A taught class or an online tutorial like this?

A: I suppose I would probably say that in an ideal world you would have a little bit of both, but you know if you have to choose between one, I would say probably online, it’s the language that they speak, particularly at first year, they are coming in now you know with iPads into class to take notes there…
M and J: em (as if to reinforce or agree)

MH: ..they are, you know, it’s really talking to them in a language that they understand which is breaking down almost an initial barrier that they would have we will say when they, they do need you know somebody speaking to them for certain things, but I think where you really want them to get into something you want to break fear first and I think they like online, they get more excited when you send them online, so I think they may engage with it more, that’s at first year level, I would say, undergraduate first year level

A: yeah, it’s ideal for the distance learners as well I suppose to get access to the maximum amount of students this is ideal, and as again as Mary said if you have a blend of both perhaps this for an introduction and if there’s any other issues that aren’t covered by this em then perhaps then they can have contact with a librarian like yourself

S: The good thing about the online you know somebody could be sitting there, you know and not very focused or in their first three months and thinking, what’s all this about, but once they get the project to do or the essay to do then they think oh I’d better go back and then they have to access it online to go back.. where there’s meaning in..

A: yeah definitely

S: yeah yeah that would be the positive thing I think for all ages of students
M: and you’re getting very good feedback as well, so you’re getting specific feedback, your trying out things and getting feedback, em.. I think the way you’ve done it was very well, maybe it needs another video on top to kinda talk, you’ve talked through the whole thing and how it was laid out, and I think maybe if that was the class, and then you sent, then you kinda let people off to explore it themselves em… maybe if it was just kind of, if they were sent a link to it they mightn’t appreciate all that was in it and they mightn’t bother I think there needs to be something to kinda push people down into it and see value in it, but definitely it’s very good

S: yeah excellent

J: (19.58) mm-hm (affirmative)no I couldn’t disagree with anything I’ve heard really I think, I do think Michael’s on to something though about building it into almost like a prerequisite before you go on to the next stage in an assignment…

M,A,S: mm-hm affirmative noises

J:...it could easily be like a you know a learning skills module or a research based module

I: that was actually one of my questions, was do you think it should be built in somehow..

M: Yeah (in background)

A: absolutely

J: oh I do, I think it would incentivise their use of it and I think it would also satisfy us as academics that they had actually you know, that they were compliant in (20.28) in in the A-Z of actually using all the resources here
S: yeah

I: do you think it should be assessed somehow?

J: I do yeah

A: I do to

S: certainly

A: otherwise they just won’t do it, I mean, maybe build it into a communications module or something

J: yeah

M: yeah, I think that would be a very good idea

M: Yeah, at the University of P now (where M is doing his PhD) there’s a similar thing on plagiarism and you can’t actually graduate without taking and passing the Moodle quiz on plagiarism, and that’s at level 10 but it’s across all their.. There was a decision made that everyone has to pass this.. Plagiarism em, and it’s like this.. your brought through talking about plagiarism and that, and then at the end then you take a Moodle quiz, and eh this is a requirement that you have to actually pass the course to get the Moodle quiz.

A: yeah

J: I think it’s a good idea

S: yeah
A: How many different examples do you have for Paul there to make mistakes? Could that be taken by an entire class and have different scenarios?

I: oh, this could be developed in any way that we want, this is literally just version 1 and the quizzes were done like in half an hour, you know? So it could be developed, and certainly another thing that I wanted to say was do you think that we should be, as the library staff, that we should be creating content like this, not necessarily this maybe a smaller version for the lecturers to use in their Moodle pages?

A: mm-hm

MH: yeah

I: that was .. Probably a bit of an aside..but..em, that was another thing that we thought about a lot em..do you think..ill just get back to this, em..what are the advantages of a taught class ..over this?

MH: The immediate question is it the first thing, that’s why I kind of said …separate it initially to we’ll say maybe the undergraduates we’ll say or say that I kind of like maybe a balance because sometimes you know yourself you get an immediate question and you know that they mightn’t know where to go to ask. Now I know it’s there but they mightn’t know where to go to ask a question, or an immediate question, but having said that when I went through it if I had a question, it nearly got answered on the next screen if you know what I mean (22.17) but that would be my my view on , or if you have let’s say people who are at the upper levels, we’ll say maybe fourth years,

M: mmm
MH: will everything in this suit everything that they want to do, and they do sometimes need that little bit of encouragement before they go ahead, because you are away from them for a period of time so they, they like that, the little bit of interaction we’ll say on a

S: With the face to face class as well you know, you get a very.. quickly feedback about what their prior knowledge is or where they’re at, and that’s, then there would be flexibility for you em you know with those students….you could pitch it

.. but this is very, this is excellent yeah you know

M: but you’d get over that S because you could ask questions as you are going along and if they are getting questions wrong it could drive you down the path of explaining something more

I:  yes, you can use variables in it certainly, we didn’t do that in this case but you could have, like different layers within it if you wanted to go down that route,

S: yes, yeah

I:  so you could have YES NO, do you want to see whatever , you could have optional stuff as well, so just to make you aware that that is available

MH: with referencing as well, sometimes when you are speaking to students, this is why this is better, when you are speaking to students sometimes and you say “do you know how to reference?” they’ll say yeah yeah , and you know you don’t get that opportunity to kinda get in with each one of them to see to what degree can you reference, cause some of them, there not always lying, sometimes they do think they can reference whereas
something like this it ..regardless of their prior knowledge, they still have to go through it, but maybe they can go through a section quicker if they know it, but it might catch those who maybe have a little bit of a kind of a .. a skewed interpretation of what referencing really is.

A: and It will build confidence as well…

M: mm-hm

A: You know? maybe they think they know, but they are not quite sure, and this will verify it one way or the other,

I: in terms of the actual tutorial, do you think they would learn better from this or from a taught class, the amount of learning, a higher learning or, not just information in their heads, but applying it afterwards, that kind of thing?

S: I think the interactive element of that is very good..

M: very good..

S: and that the whole, typically students find all this very tiresome and .. boring! They do!, they do… so, being able to… I think it was very interactive, I want to do that now, and go through it, I think, I’d find it helpful, I think it was very, you know .. Engaging definitely.. (24.41)

MH: and practical as well

S: yeah
MH: you know it’s a very practical thing to be doing, cause you know it’s hard for… you know sometimes say you come in and you do the talk with the students, (library staff) but then it’s almost like you’re gone again, and sometimes I have sat in on yours, and they are really good, and they do listen, you know they do listen to you when you’re there, but sometimes you go away then..

I: they don’t sometimes too..

MH: but, well that depends on the student group..there’s no getting away from.. but you know when you go away then..

I: yeah..

MH: you know they always have this..and they will always come back to this, and I think because, it’s so focused on it , that there always kinda have a version of you so to speak there to help them with something. I think they are more likely to go to this almost then to come to us sometimes

J:mm

I: You covered that you liked the interactions?

Yes (ALL)

I: What about the screencasts? That was the part that’s in it where it’s showing you where to click, it shows the real thing, it was the A-Z one the one I showed you I think, what did you think of the screencasts?

MH: they are very good
M: yeah yeah

S: I love it, I think it’s great

I: and the quizzes?

S: yeah

A: yeah, yes, definitely yeah

S: because again it’s like that instant gratification

J: yeah

S: instant kinda feedback for them,

A: yeah

S: and students love that you know?

M: I’d say the quizzes, what might enhance it a bit, em, we had it before in the CISCO system we had years ago where we were training students, basically when you sat an exam, you sat a multiple choice test and you got a report basically on what sections of the curriculum that you needed to concentrate on to do better, so if you got a report that said, eh “you done ok but you might need to go back and have a look at the Google search, or”. so that you driving people back to the area where there is a weakness, I think sometimes that that, I don’t know if that would be possible, but I think the feedback, rather than just giving a score, if the feedback also.. because you could do it very targeted here because it’s distinct sections and you are asking distinct questions

I: It is possible
M: yeah, yeah

I: you could actually bring them back and have a second bit of information, or you could word it in a different way.. yeah..em.. who do you think the target audience is? Do you think it’s first year, fourth year, a research student doing a PHD, an adult learner, someone from home who, or someone who’s physically in here? In terms of where the student is at with their studies I suppose is what I am trying to get at

A: I think it can reach all of those..

J:mm

A: all those that you mentioned

S: I think it’s very good

A: I suppose.

J: The only groups that I, I think there’s an issue here institutionally it’s about disability access and em, people who might be particularly visually impaired to look if you were a student to actually use this particular resource, so I am wondering if there was some kind of way that you could have some kind of way that you could have an audio version you know of it as well

I: Yeah, actually disability came up as an issue in the research and there is a way to put alt tags and all that to have the images built in such a way, and have a screen reader will read them, but we haven’t gone down that route with it yet, but certainly we are going to have to
J: if we had a cohort like this year would have no issue with it, I agree with that, first years, postgrads, mature students, adult learners whoever they might be that’s just the only little concern I would have

I: yeah, we were actually give very positive feedback from dyslexic students, because of the amount of video rather than text in it, it was, kind of, I was going to see where it would go, I didn’t think it would be raised, but, it actually was, so it’s a big thing that I have to look at, and will be looking at, em the other thing as well, I was going to ask what you thought of the cartoon character?

J: Personally I thought the woman was a bit too glamorous, (laughter from others-J is serious though) to be honest yeah, eh, yeah she could be I think maybe more neutral type character, I think the feminists would have a view on that.. I certainly know my colleagues would (I thought he meant that the character should look more like student- but I think it might have been the blonde hair)

A: laughs

S: I don’t know.. it doesn’t, it doesn’t bother, I don’t have an issue with it one way or another

MH: I actually thought there was somebody.. I hadn’t thought of it in that way if you know what I mean so its an interesting other perspective on it but I hadn’t thought, I just thought it was nice to have something to look at because you know you have sometimes you have a voice (29.00) coming in from somewhere now I mean you could make it more
say I dunno generic is not really the right word for it, or maybe a different image or a different

S: more librarianny? (laughter)

A: it was a warm character, it was a warm character

MH: it was

M: yeah

J: I can guarantee that certain of my colleagues would have a strong view, a very strong view

I: in terms of the cartoon though, as opposed to the glamorous person, em, it was em I tried to mix up the characters a little bit, so there was a male and a female, race and all that

A: oh yeah, very good..

I: but yeah, I did think about that, but it was just..(time) but in terms of the cartoon being used as opposed to

J: excellent

S: yeah good

I: because if I was going to go i would try and mix up the characters a little bit,

J: yeah of course you would

I: but im kinds going with the stock imagery that we have as well, you know soo.
MH: Good concept

J: It is yeah

M: it’s good that you were in, there was photographs of the library behind the person, it looked, like they were standing in the library or were sitting at the desk in the library

MH: yeah an actual photo

M: yeah

I: but do you think, just to go back to the cartoon character, do you think it would be better if the character was more student-like looking, em, you know the kinda difference between I suppose a cartoon student as opposed to a kinda professional person, you know because these can be aimed towards kinda workplace training as well, so I was just wondering where?

I: but you didn’t have a problem with the cartoon in itself?

J: no

A: no

MH: no, definitely not, I thought it was nice, because its, when you engage with something.. a lot of stuff that’s online now, it’s a voice and a screen, just a voce and a screen and you know sometimes it is nice to..

I: what about real video, a real little square, I know B does it that way, like a small little square with his head talking (30.46)

J: no
A: I find that distracting really

MH: yeah

J: yeah

A: I really do

S: It doesn’t look as polished, it looks a bit kind of, you know like there’s a screen and a webcam and the whole.. you know I think that looks really well

I: what if the character in this was a photo rather than a cartoon

J: no I think

ALL: I liked the cartoon (they all said this at the one time)

M: you kinda followed it through if you know what I mean

J: yeah and the fact that she has an identity, Laura and..

A: Yeah

J: using an identity is good as well you can relate to

S: it’s great to hear and Irish accent as well, do you know..

J: that will be dubbed lover (laughter)

S: as opposed to American, or..

I: Do you think information literacy, the whole idea of this will be used by the students in college only, or will they use it when they leave college?
A: I think they will use it later certainly

All: yeah

J: definitely

I: em, can you see us adding content that ye give us, into something that we don’t write that ye write, so for example research methods.. just as an example.. into something like this, so taking your PowerPoints or documents and embedding them into this, as opposed to us writing content that we think, you know.. that students should know?

J: yeah, I mean your putting your finger on something much more fundamental here about the absence of instructional design supports for staff to do this themselves, I mean ideally I’m sure all of us would love to have this sort of kit to make our lectures more interactive or, or you know Moodle sites more appealing to students, I mean absolutely we should liase with you, we should collaborate, but I mean, we need to get training in it as well, I mean obviously you invested a lot of your own time in doing a Masters degree, and you can see the evidence of it, the quality is very good, but a lot of people would be coming from a zero base, that it would all have to be.

I: I would have a technical background, I would do the library website and . you know
S: The only thing about it as well, is that you wouldn’t want to like if you are targeting this for on.. for literacy what do you call it.. literacy? You don’t want to start putting all this content, you know you want to keep something that that is going to work particularly for first year students

M: yeah

S: … that doesn’t become all heavy and research methods and all that, you’d need to think about it before you start

A: and knowing what capable across all different courses, there’s differences as well. (the content would not be generic)

M: you see, yeah, there’s a couple of things, the first thing is there is probably a range of those you need for a range of things but I think, so you know there’s probably one on plagiarism, one on research methods..

I: there will be 7 of those

M: seven yeah, ok

J: even one on using Moodle!

M: but I think em, you you doing it and picking examples yourself is probably better than

I: we have a framework right, so we were going to.. but we are .. open to comments on it
M: whereas if you go down and pick the road.. and it will become too specialised then I mean for a discipline.. I think you’ve picked good examples around B12 around the… you know different things. And you’ve varied

I: so ye like the generic examples

All: yeah.

A: absoutely

I: rather than the

MH: you see I would worry that it would get heavy because of the different types of research methods that are required for the different types of research youd nearly have to have something on every single on of them, and then you might have the students getting confused as to which one they are supposed to be doing whereas if you give them the basics, then they can come back to us to help them with the more , you know whichever one they are going down, but that was really nice, and really relatable for me

J:yeah

I: another question, is the length a problem? 30 - 40 minutes?

J:no, because you can watch it in your own time.

A: ah yes

S: It’s probably a little bit long, you know.. look like we’ve all, we saw a little kind of a snapshot of it, em I don’t know, to sit and look.. I don’t know…

I: 40 minutes
S:… yeah 40 minutes, yeah

I: and then say you were slow at navigating it could be even an hour

J: but couldn’t you just stop and watch in chunk sizes, you could spend 10 minutes, stop and move on

MH: the thing on the side was really good, I did it, I did it at home and you know the way you are clicking into things we’ll say at one stage the phone rang you know when I was in the middle of doing it and the face that it’s no all on an.. continuous basis is really good..

I: It remembers when you open it again, the web page, what page you were on before..

S:oh really?

J:impressed by that

A:super

I: yeah

MH: that’s excellent (lots of positive noises, mmm)

I: yes, the software was expensive, but we did a lot of homework on which software we would get.

I: em.. what are the benefits to you as lecturers to you being given something like this in a SCORM package for Moodle instead of just a link to the website?
J: well, I have an issue with Moodle… I think in terms of its user friendliness for students, there’s quite a lot of aspects of it .. that they don’t get, I’ll give you a recent example..which I think an initiative like yours would be ideal to help resolve is wiki, we’ve got a wiki facility on Moodle and yet we can’t activate it, and nobody in the institute can actually help us to actually activate that.. myself and my colleague were teaching a group of first years..

I: is it a plugin for Moodle?

J: I think so

I: Sorry I’m going a little bit off topic here.

J: but my point is… if there was a little… the students don’t know how to use it either .. they’ve never used wikis, they are a very good idea for group work ah, there’s a great you know repository of information, you can see it from A-Z the finished article and all the students.. you need contributions so you are actually developing of a particular product yet we can’t use it because there is a software issue but even if we did have it ongoing students would still need a little video like this to learn how to use it, and what it’s strengths and weaknesses were

I: yeah

S: I teach first years, and a lot of these interpersonal communications subjects and I think it would be great, even just to say.. we are going to have lab today and we are going to do this, and even just get them to do it there even, and do the 40 minutes and do the quiz and then you’d have feedback, I think it would be brilliant.
A: that’s a class

I: It could be a class (whispered or under breadth to someone else)

MH: yeah

S: brilliant

I: we’d have to make sure that we had it right. em.. another thing, just a quick question, do you think we should embed either a wiki or a chat room or something (36.43) like that into this.. em for the students? Is there an element of live chat or kind of synchronous …icity or whatever the word is, needed in something like this?

M: no in that one I don’t think

J: no I don’t think so

S: I don’t think so in that one

M: with the other topics, to flesh them out there might be

I: and another question, just.. nearly.. my last question actually.em, do you think that instead of doing something like this that we should just create really good high quality high definition YouTube videos, have them downloadable as well and give them to people to stick places, like instead of doing a tutorial, to create a YouTube video on Science Direct on how to search, instead of this

MH: Oh no I like interactivity like this as well in.. the fact that they sit there

A: I think the students would like it more
MH: to a certain extent they are..

M: yeah

MH:… YouTubed to a certain degree I think students are YouTubes.. YouTube has become you know a thing for fun, you look at somebody doing something.. a cute cat or something, doing a funny trick whereas this I think they in their head they separate it that this is something academic and I’m not actually so sure that they would be as quick to go down the use of using YouTube as they would the use of this..

S:yeah

MH: cause this is .. this is smarter do YOU know what I mean, I don’t mean, I know the word’s not there but, you know it’s more I dunno it looks more polished, now I haven’t seen what I mean by the YouTube clip but I think this looks like something that they will feel they have gone through a process, when they go to you tube they are looking at it and they can go off here, this makes then click, it makes them click

S: yeah I think the engage, the engagement part of it, cause you do see them on YouTube and then they are one minute into it and then click, they’re gone like the focus and that. The attention span is so kind of, they are so..

A:yeah

S: much kind of if things to interrupt, I think this will be good, you know and then the quiz at the end, I really like that, oh yeah
MH: this is like the new YouTube, when YouTube came out first it was everything was YouTube, whereas now they are over that if you know what I mean it’s now more functional than fun

I: just em, ive another question, what do you think of the digital literacy of the students , do you think the students are good at using technology…in general? (38.59)

J: well I was just going to relate that to your previous question because I actually hadn’t contributed to that

I: sorry..

J:no, that’s fine, in your own time, no.. Increasingly we are asking our students anyway to develop learning artefacts themselves, em

So it could be a podcast, it could be a YouTube video, it could be a short documentary, and I’m wondering is there some way you could marry that… em requirement of some of the modules in general, I think the skills they are developing, you could make your own little mini video or podcast of an assignment or an exercise that you build into you cli.. Your little footage here.. they they can go ahead and actually demonstrate that they can actually, they can actually use the resources eh, adequately that it’s not, you know, its not just about ticking a box and doing a quiz but it’s actually learning by doing that there’s some way that you can actually emm..access that they actually do understand, em the Boolean search term or the correct referencing or you know?..

I: yeah, you’d probably have to use a portfolio assessment method to em..
J: ok, and that’s not easy, I know all that, but for me that would be the “icing on the cake” that there was a little space to demonstrate a number of tasks before you could.

M: but that could be slipped into the kinda quizzes and things?

I: they could create content like?

J: they would create a bit of content, em, even by using a wiki, you talked about using a wiki today, ok so fine, you are recommending that wiki’s a good way.. a good learning management mechanism for students to do group work ok well then have a link into a wiki on Moodle and ask them to fulfil a number of very basic tasks you know what I mean?

I: yeah so your asking them to transform the information that they got from our online tutorial into a different format

J: precisely

I: and therefore they understand it if they can do that

J: absolutely

I: ok

J: I mean I’m not sure what the technicalities of that are, if it’s even feasible

I: The students, some of the students are doing that already

J: ok well
I: we had a student in during the week panicking because he didn’t know how to attach audio to video

J: ok

S: yeah you see I think

I: he wasn’t your class.. he was somebody else..(laughing)

S: maybe they know about technology but they really don’t know how to….

I: he said he asked his lecturer how to do it and

J: ok

I: and to YouTube it.. and he was panicking

J: well on the point of YouTube, I think we need to have our own itsligo-tube for a whole lot of different reasons, more and more assignments are being generated in multimedia format and for integrity’s sake and for privacy and confidentiality (41.33) I don’t see why we don’t have our own space where students can load all this stuff and it’s organized internally

I: that would be the repository I suppose

J: precisely, it would be a repository aspect

I: the repository,..

I: em just in terms of digital literacy what I meant as well was do you think they are good at using computers in general?
J: mixed

S: like I said I think they think they are

M: yeah I agree

S: but they don’t know how to…it’s like I have a a dissertation student at the moment and I said did you look up this, and they said I can’t find anything and I went back up to the office and straight away I found something and I thought “how could they not?” they are not very creative…

M: yeah

S: in searching, and they are not good at going with a prompt that you know.. probing or patient, they want instant gratification..

A: yes, yeah

S: and they can’t find it straight away, it’s too hard, and that’s what I think is the problem

MH: I think that is the usual.. hey are “technically” literate in that they’ve all got phones and pads and all the rest, but they use them for very very specific things like Facebook, twitter

A: yeah

MH: ,and you know if you ask them about Facebook or twitter good God they could probably get a PhD, some of them in getting around certain things on it

M: mmmhh
I: but yet they put compromising photos of themselves on Facebook?

MH: yeah, they are not thinking of, understanding of it, they press the buttons but they are not thinking of implications, they are not thinking of sources, like my biggest issue in terms of, they can go off and get loads of stuff, and you hit on it in that its about them you know who wrote it? who are they? Where do they come from, its relevant, so technically pressing buttons.. Yes, but the indications in terms of what happens after they press the buttons, I don’t think they’re all that technically savvy

I: when your in a class, and your showing them how to do a phrase search in Google, which to me is very basic, and you can see them go “oh I didn’t know that, I didn’t know that” and then, your explaining subject headings in terms of hash tags in twitter now any more for them to understand, so it’s just all very much changed.

J: the one thing that amazes me as well is in terms of information literacy, never mind digital literacy is, what I mean by that is, I mean you guys use endnote

I: yeah

J: I don’t know any students that I teach that actually use endnote, in terms of managing their bibliographies, their references etc…another piece of kit that I use that a lot of American Universities use is called Evernote

I: yeah, I use Evernote *every* day

J: when I asked them, not one of them used Evernote, because they don’t know how

M: back to what you were talking about, using cloud storage spaces, and it might be worth looking at what a student account in IT Sligo kindof looks like, cause I think they are tied
more into Microsoft now, Microsoft have a thing called OneNote which is very like Evernote (44.37), they have a think like, they have a skydrive account so that section could be more tailored to the tools and the accounts

I: but then, like with the website, sometimes I feel if you say “use endnote web” because it’s the only software we support, I kinda feel should I be showing them how to use Mendelay or Zotero or Qiqqa, which I do, because I know how to use them

J: that’s a really good point that you’ve both made because we talked about, you know instructional design

I: you are really tied down to one

J: restricted to using the Harvard convention for instance in terms of referencing exactly should we be emphasising what are these particular packages over others

Conversation goes off topic with a conversation ensuing on the cost of inter library loans.

MH adds at the end that that she liked using it, wanted to finish it, and that she learnt a lot from it.