

DESIGNING AN ORAL HISTORY SEARCH SYSTEM

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**This dissertation was submitted in part fulfilment of requirements for the
degree of MSc Information and Library Studies**

**DEPT. OF COMPUTER AND INFORMATION SCIENCES
UNIVERSITY OF STRATHCLYDE**

SEPTEMBER 2016

DECLARATION

This dissertation is submitted in part fulfilment of the requirements for the degree of MSc of the University of Strathclyde.

I declare that this dissertation embodies the results of my own work and that it has been composed by myself. Following normal academic conventions, I have made due acknowledgement to the work of others.

I declare that I have sought, and received, ethics approval via the Departmental Ethics Committee as appropriate to my research.

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Abstract

This research provides an exploration into designing an oral history search system. Oral History is increasingly being enhanced and accessed via new technologies and mediums. The intended aim of this study is to conduct a U.K based assessment of oral history technology and to identify the most important features that should be available in any oral history search system or archive, and to offer a set of design recommendations. To investigate this, a literature review and five focus groups were carried out across different areas. These included: BBC Scotland, The Scottish Fire and Rescue Service, The Scottish Oral History Centre, The Public, and History Graduates from a selection of Scottish Universities.

Through qualitative research and thematic analysis, this study found that, ‘ethics, consent and control’, ‘accessibility and engagement’, ‘publicity and awareness’, ‘and innovative technologies’ were the four major themes to emerge from an analysis of the findings. These are further explored in this dissertation and broken down into sub themes and examples. This study established that there is limited understanding of oral history in the digital age, numerous interests, ethical concerns, lack of publicity and several key attributes that those designing an oral history search system or archive should strive for.

However, the findings identified that further exploration into sampling selected technologies on different user groups is required in order to develop software that would benefit the field. This study has been successful in the validation of previous findings, identifying important features of any oral history search system, and offering a selection of design recommendations. However, it is clear that the field is still in the preliminary stages of development and there is scope to develop further innovative platforms and projects in relation to designing an oral history search system.

Acknowledgments

I'd like to thank my supervisor Dr Martin Halvey for his guidance and support throughout researching and writing this dissertation.

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Chapter 1

Introduction

1.1 Overview

Gluck (2014) stated that “since 2000, the excitement about the potential of the digital revolution has grown by leaps and bounds across the world” (Gluck, 2014,p.3). There are a host of new technologies that offer instant access and engagement with oral histories. Media platforms such as Youtube, SoundCloud, Wordpress, Drupal, Omeka and content management systems such as CONTENTdm are a few that have emerged in recent decades and revolutionised access, preservation and engagement. These various platforms offer opportunities for users to search collections through transcripts, index, audio, and video. Therefore, this study examines the various options for presenting, engaging, and searching oral histories in light of technological developments. It is the intention of the researcher to conduct a qualitative assessment of numerous stakeholders in order to establish important features within an oral history search system, and to offer a set of design recommendations for future use and exploration.

It is first necessary to provide an overview and definition of oral history. Oral history can be defined in a multitude of ways and holds a significant place in a variety of libraries, collections, universities, communities and research environments (Thomson,2006). According to Butler (2008) “oral history is a recorded interview of an individual or group of individuals by a historian, researcher, or another interested individual doing the interview” (Butler, 2008, p.34). In addition, Thompson cited in (Yow, 2005) stated that “Oral history is a connecting value which moves in all sorts of different directions and connects the academic world and the world outside”(p.13). For example, there are numerous famous oral history projects from around the world such as the Shoah Foundation which has over 53,000 video interviews of Holocaust survivors (USC Shoah Foundation, 2016); The Ellis Island Oral History which shares historical accounts of immigration to the U.S (Ellis Island Oral History Project) and Scotland’s Rural Past which explores the life of rural settlements and the people that lived in them (Scotland’s Rural Past, 2016). In addition, Andrew Viñales (2016) highlighted in ‘Oral history for youth in the age of #BlackLivesMatter’ that “he and his students have used oral history to not only document the lives of people fighting for social justice but also as a tool to inspire young

people to act” (Viñales, 2016, p.8). These are just a few of a substantial amount of projects which portray the different uses of oral history and how it can be used as a tool for social and political change. Oral history focuses on a variety of people from all walks of life and plays a central role in the representation of local communities, women, ethnic minorities and ordinary people. These groups were largely underrepresented in historiography until the late twentieth century and have recently come into focus. Thus, oral history focuses on social and cultural history that recognises the experiences of a wide range of people or ‘history from the bottom up’ in which individuals such as workers, women and minorities take centre focus.

However, due to “The digital revolution”, the developments in recent decades have prompted a shift in the way historical materials are stored, represented and accessed. Oral history has experienced a renaissance in recent years having been used in a multitude of settings (Bulger, 2006). Benmayor (2013) highlighted that, “oral history is a powerful tool for researching, teaching, and learning about the past which is not new, but widespread access to it is” (Benmayor, 2013, p.512). Moreover, according to Seedfelt (2009) “Digital history is an approach to examining and representing the past that works with the new communication technologies of the computer” (Seedfelt, 2009, p.92). Thus, it is evident from recent literature that the internet has transformed the way in which oral history is catalogued, presented and reflected upon.

However, Gluck (1999) stated in her article on ‘Reflections on Oral History in the New Millennium’ that:

An obvious but fundamental truth that may be reassuring or troubling depending on your point of view. No matter how the technology evolves, the human elements will remain crucial to the future of our field (Gluck, 1999, p.25).

Arguably, Gluck’s recognition of technological advancements and human involvement in the field of oral history was accurate as we firmly enter the digital age. The researcher would agree that regardless of the technological developments in the field, the human element has always remained central to discussion. Therefore, this study is focused on the development and use of oral history technologies which form “new media”. It is clear to say that oral history can be clearly defined. However, it is evident that the way in which oral history is managed, represented and accessed has been accompanied by numerous challenges, controversies and limitations. This is largely due to oral history resources holding different meaning and serving different purposes. Therefore, this chapter is divided into four sections. Section one has provided an overview of the topic. Section two

provides the background to the research. Section three identifies the research problem and the research gap. Last, section four outlines the structure of the dissertation with a summary of each chapter.

1.2 Background to the Research

As previously mentioned, there are a host of technologies which allow researchers, historians and users to record, organise, interpret and share stories and collections. Recently, there has been an emphasis on how a new range of digital tools such as mobile technologies could be used in oral history. However, combining new collections and making them accessible with new technologies has presented various challenges. According to Boyd (2013) “the design and usability of archival interfaces will directly correlate to the discovery and effectiveness of the user experience” (Boyd, 2013, p.96). Furthermore, Boyd and Larson (2014) highlighted that technologies “remain under-utilised because oral history can be a cumbersome resource to use within an online environment”(Boyd and Larson, 2014, p.1). One of the fundamental challenges which has been addressed in recent years is the development of individual interviews into searchable databases. Therefore, it is the primary aim of this study to conduct research into the current understandings, practices, and important features when designing an oral history search system.

1.3 Research problem and objectives

Perks and Thomson (2015) stated that: “the role of the archive in the digital age is changing and its importance rapidly increasing” (p132.). This has prompted a shift in focus away from the discussion of the interview itself to the discussion of the post-interview. There have been numerous studies conducted on the design of oral history search systems in the United States and Australia in recent years and this has highlighted difficulties of transcription, indexing and integration. One will address and examine a selection of these case studies in greater detail in chapter 2. However, the U.K. is one of the leading countries in terms of technological advancements; therefore it is notable that limited research on designing an oral history search system has been conducted. This dissertation is primarily case study based with survey elements, and will offer a qualitative analysis of different user groups in relation to designing an oral history search system. It will do this by exploring the answers to the following research questions:

1. What are the most important features that should be available in any oral history archiving and search system?
2. What are the current understandings of oral history and oral history technologies?
3. What are the different needs of numerous users and stakeholders?
4. What are the major opportunities for new media tools in the near future?

In order to answer these questions, these are the key objectives as a whole to the research:

- To produce and reflect upon a suitable plan for achieving this aim, secure permissions from multiple stakeholders for research to be carried out.
- To secure participants and conduct research across multiple sites using justified methodologies.
- To produce a reflexive dissertation presenting the researchers findings.

Moreover, this study proposes to offer a few key deliverables and develop the following learning outcomes:

- To identify the most important features that should be available in any oral history search system or archive.
- To offer a standard set of design recommendations and guidelines through consultation with multiple stakeholders.
- To contribute to work that has already been conducted in the field of study.
- To develop the researcher's professional and qualitative research skills through the delivery of semi-structured interviews and focus groups.

1.4 Summary

In relation to the content and structure of this study, one will implement a sequential structure in order to present the development process and the findings effectively. Therefore, chapter 2 will offer an in depth examination and discussion of the relevant literature within the field of oral history. This will include an assessment of the field, case studies and ethical and legal considerations. Chapter 3 will discuss the Framework Approach with elements of grounded theory which was selected as the methodology. One will examine the methods of data collection, data analysis and the risks associated with this study. Chapter 4 will offer an extensive discussion related to the results that were collected during the primary research. This will portray the data analysis process and the findings of this study through the use of the chosen methodology. Last, chapter 5 will place emphasis on the researcher's concluding arguments and thoughts. This will include a summary of the research objectives and deliverables, discussion in relation to design recommendations, previous research and areas of further exploration in the field.

For the purposes of this work, it is necessary to highlight that due to limited time period, the researcher was unable to examine every area in extensive detail, but has provided a greater insight into appropriate intervention areas to improve the field. In addition, one

does recognise that this study is broad in nature which possessed both advantages and limitations. On the one hand, there are a broad set of results examined in less depth. However, a diverse range of participants was considered to be invaluable for identifying important features, offering recommendations and contributing original research to the field. Ultimately, the chosen structure should enable the reader to be provided with a clear and concise understanding of this study and the important features, challenges, and developments in the field.

Chapter 2

Literature Review

2.1 Introduction

The main purpose of this chapter is to provide a context of the dissertation and its relation to research in the field. The chapter will be divided into three sections. First, one will provide an overview of the current practices of oral history in the digital age and map out the key points of discussion. This will identify the main themes that have emerged from the literature and the developments and challenges experienced in the field. Second, there will be an analysis of a handful of previous case studies and examples. This will examine various institutions and professionals that have developed and implemented selected technologies. Last, this chapter will consider the ethical and legal challenges faced by oral history in the digital. This should exemplify one's understanding of professional practice and controversies in the field. Underpinning this chapter is what needs to be considered when designing an oral history search system. This should demonstrate a strong foundation and justification for the development of this study.

2.2 Oral History in the Digital Age

Traditionally, interviews have been difficult to access without sufficient documentation. There has been considerable discussion surrounding the place of transcription, indexing, audio, video, and automatic speech recognition. According to Frisch and Lambert (2012) oral history can be “mapped around three key axes-cataloguing v. indexing, transcriptions v. recordings and content mapping v. data mapping” (Frisch and Lambert, 2012, p.26). Arguably, the majority of history collections remain closer to cataloguing, transcriptions and mapping. Furthermore, Frisch (2006) highlighted that “collections depend more on linear searches than on relational database approaches to navigation and organisation and are more familiar with content-searching than mapping” (Frisch, 2006, p.26). Therefore, it is necessary to draw attention to several of key points of discussion in the field. Transcription has been a central point of debate among professionals. For example, Portelli et al (2006) stated that “transcripts not only fail to convey the essence of the interview space, but also service to flatten the emotional content of speech” (Portelli et al, 2006, p.35). Furthermore, Thompson (2016) highlighted that:

Creating and using oral history has become cheaper. Whereas in the past, transcription costs comprised a large chunk of many oral history project

budgets, indexing with timed summaries linked to digital audio is making transcription less necessary (Thompson, 2016 p.3).

Many projects, users and archives now use digital indexing by timed summary instead of transcription due to financial and practical reasons. According to Bond and Walpole (2006) “preparing transcripts for oral history interviews is by far the most expensive and time-consuming part of the whole enterprise” (Bond and Walpole, 2006, p.451). Furthermore, Case et al (2007) stated that “once transcripts are edited, a minimum of two hours for every hour of streaming audio must be spent time stamping the files” (Casey et al, 2007, p.453). Therefore many organisations use digital indexing largely due to the difference in cost and time. It is also quicker to examine than a transcript. This highlights the disadvantages of transcripts and questions why the field should bother preparing and working with transcripts. It is clear that users can search for topics and areas of interviews across collections. However, more work needs to be conducted in regards to the deep listening of interviews. Moreover, Thompson (2016) stated that “the great advantage of digital indexing is that the link to the recorded sound of the words might be part of their meaning”(Thompson, 2016, p.11). Therefore, it is evident that there is an increased move towards indexing and timed summaries and it is arguable that transcription is no longer the optimum method because of cheaper alternatives such as indexing, audio and video technology. However, regardless of the cost benefits of timed summaries, transcripts are valuable for several purposes such as in depth examination, research purposes, and accessibility.

The digital revolution enables professionals to create, represent and engage with video and audio material with minimal difficulty. For example, Jess et al (2012) highlighted that “a growing number of historians have begun to seriously consider how digital applications may offer new ways of engaging with the orality of interviews” (Jess et al,2012 p.5192). It is clear that audio and video technologies offer vast opportunities for research and future development. They have also extended text-based literacy with sound and image (Frisch, 2006). However, High et al (2009) expressed concern “that oral history databases central purpose is to pull stories, or clips, out of each individual life story allowing us to follow various threads across interviews”(High et a 2009, p.12). Moreover, High and Sworn (2009) stated that:

This is great, but it strips the clips of their life story context. What is lost in the process? Will we end up with disembodied stories? Will it only hinder deep listening? (High and Sworn, 2009 p.12).

This has identified fundamental questions that need to be addressed. For example, who will have the time to develop digital indexing of audio and video interviews and who will have access to the necessary software and technologies? Furthermore, it is apparent that

the majority of users that work in research prefer using transcripts. For example, High et al (2012) based a study on a survey of 157 public and oral historians around the world and found that the majority preferred transcripts for research purpose (p.12). This highlighted that there is less known about the wider demographics who may engage with oral history online which is an area that this study intends to expand on. It also enabled the researcher to consider possible questions previously outlined by Gustman and Sorergel (2002). For example, how do users search and engage with materials? What are the differences between speech vs written text? What are the effects of audio or video? (Gustman and Sorergel, 2002, p.23). Several of these questions have been examined in recent years and have supported the construction and development of this study. Nevertheless, it is apparent that transcription remains a key area of discussion in the field and has brought many questions to the forefront of recent discussion. Therefore, the relevant literature has exemplified the different platforms of engagement and the controversies of how to search and engage with oral histories in the digital age. Therefore, it is apparent that there is still difficulty in finding a balance between new resources and transcript access which needs further examination.

Another area to emerge from the analysis of the literature was the development and standard of best practice. It is evident that some have placed less emphasis on the development of standards and best practices and others have placed more emphasis on flexibility and meeting individual needs. According to Lambert and Frisch (2013) “waiting for the “perfect software” to resolve the complex challenges of oral history practice in the digital age is inadvisable” (p.142). This has highlighted that there needs to be a balance between the emphasis on technology and a focus on the human involvement in relation to new technologies. It also has exemplified that the development of a perfect software will not fit the needs of different stakeholders. Thus, it is arguable that there is no standard best practice for oral history in the digital age. This can be attributed to financial constraints, different contexts and different uses. However, there are some who have established the importance of a benchmark or standard practice in the field for some components such as Nancy Mackay (2015) who believed that developing standards for collecting and organising information is the best way to handle oral histories in the digital age. Mackay’s idea for a solution was a metadata scheme for oral histories with the title ‘Oral History Core’ (Mackay, 2015). It is evident that creating a metadata scheme and accompanying cataloging guidelines for oral histories is fundamental in the sharing, accessing and preservation of oral histories in the digital age (Vos, 2007).

Moreover, Mackay (2015) established a series of recommendations for the field in “Curating Oral History” which included:

The establishment of guidelines for oral historians to prepare recorded interviews and establish an interview-archive toolkit with templates, checklists, technology tips and simple instructions for practitioners at any level. (Mackay, 2015, p.82)

Mackay was successful in her establishment of recommendations of practices within the field such as partnering with software firms to develop affordable technologies, a website offering technical support and user's forum for sharing personal experiences (Mackay, 2015). Therefore, it is evident that there are a vast range of technologies, users and stakeholders who have different motivations and needs in regard to oral histories in the digital age. This had made the researcher aware of the difficulties and challenges in establishing a set of guidelines and recommendations which needs to be taken into consideration. However, the emergence of keywords and tags have led to a reinvention of metadata that challenges the traditional methods of cataloguing and indexing (Frisch and Lambert, 2013). This has questioned the standards of best practice and traditional institutions.

According to Schrum et al (2011) "most oral historians until recently worked primarily with text and audio but video provided yet another layer of information" (Schrum 2011, p. 508). Another theme identified in the recent literature is the discussion surrounding video technologies and automatic speech recognition. Video is estimated to account for 82% of global consumer traffic by the year 2020 (Cisco 2015, p.3). The vast majority of users are accessing digital information and materials on devices that have screens. Video is able to capture dimensions that text cannot portray and represent (Frisch, 2016). The user interface is also built for audio and video engagement. According to Kaufman (2013) "oral history, in a word should quite naturally be video history" (Kaufman 2013, p.2). Moreover, Levin (2011) stated that "the near-immediate publication of the uncut video interviews provides immediate content to our viewers" (Levin, 2011, p.71).

There are considerable advantages for those who adopt and implement video. Video has substantial relevance and allows the various elements of the human interview to be experienced by all user (Ritchie, 2013). In addition, Christel and Frisch (2008) highlighted that "the video dimension of interview data produces enhance user connection and aid interest in first-time encounters with oral histories" (Christel and Frisch, 2008 ,p.248). Allowing the user to search and engage with text, image, sound and video enables greater examination of oral histories and greater public engagement on the web. Therefore, video technology offers a platform for users to be more actively engaged with the interview and brings oral history further into the public sphere. However, there are those who have identified the limitations of new technologies. According to High (2010) "there has simply been little serious interest in the primary audio or video interviews that literally define

the field that the method is organised to produce” (High et al, 2010, p.101). There may be reluctance and challenges in the development of video to accompany audio. Video also contributes to ethical challenges of oral history in the digital age and puts a strain already stressed resources (Mackay, 2015). Therefore, this study will continue the assessment of alternative methods of engagement and address the challenges and opportunities that video has presented to oral history in the digital age.

Limited research has been conducted into automatic transcription and speech recognition in relation to oral history in the digital age. Studies have been conducted into mobile oral histories and innovative equipment for recording but less has been conducted on search and engagement. Oard (2012) stated that “building such a highly specialised system would only be cost effective for the largest of oral history collections” (p.3). This has conveyed the difficulties of cost and the time to establish an ASR system. Both Oard (2012) and Boyd (2014) have touched upon the difficulties of automatic transcription and speech recognition having demonstrated that transcripts present complex dialogue and language that is not easily transcribed or searched via technology. This is an area that the researcher intends to explore further by establishing areas that could be examined in greater detail.

Nevertheless, an overview of the literature has highlighted several areas of discussion and the potential advantages of new media and technologies in the field. It is evident that there are major limitations when it comes to the adoption and implementation of new technologies. A lack of training, time constraints, limited funding, and an apperception that digital endeavours are not recognised by institutional structures. Furthermore, there are various needs of organisations and stakeholders when it comes to oral history and technology which makes the establishment of standard practice increasingly challenging. However, it is apparent that textual, audio, visual and new technologies will continue to be central to discussion in the field. Ultimately, an analysis of recent literature has established the motives for this research and has provided sufficient knowledge of issues in the field.

2.3 Case Studies

There are a host of recent case studies which have addressed usability, search interfaces and the technologies associated with designing an oral history search system. Many of these projects and endeavours have taken different forms (Lloyd, 2012). It is important to note that it was not possible to address all recent case studies due to an extensive selection. Therefore, the researcher has selected studies which have supported the development of this study. Linda Shopes (2012) drew attention to a selection of innovative examples that moved away from traditional transcription to provide digital access to interviews. For example, The Virtual Oral History Archive of California State University Long Beach provides audio access to 300 interviews. The project broke the interviews into short audio segments which are summered in print and can be searched and accessed in various ways (California State University). This included a topic index, interview series and individual interviews (Shopes, 2012). In addition, the USC Shoah foundation interviews are not transcribed. Shopes (2012) highlighted that this could be related to the Shoah Foundation wanting to users to listen to the interviewee rather than reading a transcript (p.8). This exemplifies that a user of the collection can hear the spoken word and that the emotions are conveyed effectively without the use of transcript which returns orality to oral history. Therefore, this has demonstrated that the transcript is not always necessary and that there are alternatives when searching an oral history archive.

Another innovative and ground-breaking study was conducted by the Louie B. Nunn Center for Oral History at the University of Kentucky Libraries. In 2013 Douglas Boyd led a team to construct and launch the first version of the Oral History Metadata Synchroniser (OHMS) to enhance access to online oral history. OHMS is an open source web-based application and allows users to search to a specific moment in an interview. Boyd (2013) stated that:

This system provides users with a word-level search capability and a time correlated transcript or index connecting the textual search term to the corresponding moment in the recorded interview online (Boyd, 2013, p. 96)

For example, in 2015, Latah County utilised (OHMS) and Becker et al (2015) highlighted that “it presents and connects the text and recording of the oral history on the same web page” (p.6). The synchroniser also allows the user to explore both the audio and video recording of oral history. Therefore, it is clear that the OHMS enables the user to customise the system and improve the experience regardless of the repository that is used. However, it is evident that there are several limitations. The OHMS was intended to work with transcribed oral history. Also, there are few historians and professionals that can afford to transcribe on mass scale, presenting a significant challenge (Boyd 2013). Incorporating searchable text when transcribing an oral history collection has many benefits for the user including increased efficiency. However, the OHMS demonstrates that

a compromise must be made in regards to resources, access and transcripts. OHMS is one of many open source web-based tools available and is cost effective, user-friendly and can be used for a wide variety of purposes. According to Royles (2016) using OHMS to “teach about metadata, markup, and hosting helps students to see the familiar world of the Internet, social media, and mobile devices in new ways”(p.12). Therefore, it is apparent that OHMS is advantageous in host of environments and is a revolutionary piece of software in the field of oral history. It has exemplified a vast range of possibilities for users and several benefits of recent technological developments.

‘Providing online access to oral histories: a case study’ is another study which has provided one with an advantageous insight into oral history in the digital age. Daniels brought attention to a study conducted by the University Louisville Libraries and Archives in 2005 which received funding for the purchase of a 50,000-item CONTENTdm license and an additional server to host a Digital Collections site (Daniels, 2009). There are few studies which have demonstrated the decisions made in the development of online resources in relation to transcripts and audio files. According to Daniels (2009) “the Oral History Centre’s goal was to provide to user-friendly access while respecting the nature of oral histories and retaining some control over downloading and alteration” (p.175). This study has effectively demonstrated that users need the option of accessing full interviews and also require the ability to examine specific segments and extracts for in depth research. Therefore, this study was useful in establishing that breaking the interviews into extracts enabled the creation of metadata which allowed the user to search for specific areas of interest (Daniels, 2009). Ultimately, Daniels has illuminated the fundamental importance of access to the full interview and the creation of metadata to target specific extracts and areas of knowledge during the online search process.

Furthermore, there have been several studies conducted into the importance of metadata in recent literature. Metadata is is critical for organising, sharing and describing oral history collections and materials. The Southern Oral History Program (SOHP) presented its collection through technologies such as CONTENTd and Omeka. The New Roots Project was successful in developments toward oral history metadata. The project assessed areas of what is needed and what users want. According to Vos (2007) “The project encouraged clarity, directness and ease of use in describing oral history and developing new features to reach new audiences“(p.2). Instead of expecting users to search through vast collections, the Omeka website enables users to access materials directly and with ease. The Omeka website allows users to create, tag, plot locations using Google Maps, create reports and use controlled vocabularies (Concordia University, 2012).

The Southern Oral History Program (SOHP) considered different approaches to describing, organising and sharing oral histories. The project also highlighted the practices and

developments in regards to multilingual audiences and improving the overall experience for various groups. For example, they developed clear and understandable terms that represent important terms and themes to interviewees such as activism, racism and discrimination (Vos, 2007). Ultimately, the Southern Oral History Program has illustrated the importance of metadata, keywords, tags and accessibility issues surrounding searching oral histories online, multilingual audiences and representing data via maps and timelines.

The Stories Matter Project is another study which addressed the conceptual challenges in the development of oral history database building software (Jess et al 2012). The study attempted to encourage a shift away from the use of transcripts and established nine main design features such as export, merge, clip and search features. Jess et al (2012) highlighted that:

It is intuitive software that enables non-technologically savvy people to manoeuvre among and between interviews in their collections and integrate clips into their presentations and websites. Such features are particularly relevant for public engagement and teaching. (Jess et al 2012 p. 5626)

The Stories Matter Project consisted of a software engineer and several oral historians at the Centre for Oral History and Digital Storytelling (COHDS) at Concordia University in Montreal. The software developed includes features such as tag clouds, indexing terms and a media player which is effective in the discovery of specific materials. The project conducted extensive research through an online survey completed by 157 participants practicing in the field and 22 in-depth interviews with stakeholders involved in the development of new media projects (Concordia University, 2012). The project identified that transcription was the optimum method of search and engagement from the participants involved in the study. In addition, the project offered remote access and the ability for users to collaborate, control and communicate via the database. Therefore, the Stories Matter Project has provided the researcher with an insight into a supportive framework in assessing what technologies already exist. It also demonstrated the preferred search methods of stakeholders which has provided ample opportunity for the development of this study.

According to Lynn Abrams (2010) “the key element of oral history communication is the spoken word” (p.2). A recent project which placed emphasis on this was the “The Illinois State Museum’s Oral History of Illinois Agriculture (OHIA) project. The project was developed to enhance the digital revolution and develop tools to use on an interactive website called Audio-Video Barn. The core aim of the project was to enable users and local communities to be involved in their local history. As previously mentioned, scholars and researchers have illuminated that the traditional method of transcription have a host of advantages and limitations. However, this study identified that the process of

transcription has several limitations such as meaning being lost and it being less engaging and interactive (Warren et al 2013). Therefore, the Audio-Video Barn project was advantageous as it advanced on traditional and google type searches. According to (Warren et al 2013) “google type searches limit the ability to use specific words and combinations in text” (p. 113). The OHIA project was innovative and expanded on this. Instead of searching for words within text, the project resulted in a tool that enables the user to search for audio and video files that contain brief extracts or clips of interview recordings. Warren et al (2013) stated that:

The use of digital indexing enabled the project files to be linked to a “string of searchable metadata, some terms return whole interviews where some returned specific segments or clips (Warren et al 2013, p.11)

Therefore, the project has successfully conveyed that search terms provided users with various options when accessing recordings. Also, The Audio-Video Barn case study has exemplified that one of the most valuable tools in the field is faceted searching. It has also aided the researcher’s knowledge on the field and has drawn attention to the use of brief extracts or narratives being used rather than full interviews. The study also established that productions are largely text based and many publications are written for academic audiences, not the general public which is an area that this research intends to build on (Warren et al, 2013).

The last case study which provided the researcher with a strong foundation and direction for this study was published by Thompson (2016). Thompson’s study has demonstrated the advantages of search-ability and modern challenges associated with oral history collections exemplified through ‘The Australian Generations Oral History Project’. Thompson (2016) highlighted that “The Oral History Project used “the National Library of Australia’s ground-breaking online audio delivery system” (p.77). Through the use of XML and text encoding this study enabled the identification of keywords and timed summaries linked to time code information within the sound recordings (Thompson, 2016).The Australian Generations project opted for timed summaries as the primary interview documentation format. According to Thompson (2016) “we knew that employing a large number of interviewers to record three hundred interviews would be expensive”(p.79) which subsequently led to not transcribing the interviews as the cost was too high for the project. Therefore, the project has conveyed the cost and challenges of transcription in the digital age in regards to larger collections and the use of timed summaries as an alternative. However, this study identified that transcription provides users with a more detailed platform to analyse the audio in greater detail in comparison to a timed summary. The study used the ZOTERO database. This can be text-searched using any word

of phrase which results in the ability of a user to search all the materials related to a specific topic. On the one hand, Thompson's study has exemplified the recent developments and challenges associated with oral history in the digital age. In addition, the technology implemented in this project is valuable as it enables users to search for words or phrases that appear in the timed summary and correlating keyword lists and then provides them with the ability to click and listen. (Thompson, 2016). However, Thompson (2016) reiterated that the "effectiveness of the search is limited" (p.16) and more work needs to be conducted in relation to search-ability of oral history in the digital age.

Overall, a relevant selection of case studies addressed have shown that new solutions and platforms exist. The case studies have also conveyed that technologies must be developed and assessed to meet different user expectations and needs. It is clear that if platforms are developed for a variety of different users it will enable people to be more engaged with materials and they will choose to search, listen, read or watch. Moreover, the various case studies assessed provided the researcher with a strong grounding on the various technological features, developments and challenges associated with oral history technologies. It has also established that more work needs to be conducted in relation to different user perspectives of designing an oral history search system and archive which is a core objective of this study.

2.4 Legal and Ethical Concerns

Making oral history archive and collections available on the web has presented several moral, legal and ethical issues. According to Douglas Ritchie (2003):

It is imperative that oral historians grapple with the ethical issue of the Internet and avoid exploitation of their interviewees. But the solution is not to avoid the web, for fear of stepping into a minefield. On the contrary, those projects that do not avail themselves of the Internet run the risk of being ignored by the next generation of researchers. (Ritchie, 2003, p.81)

It has been over a decade since Ritchie highlighted his concerns but there has been considerable development and discussion in relation to the legal and ethical threats presented to oral history in the digital age. Oral Historians have been fortunate as limited cases have emerged. However it is still necessary to have measures in place to tackle future controversies (Neuenschwander, 2014). A recent survey conducted into oral history programmes from around the world which was illustrated by Neuenschwander (2014) revealed that "62% give interviewed the opportunity to place restrictions on their interviews" (Neuenschwander, 2014, p.4). According to Larson (2013) "oral historians have been aware of issues within the field for several decades" (Larson, 2013, p.41). This has

resulted concerns over copyright, ethics and legal issues. In addition, Neunschwander's extensive ethical assessment conveyed the future possibilities to meet the changing demands of oral history in the digital age. For example, Neunschwander (2014) published an article which drew attention to the Boston College Case (2011) which saw a lengthy litigation. The interviews sought were recorded from 2001-2006 with former members of the Irish Republican Army and Loyalist paramilitary groups who participated in the "Troubles" in Northern Ireland (BBC, 2012).

Recently, the legal battle came to a close at the US Supreme Court to prevent the interviews with an IRA bomber from being handed over to police in Northern Ireland, with Boston College being sued in 2014, (BBC, 2014). There are few legal cases like the Boston College case but this has brought attention the severity of the legal and ethical issues of oral history in the digital age. However, there are solutions to copyright in the digital age and organisations are working towards developing standards and safeguards (Neunschwander 2014). For example, organisations such as creative commons which is a nonprofit organisation that encourages copyright holders to change perspective from all rights reserved to some rights reserved. This results in the sharing of information, maintaining the majority of the rights and attempts to create a balance between copyright and web (Creative Commons, 2016). Therefore, this has made the researcher aware that there are bodies who are working towards alternative solutions.

According to Bradley and Puri (2016) "the curator must weigh up the content and context of the information, the likelihood that some third party might be defamed"(p.84). Therefore, the evidence has highlighted that increased access to oral history in the digital age will add to the concerns of professionals and stakeholders responsible for the representation and sharing of content. Therefore, as we go forward and there are more technological advances, consideration must be given as to how users access, share and interact with oral history. Professionals who depend and rely on technology are exposed to greater risks. Prior to the digital revolution, those who practiced oral history could be assured that materials would be monitored by an archivist or a librarian. Thus, accessibility and restriction were controlled effectively. On the one hand, the digital age has opened up opportunities for a variety of stakeholders to practice and engage with oral history at any time. This is invaluable in making more materials accessible to the demographics that oral historians wish to serve and represent. However, it is clear that there are various practices, principles and technical standards that need to be upheld by professionals and institutions. Relevant professional bodies such as The Oral History Society (2016) and The Oral History Association (2016) have published materials in relation to the ethical dilemmas and practices of oral history in the digital age. The Oral History Society (2016) published information on copyright law and 'Is your Oral History Legal and

Ethical?’ in order to support professionals. The society covers ethical guidelines, practical steps, preparation, first approach and during and after interview practices. Furthermore, in regards to consent, The Oral History Society (2016) highlighted that:

For digitisation projects involving online web access to oral history interviews, as far as possible interviewees should be re-contacted to confirm their consent to this kind of access (Oral History Society, 2016).

In addition, Boyd and Larson (2014) discussed six key questions that need to be addressed following any oral history interview. These included personal information, confidential information, criminal allegations, slanderous, institutional secrets and culturally sensitive language (Boyd and Larson, 2014). Therefore, it is clear that scholars and professional bodies have made attempts to safeguard the profession against legal and ethical risks. However, there are numerous concerns and challenges that still need to be addressed. According to Shopes (2015) “why would a groups that experience discrimination or harassment air out dirty laundry in public?” (Shopes, 2015, p.306). In addition, Larson (2013) highlighted that “from an ethical standpoint, what does it mean to put interviews online that were completed decades before the Web was even a twinkle in a Silicon Valley eye?” (Larson, 2013, p.42). These are several questions that must be taken into consideration when designing an oral history search system or archive. Scholars have reiterated that the sharing of sensitive information and controversial issues pose significant threats as widespread access to the web continues to grow. Therefore, it is fundamental that professionals consider ethical and legal considerations as it is important to manage the materials, identify copyright, and to control access (Quinlan et al 2009). Also, it is evident that some institutions are clear on copyright while others do not mention copyright at all (Swain, 2009). Therefore, a brief assessment of legal and ethical challenges in the field has provided the researcher with an awareness of what needs to be considered surrounding access, copyright and representation of materials when designing an oral history search system or archive.

2.5 Conclusion

Ultimately, an analysis of a selection of the relevant literature and case studies has demonstrated current rhetoric the field, innovative case studies and the legal and ethical challenges faced in the digital age. It is evident that oral history is fundamentally an oral experience and not just a textual experience (Tebeau, 2012). It is also apparent through extensive research that a lot of the training guides, best practice guides, manuals and workshops focus on the process of interviewing rather than representation and

engagement, (Frisch 2008). Therefore, interviews must be made ready for access through increased accessibility and usability. This requires the right set of tools and an assessment of existing tools. This has allowed the researcher to conduct a qualitative assessment of a diverse range of stakeholders. Arguably, input from various stakeholders and users is required in order to enhance our understanding of designing an oral history search system, establish important features, and to offer a valuable set of design recommendations. Thus, an assessment of recent literature has provided a strong grounding and development for this study.

Chapter 3

Methodology

3.1 Introduction

According to Thomas (2006) “evaluators beginning qualitative analysis for the first time often experience a bewildering array of options and strategies for conducting such analyses”(p.245). Therefore, this chapter will begin by discussing the selection and justification of the Framework Approach with elements of grounded theory as the chosen methodology for this study, and its associated advantages and disadvantages. Second, it will describe the development and construction of the focus groups, and address the reasons for the selection of activities and attributes of each group. Third, it will offer a detailed explanation of the data collection and analysis process. Last, it will discuss the risks and ethics associated with the study and how the researcher effectively addressed and overcame these. Throughout this chapter, there will be frequent reference to relevant literature that supported the development and construction of the delivery process. Subsequent chapters discuss and reflect on each part of the project process and results from the research.

3.2 The Framework Approach

During the preliminary stages of the research, various methodologies such as the framework approach, grounded theory and comparative analysis were considered. The methodology that researcher selected was the Framework Approach with elements of grounded theory. Gale et al (2013) stated that “Framework Analysis originated in an independent qualitative research unit in the social community planning institute situated in London, England”(p.1), The central idea for using the Framework Approach is for thematic and explanatory analysis which enabled the researcher conduct an in depth examination of the data collected. Srivastava and Thomson (2009) highlighted that:

It can be said to be quite similar to grounded theory; however, framework analysis differs in that it is better adapted to research that has specific questions and a limited time frame (Srivastava and Thomson, 2009, p.73).

This made the Framework Approach an optimum selection for this study as it enabled one to link together the different components of thematic analysis to identify and develop important features and design recommendations. However, it is important to highlight that the researcher had gone through a reflective and critical selection of the chosen methodology. During the initial stages of research, a comparative case study design was considered. This was primarily due to the appeal of a multiple-case study analysis across the varying user groups involved in this study. The comparative design methodology could be applied to both qualitative and quantitative data. The methodology also appealed to the researcher as one could analyse multiple cases using the same methods (Bryman, 2015). One of the fundamental arguments for a comparative design is that it allows characteristics to appear through the comparison of findings (Bryman, 2015). However, it was decided that a comparative case study design had limitations and was more based on a select environment which clashed with the research objectives of this study. Grounded theory was another methodology which was given substantial consideration. According to Strauss and Corbin (1990) “the term grounded theory is used to describe the inductive process of identifying analytical categories as they emerge from the data” (Strauss and Corbin, 1990, p.79). Furthermore, Pope et al (2000) stated that:

This sequential analysis or interim analysis has the advantage of allowing the researcher to go back and refine questions, develop hypotheses, and pursue emerging avenues of inquiry in further depth (Pope et al, 2000, p. 114).

Constant comparison allows the researcher to compare and code the data so categories emerge (Glaser and Strauss, 2009). It was evident that there were several valuable features of grounded theory that appealed to the researcher such as coding, sampling and constant comparison. (Charmaz, 2002). However, it was evident that grounded theory was not without its limitations. According to Bryman and Bell (2007) “in spite of the frequency with which it is cited and the frequent lip service paid to it, grounded theory is not without its limitations” (Bryman and Bell, 2015, 591). Nevertheless, its core processes, such as coding, memos and allowing ideas to emerge out of the data were highly influential. This led the researcher to be inclined to implement grounded theory early on in the development process of this study. However, on reflection it was felt that a Framework Approach with elements of grounded theory offered ample opportunity for this study due to its clear structure and flexibility.

Therefore, it was decided that the Framework approach would be advantageous as it is used for the thematic analysis of semi-structured interviews, the familiarisation of data, d coding and reviewing themes (Braun and Clarke 2006). The sequential structure of the methodology was highly appealing and provided one with an effective guideline throughout the data analysis process. In addition, the Framework Approach is dynamic and open to change. Furthermore Ritchie and Silverman (2002) stated that:

The Framework Approach has been reined and developed over the years but the general principles of the approach have proved to be versatile across a wide range of studies (Ritchie and Silverman, 2002, p.306).

The Framework Approach is appropriate for thematic analysis of qualitative data which allowed the researcher to compare and contrast themes across cases. Arguably, the process was invaluable to this study as it enabled the researcher to remain open, keep close to the data, keep codes simple and compare results. The researcher was then able to identify how the participants in each group differed from one another (Boeije, 2002).

However, it is important to recognise that there are potential disadvantages and pitfalls of the chosen methodology and its associated elements. It was recognised that the Framework Method with elements of grounded theory presents time constraints and a stress on resources. For example, the time taken to transcribe recordings of interviews to a tight deadline and the comparison of data and representing knowledge was a challenge. Coffey and Atkinson (1996) argue that “this kind of activity results in a loss of sense of context and narrative flow” (Coffey and Atkinson, 1996, p.580). In addition, Bryman (2015) highlighted that “one of the most commonly mentioned criticisms of the coding approach to qualitative data analysis is the possible problem of losing the context of what is being said” (Bryman, 2015, p.583) Nevertheless, one would argue that the Framework Approach coupled with elements of grounded theory was advantageous to the nature of this study as it represented the most influential and effective strategy for qualitative analysis. Regardless of the pitfalls associated with the chosen methodology, one was able to gather rich qualitative data in order to address the research objectives.

3.3 Early Decisions and Initial Ideas.

After the selection of a methodology, one was faced with significant challenges in deciding whether to conduct individual interviews or a set of focus groups with multiple stakeholders. Initially, it was the intention to conduct multiple individual interviews across three to four key user groups. However, it was decided that interviews would present limitations during the transcription process as there would be significant time constraints

and logistical challenges. Therefore, after consultation with relevant academic staff at the University of Strathclyde, it was decided that focus groups would be practical and time efficient for the provided research period. Relevant literature also supported the researcher in the preliminary stages of this study.

Focus groups are also referred to as group interviews as the researcher does not ask questions to each participant in the group. According to Silverman (2013) “the moderator rather, facilitates group’s discussion, actively encouraging group members to interact with each other” (Silverman, 2013, p.213). It was also evident that one group would not meet the researcher’s needs (Bryman, 2015). For example, during the development of the focus groups it was apparent that it was highly probable that the responses provided from the stakeholders would be particular to a specific group. According to Davies and Hughes (2014) to get a reasonable spread of expressed view you may want to think about age, gender, experience, class and occupational group (Davies and Hughes, 2014, p.175) For example, it was anticipated that The Scottish Oral History Centre’s understanding of oral history would be more advanced than other members having practiced in the field. It was identified that demographic factors would affect the opinions of the participants involved in this study. Therefore, the focus groups were designed using stratifying criteria to make sure that groups with a wide range of features were included to ensure the diversity of this study and the originality of the results. This can be supported by the demographic forms displayed in Appendix 4. Arguably, the selection of a wide range of stakeholders produced valuable qualitative results.

3.4 Research Design

The researcher made sure that the approach was not intrusive and structured. For example, there is a tendency for researchers to use a fairly small number of very general questions to guide the focus group session (Bryman, 2015). This was the initial approach and design selected for the focus group sessions. There was considerable thought given to the nature of the participants as the research was conducted across multiple stakeholders. One of the issues in using the Framework Approach is the lack of generalisability of findings; in order to combat this, this study too place across different sectors. Focus groups were selected for practical reasons as participants were able to bring up the core issues that they deemed to be important and significant. This is an important consideration when conducting qualitative research, as different perspectives are critical for results (Bryman, 2015). Therefore, the first stage of developing the focus group experience was to produce a preliminary structure for the various activities. One identified that there are a range of challenges when attempting to engage with different

stakeholders who possess varying knowledge or little on a particular field. Therefore, the structure of the focus groups were organised as follows:

- An introduction and overview to the focus group, outlining the learning objectives and defining what oral history technologies are.
- Providing context as to the importance of oral history technologies and demonstrating their value.
- Introducing stakeholders to different oral history technologies, comparing them to enhance understanding.
- Getting users to answer general and domain specific questions in regards to oral history.
- Getting stakeholders to brainstorm and discuss ideas amongst themselves from the evidence presented.

These sections can be identified in the accompanying PowerPoint presentation, instruction sheet and transcripts as exemplified in Appendix 2 and 3. The researcher felt that it was fundamental to offer introductory and supportive materials to make sure the study was focused and had a clear narrative for the participants to follow. Five sets of focus groups and interviews were conducted involving between 1-4 participants. A semi-structured interview of general and domain specific questions were selected as the initial activity as shown in Appendix 5. This enabled the researcher to pick up on general themes and interesting information that could not have been predicted in advanced. In relation to semi-structured interviews, Bryman (2015) highlighted that they are more “general in frame but allow the researcher to ask further questions to significant replies” (Bryman, 2015, p.201). This was to avoid forced cognition and yes or no answers. It was felt that open ended questions had considerable advantages over closed ended questions. According to Davies and Hughes (2014) “the questions should not be of a kind that invite simple yes/no or similarly closed answers” (Davies and Hughes, 2014, p.29). Arguably, open ended questions were useful for exploring new areas or ones in which the researcher had limited knowledge and allowed a more dynamic interview. It is important to note that the domain specific questions did not differ greatly but were edited slightly with the participants in mind to ensure a rich set of results.

Subsequently, one designed the second activity based on methods conducted in previous usability studies. For example, papers such as “user-centred multimodal reminders for assistive living” influenced one’s decision in the construction of the focus groups. For example, Brewster et al (2011) asked participants to “respond to research questions on

'sticky notes' and organise the design features and technologies into hierarchies of importance to them" (Brewster et al,2011, p.2019). The researcher implemented a similar approach by presenting the stakeholders with post-it notes. As highlighted by Silverman (2013) the discussion is "usually based on the use of a schedule of questions which is sometimes followed by some kind of stimulus material" (Silverman, 2013, p.213). This could include a structured exercise including ranking, rating or card sorting (Silverman, 2013). This prompted the researcher to use post-it notes as a stimulus material which allowed the participants to arrange visual representations of key terminologies related to the research. Key terminology included terms such as 'video', 'transcription', 'audio', 'automatic speech recognition', 'mobile devices' and 'indexing'. This prompted further discussion among the groups and allowed further ideas and developments to emerge.

3.5 Data collection and Data Analysis

All of the data was collected on a Dictaphone and the researcher made sure that the correct ethical procedures and policies were adhered to during the development process. One dispatched the necessary information and consent forms and stored data in a safe and secure manner as portrayed in Appendix 1 and 3. However, a critical limitation that was experienced in the recruitment process was the location of where the primary research was to be conducted. It was decided that organisational premises and public places which included the Scottish Fire and Rescue Services Headquarters, Edinburgh Central Library and The University of Strathclyde Library. These locations were advantageous for conducting focus groups as they were reliable, in neutral spaces, and met the necessary health and safety regulations.

According to Pope et al (2000) "using software to help with the more laborious side of analysis has many potential benefits, but some caution is advisable" (Pope et al, 2000, p. 115). The researcher used NVivo 8 to manage the large amount of transcriptions and implemented the framework approach in order to condense extensive the data which will be examined in greater detail in Chapter 4. In addition, the researcher attempted to look for patterns of association in the data collected in order to identify relationships between the data. As highlighted by Bryman (2015) "with the analysis of qualitative data, coding is a process whereby the data are broken down into their component parts and then given labels" (Bryman, 2015, p.11). In terms of identifying themes within the data collected one consulted various scholars such as Ryan and Bernard (2003) who recommended looking for certain attributes such as repetitions, similarities of material during the analysis stage.

3.6 Risk analysis and Ethical Considerations

A series of precautions were implemented in order to minimise risk throughout the research process. One of the significant complications that is regularly experienced in running focus groups is non-attendance. Bryman (2015) stated that “it is almost impossible to control no shows”(p.521). A contingency plan was to consciously over-recruit. For example, it was the intention of this study to recruit between 4-6 participants for each of the focus groups. Another risk that had to be taken into consideration was the lack of control that one would have over the proceedings than the individual interview. This raised questions and concern of how far one can allow the participants to ‘take over’ the running of the focus group (Bryman, 2015). It was also identified through examination of previous studies that participants within focus groups may be influenced by other. However, a major limitation that was encountered early on in the recruitment process was the lack of response and interest of certain stakeholders. Therefore, one had to carefully plan and put in place contingency measures to combat these challenges. Initially, the intention was to conduct research across three sets of stakeholders. However, the researcher felt that it was appropriate to consciously over recruit. Therefore, one contacted five different user groups in order to maximise response and to tackle a lack of participation and non-attendance.

According to Davies and Hughes (2007) “you should also clarify and resolve issues of confidentiality and anonymity” (Davies and Hughes, 2007, p.44). In relation to ethical assessment and precautions, several pieces of documentation were developed and distributed to the various participants. These included a participant information sheets and demographic forms which are exemplified in Appendix, 3 and 4. This demonstrates that the researcher considered the provision of confidentiality, anonymity and informed consent. Moreover, drawing on the ethical considerations presented by Bryman (2015), Davies, M.B. (2007) and Pickard, A. (2007) and The Research Ethics Guidebook (2014) the researcher developed an interview consent form modelled on the UK Data Archive (2009) as exemplified in Appendix 1. The advantage of such forms is that they give respondents the opportunity to be fully informed and highlight the motives and justification of the research. It also addressed areas of privacy and data protection which are critical when designing an effective study. This clearly illustrates that the researcher put in place the necessary measures to safeguard both the researcher and the participants.

3.7 Conclusion

Overall, this chapter has provided a description of the development and delivery process of this study. It has exemplified the selection of an appropriate methodology and conveyed the initial processes, ideas and challenges associated with the development of this study. The researcher has also portrayed the difficulties of developing the focus groups and offered a justification for the selection of the different stakeholders assessed. An assessment of ethical considerations and risks also demonstrates the contingency measures and thought put in place to the confidentiality and anonymity of the various participants. The researcher adhered to the necessary health and safety requirements and was critical during the data collection and analysis process. Therefore, it is necessary to present a selection of the findings. The following chapter offers an evaluation of the data analysis process and the findings of this study.

Chapter 4

Analysis

4.1 Introduction

The purpose of this chapter is to offer a discussion in regards to the development, implementation and evaluation of the findings through the chosen methodology. First, this chapter will evaluate and reflect upon the delivery of the focus groups, identify limitations, and address future improvements that could be implemented. Second, the researcher will apply the chosen methodology to analyse the results obtained in relation to the themes and categories that emerged from the transcriptions. Instead of a case by case analysis, the researcher adopted a holistic approach and identified similarities and differences in regards to the various themes and terminologies that emerged. Ultimately, this chapter should portray the value of the chosen methodology, demonstrate the findings effectively and offer a set of reflective results. For the purposes of this work, it is important to note that key references from the transcriptions selected and have been anonymised accordingly. The researcher selected the text extracts represented in this chapter based on relevancy and the ability to support one's argument. In addition, the discussion will be structured in thematic order to maintain transparency and explicitly.

4.2 Evaluation of the Qualitative Research Process

It is necessary to establish the limitations experienced and the improvements that could be made to the research process. The focus groups provided the researcher with a rich and diverse data set that was useful for qualitative analysis. However, there were several factors that could have enhanced the data collection and analysis process. In terms of limitations, recruitment was problematic. Due to circumstantial, logistical and operational constraints, there was limited availability across some key organisations and professional bodies. For example, the researcher did not obtain a high participant level from BBC Scotland and the Scottish Oral History Centre which was not initially anticipated. However, it was agreed between the researcher and relevant academic staff at the University of Strathclyde that the data collected from these organisations would be invaluable and enable a richer set of qualitative data. The same format of interview was implemented irrespective of participant levels in order to maintain consistency throughout the research process. Therefore, Bryman's method over-recruiting and contacting more perspective

groups than required proved to be effective as several unforeseen and uncontrollable circumstances were experienced (Bryman, 2015).

Another issue experienced was the issue of control and how far the researcher can allow participants to 'take over' the running of the focus group (Bryman 2015). There were instances where a certain level of control had to be implemented during the discussion due to more experienced participants contributing heavily in comparison to their counterparts. Moreover, the purpose of the second activity in the data collection process as shown in Appendix 5 was to elicit further information and promote the participants involvement. The activity was useful in gaining additional information and offered an insight into the perspectives of various stakeholders. However, future improvements could be made. It was apparent that there was a reluctance across all user groups to add terminologies and key terms to the post-it notes that were provided without guidance from the researcher. Thus, one had to intervene in order to promote initial discussion and elicit further information.

Overall, the activity was advantageous but it required significant levels of involvement from the researcher which was not the intended aim. In future research, one would consider developing an alternative group activity for the interactive component of the focus groups. Open questions and semi-structured interviews provided the researcher with a level of flexibility and the ability to expand on additional themes and research questions. It was difficult to avoid forced cognition when short responses were provided but open-ended questions and a semi-structured format enabled the researcher to maintain a flexible approach. Ultimately, the methodology provided a clear sense of direction, a high level of transparency and a valuable set of results. However, one would consider the future improvements identified in order to enhance the richness and quality of the findings.

4.3 Data Analysis

As previously mentioned, all of the data collected was transcribed from a Dictaphone onto Microsoft Word and then analysed using qualitative software applications as exemplified in Figure 1.2. The transcribed data was then run through NVivo 8 where the researcher was able to assess word frequency and code the data into further themes and categories. One based the approach on the five step process outlined by Srivasta and Thomson (2009) during the analysis stage which included:

1. Familiarisation.
2. Identifying a thematic framework.

3. Indexing.
4. Charting.
5. Mapping and interpretation. (Srivasta and Thomson, 2009, p.30)

The researcher had predetermined ideas about what topics and categories may have emerged due to an examination of relevant literature at the early stages of research. The sequential structure of the methodology was effective and provided the researcher with an effective guideline during the analysis of the findings. One began with a broad set of results from a range of stakeholders and then identified key words and terminologies as shown in Appendix 7. Subsequently, this led to the development of categories and classifications to produce important features and design recommendations. By studying the transcripts of each study repeatedly, one was able to consider possible meanings and how these fitted in with developing themes. Transcriptions were also read “horizontally” which involved grouping segments of text by theme which is portrayed in Appendices. According to Mason (2002) “you need to create for yourself a mechanism for moving back and forth between your research question and your data” (p.159). Therefore, one ensured that categories were indexed and developed throughout the analysis process. Figure 2 demonstrates the data analysis process that the researcher developed to maintain consistency and transparency. Figure 3 shows the indexing process that the researcher followed and the Appendix, 7, 8 and 9 exemplify the coding, charting and NVivo analysis adopted by the researcher. Moreover, it is necessary to highlight that each of the groups were presented with two activities as shown in Appendix 5. A set of generic questions and a set of domain specific questions. The general questions consisted of:

- What is your current understanding of oral history and oral history technologies?
- What is your main interest in oral history?
- What would be your main use of an oral history archive?

The domain specific questions were catered dependent on prior knowledge and experience. The researcher did not alter the nature of the questions but changed the wording in order to meet individual needs. For example, the researcher asked The Scottish Oral History Centre and the public similar questions to elicit information but altered them to meet individual needs and gather any domain specific information. For example:

- What features would you consider fundamental to your organisation? (The Scottish Oral History Centre)
- What search features would you consider fundamental? (The Public)

It is important to note that the domain specific questions did not differ greatly but were edited slightly with the participants in mind to ensure a rich set of results. Each focus group was then provided with terminologies which included terminology such as ‘audio’,

'video' and 'transcription' with terms such as 'user-friendliness', 'usability' and 'mobile technologies' being added during the discussion. In order to provide a sequential and logical analysis, the researcher has divided the chapter into the four key themes that emerged from the data analysis. These include:

- Ethics, consent and control.
- Accessibility and engagement.
- Innovative technologies and opportunities.
- Publicity and awareness.

Each theme is supported by narrower terms and examples provided as shown in Appendix 7 and 8 which exemplifies the qualitative analysis process and charting of the data. The data will be represented by a selection of extracts from the coding process and supported by findings illustrated in the relevant appendices. Ultimately, this should provide a clear structure and expression of the results collected by this study.

Figure 1 Data Analysis Process

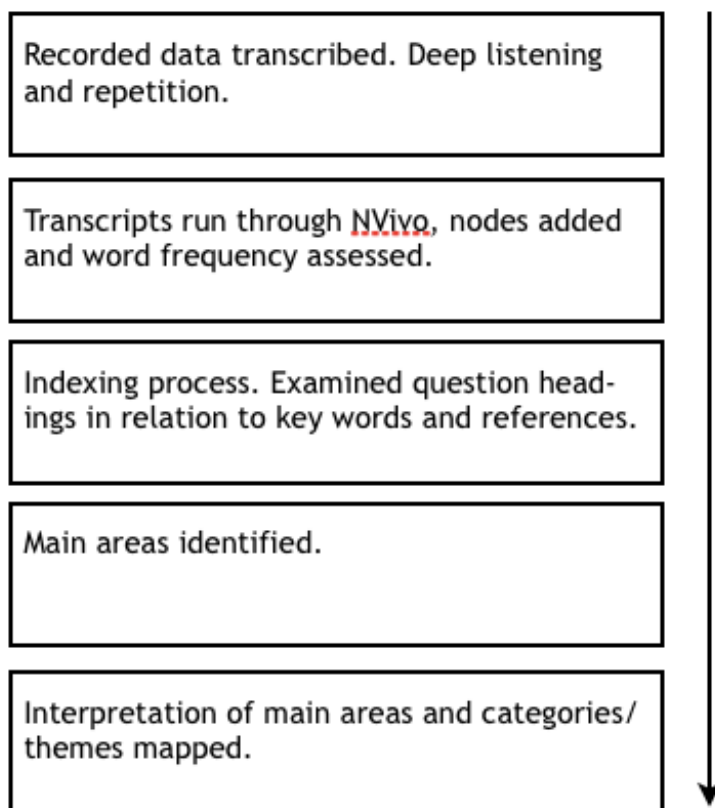


Table 1- Keywords

Keywords NVivo	User
Engagement	Control
Accessibility	Mobile
Keywords	App
Transcription	Ethics
Audio	Automatic
Video	Speech Recognition
Participant	Awareness
Consent	Limited

Table 2- Indexing Process

Question Headings	Group 1 BBC Scotland	Group 2 Public	Group 3 Scottish Oral History Cente	Group 4 History Graduates	Group 5 Scottish Fire and Rescue Service
Activity 1 Understanding	Limited	Limited	General	Limited/ General	Limited/General
Activity 1 Interest	Historical Events	Family History General Leisure	Research Personal Historical Events	Family History Leisure Personal	Preservation Engagement Community
Activity 1 Fundamental Features	Keywords Transcript Audio	Transcript Audio/Video Keywords Facet search	Ethics Transcript Audio Keywords	Transcript Metadata Keywords	Transcript Audio/Video Ethics
Activity 1 Improvements	Publicity Accessibility	Publicity Workshops Events Accessibility	Repository Policies Government Accessibility	Control Publicity Institutional bias Accessibility	Repository Policies Accessibility Organisational
Activity 1 Use	Research Work	Research Education Work	Academic Education Research Community	Research Education Academic Leisure	Family History Research Community Education
Activity 2 Post-it notes	Usability User-friendly Mobile Apps Transcript Audio Video	Usability User-friendly Mobile Apps Transcript Audio Video Keywords	Usability User- Friendly Keywords Mobile Apps ASR Transcript Audio Video Ethics	Usability User-friendly Mobile Apps Transcript Audio Video	Usability User-Friendly ASR Ethics Mobile Apps Transcript Audio Video

4.4 Accessibility and Engagement

Based on the findings of this study, it is evident that issues of accessibility and engagement are central to discussion when designing an oral history search system. Tebeau (2012) highlighted that “oral history is not just a textual experience but also an oral experience which the field of oral history should embrace”(p.12). This study has touched upon Tebeau’s recognition having identified that oral history is not just a textual experience and making oral history open and accessible is something that every current and future stakeholder should strive for. Through an examination of the of word frequencies and terminologies developed in NVivo 8, the researcher was able to cross-compare and establish several key findings. Through the processes of coding and indexing, it was discovered that audio, metadata, keywords, accessibility issues, transcripts and visual engagement were considered to be important elements when designing an oral history search system.

Therefore, it is necessary to provide a selection of examples that emerged when the researcher presented the participants with questions and visual materials during the focus groups. There was a debate within each group in relation to the specific features that were considered fundamental in an oral history search system. As shown in Table 3, it is clear that all groups involved in this study identified the importance of the transcript. For example, participants from the selection of history graduates and The Scottish Fire and Rescue Service identified that if an individual was seeking to gain more context at the initial search stage, timed index codes and transcripts would be advantageous in comparison to audio and video. For example:

...“If people just want little snippets especially if you’re doing a public display. You’re not going to say here is a 30 page transcript. That is when a time indexed codes would be great” (HG_P3).

...“I’d probably go with transcription over audio if you had to choose in that if you are doing a lot of research, you do not have time to sit and listen to thirty minutes of people talking” (SFRS_P2).

Therefore, it is evident that textual support at the initial search stages was considered to be valuable. This is in line with previous studies conducted by Thompson (2016), Frisch and Lambert (2012) and High et al (2012) who identified the advantages and limitations associated with transcripts and timed indexed codes. In addition, a selection of the stakeholders involved in this study successfully recognised the pitfalls of traditional and new methods of engagement. For example some of the key responses from the participants highlighted that:

...“Arguably, you lose quite a lot by just have the audio and you lose even more by just having the transcript itself. Again that depends on whether you are just looking at it for information or just looking it to see what it was like in the past. It just all depends on the audience I guess” (HG_4).

...“I think it depends on what you are going to use it for at the end of the day. If I am researching something, I will want a transcript to read at my own pace and print it out when I write about it. Whereas, if I am making it for someone else, I would want to have a video that I could play a clip or some sound that I could play to make it more interesting” (SOC_P1).

...“I think transcription is probably the bedrock of all this activity because say you did want an audio in the future, you can use the transcript to get someone else to create the audio” (SFRS_P2).

...“For me, I think that video and audio have more life. However, I agree that it is not as accessible as a transcript. If you have a literacy issue or English is your second language, eyesight problems. Then audio and video are your friend” (SFRS_P3).

The qualitative findings have exemplified that transcripts are of high importance when conducting research and for addressing users with accessibility issues such as “eye sight problems” and “English as a second language”. However, various participants addressed other methods of search and engagement in an oral history environment such as audio, video, keywords and metadata. Keywords and tags were considered to be ‘user friendly’ and make online platforms more searchable to users. The findings established that keywords support users in the discovery of specific information in a collection that they may not have found before. For example, participants from a number of groups including public sphere and public organisations emphasised the importance of keywords and tags. For example, several of the participants highlighted:

...“I would use keywords or tags. I would like all the available tags to be in a box and then you can tick them and filter down what you want to find. For example, I would like it to be similar to how I would buy a bag on a shopping website. I would like that kind of set up, where you could filter materials in different ways. I would like to contribute tags to certain fields as well but I feel that if someone tags it incorrectly it would need approval. I would feel comfortable tagging and contributing content” (P_P1).

...“The author needs to sit down and think about keywords and I think for the interview that is also really important” (SOHC_P1)

...“It’s not very searchable. I don’t know if that’s because there is an inconsistency in terms of how much data has actually been coded to each file. I don’t know if the majority of it is actually just files with no metadata I feel like there is an institutional bias” (HG_P4).

Therefore, “the ability to filter materials” in different ways and the importance of keywords were attributed to search functions such as metadata and tags. The above examples confirm Cohen’s (2012) statement that “citizens of different cultures, their personal filters reflecting ideas, perspectives and beliefs may not find in an oral history what the metadata and keywords suggest and they ought to hear” (p.163). Therefore, the qualitative findings have exemplified the importance of keywords but also challenges associated with metadata and oral history collections. Furthermore, a selection of examples presented below convey the participants perception of visual and audio engagement which is an area of current development. It was identified by the participants involved in this study that visual and audio engagement is advantageous for engaging younger and wider audiences. In addition, being able to visualise what an individual is saying plays a pivotal role in the engagement of different demographics. This can be supported through a selection of responses in regard to audio and video as exemplified below:

... *“They have started to argue and talk about inter-subjectivity and performativity in oral history. This is where video is really useful. You can not only analyse what someone is saying but also their mannerisms. Arguably, you lose quite a lot by just have the audio and you lose even more by just having the transcript itself” (HG_P4).*

...*“I was trying to figure out how close these women worked next to each other. During the interview that is great and then I am transcribing it weeks later and I cannot remember if that was what that space was. I think even for little markers like that that is why video is good because you can see what someone is saying when they say “this big” or “her arm” (SOC_P1).*

...*“However, for us, we might actually want to start using our oral histories to connect with high schools students. We are not going to sit down with massive loads of paper and say read through that. If we send them one minute short videos or links on YouTube, they are more likely to access it because that is what they are comfortable with” (SFRS_P2).*

The qualitative findings of this study have conveyed that there is an increasing shift towards visual representation and engagement. For example, Gould et al (2014) highlighted that “the internet is a way to harness some of that empathy and energy and propel students into rigorous academic research” (Gould et al, 2014, p.350). A selection of participants in this study identified that videos were useful to engage students and in supporting academics during the transcription process. Nevertheless, through an in depth assessment of the findings demonstrated above and in Appendix 8, it is clear to say that this study has supported Boyd and Larson’s (2014) statement that “analog and textual models are still deeply ingrained and continue to shape the primary modes of oral history expression in the digital age” (Boyd and Larson, 2014, p.68). It is also clear that there are a different needs and purposes among different user groups. For example, as illustrated in

Table 3, key terms such as ‘work’, ‘research’, ‘family’, ‘leisure’ and ‘education’ were identified which convey a wide range of uses and needs. Therefore, the last key point to emerge from the findings is that there should be a greater awareness of varying literacy needs and disabilities when designing an oral history search system or archive. Rakerd (2013) conducted an invaluable study and offered a series of design recommendations for those with hearing, visual and language impairments. Rakerd (2013) highlighted that “slowing the rate of speech has been shown to improve the accuracy of speech has been shown to markedly increase misunderstanding by nonnative language users” (Rakerd, 2013, p.72). In addition, multilingual search terms have also been addressed by previous studies such as Vos (2007) in her assessment of the Southern Oral History Program. As shown in the above examples and relevant appendices, it is evident with a diverse user based, English as a second language, literacy issues and different learning needs should be addressed. In regard to overall statements on accessibility and engagement some of the respondents stated that:

“I think it has a lot with the public trying to see value in it. That’s the point in doing things isn’t it? You don’t want to develop an extensive archive and then have no one look at it. It is key and it is the whole point that people do these kinds of things” (HG_P1).

“If there is a capacity to upload everything online I think a lot of times people will do that but often the resources aren’t available”. In addition, it was also highlighted that “if you’re going and speaking to people and recording their narratives and testimonies, those should be available to whoever wants them as long as the interviewee has given consent” (SOHC_P1).

“I think it also depends on what kind of learner you are. Some people prefer to learn things by reading and some people prefer listening” (P_P2).

Ultimately, an analysis of the above samples portrayed in above examples and in the relevant appendices have established that different formats will accommodate different user groups. Therefore, it is clear to say that careful consideration should be given to the selection of platforms in relation to accessibility and engagement. Overall, the qualitative findings from this study have established that:

- Transcription is fundamental and is considered to be advantageous for the initial stages of searching and for finding detailed information.
- Audio and video are effective in the engagement of wider audiences and offer a more authentic and interactive experience.

- Keywords, tags and metadata are fundamental and highly useful for those conducting searches across collections.
- An oral history search system should be easy to access, free, and attempt to avoid bias towards a particular user group or institution.
- Different users, multilingual audiences and users with disabilities should be considered when designing an oral history search system and selecting specific technologies.

4.5 Ethics, Consent, and Control

Through an assessment of word frequencies, repetitions and varying questions presented to the stakeholders during the data collection process, the researcher identified that ‘ethics, consent, and control’ were of central concern as shown in Table 2 and Table 3. The literature review has portrayed various concerns from scholars in relation to legal and ethical practices and highlighted that recent technological developments have placed a significant strain on resources. They also pose a wide range of risks to the narrator and archive in relation to privacy, culturally sensitive information and copyright (Boyd and Larson, 2014). The findings from this study provided the researcher with a rich set of results and established that ‘ethics, consent and control’ are of fundamental concern to a diverse range of stakeholders when designing an oral history search system or archive. Moreover, the researcher presented several questions to the participants such as “What would you consider fundamental to the field?”, “What would you consider best practice?” and “What would you like to develop or implement?” These all prompted responses in relation to ethical and legal considerations. Irrespective of personal or organisational background, it was clear through analysis of the word frequencies and references coded in Nvivo 8 that similar issues emerged. For example, several respondents stated:

“...I think if you were going to do something like that you would need a way of verifying and following copyright by saying that this material is okay” (HG_P1)

“...You cannot just treat them as historical specimens. They are living people. Ethically, you have to make sure that they are fully of what you’re doing and why you’re doing it” (SOHC_P1)

“...I know in the consent forms that we have got it says can we archive this for future use. Obviously, it would have to be the interviews which the respondents have given their consent. The Boston College case has shown how it does open that up to problems. If it was done in a fully ethical manner with those who took part and those who also

conducted the interview as they do belong to them as well. That would be good. Also that national archive could say that this is what is available to the public. Other interviews exists but speak to this person but to and it is entirely their discretion whether they are going to give it to you” (SOHC_P1).

“...If there was a particular incident where those involved did not agree with an operational command or outcome and provide a strong opinion, this might have legal repercussions for the organisation and portray the organisation in a negative light” (SFRS_P3).

“...One of the things that has just come up when I had a conversation about data protection was about ethics. A lot of the information that comes up when you talk to firefighters, particularly about incidents has the potential to be distressing or is it morally okay to share it? How do you get to a point where you are adhering to a code of ethics but you’re not censoring?” (SFRS_P2).

...“It would be nice to find things about real live people that is not written anywhere. People who have said things and you can find them and listen to them as long as this is in line with ethical procedures”(BBC_P1).

Through an examination of the above transcriptions in the appendices and a selection of the above examples, it is evident that there were concerns in relation to ethics and legal repercussions. The Scottish Fire and Rescue Service had several concerns that would affect individuals, families and the organisation as whole. For example, questions such as “how to adhere to a code of ethics without censoring?” and “Whether it is morally okay to share sensitive information?” were highlighted. This portrays that organisations have concerns over the sharing and provision of oral history collections. In addition, the Scottish Oral History Centre expressed concern over the interviewees and the history graduates were largely concerned about the reliability of the materials and who was responsible for the sharing and policing of collections. This has further added to the importance of ethics within the profession and has highlighted that materials cannot be uploaded and shared in anyway that is deemed fit by individuals or organisations. The findings have reiterated that the people that have been interviewed are living and have various associations which scholars such as Larson (2013) and Shopes (2015) recently identified in their research.

Thus, the findings from this study have established that there needs to be extensive care and sensitivity taken in the provision of materials when designing an oral history search system or archive. Arguably, individuals and organisations do not have the clear authority to write and publish what they wish without the necessary measures in place. For example, both the History Graduates and members of the public expressed concerns over the monitoring and control of the information that can be searched. For example, who

decides on what is available and how to categorise materials? Who is responsible for controlling and policing the use of collections and published materials? In terms of solutions that emerged from the stakeholders some participants expressed possible options and recommendations such as:

“...Would it not make more sense to make it like wikipedia which is user generated? For example, you develop a base platform and then you can get people to use it. However, you have get a base of people willing to moderate it and put stuff on” (HG_P2).

“...I think a national depository would be great. I know that you have the Scottish Sound Library but again, are the engaging with the archive here, are the engaging with the project in Bathgate, the Stirling projects and little projects where have happened down where I am from. How much are they saying what do you have, we want and we are going to archive it?” (SOCH_P2).

Based on the findings of this study, it is clear that a Creative Commons style framework or a move towards more local, organisational or national depositories which focus on laws and consent would be invaluable. The findings have conveyed several fundamental features and considerations that need to be taken when designing an oral history search system or archive. At present, an effective strategy which was identified by Larson (2013) is to “have detailed support online that enables users to identify topics within collections and express interest in a specific interview while keeping interviews offline” (p.15). However, this study has supported previous research in having discovered similar concerns. It has been effective in the provision of a wider set of perspectives in relation to ethical concerns and limitations. As the internet and digital access expand, this study has made clear that stakeholders are faced with significant challenges over the sharing, preservation and accessibility of materials covering a range of cultural topics and sensitive issues. Ultimately through qualitative analysis of the data collected in relation to ‘ethics, consent and control’ the researcher can establish that:

- A move towards a local, organisational or national depository of materials with clear consent policies would be advantageous.
- Developing a series of national policies and copyright rules to attempt and implement a level of control and consistency.
- Ensure that the content that is made available treats the interviewees with respect and not as historical specimens.
- Assess the ethical and legal risks if dealing with sensitive materials when designing an oral history search system or archive.
- Allow access to certain materials or part of selected materials through online requests.

4.6 Publicity, Interest, and Awareness

The findings indicated that ‘publicity, interest, and awareness’ are important features when designing and oral history search system or archive. The qualitative data enabled the researcher to identify trends across the stakeholders and establish that the current understanding of oral history and oral history technologies was limited as exemplified in Table 3. As previously mentioned, each of the stakeholders assessed were presented with the questions of “What is your current understanding of oral history and oral history technologies?”, “What is your main interest in oral history?” and “What would be your main use of an oral history archive?”. The understanding of oral history appeared to be more traditional and less diverse than the researcher had initially anticipated.

Through comparison of the results in Table 3 and Appendix 8, It was evident that there was knowledge in relation to the definition of oral history and what oral history was. However, in regard to oral history search systems and archives there was a lack of knowledge irrespective of the group assessed. All stakeholders involved in this study possessed a lack of awareness of what technologies were on offer beyond platforms such as Youtube, Soundcloud, Google and library search based technologies which is conveyed in Appendix 8. For example, participants identified various archives that they have used outside of an oral history domain in university and work. However, the findings were advantageous as they allowed the researcher to identify that there are a host of collections, materials and technologies available but there is not always widespread awareness of them. This is a major limitation but the findings also presented possible recommendations and solutions. In relation to understanding and knowledge some of the respondents stated:

“...It certainly feels to me that the technology is not very well publicised” (BBC_P1).

“...Not very much I am afraid but my thinking is that it is to do with audio recordings and then I don’t know, somehow they have to be transcribed and catalogued and kept somewhere so that they can be retrieved” (BBC_P1).

“...Very little, I guess beyond the whole voice recorder, what we are doing at the moment” (HG_P1).

“...In terms of technology not really a great understanding of what’s out there. I’m quite traditional when it comes to doing oral history. In terms of technology I use a taskcam zone, recorder, express scribe for transcribing and a foot pedal from transcribing. Other than that, I then just print out everything and work from paper” (SOHC_P1).

...“I feel that I have limited knowledge of actual oral history but I feel I might be able to give a little more insight into the way that people might be trying to access it and understanding that” (HG_P2).

...“I am going to go with limited. I used some search databases at University when I was mostly doing history courses. I would maybe say that if we were doing research and things at work I might use video databases that might have historical accounts in them” (P_P2).

“...Make it free. I think it also needs to be promoted. For example, if it is the National Library of Scotland I would like to see it very prominently on their website or social media platforms. If they have gone to a lot of effort to do a massive archive” (HG_P3).

“...Or even as like an outreach or educational activity. For example, if they released a digest weekly of video segments or highlights from the oral history archive to get people interested and also as a publicity thing” (HG_P4).

Through a demographic survey, the researcher was able to identify several of the occupations of the participants which included archivists, historians, teachers and firefighters. The above examples have exemplified that professionals, archivists and members of the public had limited of knowledge of what is available. This could be attributed to a multitude of reasons but has provided an insight into the lack of awareness of a diverse range of user groups. However, stakeholders placed emphasis on the importance of publicising an oral history search system or archive and offered some possible solutions and recommendations. For example, through an examination of the above examples it is evident that workshops, outreach activities, online platforms and educational events could be used to publicise a particular search system or archive. Furthermore, the stakeholders highlighted that online guides and video tutorials on how to use a search system or archive might be advantageous for those looking for guidance and support on how to conduct research, and find specific materials within collections.

In terms of interest, stakeholders expressed using oral history technologies and materials for research, education, work, and personal use as exemplified through qualitative analysis in Table 3 and Appendix 8. This supports previous research in identifying that oral history holds different meanings and purposes to different user groups. This also highlighted the challenges associated with the implementation and development of a platform that can accommodate equal access and engagement for a multitude of users. For example:

“...I always thought it was a way of sharing information or stories and also as a method of preserving them so they are not lost” (SFRS_P2).

“...I have always wanted to look into family history. I sometimes go to the Mitchell Library to look for my family history. I am interested in using search systems for materials like that” (P_P4).

“I think from a fire service perspective, we’ve got quite a lot of people that are maybe interested in the service or have left the service who have information about an incident or a time in firefighting history that doesn’t exist anymore. So the way that fire fighters were employed, how they approached their everyday jobs, how they fought fires, what the culture in the service was” (SFRS_P2).

“..Yes I think it’s interesting and it would be nice to find things about real live people that are not written anywhere. People who have said things and you can find them and listen to them” (BBC_P1).

“I suppose that my main interest and area of research is working class history. In order to gain access to working class history, most of the time and the best way is to actually go and speak to people as they haven’t archived or documented” (SOHC_P1).

A selection of the findings demonstrate that there is widespread interest of oral history among different user groups. The word frequencies and codes from NVivo highlighted that the various interests included research, personal use, lessons, leisure, education, community engagement and preservation. Therefore the findings have established that when designing an oral history search system or archive, there should be attention given to the way in which materials are represented and marketed. It is clear that there is a diverse interest in oral history. In order to increase use, access and the sharing of materials beyond academic environments there needs to be marketing and guidance in place for users to be able to use a search system or archive. This could be in the form of educational activities or through online tutorials. Nevertheless, the findings have established that even though a range of technologies exist, there is not a widespread awareness of the technology among a variety of stakeholders. For example, the professionals, archivists, public bodies and graduates involved in this study all demonstrated limited knowledge and awareness in relation to technological platforms. Therefore, it is arguable that ‘Publicity, interest and awareness’ are fundamental in the development of an oral history search system or archive as the qualitative findings from this study have identified that:

- Current and perspective organisations should attempt to sustain and market what is available to use in order to promote and increase engagement levels.
- There appeared to be a broad set of interests such as using oral history for leisure, exploring historical events and conducting research.
- Developing platforms in order to share information with the public was considered fundamental.
- The interest of the stakeholders is broad but all of the stakeholders shared and stressed the importance of promoting preservation, engagement and access.

4.7 Innovative Technologies and Future Opportunities

Innovative technologies are increasingly being developed and implemented across a variety of environments in the technological age. According to Teabeu (2013) “the mobile computing revolution offers tantalising possibilities to archivists, historians, and curators interested in reaching broader public audiences”(p.25). Through an examination of the qualitative findings collected from this study, the researcher identified that words such as mobile technologies, mobile apps, automatic, technology, usability and user friendliness were frequently mentioned and discussed across the numerous participants. These are conveyed in the findings demonstrated in Appendix 7 and Appendix 8 of this study. Moreover, the results obtained have established that stakeholders recognised the increased possibilities of new technologies in order to search and engage with materials in an oral history search system or archive.

However, emphasis was placed on the importance of ‘usability’ and ‘user friendliness’. Each group discussed the issues surrounding automatic speech recognition and transcription, mobile devices, and possibilities for the future. According to Hansen et al (2005) “reliable speech recognition is challenging to retrieve when the data is recorded over different media, equipment and time periods” (Hansen 2005, p.712). For example, during the second activity of the data collection process the researcher identified that all of the stakeholders expressed concerns over the use of Automatic Speech Recognition and transcription in an online search environment. For example some respondents stated that:

...“I’d like it to be operational. For example, I would like it to be fast. I need to know that it is searching a large pool of content like google” (P_P3).

...“I think that you can sacrifice quality to user friendliness as well. It might be a lot easier. The more searchable things are the better. For example, if you were able to produce transcripts quickly through voice recognition that would make it a lot easier to search things but if that means that you are not going to be able to search accurately because the software has not picked up the words accurately. Therefore, there will be an illusion of ease but the product that you might be using might not be of the highest quality” (HG_P3).

...“I can see mobile technologies and automatic speech recognition being hugely problematic. For example, if you come from Glasgow and you try to use Siri on your iPhone then speech recognition does not always work”. I think again as well, from an academic point of view often the value of studying oral history is that these are peoples’ voices who often don’t get written about in history. So their language is more likely to be non-standard and therefore, much harder for technology to pick up on. I understand that this is something that is being worked on but it imposes an even greater technological barrier for voice recognition to recognise things like dialects or strong accents” (SOCH_P1).

...“The more searchable things are the better. If you were able to produce transcripts quickly through voice recognition, that would make it a lot easier to search things but if that means that you are going to be able to search accurately because the software has not picked up the words accurately then it poses a disadvantage” (HG_1).

...“Yeah, and also when you have speech recognition there is always the problem that people have different accents and people don’t recognise it, it doesn’t understand people and people get frustrated. For example, I have tried to use speech recognition on my phone and get very frustrated with it” (BBC_P1).

Through an examination of the above examples, it is clear to say that automatic speech recognition and transcription were seen to be valuable. However, there were serious concerns surrounding their reliability and accuracy across all of the stakeholders involved in this study. As demonstrated by the Scottish Oral History Centre, the value of studying oral history is that these are peoples’ voices who often don’t get written about in history. Therefore, language is more likely to be non-standard and harder for technology to pick up on. Another concern raised was that disadvantaged groups may not have the means to engage with collections and materials in particular ways. For example, recent studies such as the ‘Community-Generated Media for the Next Billion’ placed focus on issue of accessibility around the world and that access to collections, databases and technologies are not universal (Robinson et al 2012). Moreover, 5.9 million adults in the UK have never used the internet and 27 % of disabled adults (3.3 million) have never used the internet (The Royal Geographical Society, 2016). Therefore, 9.1 % of the U.K adult population in 2016 have never used the internet which highlights that issues of accessibility to the internet are still prevalent (BBC, 2016).

The stakeholders involved in this study expressed similar concerns in relation to access and technological developments. Furthermore, there was concern among the various stakeholders that a lot of technology has surpassed and developed at a rate that a portion of people do not have the means to use or do not know how to use. For example the Scottish Oral History Centre expressed that if an organisational or professional body was able to develop automatic transcription that was accurate and reliable, this would greatly reduce the financial cost of transcription and human hours. However, issues of dialects, accents, language and accessibility were identified as potential weaknesses and downfalls. However, participants from the public, a selection of history graduates and The Scottish Oral History centre established that podcasts, mobile devices and mobile applications have significant advantages when attempting to engage and involve younger audiences and wider demographics. For example:

“...I have been listening to a podcast that tells myths and legends. It is basically an English student has gone around and read all the Myths and Legends and tells them in a format that is easier to digest. I have realised that podcasts are a very good

way to communicate. Oral History is not necessarily visual. Stick to one specific medium, whether it is music or podcasts” (HG_P2).

“You’ve got Kindles and everything is online now for kids. You have things like Youtube and Google. I think young people learn more from that in comparison to anything else” (SFRS_P1).

“I think a mobile application would be massively useful. If you could just speak in and say “i want to know this” and hold it up to something like Shazam that would revolutionise what we do” (SOHC_P1).

“If there was something more easily accessible for maybe for younger people to access online or on an app would be more accessible to younger ones coming up that were maybe doing it for a school project rather than tracking down a particular book” (SFRS_P2).

“If you were trying to find something. For example, if you were trying to find a song from the 1900s and you have a small clip of it. You play the clip like in Shazam and it searches the database and tell you what the name of the song is and when it is from“(P_P4).

The above examples have illustrated the vast opportunities that could be developed or considered when designing an oral history search system or archive. For example, there was an interest in the development of mobile applications and different mediums such as podcasts and the use of speech recognition to search for materials. The Scottish Fire and Rescue Service highlighted that mobile technologies might be more engaging for younger people to engage with collections for educational purposes instead of traditional technology. In addition, it is clear from the above examples that a variety of the participants expressed that creating apps would enable quick and efficient searching which would be an advantageous opportunity for those designing an oral history search system or archive. As demonstrated above, podcasts, music, and video segments were all highlighted as important and possible features for future exploration when designing an oral history search system or archive. Ultimately, an analysis of innovative technologies and future opportunities has highlighted the following important features when designing an oral history search system or archive:

- Participants identified clear limitations in relation automatic speech recognition and mobile technologies and with the difficulty to recognise dialect and speech.
- Stakeholders did express the advantageous possibilities of innovative technologies such as mobile application and podcasts but this raised concerns over ‘accessibility’, ‘usability’ and ‘user friendliness’.

- It was highlighted that mobile devices are an innovative way to engage students and younger audiences in oral history materials as the smartphone and mobile applications play a pivotal role in everyday life.

4.8 Conclusion

The qualitative findings from this study have illustrated several advantages, limitations and opportunities associated with designing an oral history system in the digital age from the perspectives of different users. This arguably makes this research valuable in its contributions to the field. Through an examination of the main headings, samples and literature it is clear that different user perspectives has resulted in important features and future recommendations. The main differences among the stakeholders was in relation to accessibility and engagement as each group had different personal preferences. However, it was identified by all stakeholders involved in this study that the transcript was fundamental for conducting research and initial search enquiries. An examination of ethics, publicity and innovative technologies also confirmed previous research and can provide valuable findings for future research. Therefore, it is necessary to portray how the findings have validated previous research and can offer further exploration in the field of study.

Chapter 5

Conclusion and Future Work

5.1 Introduction

In relation to final conclusions and future recommendations, this study has been successful in two key areas. First, it has validated previous research in relation to oral history search systems and archives. Second, it has expanded on previous studies and offered a set of valuable design recommendations. This research extended beyond the realms of education to organisational bodies and members of the general public which makes this study original and valuable in its contributions to the field. There were a host of logistical challenges associated with this study but the researcher was able to meet the initial research objectives and deliverables. This study has demonstrated that technology has advanced rapidly in the last decade and the ability to design numerous search systems and techniques across multiple platforms exists. However, it has also identified that there is room for further exploration and work to be conducted in the field of study. Therefore, this chapter will identify how the objectives and deliverables were met. It will also offer a summary of the initial research questions, and a discussion of previous and future research.

5.2 Research Questions and Deliverables

The initial research questions were:

1. What are the most important features that should be available in any oral history archiving and search system?
2. What are the current understandings of oral history and oral history technologies?
3. What are the different needs of numerous users and stakeholders?
4. What are the major opportunities for new media tools in the near future?

RQ1-What are the most important features that should be available in any oral history search system or archive?

Through a diverse assessment of the stakeholders, the findings from this study have identified several important features that should be available in any oral history search system and archive. For example, the findings established that transcripts are considered to be valuable for research purposes and are supportive during the initial search stages. Keywords and metadata were considered to be fundamental with emphasis placed on tags, filtering, metadata and multilingual search terms as shown in section 4.4. It is evident that consent policies, online guides, video segments, and mobile applications are important features that should be available in any oral history search system or archive. Arguably, these are a selection of fundamental features that should be available in any system in order to increase engagement, address issues of accessibility, tackle legal and ethical concerns, and to support to a wider range of users.

RQ2-What are the current understandings of oral history and oral history technologies?

This study found that the current understandings of oral history and oral history technologies were limited across all of the stakeholders involved. As shown in section 4.6, the various participants had an understanding of the importance of preservation, access and engagement of historical materials. Some stakeholders such as the Scottish Oral History Centre had an advanced understanding of best practices in the field in comparison to other participants. However, in relation to oral history technologies and search systems there was limited knowledge and awareness across all of the participants involved. The majority of stakeholders were aware of some platforms such as Youtube, Soundcloud, library data bases and google style platforms for conducting online searches. Nevertheless, this study has established that there was limited publicity and awareness in relation to what is available.

RQ3- What are the different needs of numerous users and stakeholders?

The findings validated that there are a variety of different needs of stakeholders. It can be identified that the majority of the participants in this study expressed that the use of a transcript was the best method for conducting research and for searching oral history archives. Section 4.4 highlighted that the transcript was recommended for research purposes whilst audio and visual engagement were considered to be useful for engaging younger audiences and wider demographics. In addition, the established that the performativity of video, the orality of audio and the ease of indexing over transcription should be given careful consideration when attempting to promote access. The various

participants involved in this study highlighted that oral history needs to take interactive platforms into consideration. Furthermore, various participants highlighted that literacy issues, multilingual audiences and those with visual impairments must be carefully considered when designing an oral history search system or archive. Nevertheless, the results have effectively highlighted that there a host of different needs which must be taken into consideration.

RQ4- What are the major opportunities for new media tools in the near future?

Through coding and examination of the interview transcripts it was evident that All of the stakeholders involved in this research discussed 'mobile technologies', 'usability', 'automatic speech recognition' and 'user friendliness'. As portrayed in section 4.7 and the relevant appendices, this study highlighted that new modes of online searching and engagement such as mobile applications could enhance oral history collections and archives and appeal to a wide range of audiences. Stakeholders such as the Scottish Fire and Rescue Service, The Public and The Scottish Oral History Centre emphasised the importance of mobile technologies and applications. However, this was also seen to be problematic as not all users have the means to access new and innovative technologies. Automatic speech recognition and transcription were seen to be valuable but all of the stakeholders assessed conveyed concern surrounding the accuracy and user friendliness of such technologies. Therefore, the findings confirmed that there are major opportunities for new media tools but there are also major concerns over accessibility, accuracy and user friendliness.

Deliverables and Learning Outcomes

The initial research deliverables and learning outcomes set were:

- 1) To offer a standard set of design recommendations through consultation with multiple stakeholders.
- 2) To contribute to work that has already been conducted in the field of oral history.
- 3) To develop the researcher's professional and qualitative research skills.
- 4) To understand the software and design preferences of an array of stakeholders in relation to oral history search system design.

It is clear to say that the researcher has been successful in the validation and enhancement of oral history in the digital age and met the intended research deliverables

and learning outcomes. Through the selection of the Framework Approach with elements of grounded theory, one was able to conduct extensive qualitative research across a diverse range of user groups which allowed the researcher to follow a sequential process of data collection and data analysis. In addition, research conducted across a diverse range of user groups allowed the researcher to understand the different software and design preferences of an array of stakeholders in relation to oral history search system design.

A set of generic and domain specific questions followed by an interactive activity enabled major themes and terms to emerge that could not be predicted in advance. In addition, one has developed a strong grounding on how to develop research and conduct effective qualitative methods in a fair and ethical manner. This can be exemplified through the selection of an appropriate methodology and the data collections process. For example, the participant sheets, consent forms, question templates and demographic forms demonstrated in the appendices convey the researcher's ability to construct effective qualitative research. This study allowed the researcher to be critical in the selection and implementation of research skills and has enhanced one's professional ability to conduct future studies. The researcher is aware that some of the previous studies in the field had touched upon elements of this study. However, based on an assessment of a range of stakeholders, the recommendations offered can validate previous studies and encourage current and future stakeholders to consider the following recommendations exemplified below.

Design Recommendations

Drawing on the findings from this study, there are a host of possible design recommendations that could be considered when designing an oral history search system or archive. The recommendations offered by this study come with significant challenges. However, it is within the interest of those who wish to develop an oral history search system or archive to take these recommendations into account. The researcher does recognise that there are not always the human resources and financial capabilities to achieve the recommendations presented below. However, these are areas that should be considered by those seeking to design an oral history search system

- Implement several platforms of engagement and make sure that consideration has been given to how different user groups such as researchers, the public, younger audiences, and those with additional needs will be using a search system or archive.

- Publicise the technology and collections that you are providing through the use of workshops, online guides, tutorials, institutional partnerships and outreach activities to promote wider engagement. This could be in the form of school visits, university workshops and community outreach programmes.
- Develop clear ethical and consent policies in order to ensure the protection of interviewees and organisations. Organisations should also strive to create central repositories of materials which can be controlled and managed effectively in order to monitor and share materials.
- Develop a mobile applications, podcasts and video segments for your search system or archive in order to increase engagement and appeal to a wider demographic that would be interested in more innovative ways to search collections.
- Make keyword searches, tags and metadata a priority when designing an oral history search system or archive to ensure that users from different backgrounds can find specific information or terms that they are looking for within collections.

5.3 Previous and Future Research

An analysis of the research questions above has touched upon the possibilities for future exploration in the field. As highlighted in chapter 4, the researcher was able to establish four emergent themes through the implementation of qualitative analysis. The four themes were:

- 1) Engagement and Accessibility.
- 2) Ethics, Consent and Control.
- 3) Publicity, interest and awareness.
- 4) Innovative technologies and future opportunities.

Through an examination of a previous studies, it is arguable that this study has validated several key findings and has opened up areas for future exploration. For example, the qualitative results from this study have validated the strong preference for textual engagement and the importance of the transcript for conducting research. This is similar to previous studies conducted by High et al (2012) and Christel et al (2010) who

established the importance of the transcript and textual engagement through their assessment of professionals in the field of oral history. This study has gone further by assessing a more diverse set of stakeholders in relation to the challenges faced in the representation of oral histories post-interview.

The participants of this study exemplified the importance of keywords, facet searching and metadata and the difficulties associated with different methods of engagement. This supports previous studies conducted by scholars such as Thompson (2016) and Warren et al (2013) who highlighted the importance of faceted searching, indexing and the ability to conduct keyword search across databases. Larson (2013), Boyd (2014) and Neuenschwander (2014) conveyed the ethical and legal concerns of oral history in the digital age. All of the studies exemplified in the literature review discussed issues of copyright, legal implications, sensitive issues and threats of increased digital accessibility to oral history. Attempts to establish guidelines and solutions such as Creative Commons in recent years have demonstrated possible solutions. Through qualitative analysis, this study has validated the concerns of previous scholars and organisations. Several participants involved in this study expressed concerns over confidentiality and how to effectively control and represent oral histories in the digital age. In relation to ASR and speech recognition this study has represented similar issues raised by Oard (2012) and Boyd (2014). The participants from this study indicated that speech recognition and ASR would be efficient for specific purposes. However, the majority of the findings validated previous research having identified that ASR and speech recognition continue to present considerable challenges in the digital age in relation to accuracy and usability.

However, the qualitative findings from this study have allowed the researcher to identify areas of future exploration and work to be conducted in the field. Based on the qualitative data collected and analysed there are several recommendations for future research.

- The researcher believes that specific studies could be conducted into the development of mobile applications for oral history search systems and archives through consultation with different user groups.
- This study was broad in its scope and selection of stakeholders which had both associated advantages and disadvantages. Therefore, research could be conducted into a specific user group in order to highlight domain specific issues in greater detail.

- The researcher believes that the sampling of selected technologies across varying user groups would be advantageous in gaining rich feedback and for developing further oral history software and technologies.
- The study did not manage to identify a conclusive set of design recommendations due to the diverse needs and preferences of the varying stakeholders involved. Future research could attempt to conduct extensive studies into whether it is possible to offer standard design recommendations at all.
- Research could be conducted into the best methods of publicising and developing awareness of oral history and oral history technologies through educational events, workshops and online platforms.
- An assessment could be conducted into the local and national Governments' role in the promotion, collection and preservation of materials. Examine various government websites and collections to assess the overall effectiveness of government involvement in oral history and oral history collections in the digital age.
- Research could be conducted into those with accessibility needs, literacy issues and disabilities in order to understand design preferences and important features in greater detail.
- The researcher believes that further research could be carried out specifically into to ethical and legal concerns. This study has touched upon this issue in the digital age but a larger assessment of organisations and professional bodies would possibly bring more issues to the forefront and well as possible solutions.

5.4 Summary

Overall, the researcher has conducted effective qualitative research with a diverse range of stakeholders in order to determine fundamental features, and design recommendations for those seeking to design an oral history search system or archive. Based on the findings from this research it is clear to say that this study has been successful in the identification of important features and has offered a set of design recommendations. It has also established areas for future research for those interested in conducting further work into designing an oral history search system or archive.

In terms of what this research achieved, it has succeeded in two fundamental areas. It has been effective in building and validating previous findings in relation to the discussion surrounding ‘accessibility and engagement’, ‘ethics, consent, and control’, ‘public, interest, and awareness’ and ‘innovative technologies and future opportunities’ from a U.K based perspective. It has also opened up exploration for future research in several key areas such as usability, software development and marketing . Ultimately, the potential audience will continue to grow to the seven billion living in the networked planet (Cohen, 2013). Therefore, it is appropriate to conclude by reiterating Gluck (1999) who stated that the “human element will always remain fundamental to the field” which this research has effectively illuminated (p.25).

Appendix 1 Consent Form for [Designing an Oral History Search System]

Please tick the appropriate boxes Yes No

Taking Part

I have read and understood the project information sheet dated DD/MM/YYYY.

I have been given the opportunity to ask questions about the project.

I agree to take part in the project. Taking part in the project will include being interviewed and recorded (audio or video).

I understand that my taking part is voluntary; I can withdraw from the study at any time and I do not have to give any reasons for why I no longer want to take part.

Use of the information I provide for this project only

I understand my personal details such as phone number and address will not be revealed to people outside the project.

I understand that my words may be quoted in publications, reports, web pages, and other research outputs.

Please choose one of the following two options:

I would like my real name used in the above

I would **not** like my real name to be used in the above.

I understand that other genuine researchers will have access to this data only if they agree to preserve the confidentiality of the information as requested in this form.

I understand that other genuine researchers may use my words in publications, reports, web pages, and other research outputs, only if they agree to preserve the confidentiality of the information as requested in this form.

So we can use the information you provide legally

I agree to assign the copyright I hold in any materials related to this project to [name of researcher].

Name of participant [printed] Signature Date

Name of researcher [printed] Signature Date

Project contact details for further information: Names, phone, email addresses, etc.

Appendix 2- PowerPoint Presentation

DESIGNING AN ORAL HISTORY SEARCH SYSTEM



Iain Walker
Dept. of Computer and Information
Sciences
University of Strathclyde
September 2015- September 2016

- **INTRODUCTION**
- **OVERVIEW AND RESEARCH OBJECTIVES**
- **INSTRUCTIONS**
- **GENERAL QUESTIONS**
- **DOMAIN SPECIFIC QUESTIONS**
- **INSTRUCTIONS**
- **GROUP ACTIVITY**
- **Q&A**

VARIOUS USES

- **Genealogy**
- **Personal**
- **Community**
- **Research**
- **Education**

ORAL HISTORY TECHNOLOGIES

- Oral histories are usually digitally recorded, with the audio achieved with some limited textual information.
- Digital technologies offer significant opportunities for the dissemination and collection of interfaces and projects.
- Technologies have solved issues of access, preservation, contextualisation and presentation.

EXAMPLE ORAL HISTORY ARCHIVES

The screenshot shows the 'SOUNDS' website interface. The main navigation includes 'BL.uk', 'Sounds Home', 'About', 'Audio tools', 'Blog', 'Case studies', and 'Help'. The 'Oral history' section is highlighted, featuring a grid of topic tiles: Architecture, Art & photography, Working & finance, Branding & design, Crafts, and Disability voices. A search bar is visible on the right side of the page.

The screenshot displays an audio player interface for an interview with Martin Luther King, Jr. dated March 18, 1964. The player includes a progress bar showing 0:00:04 of a 0:52:07 recording. Below the player is a table of contents with the following segments:

0:19 - Continued civil rights activities over generations
4:24 - Responsibility of the "negroes"
7:54 - Dr. King, a sell out?
11:19 - Reparations for slave owners
16:23 - Revolution and a single leader
20:27 - Public school integration
27:50 - Splitting the psyche of the "negro" / African or American?
33:07 - Slogan: "freedom now"
39:20 - The revolution

The selected segment (16:23) includes a 'Partial Transcript' and a 'Segment Synopsis'.

Partial Transcript: Yes, I think, I think I do. I think a revolution can survive without...

Segment Synopsis: Dr. King explains the goal of unified leadership, preferring it to the evolution of a single leader over the entire revolution.

Keywords: centralized leadership within a revolution; control; random violence potential; revolution; shared governance

Subjects: Leadership Nonviolence

On the right side of the player, there are tabs for 'TRANSCRIPT' and 'INDEX', and a search box labeled 'Search this Index' with a 'Search' button.

Special Collections Centre

[List of Interviews](#)

[Link to Catalogue](#)

[Oral History Home](#)

Special Collections Centre

University of Aberdeen Oral History Archive

The Aberdeen University Oral History Archive is the only one of its kind in the United Kingdom. Begun in 1985 as part of the Aberdeen University Quincentenary Project, the interviews were originally intended to aid historians working on monographs commemorating the University's Quincentenary a decade later. Interviewing continues, however, and the archive now contains over 200 interviews with 170 individuals connected with the University. Transcripts of many of these are available through the archival catalogue.

Interviewees come from a wide cross-section of University people, but form three basic groups:

- past students
- long serving members of staff
- eminent individuals connected with the University (Principals, senior professors, writers etc.)



[Listen to extract of the interview with Sir Edward Wright](#)



[Listen to extract of the interview with Mrs Flora Garry](#)



[Listen to extract of the interview with Dr Stella Henriques](#)



[Listen to extract of the interview with Emeritus Professor R. V. Jones](#)

The interviews are important testaments. They contain not only personal information about each individual but reflect on the history, structure, constitution and development of the University. There are unrivalled glimpses into the lives of those connected with the institution, from remarkably detailed memories of graduates of the 1920s and 30s describing landladies, digs and food, through to ex-Principals and Heads of Department recounting their first hand experiences of university government at the highest level. Few would have recorded their memories but for this project.

ACTIVITY ONE

- Each of you have been provided with an instruction sheet.
- Together, I will go through each of the general and domain specific questions.
- We will discuss this amongst ourselves and this discussion will be recorded by dictaphone.

ACTIVITY TWO

- As a group, I would like you to write down your ideas and thoughts about what is most important to you.
- Try and place these ideas into a hierarchy and discuss this amongst yourselves.
- If you are struggling to produce ideas I have prepared a selection of post-it notes to assist you.

Appendix 3- Participant Information Sheet

Title of study: 'Designing an Oral History Search System'

My name is Iain Walker and I am conducting research into 'Designing an Oral History Search System' as a student in the MSc Information and Library Studies Programme at the University of Strathclyde, United Kingdom.

What is the study about?

I am looking to conduct focus groups across multiple organisations and stakeholders concerning the practices, design, and limitations of current technologies being used in field of Oral History. I am looking for various participants for the study in early/mid July which would last approximately between 30 minutes and one hour depending on the size of the group.

Therefore, this dissertation will assess the various needs of different stakeholders and offer a comparative analysis of different user groups in regards to oral history search systems and technologies. It will do this by exploring the answers to the following research questions:

- What are the most important features that should be available in any oral history archiving and search system?
- What are the current understanding of oral history and technologies?
- What are the different needs of numerous users and stakeholders?
- What are the major opportunities for new media tools in the near future?

In order to answer these questions, these are the key objectives as a whole to the research:

- To produce and reflect upon a suitable plan for achieving this aim, secure permissions from multiple stakeholders for research for to be carried out.
- To secure participants and conduct research across multiple sites using justified methodologies.
- To a produce a reflexive dissertation presenting the researchers findings.

Why have I been approached?

You have been approached because the study requires information from people who have a variety of experiences and different knowledge on oral histories and technologies. This ranges from experts and professionals in the field to the public.

Do I have to take part?

No. It's completely up to you to decide whether or not you take part.

What will I be asked to do if I take part?

If you decide you would like to take part, you would be asked to participate in a focus group lasting approximately one hour with other participants. There are a 3 general and 3 domain specific questions. This is followed by a group activity and discussion which will be recorded on a dictaphone.

Will my data be Identifiable?

The information you provide is confidential. The data collected for this study will be stored securely and only the researchers conducting this study will have access to this data:

- Audio recordings will be deleted once the project has been submitted for examination.
- Hard copies of questionnaires will be kept in a locked cabinet.
- The files on the computer will be encrypted (that is no-one other than the researcher will be able to access them) and the computer itself password protected.
- At the end of the study, hard copies of questionnaires will be kept securely in a locked cabinet for ten years. At the end of this period, they will be destroyed.

The typed version of your interview will be made anonymous by removing any identifying information including your name. Anonymised direct quotations from your interview may be used in the reports or publications from the study, so your name will not be attached to them.

All your personal data will be confidential and will be kept separately from your interview responses.

There are some limits to confidentiality: if what is said in the interview makes me think that you, or someone else, is at significant risk of harm, I will have to break confidentiality and speak to a member of staff about this. If possible, I will tell you if I have to do this.

What will happen to the results?

The results will be summarised and reported.

Are there any risks?

There are no risks anticipated with participating in this study. However, if you experience any distress following participation you are encouraged to inform the researcher and contact the resources provided at the end of this sheet.

Are there any benefits to taking part?

Although you may find participating interesting, there are no direct benefits in taking part

Where can I obtain further information about the study if I need it?

If you have any questions about the study, please contact the main researcher:

Iain Walker

iain.walker.2015@uni.strath.ac.uk

Complaints

If you wish to make a complaint or raise concerns about any aspect of this study and do not wish to speak to the researcher, you can contact:

Dr Martin Halvey

martin.halvey@strath.ac.uk

Appendix 4- Demographic Form (Template)

Appendix 4-Demographic Survey Template

Question 1- Sex

Male	Female

Question 2- Age

18-29 years	
30-49 years	
50-64 years	
64 years and over	

Question 3- Occupation

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Appendix 5- Focus Group Template

The Scottish Oral History Centre

Focus Group Schedule- Designing an Oral History Search System Time: Approximately one hour

Location: TBC

Generic Questions

- What is your current understanding of oral history and oral history technologies?
- What is your main interest in oral history?
- What would be your main use of an oral history archive?

Domain Specific Questions

- What would you like to develop or implement?
- Have you (or your centre) used any tools in your practices? Could you briefly describe how? If you recall, please tell us how you were introduced to these tools?
- What features would you consider fundamental to your organisation?

10:00-Introduction to the study and overview of the topic.

10:10-Read out script and hand out instruction sheets.

10:15-Ask the generic questions.

10: 25-Ask the domain specific questions.

10:30-Read out the instructions for activity two.

10:35-Allow participants to brainstorm ideas.

10:40- Activity & Discussion.

11:00- End study with follow up questions from participants.

Resources, support and equipment

- PowerPoint with additional information on oral history and oral history technologies
- Post-it-notes
- Dictaphone
- Additional post-it-notes with pre-prepared ideas to assist the focus groups if necessary

Appendix 6- Timeline

Stage of Process	Start Date	Tasks to be completed	✓	Maximum end date
Research Design and Approval	February 2016	Choose dissertation topic Discuss idea with academic staff (Dr Martin Halvey)	✓ ✓	April 2016
Participant recruitment and confirmation of research to venues	June 2016	Fill out ethics application and contact stakeholders with information and consent forms	✓	June 2016
Carry out research	June 2016	Conduct interviews and focus groups with stakeholders	✓	July 2016
Analyse and record/write up data	June 2016	Code and transcribe the data collected	✓	July-August 2016
Write up first draft of dissertation	July 2016		✓	August 2016
Write up second draft of dissertation	July 2016		✓	August 2016
'Mopping-Up'	August 2016	Edit and tweak dissertation and become happy with final product Print and bind dissertation	✓	August 2016
Submission	September 2016	Submit the dissertation electronically and to the department office.	✓	September 2016
Feedback to participants and	September 2016	Provide a copy of my dissertation to my research participants and institutions (should they request this)	✓	November 2016

Appendix 7- Coding the interview transcripts

1. Ethics, consent and control

- a. Control.
- b. Rules.
- c. Ethics.
- d. Legal.

2. Publicity and awareness

- a. Depository
- b. Workshops.
- c. Organisational
- d. Outreach.
- e. Events.
- f. Guides.
- g. Limited.

3. Access and engagement

- a. Transcription.
- b. Audio.
- c. Keywords.
- d. Video.
- e. Facet.
- f. Filtering.

4. Innovative technologies

- a. Automatic Speech.
- b. Mobile Devices.
- c. Accuracy
- d. Automatic Transcription.
- e. Accessibility.
- f. Mobile Application.
- g. User-friendly.
- h. Dialects

Appendix 8- Analysing the Transcriptions

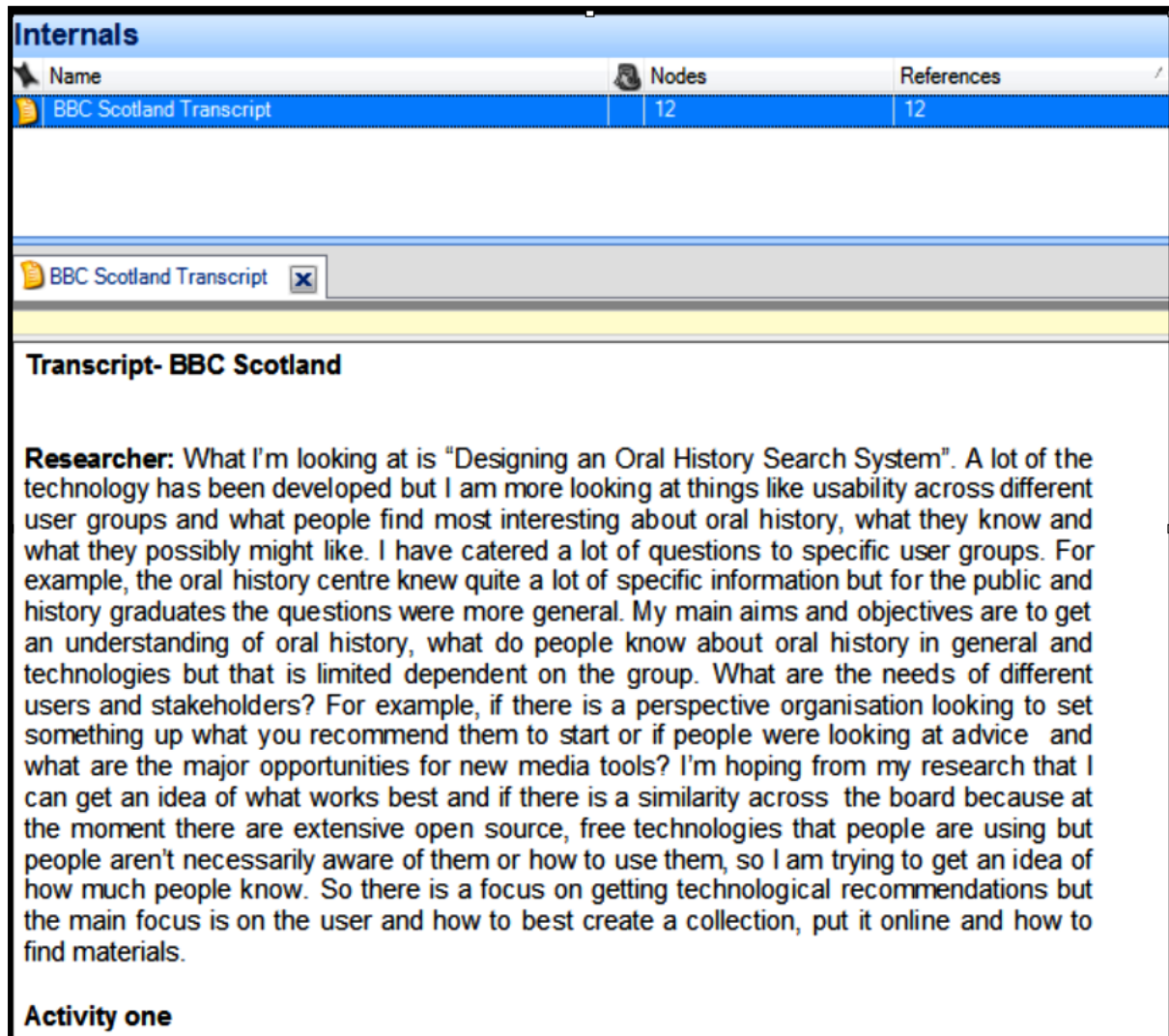
Index Table	Focus Group 1 BBC Scotland Participants: 1	Focus Group 2 The Public Participants: 4	Focus Group 3 The Scottish Oral History Centre Participants: 1	Focus Group 4 History Graduates Participants: 4	Focus Group 5 The Scottish Fire and Rescue Service Participants: 3
Theme 1 Ethics, consent and control	<p>“It would be nice to find things about real live people that is not written anywhere. People who have said things and you can find them and listen to them as long as this is in line with ethical procedures (BBC_P1).</p>	<p>“I would like to know that the priorities are something that I trust as well” (P_P2).</p>	<p>“Remember that it is people that you’re dealing with and you can’t just treat them as historical specimens. They are living people. Ethically, you have to make sure that they are fully of what you’re doing and why you’re doing it”(SOHC_P1.</p>	<p>“Would it not make more sense to make it like wikipedia which is user generated? For example, you develop a base platform and then you can get people to use it. However, you have get a base of people willing to moderate and control content”. (HG_P3)</p>	<p>“Is it morally okay to share it?” (SFRS_P2)</p> <p>“Adhering to a code of ethics but not censoring”. (SFRS_P2)</p> <p>“We would probably personalise and represent events differently as well because it happened on a certain day or would there be rules around naming people or naming your fellow officer”(SFRS_P 1)</p>
Theme 2 Publicity and awareness	<p>“It certainly feels to me that the technology is not very well publicised”. (BBC_P1)</p> <p>“Well I certainly don’t know what’s available, if I need to find something I go to google first and then I check through to see what comes up and if anything related comes up” (BBC_P1).</p>	<p>“I am going to go with limited. I used some search databases at University” , (P_P1).</p>	<p>“Not much no. I know there are archives for Oral History but I probably haven’t come across them because I have been so focussed on my own interviews. I haven’t checked what’s out there as much as I should of. (SOHC_P1).</p>	<p>“Or even as like an outreach activity. For example, if they released a digest weekly of highlights from the oral history archive to get people interested and also a publicity thing”. (P_P1).</p>	<p>“I cannot think of anything off of the top of my head that I have used specifically” (SFRS_P2)</p>

Index Table	Focus Group 1 BBC Scotland Participants: 1	Focus Group 2 The Public Participants: 4	Focus Group 3 The Scottish Oral History Centre Participants: 1	Focus Group 4 History Graduates Participants: 4	Focus Group 5 The Scottish Fire and Rescue Service Participants: 3
<p>Theme 3 Access and engagement</p>	<p>“You simply type in a keyword or bring up a list of words and choose or a specific date or historical event” (BBC_P1)</p> <p>“Yes of course if you are able to view something it will make it much more interesting for engaging”(BBC_P1)</p> <p>“The system I use is a big database I suppose and when I have enquiries regarding old paper I would use google actually”(BBC_P1).</p>	<p>“However, as a resource, video and audio are very useful, especially in a classroom”(P_P1).</p> <p>“In a research and educational setting, transcription is necessary”(P_P2).</p> <p>“I’d probably go with transcription over audio if you had to choose. Especially if that if you are doing a lot of research” (P_P4).</p> <p>“ For example, if you do have the entire transcript and you have something that is google style and you can search any word or phrase like in a Pdf where you can find all the words. It would be similar to key words but slightly different”(P_P2)</p>	<p>“Key terms are highly beneficial”(SOHC_P1).</p> <p>“I don’t think video is necessary but i think that it is beneficial. The reason that I don’t think it is necessary is because I think to insist that everything must video first of all would inhibit peoples ability to do oral history” (SOHC_P1).</p> <p>“The author needs to sit down and think about keywords and I think or the interview that is also really important”. (SOHC_P1).</p>	<p>“I think it has a lot with the public trying to see value in it”(HG_P1).</p> <p>“I think would be, if people just want little snippets especially if you’re doing a public display. You’re not going to say here is a 30 page transcript. That is when a time indexed thing would be great”. (HG_P3).</p> <p>“I would rate transcription highly”. (HG_P2)</p> <p>“I’d probably go with transcription over audio if you had to choose in that if you are doing a lot of research, you do not have time to sit and listen to thirty minutes of people talking” (HG_P4).</p>	<p>“We’ve been doing the family tree recently”. (SFRS_P3)</p> <p>“The human element is interesting”. (SFRS_P2)</p> <p>“We have no formal method of archiving”. (SFRS_P3)</p> <p>“There is both community interest and organisational interest” (SFRS_P2)</p> <p>“Transcriptions would be better for historical use. However, if we are talking abouts user-friendly I think people would probably prefer to listen to it and just to listen to the story install of analysing a document”. (SFRS_P3)</p> <p>“Break it down into particular themes or areas of interest like the cheap side street fire or geographical. Maybe also personal perspectives” (SFRS_P2).</p>

Index Table	Focus Group 1 BBC Scotland Participants: 1	Focus Group 2 The Public Participants: 4	Focus Group 3 The Scottish Oral History Centre Participants: 1	Focus Group 4 History Graduates Participants: 4	Focus Group 5 The Scottish Fire and Rescue Service Participants: 3
<p>Theme 4 Innovative technologies</p>	<p>“Yeah, and also when you have speech recognition there is always the problem that people have different accents and people don’t recognised, it doesn’t understand people and people get frustrated. For example, I have tried to use speech recognition on my phone and get very frustrated with it”(BBC_P1).</p> <p>“However, for the initial search I think the audio and video are very useful” (BBC_P1).</p>	<p>“Yeah the automatic speech recognition on YouTube is still fairly unreliable” (P_P3).</p> <p>“I feel that automatic speech recognition is still quite niche”(P_P1)</p>	<p>“If someone could come up with a way of doing transcribing through voice recognition and that would be invaluable to the field but I imagine that is a while away” (SOHC_P1).</p>	<p>“Definitely. I think it also stuff like tech relevancy. If you are going to put stuff on a mobile device, don’t fall into an app trap” (HG_P2).</p> <p>“Unless you are trying to target a specific market. I think it is far easier to say that a mobile device is cool” (HG_P4).</p>	<p>“Short videos or links on YouTube are more likely to be accessed as it is comfortable”(SFRS_P1).</p> <p>“Things like, video, automatic speech recognition and mobile devices-most people have been quite critical about them as they are costly and they don’t always work”. (SFRS_P2)</p> <p>“You’ve got Kindles and everything is online now for kids. You have things like Youtube and Google. I think young people learn more from that in comparison to anything else”(SFRS_P3).</p>

Appendix 9 NVivo Analysis

Importing transcriptions



The screenshot displays the NVivo software interface. At the top, a blue header bar contains the word "Internals". Below this is a table with three columns: "Name", "Nodes", and "References". The table contains one entry: "BBC Scotland Transcript" with 12 nodes and 12 references. Below the table is a tab labeled "BBC Scotland Transcript" with a close button. The main content area shows the text of the transcript, starting with "Transcript- BBC Scotland" and a paragraph of text under the heading "Researcher".

Name	Nodes	References
BBC Scotland Transcript	12	12

Transcript- BBC Scotland

Researcher: What I'm looking at is "Designing an Oral History Search System". A lot of the technology has been developed but I am more looking at things like usability across different user groups and what people find most interesting about oral history, what they know and what they possibly might like. I have catered a lot of questions to specific user groups. For example, the oral history centre knew quite a lot of specific information but for the public and history graduates the questions were more general. My main aims and objectives are to get an understanding of oral history, what do people know about oral history in general and technologies but that is limited dependent on the group. What are the needs of different users and stakeholders? For example, if there is a perspective organisation looking to set something up what you recommend them to start or if people were looking at advice and what are the major opportunities for new media tools? I'm hoping from my research that I can get an idea of what works best and if there is a similarity across the board because at the moment there are extensive open source, free technologies that people are using but people aren't necessarily aware of them or how to use them, so I am trying to get an idea of how much people know. So there is a focus on getting technological recommendations but the main focus is on the user and how to best create a collection, put it online and how to find materials.

Activity one

Conducting a word frequency

Word Frequency
Find frequently occurring words or concepts.

	1	1
	1	1
	1	1

History Graduates- Transcription

Researcher: This is focus group four. I am just going to read out the instructions. The consent forms and the demographic forms have been handed out, read and signed. I am just going to give you an introduction and then an overview of my research objectives. Introduction- what I am looking at is oral history and how to design an oral history search system or what is needed from a search system. My aims and objectives are what are the current understandings of oral history and oral history technologies among different user groups. I am trying to get ideas and opinions from different people who might use an oral history search system or oral history materials. That is the main idea behind my research. Trying to get an idea of the needs of different people and trying to to get an idea of opportunities for new media tools. We are going to look at transcription, indexing, video

Adding nodes and references

Nodes

Name	Sources	References
Video	1	1
Transcript	1	5
Publicity	1	2
Online Searching	1	2

Transcript: The public

Researcher: What I'm looking at is "Designing an Oral History Search System". A lot of the technology has been developed but I am more looking at things like usability across different user groups and what people find most interesting about oral history, what they know and what they possibly might like. I have catered a lot of questions to specific user groups. For example, the oral history centre knew quite a lot of specific information but for the public and history graduates the questions were more general. My main aims and objectives are to get an understanding of oral history, what do people know about oral history in general and

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