When cultural heritage goes digital: Exploring the user experience of the Chinese Digital Community website

by

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Submitted to the School of Information Management, Victoria University of Wellington
in partial fulfilment of the requirements for the degree of Master of Information Studies

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When cultural heritage goes digital: Exploring the user experience of the Chinese Digital Community website

(hereafter referred to as 'The MIS Research Project')

being undertaken by

Samantha Foo

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School of Information Management, Victoria University of Wellington.

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Abstract

The aim of the study is to investigate user experience of the *Chinese Digital Community* website as an online resource. This study uses a qualitative method which the researcher interviews the participants through face-to-face interviews. The data collected from the interview allow the researcher to understand challenges and issues faced by users accessing the *Chinese Digital Community* website. The key findings from the study shed some light on the users’ overall satisfaction towards the *Chinese Digital Community* website, reasons why they access the website, issues and difficulties they experience when accessing the website and the importance of the website in online cultural engagement to the Chinese community and the New Zealand public.

The results of the study will allow libraries and cultural associations to understand how online resources can be improved to ensure their abilities to deliver information effectively to users and identify gaps in user accessibility. The study will also provide suggestions for future research into user experience of online resources in New Zealand.

Keywords: online cultural engagement, online resource, Chinese Digital Community, New Zealand, Chinese community, user experience
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1. Introduction

As we enter into the internet era, there is a need for us to become a learning and knowledge society. A learning and knowledge society requires more than the development of hardware, software and telecommunication networks (Liew, 2006). With the increase in technological innovations, accessing information can be done beyond time, space and distance. As a result, many libraries and cultural associations are shifting from the traditional library and museum model to “models which support the provision of novel ways to allow users to engage with the material for intellectual work, as well as provide support for collaboration and facilitating communities of practice” (Liew, 2014, p. 3). The changes in the information environments results in a new breed of users who use the Internet to access information. This creates competition between the traditional information environment and online information providers, prompting libraries and cultural associations to create strategies in maintaining their roles as cultural and information hubs in society.

An online resource is defined as an organised collection of information in online form which is accessible over a network (Jeng, 2005). Online resources offer interactive access to users in multimedia form which can reach out to both new and existing users. An online resource aids in preservation of information and invites audiences to become active participants in learning, increasing interest towards information and cultural heritage (Pruulmann-Vengerfeldt & Aljas, 2009). However, Kiran & Singh (2008) highlight the importance of libraries recognising users' needs and expectations when accessing an online resource for information. The usability of a website plays a role in determining the “number of hits to a website” (Kothainayaki, Sivakumaren, & Gopalakrishnan, 2012, p. 2). Questions are raised on how libraries
and cultural associations can “provide more attractive and informative presentations” (Lazarinis, 2011, p. 391). Although online resources have flourished, there is little known information about user experience with online resources (Tammaro, 2008).

This research project aims to explore user experience of the Chinese Digital Community website as an online resource which delivers and preserves content on New Zealand Chinese history for the public to identify the impact of Chinese Digital Community website on promoting cultural and heritage awareness among the New Zealand public.

This overall question for this study is:
How do users’ experiences of the Chinese Digital Community website inform our understanding of the value of online cultural heritage engagement?

For the study, the following sub-questions will be addressed:

1. Why do users access the Chinese Digital Community website?
2. What are users’ expectations of the Chinese Digital Community website?
3. What are users’ experiences of and preferences for the Chinese Digital Community website in terms of ease of use, usefulness and importance?
2. Literature Review

2.1 Literature Review

Despite being considered relatively young in the scientific field, Ioannidis (2005) states online resources have paved a path for both immediate and long-term future as technological information tools. With the emergence of online resources, Aabo (2005) questions whether public libraries still play a role to society. A research study by D’Elia, Jorgensen, Woelfel and Roger (2002) shows the Internet complements with traditional libraries by affecting library use depending on availability, convenience, wider range of resources online and up-to-date information. The creation of online resources allows librarians, historians and the public can “explore and connect with our past” (Owens, 2013, p. 127). The creation of an online resource is a collaborative process, requiring “common goals to be agreed and an understanding of what both the user and stakeholder want to build an operational system” (Cousins, Chambers & van der Meulen, 2008, p. 125).

Although online technology is perceived as a threat to traditional libraries, libraries and cultural associations can complement with technology to “improve the quality of their services” and deliver information to their users effectively (Cullen, 2001, p. 662). The internet allows cultural institutions to transform their role from information interpreters to information providers, creating a two-way information flow between the cultural institution and the public (van den Akker, Legene, van Erp, Aroyo, Segers, van der Meij, van Ossenbruggen, Schreiber, Wielinga, Oomen & Jacobs, 2011). With information technology, Cullen (2001) writes that libraries and cultural associations must re-examine the quality of their services that fulfil both customer needs and user satisfaction to be able to attract both current and new users. For
example, the National Archives of Singapore developed an online exhibition with the aim of promoting cultural heritage information awareness to the Singaporean public, including school students, as its target audience (Leong, Ramaiah & Foo, 2003). Unlike traditional exhibitions which consist of physical artefacts on display, the National Archives of Singapore online exhibition consisted of multimedia kiosks and audio narratives. Leong et. al. (2003) state there are a number of existing online exhibitions around the world such as Singapore’s Asian Civilisations Museum and Indiana University’s American History Documents that allow information to be accessed remotely and provide educational resources in static and multimedia content for teachers and students.

Online resources have the potential to offer a practical and potentially cost-effective solution to the limitations physical institutions face, making cultural information available to a wider audience beyond time, space and distance. Preserving heritage resources online at a national level fosters social cohesion and a sense of identity. Online resources also serve as a “great public service and public relations opportunity” for both libraries and other cultural heritage institutions (Liew, 2005, p. 5). Online and digital preservation is often described as digital repatriation, allowing a community to reclaim their cultural heritage (Fitch, 2013). Online resources allow intangible cultural heritage such as traditional music and art to be preserved which would have been otherwise lost, especially for indigenous cultures. The Tamata Toiere website is an example of a free-to-access digital repository containing audio, images and information about Maori waiata and haka (Ka’ai-Mahuta, 2012). The purpose of Tamata Toiere is to recover knowledge on waiata and haka, ensuring its preservation for future generations.
Online resources are potentially powerful tools when users are able to access information, enabling them to perform tasks online effectively (Blanchard & Buchanan, 2003). Marty (2008) states online resources also provide users instant access to resources and up-to-date information about a museum or cultural institution’s collections. The introduction of mobile tools such as tablets allows online cultural engagement within and outside a cultural institution. Incorporating mobile tools in online cultural engagement facilitates information search and exploration of an online resource (Charitonos, Blake, Scanlon & Jones, 2012). However, online resources are not accepted easily by some users due to lack of awareness in their use as a technology tool that defies time, physical space and distance. Charitonos et al. (2012) add that The need to fulfil online users’ changing needs and expectations can pose a challenge for cultural institutions and designers of online resources. Other factors preventing access to online resources are lack of appropriate technologies and language barriers (Higgins, 2013). Wahab, Othman, Abas, Hassan, Malek and Mohd Razali (2012) add that varying abilities of users’ computing skills also affect users’ experiences with an online resource. Another issue faced by online resources is they are “often limited to specialists from specific fields” (Tezuka & Tanaka, 2005, p. 23).

User experience and satisfaction towards online resources is becoming a frequently studied topic in both library and information systems fields (Sun & Zhang, 2006). Usability is identified as an attribute crucial to user experience with an online resource, ensuring an online resource supports the user’s needs and provides a positive user experience (Matusiak, 2012). Lobo, Kaskaloglou, Kim & Herbert (2011)
highlight how greater usability of a website influences on user satisfaction, creating interest towards an online resource. Research on user experience with online resources involves examining “aspects of their content, presentation, navigational structure, and implementation issues” (Leong et. al, 2003, p. 3). Lazarinis (2011) adds research into user experience with online resources includes end-user perspective, allowing research to understand different types of users and users’ information-seeking behaviour. Research on user experience allows users to “have their voices to be heard” (Xie, 2006, p. 434). Research on user experience also allows librarians to respond to the evolving landscape and judge the quality or appropriateness of information for users accessing an online resource (Smith, 1997; Liew, 2014). Xie (2006) provides an example of how user experience on the Early Canadiana Materials allow researchers such as Cherry and Duff (2002) to investigate usability of an online resource and user satisfaction with different features of an online resource such as search capabilities and print function. The study on the Early Canadiana Materials “provide a basis for improvements” enabling the online resource to meet users’ ever-changing needs and expectations (Xie, 2006, p. 436). Research on user experience with online resources allows improvements on online resources to be able to continuously motivate users to “establish a personal relationship” with a library or cultural association through technology” (Styliani, Fotis, Kostas & Petros, 2009, p. 521).

Fadzil and Baharuddin (2011) write that user satisfaction is “one of the mostly widely used measures of information and communication technology (ICT) implementation success” (p. 96). Investigating user satisfaction allows libraries and cultural institutions to examine users’ preferences, searching behaviour and the information
they seek (Tyler & Hastings, 2011). This leads to a greater understanding of “measuring qualitative impacts” of a user experience with an online resource (Dobreva, O’Dwyer & Feliciati, 2012, p. 192). Tyler and Hastings (2011) state user satisfaction also allow librarians to make informed decisions about how to integrate online resources’ tools and facilities and determine what makes an online resource appealing towards both current and new online users. Demographic characteristics of users such as age, gender and computer experience are useful in helping libraries and cultural institutions to better understand how they influence user satisfaction towards an online resource. For example, Tammaro’s (2008) research into users’ perceptions of digital libraries in Italy employed a wide range of study participants based on age, gender and professions, creating a non-biased report on how libraries and cultural institutions can improve their online resources based on users’ different needs while fulfilling their users’ common priorities in using the online resources as an information hub. Therefore, there is a need for studies to address issues on how museums and other cultural institutions can make their online resources more user-centred, allowing cultural institution professionals to understand how new information technologies change the way users approach cultural institutes and their resources (Marty, 2008).

2.2 About the Chinese Digital Community website

The Chinese Digital Community website is created through collaboration between Auckland Libraries and the New Zealand Chinese Association. The website went live in July 2009 (Chinese Digital Community, 2014). The Chinese Digital Community contains historical and contemporary information about New Zealand’s Chinese community. As an online resource, the website also allows members of the
public to register for free and contribute information such as articles, pictures, web links, audio, videos and documents relating to the Chinese community (Auckland Libraries, 2014). Registered users of the website are able to comment, discuss and edit information on the website (Chinese Digital Community, 2014). The Chinese Digital Community website aims to preserve New Zealand Chinese history for future generations and grow as both an online resource and a useful tool for family history enthusiasts (Chinese Digital Community, 2014).

The Chinese Digital Community website allows users to register for free as online members, allowing them to add new information and content such as videos, photos, audio clips and articles. The website’s functionality also prevents non-users from spamming or creating resources that are irrelevant to the Chinese Digital Community website. Registered users are able to comment and discuss about information relating to the Chinese Community in New Zealand. Information on the website can also be edited by the users. Group information such as a discussion on a family genealogy can be made private as the website allows registered users the option of keeping their information private such as closed groups (Chinese Digital Community, 2014).

2.3 About Chinese New Zealanders

Since the arrival of Chinese goldminers in the 1850s, Chinese New Zealanders have been part of New Zealand society (Auckland Libraries, 2014). Today, the Chinese New Zealander population is considered as one of the biggest Asian ethnic groups in New Zealand, accounting approximately 44% of the entire Asian New Zealand population (Statistics New Zealand, 2001).
During New Zealand’s gold rush era of the 1850s, the early Chinese immigrants originated from Guangdong province in Southern China (Te Ara, 2014). In 1987, New Zealand’s immigration policy change encouraged more Chinese to immigrate from China and “other parts of the Chinese diaspora” such as Taiwan, Hong Kong and Malaysia (Ip, 2003, p. 342). Under the Immigration Act 1987, the arrival of Chinese immigrants from various Asian countries has an impact on the Chinese population in New Zealand. Chinese New Zealanders today are descended from Mainland China, Hong Kong, Taiwan and Southeast Asian countries such as Malaysia, Singapore and Indonesia (Liao, 2007). The term Chinese New Zealanders now applies to both local born New Zealanders of Chinese descent and new Chinese immigrants who have attained New Zealand residency.

The most common languages spoken by Chinese New Zealanders are English, Cantonese and Mandarin. Liao’s study (2007) states some Chinese New Zealanders do not speak Mandarin or Cantonese as their mother tongue where some speak Chinese dialects such as Hokkien and Teochew. In addition, some Chinese New Zealanders speak Malay and Indonesian due an influx of Chinese immigrants originating from Southeast Asia during the 1980s and 1990s (Te Ara, 2014).

2.4 About the New Zealand Chinese Association

The New Zealand Chinese Association was established in 1944 with 13 branches throughout New Zealand (New Zealand Chinese Association, 2014). It is a national organisation that represents the interests of both long-established and new Chinese migrants. The New Zealand Chinese Association caters to social, sporting and
cultural needs of the Chinese community in New Zealand such as the annual Easter Sports Tournament and Cultural Event and the Banana (New Zealand Chinese Identity) Conferences. The association encourages cultural maintenance and actively participates in New Zealand-related issues such as immigrant issues, multiculturalism and the Treaty of Waitangi (New Zealand Chinese Association, 2014). The New Zealand Chinese Association also conducts both historical and current research such as the poll tax and positive aging among Chinese New Zealanders.

2.5 Summary

The literature review in this study suggests gaps exist in how user experiences of an online resource inform researchers and librarians on the understanding on the value of online cultural engagement. This study seeks to address the gaps for this research using studies by Wang (2011) and Lazarinis (2011) as my frame of references. By analysing user behaviour with the use of the Chinese Digital Community website, the findings will contribute to understanding user experience and the value of online cultural engagement. The study on user experience also encourage cultural institutions to “compare and benchmark their own results”, allowing them to improve usability and accessibility of their online resources (Tammaro, 2008, p. 136).
3. Definition of Key Terms

*Chinese Digital Community* in this study is an online resource that contains historical and contemporary information about the New Zealand Chinese community. The *Chinese Digital Community* is created through the collaboration between Auckland Libraries and the New Zealand Chinese Association.

*User experience* is the overall experience of an individual’s use of a website, in terms of how easy it is use or access for information.

*User satisfaction* is a measure of how an online resource as a technology product meets a user’s expectation.

An *online resource* is defined as a collection of information, audio files and pictures in multimedia form and can be accessed online anywhere and anytime. For this study, user experience with the *Chinese Digital Community* website will be emphasised.

*Cultural heritage* is the maintenance and preservation of physical artefacts and intangible attributes such as music, language art and folklore for the benefits of future generations.

The term *Chinese New Zealander* refers to two types of New Zealand residents of Chinese descent. The first type refers to immigrants who were born outside New Zealand and may or may not speak English. The second type of Chinese New Zealanders refers to a New Zealand-born Chinese, especially descendants of first or
second-generation Chinese New Zealanders who attain their education in New Zealand and speak English as their main language.

*New Zealand residency* refers to an individual living in New Zealand as a permanent resident or a citizen.

*Main languages* refer to the one or two languages that are widely used by the speaker to communicate with family, peers and acquaintances.

*Chinese dialects* are the regional Chinese language varieties spoken within and outside China such as Cantonese and Hokkien. Chinese dialects are usually spoken among Chinese individuals who do not speak or learn Mandarin as their mother tongue.

*Bilingualism* is the ability to speak two languages fluently.

*Monolingualism* is the ability to speak one language fluently, usually a native language.

*Multilingualism* refers to the ability to speak more than two languages fluently.

*Biculturalism*, also known as *biculural identity*, is the condition of an individual having a combination of two different cultures.

*Skykiwi.com* is an online platform for the Chinese community in New Zealand.
4. Research Methodology

4.1 Research Design

The research methodology for determining user experience with the Chinese Digital Community website is a semi-structured interview. The interview aims to investigate users’ experiences with the Chinese Digital Community and how their experiences inform us on the importance of online cultural heritage engagement.

4.2 Research methodology

A qualitative research method is appropriate for researchers intending to study participants’ behaviour and experiences (Silverman, 2013). Qualitative study involves collecting data through interviews, observations or document analysis, enabling the researcher to understand a combination of participants’ perspectives, a process and a phenomenon (Merriam, 2002). Appropriate evaluation methods for a qualitative research method are crucial in ensuring both users and evaluators are “communicating on the same wavelength” (Kusunoki & Khoo, 2012, p.632). For this study, an interview will be used because it is a “frequently used method in social research” for the researcher to interact with the participants, allowing an in-depth probing to yield responses (Wang, 2011, p. 17). The interview allows users to share their experiences and voice their opinions where online resources’ services can be improved “so that their expectations can be better met” (Tammaro, 2008, p. 136). Interviewing also allows the researcher to establish a rapport with the study participants to understand their viewpoints as users of an online resource.

As users’ experiences and preferences are subjective, they provide valuable results that enable the researcher to have a “deeper understanding of user needs,
preferences and behaviour”, enabling libraries and museums to improve the services of online resources (Agosti, Crivellari, Di Nunzio & Gabrielli, 2010, p. 226). A quantitative methodology would not be suitable for this study because research context will be ignored and it is unable to gather participants’ in-depth explanations of their experiences and needs as users of an online resource (Wang, 2011). The interview for this study is based on past studies on user experiences with online resources by Agosti et. al. (2010), Leong et al. (2003), Liew (2005), Liew (2006) and Xia (2002). The interview questions are partially modelled on Wang’s (2011) research into Chinese immigrants’ experience of Auckland Libraries. The questions are written in simple English so that interview participants with little understanding of English are able to understand questions the researcher is enquiring during the interview. The interview questions for this study can be referred in Appendix A.

In an interview, a participant can communicate his or her opinions relating to experience using the online resource (Leong, et. al, 2003). As an interview is the most effective method “in giving a human face to research problems”, the researcher has the opportunity to probe further based on the participants’ responses (Wang, 2011, p. 20). For this study, the semi-structured interview will be used to gather feedback from study participants. A semi-structured interview is more appropriate than a structured interview because it is flexible and allows the researcher to probe and explore pre-established questions and scope (Wang, 2011). A semi-structured interview also allows the researcher to gain insight into research participants’ views of the importance of online cultural heritage engagement.
Participants are encouraged to access the *Chinese Digital Community* website before the researcher interviews them. Interview participants are able to select the interview time and location for their own convenience with the researcher. Prior to the interview, the study participants are required to read a participant information sheet and sign a consent form produced by the researcher in compliance with the guidelines established by Victoria University’s Human Ethics Committee. As the study will be confidential, the researcher intends to report the participants’ interviews anonymously.

The disadvantages of conducting an in-person interview are distance, time and financial constraints. Issues relating to in-person interviews can be easily overcome with the use of communicative technologies such as Skype (Deakin & Wakefield, 2014). Using Skype as an option to conduct an interview allows flexibility for both the researcher and the interview participants, providing a feasible alternative that overcomes time, geography and distance. Hanna (2012) states the use of Skype provides ease of access and “overcomes the often impractical use of battery powered Dictaphones” (p. 241).

### 4.3 Limitations of Research

The study is limited to research participants who are Auckland residents of Chinese descent. This study is also a single case study on user experience of the *Chinese Digital Community* website. A small sampling size for the study means finding of the final research will not represent all Chinese New Zealanders’ user experience of the website.
5. Population sampling

It is considered impractical to conduct an interview with the entire population of Auckland. Therefore, sampling is used by the researcher to select a number of participants, allowing high quality information to be easily obtained for this study. For the study, purposive sampling and snowball sampling will be used to select potential participants. Purposive sampling involves selecting participants “with a ‘purpose’ to represent a location or type in relation to a key criterion” (Ritchie, Lewis & Elam, 2003, p.79). Snowball sampling will also be used where research participants are given the option to recommend another individual who may be willing to participate in the study. Snowball sampling can be easily achieved through word of mouth or use of text messages and email.

Potential participants can be found through personal contacts and by advertising the research in a local community newspaper or a community area such as a church. For the interview, the sample population consists of random participants from the general public. The participants will be divided into two main groups, experienced online users and novice users. Novice users are included in the study because they are crucial to an evaluation on users’ experience with the Chinese Digital Community website, “leading to new reflections” on making online resources user-friendly for all users who possess different levels of computing skills (Consonni, 2010, p. 329). The inclusion of novice users as interview participants in the study will avoid creating a bias in identifying users’ experiences and expectations on the Chinese Digital Community. Perspectives from both novice and experienced users will allow the researcher to understand how an online resource can be improved to be more effective for all users.
Research data will be collected through a face-to-face interview with study participants. Each interview will last between forty-five to sixty minutes per participant. Due to time constraints, the number of study participants will be less than 10 individuals. The researcher will select participants based on age, social groups, and different level of computing skills in order to create a broad range of findings for the study. A diversity of participants allow the researcher to provide different opinions relating to use of the website such as user friendliness, navigation and privacy.

The original target was 10 interviews but ended up with a total of 11 due to participants’ enthusiasm and interest towards the Chinese Digital Community website. Among the 11 interviewees, 3 participants have IT and computing background, allowing the researcher to gain findings about the user experience of the Chinese Digital Community website from IT and computing professionals’ perspectives.
6. Instrumentation

6.1 Data Collection

Research data were collected through semi-structured interviews with the participants. Interview data were gathered through audio recording and note-taking, which were transcribed for data analysis. A semi-structured interview allows a researcher to “gather first-hand users’ experiences through conversational communication” (Wang, 2011, p. 20). Semi-structured interviews also allow the researcher to openly ask questions to the interviewees, allowing the researcher to probe further for answers relating to the user experience with the Chinese Digital Community website. The researcher was able to accommodate to the needs of the interview participants by either conducting interviews via Skype or face-to-face at the interviewees' locations of choice such as a park or church.

6.2 Human Ethics Approval

Prior to starting the interviews, approval was applied and obtained from Victoria University’s Human Ethics Committee to proceed with my research project. The purpose of the approval was to ensure data collected and participants' identities would remain confidential. Pseudonyms were assigned with the approval from the participants and used in the study where necessary.

6.3 Methods of Data Analysis

Consent was obtained from the interview participants prior to the interviews being audio-recorded. The interviews were transcribed and the transcripts were analysed using qualitative content analysis (Wang, 2011). From the analysis, the researcher identified key points mentioned by the interviewees in response to questions relating
to user experience of the website such as user-friendliness, strengths of the website and issues or difficulties they encountered when using the *Chinese Digital Community* website.
7. Findings

7.1 Characteristics of the Interview Participants

Eleven Auckland interview participants of Chinese descent agreed to participate in the interview for the purpose of this research, allowing the researcher to investigate user experience with the Chinese Digital Community website.

7.2 Personal background

Based on findings in Figure 1, three originated from China (27%), one was from Indonesia (9%), four were New Zealanders of Chinese descent (37%), one from Malaysia (9%) and two originated from Singapore (18%). Three of the New Zealand Chinese participants are second or third generation Chinese. Four out of eleven participants were female and seven were males (Figure 2).

![Figure 1: Countries of origin for Auckland residents of Chinese descent](image)
Based on the findings (Figure 3), three participants (28%) were born in New Zealand and seven were born overseas. Three were born in China (27%), one was born in Malaysia, one from Indonesia and two (18%) participants were born in Singapore. One of the New Zealand Chinese participants was born in United Kingdom but grew up in New Zealand.
The oldest interview participant was above 61 years of age. Six of the interview participants were aged between 18 to 24 years old (Figure 4).
Most interview participants have lived in New Zealand for a long period of time and are able to speak and understand English, having the ability to express themselves and communicate with New Zealand locals. It had been noted that seven participants speak English as their main language at home. One participant speaks Indonesian as her mother tongue and three participants speak Mandarin as their main language. Based on the findings, the three Mandarin speakers were able to access the *Chinese Digital Community* website in both English and Chinese versions. It is also noted that seven interview participants were also able to speak Chinese dialects with their family and friends.

<table>
<thead>
<tr>
<th>Main languages</th>
<th>Number of participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>7</td>
</tr>
<tr>
<td>Mandarin</td>
<td>3</td>
</tr>
<tr>
<td>Indonesian</td>
<td>1</td>
</tr>
<tr>
<td>Chinese dialects (e.g. Cantonese, Hokkien, etc)</td>
<td>7</td>
</tr>
</tbody>
</table>

*Figure 5: Main languages spoken by interview participants*

The findings in *Figure 6* shows that 3 participants who are New Zealand Chinese are monolingual which means they only speak English as their main language. As a result, the 3 participants could only access information on the website in English. 2 participants are bilingual, having the ability to speak two languages. It is also noted that 6 participants have the ability to speak more than two languages fluently including Chinese dialects.
Four participants (36%) stated they are New Zealand citizens, six (55%) said they are New Zealand permanent residents and one participant (9%) was a holder of New Zealand work visa.
Based on the findings from the interview (Figure 8), three participants are computer professionals, one is a church pastor, one is a retiree, one works as a freelancing landscape gardener and six of the participants are tertiary students.

<table>
<thead>
<tr>
<th>Occupation</th>
<th>Number of Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Retiree</td>
<td>1</td>
</tr>
<tr>
<td>Computer professionals</td>
<td>3</td>
</tr>
<tr>
<td>Non-computer professionals</td>
<td>2</td>
</tr>
<tr>
<td>Tertiary students</td>
<td>5</td>
</tr>
</tbody>
</table>

*Figure 8: Interview participants’ occupations*

**7.3 Participants' Internet use**

Based on the findings, all 11 participants are regular users of the Internet where they can access information online using desktop computers and other devices such as smartphones and tablets.

*Figure 9: Devices used mostly to access the Internet*
It is noted that the 11 participants use the Internet for study, work and leisure purposes such as social media, entertainment and keeping in contact with family and friends living overseas. In Figure 10, most participants use the Internet to access Facebook and other social media.

![Participants' activities on the Internet](image)

*Figure 10: Participants’ activities on the Internet*

It is noted that one participant rated his ability to use the Internet on a scale of 5. 5 participants have rated their ability to use the Internet followed 3 participants rating their ability as 9 and 2 participants rating their ability as 7 and 10 respectively (*Figure 11*). The findings show the participants are confident users of the Internet.
7.4 Use and access of the *Chinese Digital Community* website

7.4.1 Main reasons for accessing the website

Ippoliti (2011) writes online users browse an online cultural resource to access information on cultural heritage for educational and leisurely purposes. In the findings, Participant A, a male aged between 56 to 60 years of age, and Participant G, stated the main reasons for accessing the website is because of their interest towards Chinese heritage in New Zealand. Participant E, a male in his early forties, said he heard about the website from an acquaintance and would like to see “what is its content and what kind of website it is”. Participant B, a male aged between 18 to 24 years of age, said he was curious to find out what kind of resources are featured on the website. Participant F, a female aged between 18 to 24 years of age, stated she wanted to find out whether the websites features current events and Chinese-related venues in Auckland such as restaurants. The other participants have stated their interest to find out what role does the *Chinese Digital Community*
website have to the Chinese community of New Zealand including newly arrived immigrants. Based on the findings, the older participants such as Participants A and E, accessed the website to read resources on genealogy and history of the Chinese community in New Zealand. Younger participants such as Participants B and F tend to access the website to find out about current events and interesting places such as festivals, social gatherings and Chinese restaurants. The possible reasons why younger participants are likely to access the Chinese Digital Community website for information on Auckland venues and festivals frequented by the Chinese community is to socialise with other people from the Chinese community and to feel comfortable with the environment they are familiar with such as Chinese cuisine, Chinese music and activities related to Chinese festivals.

7.42 Devices used to access the Chinese Digital Community website

All participants accessed the website at home using various devices. 3 out of 11 participants used more than one device to access the website, for example, Participant C, a female in her forties, stated she used a desktop computer, iPad and an Android phone to access the Chinese Digital Community website. Participant J, a female aged between 18 to 24 years old, used her smartphone to access the website. Participant C added that she wanted find out whether she is able to access information online using mobile devices if she is not using a desktop computer at home. Both Participants F and G, females aged between 18 to 24 years old, used their iPhones and laptops to access the website at home. Participant K, a female between 25 to 30 years of age said she used a laptop instead of her smartphone because “it is more comfortable” and easier for her to access the website online. Participant E, a male states he used his desktop computer to access the website.
Both participants B and Participant I, a male aged over 61 years of age, said they used their laptop to access the website. Although participants A, B, E, H, I and K are smartphone users, they stated they used a desktop computer or laptop to access the website. The possible reasons why they opted not to use mobile devices are the website may not be designed to be mobile device-friendly and its content is likely to be not supported on most mobile devices (Lobo et al., 2011).

7.43 Strengths of the Chinese Digital Community website as an online resource

Participant F, a female aged between 18 to 24 years old, states the strength of the Chinese Digital Community website is it is a well organised and informative website for the Chinese community because it provides information about Chinese culture and Chinese festivals and events in Auckland. Participant K said the website “has everything” a person of Chinese descent is able to search online such as information about Chinese customs and food. Participant D, a male between early to mid-twenties, said he likes the website for featuring historical resources and “stories that I have never heard of before I checked the website” that he may not be able to find in the local Auckland library. Participant G said the website “seems to be a great archive” that she described as having a lot of information about the history and culture of the Chinese community in New Zealand.

7.44 Issues with the Chinese Digital Community website

Although the interview participants have provided different answers relating to the strengths of the Chinese Digital Community website, some participants have stated they had encountered issues and difficulties with use and access of the website.
Language barriers and lack of appropriate online technologies can hinder users from accessing an online resource (Higgins, 2013). Participant K stated the lack of pictures on the website made it difficult for her, as an individual who is not fully familiar with Chinese culture, to understand how a “mooncake would look like” despite having the information provided in text. Participant K also raised her concern towards the user-friendliness of the website which she feels it may be difficult for users with little or no computing skills to search for information online. Participant G said navigating the website “can be a bit tricky” for first-time users who are not familiar with the Chinese Digital Community website. Participant F said the website’s design layout “is boring” and “not user-friendly for mobile devices”, making it unappealing to younger Chinese residents like herself who mainly use tablets and smartphones to access information.

Although Participant C said she was able to access the website using both her desktop computer and iPad, she had difficulties accessing it through her smartphone. Participant I, a male participant who is above 61 years of age, stated some of the fonts of the website “are too big” on his computer screen, making the website look untidy and unappealing. Participant I’s statement on oversized fonts has proven that some online users age 60 and above do not experience visual problems when viewing a website that has fonts that are small or flashy layouts. Participant D stated he did not feel the website has sufficient information available in Chinese compared to the English version. Participant B raised the issue that the website lacks information for new Chinese residents about resettling in New Zealand and “legislations they have to abide to”.
Based on Participants F’s statement relating to the issue of accessing the website via mobile devices, the possible reason why the website is not considered as mobile-friendly because the website is likely to be “designed to be viewed on to a large flat-screen monitor” such as a desktop computer (Lobo, et al., 2011, p. 33). Therefore, Lobo et al. (2011) highlight the importance of designing additional or alternate versions of the website, allowing the website to be compatible with mobile devices. Barile (2011) adds cultural institutions should explore mobile device usage “as a way to connect” with users (p. 222).

7.45 Language issues encountered when accessing the website

Based on the findings, 3 participants who are fluent in both Mandarin and English accessed both Chinese and English versions of the website while 8 participants accessed the English version only. It is noted that the 8 participants are fluent only in English or are fluent in English, Chinese dialects and other languages. One of the reasons why participants who are Chinese dialect speakers tend to choose the English version of the website is because the Chinese version is only written using the standard Chinese writing that can be understood easily by both Mandarin and Cantonese speakers. Chinese dialect speakers may have possibly not learnt about standard Chinese writing system at school. It is also noted that younger interview participants who only speak English are unlikely to browse the Chinese version of the website due to their inability to read texts in Chinese. Based on the findings, 2 participants accessed the website more frequently in Chinese than in English possibly because of their familiarity with reading texts in Chinese and they were curious to find out whether the website has a lot of information in Chinese for acquaintances whose English is not their main language.
7.46 Overall satisfaction with the website

Lobo et al (2011) write how usability of an online resource can impact on user satisfaction. Usability of a website can impact on site loyalty among its users. Participant D said he is not quite satisfied with the Chinese Digital Community website because he felt it looked “old-fashioned”. Participant D also pointed out usability of the website would be an issue for older Chinese residents due to lack of updates and information, rendering the Chinese Digital Community website unappealing to older users whose English is not their main language.

Participant A is satisfied with the Chinese Digital Community website because of the website’s efforts in maintaining information on Chinese culture for the New Zealand public. Participant C is neither satisfied or nor dissatisfied with the website because she said it depends on the person’s interest, for example should the user have an interest in history, he is very likely to access information relating to Chinese history on the *Chinese Digital Community* website. Participant E said he is not sure whether to recommend the website to other online users. There is a possibility Participant E may be indicating the website requires improvements to become more user-friendly to online users who can only speak and read in Chinese.

Both Participants C and F’s said they were not quite satisfied with the website due to the difficulties they experienced when accessing it through a smartphone and an iPhone respectively. Participant F added that she would not recommend the website to other users. Participant H, a young male aged between 18 to 24 years of age, stated he is not sure whether to recommend the website to other users as he feels “people will not be willing or bothered” to access a website that resembles a library
database. He said the website layout should have a simple design to make it more appealing to online users.

7.47 Suggestions for improvements for the Chinese Digital Community website

It is crucial for libraries and cultural associations to recognise users’ needs and expectations when accessing an online resource for information on a community’s cultural heritage and history (Kiran & Singh, 2008). Recognition of users’ needs and expectation is likely to improve quality and usability of an online resource. Both Participants C and F suggested the website should improve on its interactive features in order to appeal to users of all ages. Participants D and F stated the website can appear interesting to younger users with an updated layout and use of more colours. Brady and Phillips (2003) highlight the importance of an aesthetically pleasing website that can appeal to users, creating user loyalty towards a website as an online resource.

Participant C said access of the website via mobile devices should be improved, making it accessible on a tablet or smartphone. Further evaluation and experiment can be conducted “to determine whether usability guidelines are appropriate” and fulfil the design of mobile web content to ensure its consistency in navigation and user-friendliness on mobile devices (Seong 2006, p. 6). Participant D said the Chinese version of the Chinese Digital Community website must be improved to become more comprehensive and informative for online users whose Chinese is their first language. He also suggested the website should incorporate a
Skykiwi.com forum link, allowing online users to discuss, chat and post latest information such as news and events.

Participant H suggested the website layout needs to be “given a modern touch without affecting the heritage look” to attract younger users. Participant I said the website should “do away with big fonts”. Participant K suggested each article about Chinese customs or artefacts should include a simple explanation for users who are not familiar with Chinese culture. Participant J suggested advertising should be used to promote the Chinese Digital Community website in order to attract a wider audience. Her statement highlights “the need for more promotion” of the website’s existence (Tammaro, 2008, p. 136).

7.48 The importance of the Chinese Digital Community website as an online resource for the Chinese community and the New Zealand public

Websites such as Chinese Canadian Stories and Tamata Toi re are examples of online resources that promote cultural heritage to users of Chinese and Maori descent respectively. Both websites preserve information relating to cultural heritage and history for future generations which Fitch (2013) describes as cultural repatriation. Participants A and I said the Chinese Digital Community website is very important as an online resource that helps to preserve and promote the history of Chinese New Zealanders for the New Zealand youth and future generations. Participant B stated the Chinese Digital Community website is important for the New Zealand public because “it educates the public” on Chinese culture. He added the website is important for Chinese residents to be informed about events such as the annual Lantern Festival in Auckland. Participant J said the website is important as
an online resource to make it easy for Chinese New Zealanders to find information about the history of the Chinese community in New Zealand. Participant K stated the website is informative for online users of Chinese descent who grow up with little or no exposure to Chinese culture. As an online resource for the Chinese community, the Chinese Digital Community website is concerned with “the preservation of knowledge and the celebration of identity and culture” (Ka’ai-Mahuta, 2012, p. 105).

7.49 Summary

Majority of the interview participants saw value in the website in online cultural engagement. However, they suggest the following improvements to enhance the website’s capability and value as an online resource

- Have more interactive features that would make the website look interesting and appealing to online users
- Include photos, videos or illustrations of Chinese culture-related items and make the website have less emphasis on text-only medium
- Create and include articles for new Chinese residents, who are also first-time users of the website, about resettling, networking and other immigration information in New Zealand
- Incorporate a forum or chat room to allow users to post updates and news, start discussions and chat with other online users
- Update the website’s layout to make it more colourful and up-to-date
- Create a mobile version of the website to allow content to be supported by both smartphones and tablets
- Create or translate more articles in Chinese for Chinese-speaking online users
• Have an up-to-date layout that can attract the younger generation
• Promote the Chinese Digital Community website using advertisements

The researcher, also a registered user of the Chinese Digital Community website, has had experience in contributing information by writing articles about Chinese customs. The research agrees with the study’s findings and recommends the following suggestions to improve the website's role in online cultural engagement and attracting users of all ages:

• Include an online section created for school-aged users to make learning about Chinese history and culture appealing
• Include a step-by-step guide online video in both English and Chinese for new users to teach them how to access and navigate the website
• Include more audio and video clips that introduce users to Chinese music, animation, documentaries and other features relating to Chinese culture
• Regular updates on the website about Chinese festivities, events and places frequented by the Chinese community such as shops and restaurants
• Include book and film reviews for users who are interested in Chinese literature (fiction and non-fiction), Chinese history, Chinese cuisine and Chinese pop culture
• Include music reviews for users who are interested in traditional and contemporary Chinese music
• Implement an online suggestion box to allow registered users to give feedback to the developers of the website
• Create an app for online users who access information via mobile devices “while actively moving or engaging in multiple tasks” (Aldrich, 2010, p. 5)

• Use social media such as Facebook and Twitter to promote the *Chinese Digital Community* website to the younger generation of the Chinese community.
8. Summary

8.1 Future research

This research aims to investigate user experience with the Chinese Digital Community website and users’ perspectives towards the website’s role as a promoter of Chinese heritage and culture awareness among the New Zealand public especially the Chinese community. Due to time restraints and other limitations, the research is limited to a small number of participants and some areas are not covered in the study. The following suggestions are offered for future research.

8.2 Wider geographical setting

As the research project was confined to a smaller number of interview participants where most of them are based in Central Auckland, a future study on the Chinese Digital Community website could be conducted by including interview participants living in North Shore, West Auckland and East Auckland areas. This would allow researchers to study different perspectives of Chinese residents towards the website as an online resource.

8.3 Use of Skype and other communicative technologies

Organising in-person interviews can sometimes be disadvantageous for both the researcher and the interviewee due to time constraints, distance and geography. The use of communicative technologies such as Skype and Google Hangouts is a viable alternative when time, geography and distance prevent the interviewer from conducting face-to-face interviews. Communicative technologies allow the researcher to organise an online interview to accommodate to the interview participants’ needs.
8.4 Inclusion of younger interview participants
The research project was confined to interview participants age at least 18 years of age. A future study of the Chinese Digital Community could include younger participants age between 13 to 17 years of age. The inclusion of younger interview participants can allow researchers to understand user experience through the perspectives of younger participants who are confident in using digital devices and are avid users of the Internet for seeking information for study, work and leisurely pursuits.

8.5 Increase the number of older interview participants
For the study, there were 4 interview participants who were above 30 years of age. It would be good to include more interview participants age 30 and above to find different perspectives towards user experience of the Chinese Digital Community website. The results would provide a more comprehensive understanding of older participants’ overall experience with the website in online cultural engagement and as an information hub on activities relating to the Chinese community.

8.6 Conduct a future study with both registered users and non-registered users of the Chinese Digital Community website
This study did not include any registered user of the website. It would be great to conduct a future study that includes both registered users and non-registered users of the website where the findings will provide a “more comprehensive understanding” of user experience with the website, allowing the researcher to gain a diverse range of participants’ perspectives towards the website in online cultural engagement and
what makes the website appealing to users as an online resource for the Chinese community (Wang, 2011, p.42).

8.7 Use of other qualitative research methods

To better understand user experience with the Chinese Digital Community website, researchers could include other qualitative research methods such as focus groups and diary studies. Like semi-structured interviews, focus groups concentrate on user perceptions towards an online resource’s structure and functionality (Kusonoki & Khoo, 2012). Diary studies allow users to record a collection of “naturalistic, longitudinal data” that might be overlooked during interviews and focus groups (Kusonoki & Khoo, 2012, p. 633).
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Appendix

Interview Questions

Part A: Personal Characteristics and Context

1. Are you a resident of Auckland?
2. What is your occupation?
3. What is your gender?
4. What is your age?
5. What are your main languages?

Part B: Internet use

1. On average, how many hours do you spend online every week?
2. What device(s) do you mostly use to access the Internet?
3. What do you use the Internet for?
4. On a scale between 1 to 10, how would you rate your ability to use the Internet?

Part C: Use and access of the Chinese Digital Community website (http://www.chinesecommunity.org.nz)

1. What are your main reasons for accessing the Chinese Digital Community website?
2. Which device did you use to access the Chinese Digital Community website?
3. From which location do you usually access the Chinese Digital Community website?
4. Do you find it easy to use the Chinese Digital Community website to find information?
5. What specific features of the Chinese Digital Community website do you enjoy? Why?

6. What are the strengths of the Chinese Digital Community website as an online resource?

7. Are there any specific features of the website you have difficulty and issues with? What are they? Why?

8. How satisfied are you with the Chinese Digital Community website as an online resource?

9. What improvements would you suggest for the Chinese Digital Community website?

10. How important do you think the Chinese Digital Community website as an online resource for you as a Chinese migrant/New Zealand-born Chinese and the New Zealand public?

11. Would you recommend the Chinese Digital Community website to family, friends and acquaintances?

12. Is there anything important to you as an online user that I have not asked you about? Any additional comments you wish to add?