Digital Literacy Programs for Coburg Neighborhood Houses

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Abstract

Our team worked with the Moreland City Council in Australia to create approachable learning programs for two neighborhood houses that target the older population in Coburg. The goal of these learning programs was to teach basic computer and technology skills that will assist people in communicating with family or friends, shopping and managing finances efficiently, or competing in the job market. From interviews with professionals, we concluded how to best develop learning programs appropriate for this group. Our team created several programs that teach communication through the use of the Internet and computers. We also developed tools for employees to further expand the neighborhood houses’ library of learning programs.
Acknowledgements

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Executive Summary

Background

In today’s world, technology is an integral part of our society. Computers have become a ubiquitous modern appliance. Individuals who lack the basic understanding of technologies can be faced with a variety of challenges. People who are unfamiliar with basic computer skills may often find themselves unable to easily communicate with family or friends, to shop and manage their finances efficiently, or to compete in the job market. The ability to use the Internet and software effectively is an extremely important skill to develop in order to take advantage of everything that today’s rapidly evolving world has to offer. Our group was assigned to assist a neighborhood house in Coburg (a suburb of Melbourne, Australia) by creating digital literacy programs. The population of Coburg that we worked with consisted of mainly older citizens who did not grow up using technology, or immigrants who have not used computers in their home countries. Both of these groups are target populations for the digital literacy programs that we were asked to create.

When a person lacks basic computer skills it can greatly affect their life. For many, the Internet is the only way to keep in contact with loved ones. If someone does not have basic computer skills they may be unable to keep in contact with family. Additionally, in the modern job market, having some sort of computer experience is expected, not merely desired. If a job seeker lacks such experience, they may be passed over for many job opportunities.

Methods

There is a pressing need for digital literacy among many of the residents of the Coburg Neighborhood. In order to address this issue, we created an approach to collecting and using information through the completion of the following objectives:
1. Discover who the residents of Coburg are and the challenges they face in becoming digitally literate
2. Determine the most effective way to teach digital literacy at the local community houses
3. Develop a method for instructing a digital literacy program
4. Design and test a pilot program
5. Analyze the results of the pilot program and adjust accordingly
We interviewed digital literacy instructors to better understand course structure as well as the demographics of local participants. We also interviewed prominent community leaders to discover what the community wanted to learn and the best ways to teach this material. Once we had a basic course structure, we were able to pick a specific topic (the video conference software Skype) and teach it to willing participants. After the lesson was over, we distributed evaluation forms and acquired feedback to refine the programs for the future.

Findings

We found that the primary group interested in learning computer skills at the Coburg neighborhood houses was people with little to no computer experience. This group consisted primarily of the elderly and immigrants. The skills they are looking for include a basic understanding of how to use computer hardware, the ability to navigate the Internet, and the ability to communicate with friends and family using tools like email and Skype. We also discovered that people interested in learning computer skills at a neighborhood house generally do not want to learn in a traditional classroom setting. They mostly prefer having the ability to learn at their own pace, as opposed to following the pace of an instructor. They also prefer being taught by someone they consider a peer, rather than being lectured to by an instructor. We found that using instructional documents and short videos were effective ways to teach learning programs in a way that appealed to the target population. These resources were distributed to pairs of students so each group could work at their own pace through the learning program. This also shifted the role of the instructor from being a lecturer and a source of information, to that of a facilitator and troubleshooter who could develop a closer relationship with the students as a peer.

Deliverables

After doing initial research about learning programs followed by testing at two neighborhood houses, we were able to improve upon the learning programs that our team developed. Upon learning the needs of the community, we developed several programs that could educate participants on various communication tools. The initial courses that we introduced were learning programs focusing on email, Skype, and Facebook; introducing participants to online communication and a way to stay connected with the world around them.
By using pictures and videos in the instructional material, participants could easily follow the learning programs at their own pace. However, software is constantly being updated, so eventually the videos and screenshots in the documents that we created will be out of date. To assure that these documents can easily be updated, we provided a separate set of documentation for neighborhood house employees describing how to create and edit documents and videos. These administrative tools will help insure that the neighborhood house programs can evolve at the same rate as the software. Furthermore, we developed an administrative tool that detailed our team’s method for designing new learning programs. This will allow the neighborhood house to expand their library of available courses as they get feedback and suggestions from the community.

While working with our neighborhood house, we encountered a lack of record keeping. As neighborhood houses transfer management, previous records may be lost or even removed from the property entirely. In order to mitigate any frustration upon changing management, we created a Dropbox account for the neighborhood house to encourage managing records online and saving documents to the cloud (networked data storage). Having records and programs kept in the cloud will prevent any data from being lost since multiple administrators will always have access. If an employee stops working at the neighborhood house, no information would be lost, since other employees would have access to those records. Therefore the neighborhood house can continue functioning without being set back when an administrative employee leaves.

**Recommendations**

We recommended that the neighborhood houses in the Moreland area continue to develop workshops using the methods we developed and the resources we have provided in order to respond to additional needs that we were unable to cover in our limited time. New workshops could cover topics such as online shopping or banking. The materials for the workshops we developed will also need to be edited if the software changes, resulting in different interfaces and/or new processes. In order to support this goal, we recommended that the materials be stored in a shared environment, so that multiple users will have the ability to edit and contribute. Dropbox and YouTube would be appropriate places to store this material, and YouTube would also provide a method of video distribution. The neighborhood houses also require technology capable of performing these tasks. For the Coburg house, this meant acquiring new hardware.
We recommend that the houses look into purchasing webcams for use with the Skype program. In addition, if new computers are required, the Banksia Gardens Community Center has computers available for a low cost. The house also needed to acquire software required to create instructional materials, as well as any software that may be required for future workshops. We recommend at least downloading Skype, a word processing software such as Microsoft Word, and video editing software so that new modules can be created. It would also be helpful to look into freeware such as Google’s suite of products. Finally, in order to ensure that the computers remain usable for everyone at the neighborhood house, we encouraged the house to develop an appropriate computer security system. We recommended the creation of separate administrator and general user accounts so only the administrator account would be allowed to approve and install new software. The general user account would be freely accessible, but the administrator account would be restricted to staff use only. This will provide a level of protection against malware and adware that would be inadvertently installed by inexperienced users.

Conclusions

Providing simple learning programs at local neighborhood houses is a small-scale accomplishment if viewed on its own. However, creating a framework to manage and produce new programs and providing infrastructure to manage documents will have a large impact. The method we have developed for creating these learning programs as well as the unique teaching style will, in turn, help with the creation of future programs at these neighborhood houses. This means that all of the modules will stay up-to-date and evolve as newer versions of software are released. These methods can be applied to more than one neighborhood house. All the instructional material, documents and videos, have been given to Moreland City Council as well as the network of neighborhood houses within the Moreland area with the goal that these tools will be further developed and improved. We hope that with such a vast network of individuals working on these learning programs, implementing these modules across Moreland’s neighborhood houses will positively affect countless communities. This teaching style and method of program creation is expandable and can be applied to any community’s specific needs. The material we provided can expand far beyond the realm of one or two neighborhood houses, and far beyond the area of Coburg.
Authorship

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Chapter 1: Introduction

In today’s world, technology is an integral part of our society. Individuals who lack the basic understanding of modern technology, such as computers, can be faced with a variety of challenges. People who are unfamiliar with basic computer skills may often find themselves unable to easily communicate with family or friends, to shop and manage their finances efficiently, or to compete in the job market. The ability to use the Internet and software effectively is an extremely important skill to develop in order to take advantage of everything that today’s rapidly evolving world has to offer.

The technological skills required to effectively and easily use the Internet, software, and computers are what comprise digital literacy. People familiar with these skills will be able to adapt to the rapid changes in technology, improving their quality of life. Our group was assigned to assist a neighborhood house in the neighborhood of Coburg, part of the city of Melbourne, by creating digital literacy programs. The population of Coburg we worked with consisted of mainly older citizens who did not grow up using technology, or immigrants who have not used computers in their home countries. As a result, both of these groups are target populations for the digital literacy programs that we were assigned to create.

We will be focused in Coburg, a subsection of the City of Moreland, which is part of Melbourne. Moreland City Council (MCC) understands that a lack in digital literacy is an important issue and has proposed programs at local community centers, called neighborhood houses, in order to provide assistance in learning those basic technological skills.

A major issue with the lack of basic technology skills is the resulting lack of higher quality job opportunities. Currently, two out of five people in Coburg live below the national poverty line, earning less than $400 a week, or $21,000 a year (MCC 2014). People need an access to higher wage jobs in order to lift themselves above the poverty line. Digital literacy, particularly Internet usage, can be an indicator for a successful, high-paying job. Studies show that Australians that make over $70,000 a year are 4.5 times more likely to use the Internet than those that make under $70,000 (Willis, 2006, 52). A vital step to obtaining higher paying jobs is for individuals to become familiar with basic technology and how it applies those skills in the workplace. With basic computer, Internet, and technology skills, the population of Coburg can then be more competitive candidates in the modern job market. Furthermore, these skills will
allow for easier communication through the different technological mediums.

Communication is important, and modern technology facilitates communication. Those who have family or friends that are long distances away can still communicate by using the Internet. Not all of technology is business related, and there are people wishing to learn more about digital literacy in a capacity that is unrelated to jobs. Programs such as Skype, Microsoft Word, or even a simple web browser are foreign to many people, even though others may take the use of these programs for granted. While learning these skills may pose a challenge, the benefits they afford often outweigh the effort invested.

The scope of our project was to develop a new method for teaching digital literacy that resulted in interesting, engaging, and approachable learning programs. We developed two types of programs utilizing this method to be taught at neighborhood houses in Coburg. The programs were designed to teach Coburg community members how to utilize basic digital technologies to communicate with family and friends. All of these programs that use the unique structure we developed can be applied to future programs created for the community. To complete our project, we began by developing a further understanding of the community in which we were working. We learned more about the residents we were assisting and the demographic of the neighborhood houses in Coburg, where we were based. Our team determined the topics people needed and wanted to learn with respect to digital literacy (fundamental knowledge of computers, internet, and software). After this research, we created a unique course structure as well as sample digital literacy courses to teach the Coburg residents. These learning programs taught residents how to better interact with technologies when trying to connect with their relatives over long distances. Next we implemented the learning methods in some of the local neighborhood houses. Finally, we analyzed the results of the program and, by compiling our data, we were able to provide the residents of Coburg with the skills and knowledge to effectively use computers, a variety of software, and navigate the Internet.

In this document we first delve into the demographics of Coburg as well as background information on the neighborhood houses. We also provide a complete definition of digital literacy and what it means to be digitally literate. Then, in Chapter 3 we discuss the overall goal of the project and objectives we needed to complete in order to achieve that goal. We then provide our methodology on how we gathered data to complete these objectives and develop a final course model. Next we provide our findings and the information gained from our methods.
Chapter 2: Background

Digital literacy (having a fundamental knowledge of computers and software) is an essential part of everyday life in the 21st century. Technology is intertwined in our society, constantly changing and rapidly evolving around us. Due to our immersion in technology, often we take for granted the large amount of technological skills we have developed over our lifetime. The use of programs such as Microsoft Word, the manipulation of pictures, and the navigation of websites are all common skills. Often, the underprivileged or elderly have not yet developed these skills. This lack of computer skills can limit their ability to compete in the job market, communicate with friends and family, and efficiently obtain new information. An introductory course on the use of technology could benefit either group, those seeking job skills or those trying to communicate with friends and family.

2.1: The Importance of Digital Literacy

As technology advances, a greater number of people and businesses become more and more dependent on computers and software for their day-to-day operations. Learning basic software skills (using a word processor) and hardware skills (knowing how to set up a workstation) are important skills for everybody to have and are highly sought after in potential employees. Furthermore, communication, handling finances, and learning are becoming more technology and Internet oriented within the workplace. Individuals in the workplace who struggle with understanding computers face increasing difficulty in communicating with coworkers. Managing financial accounts and acquiring new information as quickly as peers are useful skills in which to build confidence. Not only does this skillset apply to individuals who are in search of employment, but some of these computer skills are also useful for the elderly. Being able to communicate with friends and family, especially family members that live far away, is a primary computer skill to develop. Struggles with other Internet skills are particularly prevalent in the elderly population due to their lack of Internet access and use. In Australia, only 71% of people aged 55-64 accessed the Internet in 2010-2011, and only 37% of people 65 or older. This compares to 91% of people aged 15-54 years who accessed the Internet (ABS 2011). Another study, conducted by the National Seniors Productive Ageing Centre of Australia, also showed that the elderly are interested in learning to use these technologies and develop computer skills for Internet browsing and communicating with their friends and families. More than 65%
of elderly people express interest in using the Internet to communicate via services like Skype and Facebook, and 63% are interested in using the Internet to make inexpensive phone calls. Browsing for general information (71%), searching for timetables and maps (66%), and finding information on health topics (66%) are other popular topics of interest among the elderly (National Seniors Productive Ageing Centre 2011).

To remain competitive, job seekers must demonstrate their understanding of technology skills. White collar workers and managers are nearly three times more likely to use the Internet than the average working class person. This is increased even more with technical professionals, who use the Internet an average of nearly six times as much (Willis, 2006, 52). As times change, so does the skill set required to obtain a job. Reading, writing, and arithmetic were previously the most important skills to have in order to obtain a job. However, “these days there’s this fourth skill - computer education ... competent computer skills are critical to the future employment of today’s students” (Sefton-Green et al, 2009, 112). Unfortunately, some students do not have the luxury of learning these skills at home because they simply cannot afford computers. People who lack computer skills may be unable to obtain a job with sufficient pay to afford a computer, leaving their children without the opportunity to develop these skills at home. This pattern needs to be broken if progress is to be made. Our team focused on the area of Coburg which is located in the City of Moreland, a suburb of Melbourne, Australia shown in Figure 1. The city consists of several sub-sections, which are detailed below by Figure 2. We worked with the city’s local government, Moreland City Council (MCC), to assist in providing learning programs for this community.
Within the Moreland city area, there are a large number of individuals that explicitly express their need for help. More than 9000 residents, or 1 out of every 16 (6.25%), report that they need assistance in their day-to-day lives. This statistic does not account for individuals who require assistance because of low income (Australian Bureau of Statistics, 2013). When factoring in citizens in the Moreland City area needing aid due to low income, the total number of individuals requiring assistance increases dramatically. In Coburg alone, more than 38% of residents, nearly two of five citizens, have an annual income of less than $400 per week, or less than $21,000 per year, for an individual. The poverty line in Australia, as updated in March of 2014, is $412.24 for a single person (Melbourne Institute, 2014). This means more than one third of Coburg is below the poverty line. It is harder for individuals with low income to find suitable programs to advance their knowledge of technology because of program fees. In one survey, “Over 40% of participants identified ‘cost’ as a barrier” (National Seniors Productive Ageing Centre 2011). It is important to provide programs for individuals who express their inability to participate due to financial barriers.

Fortunately, through Moreland City Council’s programs, citizens that are actively engaged and eager to learn can do so effectively. The Australian government is eager to provide resources to expand digital literacy to those in need. It offers courses for children and adults to
learn more about themselves, the technology around them, and how technology affects their daily lives. One such course allows attendees to examine how both the individual and society as a whole are dependent on technology (Belshaw, 2012). Classes like this show how the government recognizes the impact that technology has on the country and the job market. A job seeker needs to develop technical skills in order to have a fighting chance in a competitive job market.

2.2: What is Digital Literacy

According to prominent social science researchers Eshet-Alkalai & Amichai-Hamburger, digital literacy can have a variety of different definitions covering a range of topics. In their article, digital literacy is broken down to five distinct skill sets:

- Photo-visual skills
- Reproduction skills
- Branching skills
- Information skills
- Socio-emotional skills

The photo-visual skill set means that a user is able to recognize different symbols that might appear on the screen. Furthermore, this means that someone with photo-visual skills will be able to look at a symbol or icon within a program and infer its meaning based on past programs they have used. A good example of this is being able to recognize the small floppy disk icon that appears in many programs as the save button. Being able to associate meanings with different symbols will make it much easier to utilize computer programs and new technologies in general.

Reproduction skills allow an individual to make new meanings by taking parts from a variety of works and recombining them into their own unique creation. “The modern digital technologies provide [people] with new possibilities for creating art and academic work by reproducing and editing texts, visuals, and audio pieces.” (Eshet-Alkalai & Amichai-Hamburger, 2004, 422). Reproduction skills allow an individual to make new meanings by taking parts from a variety of works and recombining them into their own unique creation. Reproduction of writing takes sentences and ideas from other written works in order to reorganize and reconstruct them into an entirely different piece to create new meaning. Reproduction of art takes existing art, visual or audible, editing it and manipulating it into a new and unique artistic production.
Branching skills is another important skill set that a person must master before they can be considered digitally literate. This skill set can be thought of as the ability to easily navigate a web page using hyperlinks or hypertext. “A hypertext system includes an interface which allows the user to select a node, read it, and move from there to one of the linked nodes” (Rouet, 1998, 4). Using hyperlinks and hypertext to navigate through modern online mediums is much different from reading through classical texts, where the content is presented in a linear fashion. Online databases and websites provide a lot of freedom to readers, making it easy to move quickly from place to place. If an individual is unfamiliar with this structure, it is easy to get lost. To truly become branching literate, one must learn to browse through a multimedia environment without becoming disoriented or going astray.

“The Web is undoubtedly the largest information repository known to man” (Levene, 2010, 10). To be able to access all this knowledge a user must be able to effectively use their information skills. Search engines are the most popular way to acquire information online and can come in the form of independent websites such as Google, which search the entire web, or within particular websites which only search for content contained in the website itself (Fallows, 2008). Often when using search tools, people have trouble distilling their question into the right keywords and consequently end up with very limited results or very broad results. Simply finding information is not the only important part of the information skill set; one must be able to sort through it as well. Someone who is digitally literate will likely have a greater ability “to assess information by sorting out subjective, biased, or even false information” (Eshet-Alkalai & Amichai-Hamburger, 2004, 422). After executing a search, the engine will give you results from millions of online webpages. It is important to have the ability to then select the relevant and safe web pages.

The last skill set, Socio-emotional literacy, involves digital communication and social media. Digital communication can come in the form of “knowledge-sharing groups, discussion groups, knowledge communities, chat rooms, and many other forms of collaborative learning” (Eshet-Alkalai & Amichai-Hamburger, 2004, 423). Social media shares similar features to these sites, but social networking allows for more self-disclosure than the knowledge communities (Kaplan, 2010, 63). By utilizing these websites and tools, users can create an online profile that can be seen by the thousands of other people and potential employers on the Web. This in itself could be a challenge. It is important that users know how to properly portray themselves online.
so that these potential employers do not pass over them. Users will also need the ability “to identify pretentious people in chat rooms and avoid Internet traps such as a hoax and malicious Internet viruses” (Eshet-Alkalai & Amichai-Hamburger, 2004, 423). If one cannot identify these potential dangers, then it will be very difficult to navigate the vast sea of information known as the Internet.

2.3: Digital Literacy in the Home

Technology, computers, and the Internet are becoming integral parts of people’s lives both in the workplace and at home. There are many individuals who would like to become more familiar in personal subjects of interest. One easy way to do this is through digital technology and the Internet. When a person can successfully research a subject of interest or contact family and friends by using a computer, it will help them build confidence in themselves and their ability to use these technologies. Furthering their confidence in digital literacy will allow the user to feel more comfortable when using different online resources and technological mediums. While using technology to help with job security, “one of the few Australian studies to use a multivariate approach to assess Internet use found education to be the most important influence, followed by income” (Lloyd and Hellwig, 2000). Individuals are more driven by their desire to learn than their desire to increase their income, regardless of age or occupation.

A large group in Australia who currently lack these skills are the elderly. Some potential reasons for this include, “resistance to change by older age groups, together with the difficulties in learning new skills” (Willis and Tranter, 2006, 55). Older populations have been relatively inhibited in the adoption of the Internet. According to Willis and Tranter (2006, 50), “those in the under-30s age group are still over five times as likely to use the Internet than those aged over 50.” Bridging this gap will allow the elderly to feel more comfortable when navigating the Internet for personal interests. Digitally illiteracy does not only affect the elderly. For other individuals, barriers such as income and education remain (Willis and Tranter, 2006). These barriers can make it difficult to further their knowledge in digital literacy, causing them to fall behind in other areas of their life such as the job market.
2.4: Digital Literacy in the Workplace

With all the software tools that companies use today, an established working knowledge of appropriate technology is a highly sought after trait. New employees who already have the required skills are more appealing because they can save a company considerable amounts of money in training. Ever since 1994, commercial companies backed by the Australian government have encouraged individuals to “get ahead’ and to ‘keep up’ with the information and communication requirements of contemporary society” (Sefton-Green et al, 2009, 111). Staying ahead of the curve is very important in today’s world, and the ability to have near constant contact with other people is a very attractive feature of modern technology and computers. News networks, web searches, and electronic mail are some of the many services that can be accessed via a computer, and proficiency in their use is a vital skill to have as a potential employee.

With so much work being outsourced, even basic technical skills are in demand. “Fewer companies will require employees with specialized technical knowledge, while the majority of companies will seek graduates with stronger generalist skills” (Pham, 1997, 151). This is good news for the average Australian, who most likely does not have (and cannot easily develop) strong technical skills such as programming or large-scale data analysis. Most of the work that needs to be done is on a smaller scale. Some areas, such as network management, electronic trading, multimedia presentation, online service systems, home entertainment, and information systems, do not require great depth in technical skill, but rather a simple understanding of digital technology. Many of the jobs mentioned above require only information, reproduction, photo-visual, or branching skills.

Even simple forms of digital literacy are highly valued skills to employers. Businesses highly value both the hard skills of being able to use computing technology and the soft skills of being able to acquire knowledge of new technologies (Pham, 1997). Soft skills, such as cooperation and capacity to learn new skills rank ahead of even basic decision making or problem solving (Pham, 1997). Since these skills are so important to employers, they must be taught to potential job seekers. Many people acquire technological skills naturally by growing up with computers. However, some lower income families are not fortunate enough to have access to a computer, and therefore do not have this luxury. Easily accessible and inexpensive programs must be established to teach these skills and provide access to new and existing technologies.
2.5: Neighborhood Houses

In order to aid citizens lacking in the skills defined by digital literacy, the Australian government sponsors programs designed for neighborhood houses. One of the things that neighborhood houses provide is help with the digital education people need in order to be more successful. The houses are places where people from a local neighborhood can gather to socialize, learn, get connected with others from the community, and engage in a variety of group activities. Through a range of programs, the neighborhood houses provide inexpensive or free opportunities that allow participants to receive instruction on topics such as technology, art and crafts, and community involvement (MCC – Neighborhood). Neighborhood houses are typically run by local nonprofit organizations. In Victoria, they receive some monetary support from the state government through the Neighborhood House Coordination Program (Victoria). Neighborhood houses are invaluable for increasing social capital in the surrounding community. Social capital consists of the common social values, networks, and trust in communities and between individuals (Falk et al, 2000, IX). According to Falk et al (2000, V), “building social capital is not an incidental byproduct of the way [adult and community education] providers operate. Building social capital is the modus operandi of the sector”. Educational services can dramatically increase the socioeconomic status of the patrons. People who come to neighborhood houses acquire knowledge that leads to better careers while developing relationships with the local community, resulting in an overall improvement in quality of life (Falk et al, 2000, 32-36).

2.6: Demographics and Challenges

To understand how educational programs can better aid the community, one must further understand the people that they will assist. Analyzing the demographics of this area gives insight into why and how such a large community has been set back when it comes to digital literacy. Compared to the rest of Moreland, the Coburg area has a larger percentage of residents between the ages of 35 and 49. Coburg also has a smaller percentage of seniors, residents over the age of 60, than Moreland as a whole. Seniors comprise 17% of Coburg’s population (MCC Profile.id 2013). However, the elderly population who frequent the neighborhood house, is still very important and warrants a type of learning literacy program to provide education for computer skills. It is important that their challenges are taken into consideration since this group has particularly low rates of digital literacy. Some main barriers to digital literacy among the elderly
include “lack of knowledge and skills, confusion about the technology, and concerns about security and viruses” (National Seniors Productive Ageing Centre, 2011).

Language barriers are a challenge to overcome when learning basic technology skills. Among the citizens of Coburg, more than 60% were born in Australia, while the remaining 40% were born abroad in countries such as Italy, Greece, Lebanon, United Kingdom, India, New Zealand, China, Turkey, Nepal, and Malaysia (MCC, 2014). This results in a very diverse community. While 54% of residents only speak English at home, the other 46% speak languages such as Italian, Greek, Arabic, Turkish, Mandarin, Nepali, Spanish, Vietnamese, Cantonese, Urdu, and Hindi (MCC, 2014). Language barriers are a challenge to overcome when learning basic technology skills. Thus, finding programs available at neighborhood houses that are offered in foreign languages will be a difficult, yet an important, challenge to confront.

When it comes to education, the people of Coburg have a higher level of education, based on percentage, than the rest of Moreland City. A slightly higher percent of Coburg residents have earned a Bachelor degree or higher in comparison to Moreland (2.5% increase). Despite the fact that nearly 30% of Coburg residents have earned an advanced degree, 42% of Coburg’s citizens do not have any university qualifications or trade certificates (MCC Profile.id, 2011). Therefore, a large percentage of the residents do not have the proper qualifications to be competitive in the job market, which reduces their chances of improving their quality of life through financial means.

In a comparison of Moreland City with the rest of Melbourne, 6% of Moreland City residents active in the workforce are currently working in “Professional, Scientific and Technical Services,” which is nearly 40% less than Melbourne’s professional workforce (10%) (MCC Economy.id, 2011). This shows that the citizens of Coburg are not proportionally filling occupations that require advanced knowledge in basic technology. Increasing the residents skill set to include basic digital literacy can greatly improve their chances of obtaining an occupation within the professional and technical field. Understanding the people that these neighborhood houses are attempting to assist provides great insight into the type of programs that should be added in order to best help those residents.

The residents of Coburg encounter a wide variety of different problems in their daily lives. From 2012 to 2013, the unemployment rate in the Moreland City area has increased from 4% to just over 6% (MCC Economy.id, 2013). Having certain job skills will certainly increase an
individual’s marketability within the workforce. According to MCC, residents of Coburg need assistance when it comes to understanding and using newer technologies effectively, which will allow them to thrive in the business world. Neighborhood houses have offered programs in the past to instruct citizens in computer and technology skills. If the local population is able to take advantage of these programs, the participants will gain the confidence and skills to move up in a competitive, technology based job market. However, as presented by statistics, unemployment has increased and residents are not seeking jobs in the “Professional, Scientific and Technical Services” (MCC Economy.id, 2011).

2.7: Moreland City Council

There are already programs made available at the neighborhood houses in order to help those in need. The Moreland City Council is very conscious of their citizens and desire to assist them in any manner possible. To help aid these citizens through difficult times and to assist them in becoming more self-sufficient, the Moreland City Council has arranged these neighborhood houses to provide programs covering a wide variety of topics to further educate those in need. Classes provided range from learning English or Italian, programs in computer skills, and programs in art and music (Robinson Reserve Neighborhood House, 2014). These classes allow for opportunities for the community members to meet and interact, participate in a fun activity at a reasonable cost, and some programs will help people better their chances in the job market. If residents of Coburg take advantage of the opportunities provided by the neighborhood houses, they can begin to advance in the job market and better their quality of life.

In a constant effort to better the quality of its citizens’ lives, the Moreland City Council (MCC) is a local city government whose stated purpose is to “care for and meet the needs of [their] community in a sustainable way” (MCC - service charter). The council exists to improve the health, safety, and education of the people of Moreland, provide access to useful and aesthetically pleasing public spaces, make the city environmentally sustainable, and grow the local economy. According to the council’s five year plan, “Council’s vision for the city is that, by 2017, a sustainable Moreland will have a more resilient community, more attractive, accessible and safe places, a stronger local economy and services that meet the needs of [the] growing community” (MCC – 5 year plan). In our project, we will be supporting the council’s
stated goal to “Support libraries and community facilities, such as neighbourhood houses, to facilitate access to a range of services and programs that promote social connectedness” (MCC – 5 year plan). We will be working with two neighborhood houses that the council is starting in the community. Our work will be to design several effective and approachable programs that will help improve social interaction and sense of community through teaching technology and computer skills. Digital literacy programs are not currently available at the target Coburg neighborhood houses. Our task will be to design, test, and improve new programs for the neighborhood houses. In the following chapter our team will detail how we plan to achieve this goal.
Chapter 3: Methods

The goal of our project was to assist Moreland City Council (MCC) in reopening two neighborhood houses in Coburg by creating approachable and inexpensive digital literacy learning programs. These programs will attract people to the neighborhood houses and improve their quality of life by helping those who take them gain exposure to common software programs and improve their technological and computer skills. We achieved this goal through the completion of the following objectives:

1. Discover who the Coburg residents are and the challenges they face in becoming digitally literate.
2. Determine the most effective way to teach digital literacy at the local community houses.
3. Develop a method for instructing a digital literacy program
4. Design and test a pilot program
5. Analyze the results of the pilot program and adjust accordingly

The data that our team collected includes a variety of information ranging from the challenges of learning digital literacy (section 3.1) to the best ways to overcome these challenges (section 3.2). We developed a method of instruction that meets the needs of the community (section 3.3). After designing and test a learning program using our instructional method (section 3.4), we analyzed the effectiveness and revised it for future use in the community houses (section 3.5). The challenges we faced while collecting data are also discussed (section 3.6)

3.1 Objective 1: Discover the challenges of learning digital literacy

The reason that new programs were required was due to the lack of digital literacy in the Coburg area as specified by Moreland City Council (MCC). It was important to gather data on the difficulties that members of the community face regarding technology in order to develop effective programs for the varying needs of the residents. Identifying these challenges helped us to determine whether the learning programs needed to focus on hardware or software as well as the skill level of our target audience. Collecting demographic information also allowed us to determine what equipment needed to be ordered should participants not have frequent access to a computer. In order to obtain this information, we interviewed several local professionals and community leaders. We interviewed Bruce Mowson, Joe Crawshaw, Greg Thorpe, Jaime de
Loma, Mairi Rowen, and Mel Alexander. Bruce is a digital literacy instructor who operates out of the Brunswick library. Joe and Greg teach certified digital literacy programs at the Brunswick and Robinson Reserve Neighbourhood Houses, respectively. Jaime is the manager of Banksia Gardens Community Center, and Mel and Mairi are community leaders who formerly served on executive boards of neighborhood houses.

To obtain this information, we conducted semi-structured interviews. This allowed us to ask clarifying and probing questions when necessary, which gave us a better understanding of the information each interviewee had provided. Interviewing experts allowed us to collect data more efficiently, relying on knowledge they had already acquired instead of trying to gather the information ourselves through surveys. We were informed that surveys would likely be unsuccessful due to a low response rate. We were also discouraged from using surveys due to the neighborhood houses not yet being open to the public.

By interviewing these individuals, we gained insight into the people who make up the community and the challenges they face when it comes to basic computer skills. These questions helped our team focus on the topics participants desired to learn about. The questions asked of the digital literacy instructors are found in Appendix A. When we spoke to Mel Alexander and Mairi Rowen about the needs of the community in regard to computers and digital literacy, we received similar responses. This enhanced credibility because they were not instructors in the field. Our questions for them can be found in Appendix B.

We also obtained information from our sponsors Paula Jorgensen, Natasha Coleman, and Janell Quinsee. These women are employees of MCC in the Community Development branch, working on the neighborhood house program. Because they are so involved with the community and other neighborhood houses, they are aware of the many challenges when developing new learning programs. The information gathered from this group was obtained from weekly discussions regarding the progress of the project.

3.2 Objective 2: Determine the most effective way to teach digital literacy

In order to provide the most effective programs to the local community, we needed to determine what information to teach and how to teach it. Our interviews with Bruce Mowson, Joe Crawshaw, Greg Thorpe, and Jaime de Loma, introduced in the previous section, were critical to this understanding.
These interviews provided us with information on what types of information the local people sought out in digital literacy courses, what teaching methods were most effective, and what skills would most improve the lives of the members of the community. This information allowed us to determine the most effective way to teach our workshops and ultimately guided us in creating our program structure. Interview questions that provided information for Objective 2 are located in Appendices A and B. The skills specified by the answers to these questions gave our team insight into what community members in the Coburg area want and need to learn. This allowed the workshops to be tailored to improving the participants’ lives in the most effective manner.

3.3 Objective 3: Develop a method for instructing a digital literacy program

Developing a unique teaching method was the crux of our project. This unique method would serve as the foundation for all of our courses and programs as it will also be applied to future courses. To further understand the material that comprises digital literacy courses, the team interviewed instructors with experience in creating and teaching digital literacy programs. The interviews conducted with Bruce Mowson, Joe Crawshaw, Jaime de Loma, and Greg Thorpe (all introduced in Objective 1) provided invaluable information for developing our method of instruction. We asked them about what worked well and what did not. Interview questions that provided information for Objective 3 are located in Appendix A and B. In addition to conducting interviews, we also researched courses available to the public through the local libraries. We researched courses already established at other neighborhood houses in Moreland as well as other resources such as digital literacy courses available online. To decide which types of courses to research, we used information we gained from digital literacy instructors (Bruce, Joe, Greg, Jaime) as well as influential community figures (Paula, Mel, Mairi) about what the houses needed and what was lacking in similar programs offered elsewhere.

3.4 Objective 4: Design and implement a pilot program

Using the data collected from the interviews discussed in Objective 2, we created an initial pilot program and tested it at Fawkner Community House. The group at Fawkner consisted of six individuals between the ages of 50 and 80. During the pilot course, we used the newly developed instructional method to teach one of the skills identified as important through
our interviews: communicating with friends and family. For the pilot, we developed a workshop that taught Skype. After improving our workshop based on feedback from the first pilot test, we conducted a second pilot test at the Glenroy Community Learning Centre. The group at Glenroy was a five-person class of students learning to speak English with students between the ages of 65 and 85. Each learning program pilot test was led by one of our team members, while others acted as tutors to help the participants as questions arose. The final team member acted as an observer to record notes throughout the learning program. During the program, participants were grouped in pairs to encourage social connections and building bonds amongst neighborhood house visitors. This allowed participants to help each other and also meet other community members. The initial pilot test was run for an hour. We discovered that this was not enough time to teach and evaluate, and increased the time to 90 minutes for the second pilot test.

Through the implementation of these pilot programs, we observed firsthand and took notes on how the participants reacted to course material and instruction. Having multiple observers was useful since each observer would gather different information based on their own observations. The courses were then fine-tuned by compiling observation data and analyzing information collected at the end of the initial pilot programs. The data provided through our analysis of the programs, next in Objective 5, could then be used to rework and improve the same program before testing it further. This created a cycle between implementation and analysis of the programs, which fueled a significant portion of our project.

3.5 Objective 5: Analyze the pilot program

Finally, we analyzed our learning program through two separate tests. Information gained from analyzing the successes and shortcomings of the learning program allowed us to make meaningful changes. After each test, we changed the learning programs using feedback and recommendations from participants to improve the structure, content, and simplicity of future learning programs. The effectiveness of our course was assessed by the amount that participants learned and found helpful. In order to measure this, we used written surveys and small group discussions. Post-course surveys helped us understand how effective the participants felt the course was. By making them anonymous, we encouraged the respondents to give honest information without worrying about their answers being connected to them. Surveys also provided us with the opportunity to ask the participants which elements of the workshop were
most helpful and which could be improved. Although the surveys were anonymous we found that many of the respondents were too polite to give negative criticism, this made our observations throughout the course time more important. General course evaluation questions that provided information for objective 5 are located in Appendix C. A group discussion was held at the end of the course to give the participants an opportunity to speak directly with us, as well as with one another to discuss what they liked and did not like about the course and its structure.

3.6 Challenges

During the completion of our objectives, we overcame several challenges. The semi-structured interviews we conducted with key informants provided useful information due to their open ended answers that revolved around a specific line of questions, but this sometimes led to superfluous information. We had also planned to send out surveys to residents in the area around the neighborhood houses we were originally assigned to work with directly. Unfortunately, the plan to open the houses was delayed several months, and our sponsor thought it would be best to establish the house before drawing attention to its future programs and facilities. As a result, we were forced to cancel the surveying process and obtain this information through other methods. Instead, the team interviewed key community figures and professional instructors with past experience teaching digital literacy to obtain similar information.

Some of the challenges we faced with the evaluation forms related to the willingness of participants and their ability to answer accurately. If the survey was made too long, or did not appear to be important, the participants did not wish to partake in the survey. Language barriers were also a problem. If the survey contained words or phrases unfamiliar to the participant, they could not properly answer the questions. This may have caused our participants to decline taking the survey, or to fill out the survey incorrectly, leading to inaccurate data. We had to spend extra time going through the responses to determine whether or not the collected data was valuable before we used it. In the next chapter we discuss our findings from the program.
Chapter 4: Findings

Through the completion of our project objectives outlined in Chapter 3, we made several key discoveries about who the potential learners were, what to teach them, and how to teach them. These discoveries are explored in the series of findings that make up this chapter of the report. These findings include: the target demographics for digital literacy programs, what types of programs interested these demographics, the learning styles preferred, and finally, how to cater to these learning styles. Next, we discuss the limitations that we discovered along the way. We will end with the final product we will provide to Moreland City Council (MCC) and with our recommendations for how to proceed.

When we first arrived at the neighborhood house in which we planned to work, we found that it had just been reopened by the Moreland City Council staff after 18 months of closure. The technology within the house was outdated, and there were very few records kept about past house activity. Most of the computers located at the house were locked and rendered unusable simply because passwords and other documentation had been lost. This made us realize that centralizing documentation and creating records was important. We would need to create a safety net, so that if a neighborhood house was to shut down for some reason or leadership changed, the programs and hardware could be easily recovered. All these events gave us the opportunity to be creative with the project’s direction and develop unique solution along the way as the situation changed.

Since the neighborhood house was not ready to be opened, we tested our learning programs at other neighborhood houses nearby. The learning program pilot tests occurred at Fawkner Community House and Glenroy Neighbourhood Community Learning Centre. While not being from the exact area in which we were working, the groups of students had a similar demographic to that of the Coburg neighborhood. We presented our proposed workshop methods, which are unique in that they utilize videos and documents as well as peer-to-peer learning. Testing the programs in separate locations proved that the programs we developed could be moved and set up in different locations easily while still being able to teach participants the course material. This process helped us come to several findings.
Finding 1: The target demographic for digital literacy seekers in the neighborhood house is people with little to no computer experience.

   According to the professionals we interviewed, most of the people who wish to improve their digital literacy skills are among the elderly. When we spoke to Bruce Mowson, a computer literacy instructor at a local library in Moreland, we discovered that his classes consisted of about 75% people over the age of sixty. We also learned that in his beginner computer class there were almost no participants under the age of forty. This was particularly useful information as it coincided with a statement from Paula Jorgenson, the Community Development Programs Coordinator at Moreland City Council (MCC), as she explained that the population around the neighborhood house was comprised mostly of elderly people. Bruce went on to explain that these beginner classes were designed to provide clear instruction to individuals who have little to no knowledge about computers. Therefore the structure of these classes were useful for immigrants who struggle with English as well as people seeking job skills who did not feel comfortable with the level of skill required for a certified course. According to Paula Jorgensen, “the reason they come in to the neighborhood house programs is because they don’t have the confidence and opportunity [to use computers]”. Through our interview with Jaime de Loma, Deputy CEO and Community Development Manager at Banksia Gardens Community Centre, we learned that individuals who suffered from language barriers tended to have a more difficult time remembering course material. Furthermore, he explained that these individuals frequent these programs in an effort to improve their quality of life. People who fit this demographic are generally interested in basic use of hardware and the Internet for a variety of tasks, but do not have proficiency in these areas. As a result, they do not know how to use the Internet to research new skills and require additional assistance.

Finding 2: Participants expressed interest in learning programs that primarily taught basic computer skills, such as hardware and browser usage, and communication skills through Skype or email.

   According to professionals we interviewed (Bruce Mowson, Joe Crawshaw, Greg Thorpe, Jaime de Loma), the most commonly desired uses for the Internet were for communication and for basic Internet searches. In a survey conducted by the National Seniors Productive Ageing Centre of Australia, more than 65% of elderly people expressed interest in
using the Internet to communicate via services like email and Facebook. The study also concluded that 63% of elderly people were interested in using the Internet to make inexpensive phone calls through programs like Skype. These survey results were further affirmed by Jaime who said “often they want to talk to family or friends who are not around, so quite a few people will say ‘I want to get on Skype’ and ‘I want to be able to send an email to my family.’” Through our team’s observation during the pilot programs, participants were excited to learn how to connect with family and friends through Skype. When asked about other topics of interest, the elderly in the study showed interest in browsing for general information (71%), searching for timetables and maps (66%), and finding information on health topics (66%) (National Seniors Productive Ageing Centre, 24, 2011). Using this information, the neighborhood house management can respond to it by creating new modules using the instructional method we developed, which is explained further in the deliverables section. The new modules can then be based on the needs expressed by the elderly, however this is also relevant to whoever wishes to take a course at the house.

**Finding 3: Older populations prefer peer-to-peer instruction and learning at their own pace over a traditional classroom setting, fostering the desired community connection of a neighborhood house.**

While there are computer classes already available at neighborhood houses and elsewhere, we found that many neighborhood house program participants (frequently including the elderly) were uncomfortable with traditional classroom settings. When interviewing Jaime, he explained that this traditional learning “can be terrifying to some people because it is basically a flashback to 20 years ago when they were having a horrible experience at school. If you put them with a teacher with a whiteboard they can’t learn anymore.” Additionally, when talking to Mairi Rowen, prior board member at the Newlands Neighbourhood House in Coburg, she said, “Classes are not good for older people as a whole because the person teaching knows everything and they start to teach too fast.” The alternative method we provided in the learning programs is more relaxed since it is self-paced and involved a partner with shared interest. This was in an effort to mitigate fear and encourage learning. Rather than having to keep up with or wait for an instructor, our research (evaluations and group talks) has shown that students prefer methods of learning where they can proceed at their own pace. This allows them to feel more comfortable
when learning new material and encourages further education. A study conducted by the National Seniors Productive Aging Centre showed that the elderly prefer learning from someone they consider a peer instead of learning in a classic classroom setting. One study participant expressed that they want “someone to explain the basics one-to-one using my computer then someone I can contact when I have a problem –a patient, long-suffering person who will try not to make me feel like an idiot” (National Seniors Productive Ageing Centre, 26, 2011). This information was further confirmed through our interview with Jaime who said that peer-to-peer learning was a useful teaching method that engages the community. This peer-to-peer style was also very useful in our pilot tests because it allowed non-native-English speakers to pair with each other and comfortably work through the program in their own language. Furthermore, the use of pairs also encouraged natural community connections by causing participants to interact with one another. When discussing this with Paula Jorgensen and Mel Alexander they agreed that these interactions are an important part of building the sense of community that is integral to a neighborhood house.

Finding 4: Instructional documents and short videos are an effective method in teaching learning programs, which allows groups to work at their own pace.

Through testing with two pilot groups at the Glenroy Neighbourhood Learning Center and Fawkner Community House, we found that instructional documents and videos can be used to effectively create an environment in which learners can proceed at their own pace. The learning program documentation must be kept simple and straightforward with clear step-by-step instructions. This provides groups, at any level, the opportunity to move through the program together at a pace that caters to their own ability. One study has shown that some people’s “concern about classes [was] that they may be too advanced or not [made] simple enough for an absolute beginner” (National Seniors Productive Ageing Centre, 26, 2011). Furthermore, the inclusion of videos as a second medium to help with the learning process within the groups “makes a huge amount of sense” (Jaime de Loma). We found that providing each group with their own set of instructional materials that spanned multiple forms of media allowed these groups to proceed at a pace they felt most comfortable with. When these methods were tested at Fawkner Community House, participants expressed that both the documentation and videos were simple to follow and easy to understand. When these styles of learning were paired with a tutor,
students felt comfortable with the material they had been learning.

Limitations

During this project we ran into a few challenges. One of the major challenges was the fact that the neighborhood house was not yet open when we arrived. This prevented us from interviewing and surveying the people that came into the neighborhood house. Additionally, we could not use the neighborhood house to test our learning programs, requiring us to go to other neighborhood houses and community centers. Having to frequently travel and not knowing the class demographics was definitely an obstacle.

Originally, we considered sending out surveys to be a major part of our discovery process. However, we were told that surveys would not be an effective way of gathering information from this neighborhood and were highly discouraged from doing so. We were also advised not to give out fliers or surveys that mentioned the neighborhood houses because they did not want to bring people into the neighborhood house before it was ready to be presented to the public. This could also lead people to believe that the house was open, when in fact it was not. Instead we interviewed a series of professionals and board members.

Our findings concerning the most effective way to make instructional materials were also limited by our relatively small number of test subjects. In total, we were only able to observe eleven participants across two sessions using the materials we developed. We were unable to run more than two pilot program trial sessions due to time restrictions and also because we had to schedule with other neighborhood houses during their existing computer class times. However, we were able to spend time talking with most participants and through our post-program discussion were able to get valuable individual feedback from them.

Deliverables

As part of developing our instructional method, we created materials for several different workshops including instruction on the use of email (specifically through the Gmail client), Skype, and Facebook. For each of these topics, we provided a step-by-step written instructional document for setting up an account and performing each of the most important tasks required to use the service. A sample learning program on Skype has been provided in Appendix D. Additionally, we provided instructional videos, which demonstrate the same material in a
different format. Incorporating both written instruction and videos allows participants to choose the learning style they find most effective. Learning program participants are intended to proceed through these materials in pairs, while an instructor serves as a facilitator to answer any questions the participants may have as they progress through the learning program. This method complements our modules and is an integral part of our program submission to Moreland City Council, because part of their mission is to build community connection.

In an effort to make a lasting impact, we not only created materials for three individual learning programs, but also researched and outlined the core idea and methodology behind their creation. In an effort to make a lasting impact, we created a separate set of instructional materials intended for neighborhood house coordinators, employees, and volunteers so that the modules can be updated as needed and expanded upon. This set of instructional materials, or administrative tools, assumes a higher level of digital literacy. The tools provide instructions for how to create and edit instructional materials for workshops like the ones we developed, as well as manage social media. This way, the neighborhood houses will be able to offer new workshops similar to the ones we developed on course topics we could not prepare or had even consider. A sample administrative tool entitled “Creating Instructional Documents” has been provided in Appendix E. They will also be prepared to edit the materials that we left them, if these materials should become outdated as technology continues to update and change.

After realizing the benefits of increasing the pool of creators and consumers of our material, we began looking for ways to expand this pool even further. To do this, we turned to the Internet and the power of cloud computing. We set up a YouTube channel to serve as a repository for instructional videos and a Dropbox account to serve as a repository for instructional documents. The YouTube account provides the opportunity for anyone with access to the Internet the ability to use the new material to learn new things as well as create new instructions for others. We provided the access-information for these accounts to the network of neighborhood houses, so that all of the neighborhood houses within Moreland could have easy access to all the learning programs and tools we prepared. In doing so, we expanded the pool of potential producers of instructional material to include the employees of all 20 neighborhood houses that are a member of the Hume and Moreland Neighbourhood House Network. Having these records and programs available in the cloud will prevent the information from being lost if management changes. If management does change, the new employees can easily access all
material at a centralized location allowing the neighborhood house to continue to operate 
smoothly.

To enhance the community aspect with the neighborhood house, we designed a Facebook 
page and basic website for the employees to utilize. Administrative tools to further understand 
how to run a Facebook page were created to provide management assistance. Utilizing this 
Facebook page for the neighborhood house give them the ability to send out newsletters and 
posts over the Internet, greatly expanding their outreach as well as gaining a source of rapid 
feedback. Using this feedback, the neighborhood house will be able to make the appropriate 
changes to better assist the local community. Not only is this feedback useful to enrich the 
community aspect of the neighborhood houses, but it also provides insight into new learning 
course topics. Therefore the neighborhood house can further expand the courses available to the 
community.

These deliverables create a cycle that will keep the neighborhood house fueled with new 
and engaging material. The current learning programs will create initial interest in the 
community and draw participants into the house. When paired with the Facebook page and 
announcements, the neighborhood house’s community will also expand. This will generate more 
feedback from learning program participants and other members of the community. This will 
allow the employees of the neighborhood house to assess the current programs as well as look 
into new topics suggested by the local population. Using the method and administrator tools we 
provided, the neighborhood house can easily create new learning programs to keep the public 
interested. This cycle will then repeat and allow the neighborhood house to thrive and build a 
confident, sustainable, and engaging environment for the community to turn to.
Chapter 5: Recommendations

Based on the work and research that we have done, we have the following recommendations for Moreland City Council regarding the Coburg neighborhood houses. Our recommendations stem from the themes of sustainability, community engagement, and constant improvement.

Our first recommendation is to use the method we designed to easily develop new programs at the house based on the community feedback. We are confident that using this method will help create the most effective learning programs. Having multiple sources of information (written handout, video, peer-to-peer learning, and an instructor) promotes multiple learning styles and allows each individual to be successful. We hope that in the future our instructions can be followed to create new programs based on the houses’ needs. For example, creating an administrative document to teach about promoting house events through the Facebook page would be beneficial for the houses. Understanding possible uses for the Facebook page as well as how to create promotional documents online would positively impact the outreach through the community.

Records should be stored online through Dropbox or a similar cloud storage system. This will prevent a large-scale loss of information like the one that occurred when the neighborhood houses in Coburg shut down. This repository could contain information like the passwords to the computers so that, in the event that a house shuts down or a key employee leaves, the next group of people that come in are not locked out. In the case where an employee is fired, the system’s security can easily be updated (change of passwords) to keep the neighborhood house online resources secure. Additionally it could be helpful to set up a YouTube channel that could contain all the instructional videos. This has a benefit of keeping all the videos stored online and allowing people the possibility of watching them when they are at home. Viewing the videos at home allows people to practice outside of classes and reinforces skills.

We recommend the current videos we have developed and all future videos be altered to provide instruction in native languages of community house participants. From the research we conducted while working with Moreland City council, interviews we conducted, and by testing these learning programs, we learned about certain needs of the community. Mairi Rowen also expressed that “we have so many immigrants from countries where they do not have
access to computers.” From that experience we realized their computer ability was very low, thus changing the audio track on instructional videos into different languages would be extremely beneficial to anyone who does not speak English as their primary language.

**We recommend that the neighborhood houses invest in a professional website design.** A well designed website makes it easy to find information and attract visitors to the site and ultimately to the neighborhood house itself. Once this website up and running, it is important to have staff members capable of managing it. We recommend designing an administrative learning program based on the professional website design tool that the house decides to invest in. This will give any employee with the desire to help manage the website the tools to teach themselves about moderating the website.

**At the East Coburg House on Nicholson Street, we recommend procuring ten computers, which would provide an adequate number of machines in good working order.** After setting up the house’s technology and inspecting the current equipment, we developed a list of upgrades for the facility’s hardware and software. Highly discounted computers are available from Banksia Gardens Community Center courtesy of Jaime de Loma. These machines would be a great improvement on the current technology, allowing any learning program to be run with ease. New machines should at least have Windows 7 already installed as the operating system. If not, we strongly recommend installing Windows 7 since Windows XP is no longer supported by Microsoft and the learning programs we created are based on the Windows 7 operating system. We also recommend installing Microsoft Office on these machines since most learning programs will likely involve the use of this program set. There is also other free software that we recommend downloading on the house computers such as Skype and VSDC Free Video Editor.

**Furthermore, we recommend creating and administrative account and a guest account on the house computers.** This guest account will not be able to download any software or apps online. This will help to prevent malware on the computers and will bolster their performance and lifespan. We noticed that computers from other neighborhood houses without permissions restrictions had a variety of malware and adware that greatly inhibited even basic web browsing.
Chapter 6: Conclusion

Providing simple learning programs at local neighborhood houses is a small scale accomplishment if viewed on its own. However, creating a framework to manage and produce new programs and providing infrastructure to manage documents will have a large impact. The method we have developed for creating these learning programs as well as the unique teaching style will, in turn, help the creation of future programs at these neighborhood houses. This means that all of the modules will stay up-to-date and evolve as newer versions of software are released. These methods can be applied to more than one neighborhood house. All the instructional material, documents and videos, will be given to Moreland City Council as well as the network of neighborhood houses within the Moreland area with the goal that these tools will be further developed and improved. We hope that with such a vast network of individuals working on these learning programs, implementing these modules across Moreland’s neighborhood houses will positively affect countless communities. This teaching style and method of program creation is expandable and can be applied to any community’s specific needs. The material we provided can expand far beyond the realm of one or two neighborhood houses, and far beyond the area of Coburg.
References


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R. Mittermeir, ebrary Inc. Lecture Notes in Computer Science Contemporary (1997-present) 2005 From computer literacy to informatics fundamentals


Appendix A: For digital literacy instructors

(Bruce Mowson, Joe Crawshaw, Greg Thorpe, Jaime de Loma)

We are a group of students from Worcester Polytechnic Institute in Massachusetts, USA and are working with the Moreland City Council to improve the quality of life of its citizens by creating easy, approachable, and inexpensive digital literacy programs for use at the neighborhood houses. We would like to better understand how well the community understands basic technology skills, and how to effectively provide instruction in technology.

Your participation in this interview is completely voluntary and you may decline to answer at any time. No names or personal information will appear on questionnaires, project reports, or publications if you so desire.

Interview Questions for Objective 1:

1. What was the main demographic (approximate age) of course takers?
2. Do different demographics (age groups) tend towards different courses?
3. What are the most common demographics (age groups) for different courses?
4. Do you have many students who struggle with English? (ESL, immigrants)

Interview Questions for Objective 2:

1. What courses in digital literacy have you taught?
2. Are there any areas you wish you could cover but can not?
3. How did you teach your course (manuals, videos, peer to peer, tutors)?
4. What learning styles did you focus on?
5. Was the course online, in a classroom setting, etc?

Interview Questions for Objective 3:

1. What was the format of some courses? Single session, or recurring meetings?
2. How often did people meet to take the course?
3. How long did each individual meeting last?
4. Why was this particular structure chosen?
5. How many students would generally partake in your course?
6. How long did it take for someone to complete a course?
Appendix B: For Community Board Members

(Mel Alexander, Mairi Rowen)

(preamble)

**Interview Questions for Objective 1:**

1. What groups used to use the neighborhood house?
2. What are the demographics of the neighborhood surrounding the Newland house?
3. How would you promote/advertise this digital literacy program?

**Interview Questions for Objective 2:**

1. What were some of the programs the house offered?
2. What digital literacy class topics do you think would be most useful to the people in the community?

**Interview Questions for Objective 3:**

1. How were you involved at the neighborhood house before it shut down?
2. What is the most important benefit of digital literacy classes?
Appendix C: For participants in the pilot program

(preamble)

1. How much did you learn from the course?
   a) a lot    b) a fair amount    c) some    d) a little    e) none

2. How useful do you think the material you learned was and will be in your future?
   a) very    b) reasonably    c) somewhat    d) not especially    e) not at all

3. What was the most useful thing taught?

4. What was the least useful thing taught?

5. What was the easiest way to understand the instructions? Paper, video, peer-to-peer, combination of the above?

6. How easy was it to understand the video (circle one)?
   1 2 3 4 5 6 7 8 9 10
   (Hard to Understand) (Easy to Understand)

7. Was there a particular part of the video that confused you? What part?

8. What would make the video easier to understand?

9. How easy was it to understand the paper instructions (circle one)?
   1 2 3 4 5 6 7 8 9 10
   (Hard to Understand) (Easy to Understand)

10. Was there a particular part of the instructions that confused you? What part?

11. What would make the instructions easier to understand?

12. How many times did you need the instructor’s help (circle one)?
    1-3 times    4-6 times    7-9 times    10+ times

13. How helpful was the instructor?

14. How useful was having a partner?

15. Do you have any additional comments?
Appendix D: Skype Learning Program

Why Skype?

Skype is a wonderful program that can help connect you to friends and family no matter where they are in the world. Skype sends a live video of you to your friend’s computer and allows you to receive a live video of them on your own screen. This allows you to have a face to face conversation through the Internet and costs you nothing.

Downloading and installing Skype

**STEP 1:** Open up Internet Explorer and enter “www.skype.com” into the address bar. The following screen should look as such.

**STEP 2:** Click the “Download Skype” button in the middle of the page, or the “Get Skype” button in the upper right hand corner.
**STEP 3:** Click “Get Skype for Windows Desktop” and to being downloading the file.

**STEP 4:** Click the “Run” button to start the setup immediately.
STEP 5: Select "Yes" when you see this window to continue.

STEP 6: Choose your preferred language and uncheck the box beneath.

STEP 7: Click the "I agree -next" button located at the bottom right of this window to continue. The window should look as followed:

STEP 8: Uncheck the "Install Skype Click to Call" box and click “Continue".
STEP 9: Uncheck the “Make Bing my search engine” and “Make MSN my homepage” boxes and click “Continue”.

IMPORTANT: By unchecking these boxes, you are not changing any system preferences. If you are using Bing and have MSN as your homepage, this will not change. If you are using other search engines and have other home pages, they will not be changed by unchecking these boxes. However, if these boxes are not unchecked, then any search engine other than Bing, and any homepage other than MSN will be changed.
STEP 10: Skype will install and update. This may take a few minutes. The window you see should look like the one below.
Signing up for Skype

**STEP 1:** Click “Create Account” button. You will be directed to following webpage:

If you already have a Microsoft or Facebook account, you can simply sign in with those. If you do not have either of these click on the words “Create an Account”, please follow the instructions below.
**STEP 2:** Enter your First name, Last name, and email address in the appropriate locations. Repeat your email address where it is requested.

**STEP 3:** Fill out the “Profile Information”. If you do not wish to share your personal information, just fill out the “Country/Region” and the “Language” sections.
STEP 4: Choose your Skype Name. This “Skype Name” will be the name other users see.

STEP 5: Create your password. Repeat your password as instructed.

STEP 6: Fill out the remaining information on this page before clicking the green ‘I agree-Continue” button at the bottom left of your screen.
Logging into Skype and First time Set up

**STEP 1:** Double click the Skype icon on your desktop to start Skype.
Once you are logged in for the first time, Skype will ask you to do a few more things that are very important. Mainly setting up your microphone, camera, and your Skype profile.
STEP 4: Click “Continue” at the bottom right of your screen to move onto the next step.
STEP 5: Click “Continue” at the bottom right hand of your screen.

Skype will check your computer for a microphone and camera and adjust your settings.
Skype will direct you to adding a profile picture to your account. This will allow your friends and family on Skype to easily find you and add you to their contact list.

**STEP 6:** Click “Continue” located at the bottom right of your screen to move on to the next step of creating your profile picture OR click “Add later” to skip to the section called “Using Skype”.

![Setting up Skype Add a profile picture]

Your profile picture is how people will see you on Skype. It’s much easier for your friends, family and colleagues to find you when they can see your picture.

Add a profile picture so people find the right john.sample.smith.

You can easily update your picture later.
**STEP 7:** Click the bottom right hand button, “Take a picture”, to create a profile picture.

**STEP 8:** If you are not satisfied with your profile picture, you can click the “Try again” button located at the bottom right of the same screen. OR, if you are happy with your photograph, you can click “Use this picture” and continue.
After you have created this profile picture, you will have successfully set up your profile and be directed to the main Skype screen, or the “Home” page. This screen is where you will navigate to through your contacts to make video or voice calls over Skype to your friends and family.
Using Skype

In order to start using Skype, you need have someone to talk to. It is time to connect with your friends on Skype.

**STEP 1:** Type in the Skype username of the individual you want to add. Click the “Search” bar next to the blue magnify glass, type their Skype Name, and press the enter key or click “Search Skype” button. Follow the example below.
When you search through Skype, you may find more than one person with the name you are looking for. It is important to find the correct individual before you add them as a contact.

**STEP 2:** Select the individual you want to add to learn more about them. This will let you know they are based on their profile picture, country, and full name.
**STEP 3:** Once you have verified this person as your family or friend, just click on their name and you will see the screen below. This is where you can add them to your contacts.
**STEP 4:** Click the “Add to Contacts” button in the middle of the screen. A small window will drop down and send a message to that person. The picture below shows the screen you should see.

By clicking the “Send” button, your message and friend request will be sent. The next time they log in to Skype, they will be able to see that you messaged them, and add you to their contacts. From then on, you can call or video chat that Skype user whenever you want, for free.

**Accepting Contacts**
If someone has messaged you on Skype, or added you to their contact list, you will see a number appear.
next to the “Recent” tab on the left hand side of the screen. This shows you who has contacted you through Skype and wants to be added to your list of contacts.

**STEP 1:** Click the “Recent” tab to see who has added you on Skype.
STEP 2: Choose to either “Accept” or “Decline” this person. By accepting them, you will add them to your own contact list, allowing you to Skype call or video call them.

STEP 3: To start video or voice call, click one of the two blue buttons (this is highlighted by a red box) at the top right of your screen.
**STEP 4:** Either of the two buttons will direct you to a screen similar to this as you connect to your family or friends. To end the call you simply press the red button (this is highlighted by a red box) at the bottom of your screen.

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**How to Log off**
**STEP 1:** Return to your Skype home screen by clicking “Home”

**STEP 2:** Click “Skype” at the top left of your screen. This creates a drop down menu

**STEP 3:** Click “Sign Out” near the bottom of this menu to sign out of Skype
Find your friends and say hello

Look for Skype contacts in your address book, then send an instant message or make a free video call - just to say hi!

Search address book
Appendix E: Creating Instructional Documents Administrative Program

What is an Instructional Document?

An Instructional Document is a series of easy to follow instructions that are intended to train someone. The instructions assume little to no prior knowledge of the skills it teaches and attempts to train the reader in the hope that they may teach others. Documenting processes allow these skills to be transferred should the original owner of those skills not be available. It also encourages good documentation and planning skills, which are important in running a successful organization.

What tools can be used to create an Instructional Document?

Many tools can be used to transfer information between people without direct personal conversation. Some of the methods that will be explained include word processing software (Microsoft Word, Google Docs), screen capture software (Snipping Tool, Screencast-O-Matic), and video editing software (Windows Movie Maker, VSDC Free Video Editor). Different people learn in different ways, so it is beneficial to include many types of media in order to remain effective to a wide audience.

General Tips for creating an Instructional Document

Before you begin creating your Instructional Document, it is important to plan out your approach. A good Instructional Document includes an Introduction section and a Procedure section. The Introduction section is provided to include background information for the reader and explain why the following Procedure portion is important.

Since Instructional Documents are created with the intent of teaching skills to a wide audience, the Procedure portion should consist of clear and logical steps so the reader can easily follow along. The Procedure portion should also feature simple words to avoid confusing the reader. Since they are most likely following the guide step by step, it is important that their progress is not inhibited by a language issue. Providing effective visual aids is another way to effectively teach the reader without relying too heavily on text.

It is also useful to have a Recap section, so that readers can easily refresh their memory after following the document through. The Recap section should feature key points, procedures, and fields to provide a quick access point for readers.

**Recap:**

- **Introduction**
  - Explain why task is relevant
  - Provide background information for reader

- **Procedure**
  - Explain how to perform task
  - Provide simple, numbered, step-by-step instructions
  - Use visual aids to reinforce knowledge

- **Recap**
  - Short, key points
  - Well organized for quick reference
How to create an Instructional Document using a word processor

Word processors are a very common way to create informational content. Text-based instructions are useful since they are easily distributed and allow the reader to follow at their own pace. Text documents also generally take up far less size than their video counterparts.

**Heading Styles:**

Use Heading styles to make important sections of the document stand out. Simply highlight the text you wish to add a Heading style to and click on the style in the toolbar.

**Screenshots:**

In order to add pictures into the document, two different methods can be used. One option is to press the **“print screen”** button (prt sc), which is typically located on the top right side of the keyboard. This will copy a screenshot of the entire screen onto your clipboard. You can then paste this picture into Microsoft Word.

1. An easier way is to use the Snipping Tool provided on Windows computers. To open the tool, simply open the start menu and type **“snipping tool”** in the search bar.

2. The tool should appear on your screen. To take a screenshot, select the **“New”** button.

3. Next, drag your cursor around the area you wish to capture.
What is an Instructional Document?

An Instructional Document is a series of easy-to-follow instructions that are intended to train someone. The instructions assume little to no prior knowledge of the subject, as well as the ability and willingness to train the reader in the hope that they may teach others. Documenting processes allows skills to be transferred should the original source of those skills not be available. It also encourages good documentation and planning skills, which are important in running a successful organization.

What tools can be used to create an Instructional Document?

Many tools can be used to transfer information between people without direct personal conversation. Some of the methods that will be explained include word-processing software (Microsoft Word, Google Docs), screen capture software (Snipping Tool, ScreenCast-O-Matic), and video editing software (Windows Movie Maker, iMovie from Apple). Different people learn in different ways, so it is beneficial to include many types of media in order to remain effective to a wide audience.

General Tips for creating an Instructional Document

Before you begin creating your Instructional Document, it is important to plan out your approach. A good piece of Standard work includes an Introduction section and a Procedure section. The Introduction section is provided to include background information for the reader and explain why the following Procedure portion is important.

Since Instructional Documents are created with the intent of teaching skills to a wide audience, the Procedure portion should consist of clear and logical steps so that the reader can easily follow along. The Procedure should also feature simple words to avoid confusing the reader. Since they are most likely following the guide step by step, it is important that they do not get hung up on one step because...
4. Your selection should appear in the Snipping Tool window, where it can be saved or copied to the clipboard via right click or Ctrl+C.

The selection can then be pasted into the document to provide a visual aid.
Cropping:
Cropping pictures gets rid of unnecessary content and can help the reader focus on important sections.
Select the picture you wish to crop

Next, click the "Format" tab and click the "Crop" button

Drag the corners until you are satisfied with your selection, then click off the image
**Highlight Boxes:**

To highlight certain areas for clarity, a box can be added to surround the important part of an image.

1. To insert a box, click on the **“Insert”** tab and select the first rectangle shape in the **“Shapes”** menu.

2. Next, draw the box around what you wish to highlight. You can then edit the box to give it a bright border and high transparency to make it stand out.

3. Right click the box and select **“Format Shape.”** Change the fill transparency to about 90%.
4. After you have made one box, simply copy and paste to preserve the same style

Before:

After:

Be sure to take heaps of screenshots to make the process obvious to anyone following step by step.

**Recap:**

- **Heading Styles**
  - Easily located sections
  - Styles section on right side of the toolbar

- **Screenshots**
  - Use “Print screen” key or snipping tool
  - Crop pictures to focus important areas
    - Format > Crop
  - Add highlight boxes for clarity
    - Insert > Shapes > Rectangle
    - Right click > Format Shape
  - Take heaps of screenshots!
How to create an Instructional Document using video capture

Videos are also a useful way to teach or distribute information. Although the files are large, the user can follow the process completely.

Capturing the Screen:
There are many programs that can capture a video on screen. For this tutorial, we will be using VSDC Video Editor. To capture video, follow the steps below:

1. Open the menu in the top left corner, and select “New project”

2. Select “Screen Capturing” and adjust the resolution and project title.
3. Change the Result video format to **Native** and **“RGB32, PCM: native formats, 30 fps”**. This will increase the frame rate and make the video less choppy. Press the **“Start Recording”** button to begin the capture. If desired, change your Destination Path to the desired location.
4. Select the area you wish to record by dragging the edges of the box. There is a full screen button if you wish to capture your entire screen.

5. Once you have selected your area, hit the record button at the top left.
6. This will bring up the recording toolbar. Press the “Pause” button to take a break in the recording and the “Stop” button to stop the recording and create the video file.

7. After the recording is complete, you will be brought to this screen where you can start another recording.
8. If you decide you need more clips in your video, you can access the screen capture tool by opening the menu, going to Tools, then Screen capturing.

Editing the Video:
Once you have the content for your video, you can begin the editing process. This guide will be going through how to use VSDC Free Video Editor, however you can use whatever program you like.
1. Open the menu and select “New Project”

2. Name the project, adjust the resolution, and select the “Import videos and images” button
3. From the main screen, click the “Add video” button on the left-hand toolbar

4. Select the videos you wish to add and press “Open”
5. The selected videos will be inserted into a Sprite. To view your video files, double click on the Sprite.

6. Now you should be able to see each video file that was added.
Cutting and splitting a clip:
1. In order to remove unneeded footage, the clips need to be cut and split into other sections. Select the clip you wish to edit and click on the “Cutting and splitting” button on the left.
2. This will open the cutting and splitting window. To cut out a section, set the blue arrow to the place you wish to begin the cut. You can use the arrows on the bottom right to help you navigate through the clip.

3. Press the “Start Selection” button when the blue arrow is at the start of the region you want to remove. Next, navigate to the end of the region you wish to remove, and press “End Selection”.

4. Once the area is selected, press the “Cut region” button. If you decide you want this region later, you can press the “Restore region” button.
NOTE: If you lose the blue arrow at any point, press the “Play” Triangle in the bottom left corner to get it back.

5. If you wish to break the clip into multiple sections, simply set the blue arrow to where you wish to split the clip, and Add a marker to that position. This will insert a little flag where the blue arrow was.

6. When you are satisfied, press “Apply Changes” and make sure the “Split the file using the set of markers” option is checked off if you wish to split the video. Also, make sure the “Remove the source object” option is checked and press “OK”.

- Split the file using the set of markers
- Remove the source object
- Set the duration of the source object in the scene equal to the content duration
Adding objects over clips:

1. To add text over a clip, click the “Add Text” button on the left toolbar.

2. Press “OK” after configuring the options, they can be changed later.
3. Draw a text box on the video area. You will notice that a text layer has been added to the timeline.

4. This text layer can be dragged to change its position in the timeline, and the ends can be dragged to change its duration. We will be looking at the properties window to change additional properties about our textbox.
The same process can be used for adding other objects such as lines or rectangles over your clips.

- The position that the text exists on the video
- When the object first appears in the video
- How long the object appears in the video
- Enables and changes the background color of the text box
- Opens a text editor (pictured above) to change the text
- Change the color and font of the text

The position that the text exists on the video
When the object first appears in the video
How long the object appears in the video
Enable and change the background color of the text box
Opens a text editor (pictured above) to change the text
Change the color and font of the text
Recap:

- Screen capture
  - Use screen capture to collect clips
  - Try to keep the frame rate high (30 fps) for clear video
  - Start and stop recordings to make small segments

- Editing clips
  - Add video clips
  - Cut and split clips
    - Use markers to break up large clips
  - Insert objects
    - Insert objects like text boxes and arrows for clarity
    - Use properties window to edit attributes