

**The Use of Educational Programmes to Support Marriage  
Immigrants in Taiwan: A Case Study of an Information  
Communication and Technologies (ICTs) Course**

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## **ABSTRACT**

There is an increasing flow of marriage migration around the world in the era of globalisation. As a result of moving to a new country, marriage immigrants typically encounter a range of difficulties due to language, cultural and environmental differences. To try to address some of these challenges a number of countries have begun to provide educational programmes for marriage immigrants.

Focusing on the case of Taiwan, which is one of several countries to acknowledge this issue, this study aims to explore what educational needs marriage immigrants have and the extent to which educational programmes can help to support these individuals. Indeed, the Taiwanese government has been making a concerted effort to support marriage immigrants' educational needs by offering a range of learning programmes. Here, the focus is on developing ICT skills because ICTs form an important part of all aspects of daily life in Taiwan and the skills are believed to facilitate independent and continued learning.

Using a qualitative case study approach, this research investigates one ICT programme specifically targeted at 25 marriage immigrants in an urban district in Taipei and studies the value of the programme in assisting their adaptation to their new lives in Taiwan. This study draws on adult learning theories to examine the motivations of the participants, the barriers to learning that they encounter and the ways these can be overcome, as well as longer-term impacts of the programme and the use of ICTs in their lives.

The marriage immigrants were found to have strong goal-oriented motivations. These goal-oriented motivations can be further subcategorised into those associated with job, life management and parenting. As for overcoming learning barriers for them, the government's financial support and childcare services offered proved to be important in supporting learning by decreasing both the institutional and situational barriers. Although ICTs were proved to have the capability of reducing situational barriers, they were not the participants' main concern. There were a number of longer term impacts of the programme. Increasing confidence is one of the most significant which led to further learning motivations. This research contributes to the understandings of the marriage immigrants' learning needs and the possible ways ICT programmes are supportive of those needs.

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# 1. Introduction

There has been an increase in the number of female marriage immigrants from South-east Asia and Mainland China settling down in Taiwan since the 1990s. Those marriage immigrants encounter different types of challenges in life such as those associated with linguistic and cultural differences that result from the change of living environment. To assist with their participation in various social activities and in achieving active citizenship, they are in need of educational support for self-development and basic living skills (Castles, 2004).

The marriage immigrants in this study refer to those who marry men of different nationalities and therefore have to resettle in another county (Simons, 2001). Presently, there are about 268,000 marriage immigrants in Taiwan most of whom are female marriage immigrants from Asian countries such as mainland China (63%), Vietnam (20%), Indonesia (7%) and Thailand (3%) (Ministry of the Interior (MOI, 2009a). Although only 1.1% of the population in Taiwan are marriage immigrants, a very high percentage of newly married couples in Taiwan are international in nature. According to the statistical report of the MOI (2010) in Taiwan, one out of seven newly-wed couples fall into this category.

To address the needs of the increasing numbers of marriage immigrants, there are various educational policies specifically targeted to them. However, the Taiwanese government did not take notice of the increasing number of female immigrants from South-east Asia until 1999 at which point their particular

needs were taken into account. The MOI implemented the Action Plan in 2003 with the aim to provide services for the marriage immigrants that would assist them in adjusting to life in Taiwan (MOI, 2003). Under the Action Plan, various educational programmes such as life adaption, language and parenting education courses have been offered to the marriage immigrants. Other than the Action Plan, there are two educational policies associated with the marriage immigrants: Towards the Lifelong Learning Society and Lifelong Learning project executed by the Ministry of Education (MOE). One of the aims of the projects is to assist all people including marriage immigrants in Taiwan to continue learning throughout their life in either formal or non-formal learning settings (MOE, 1998). The skills to use ICTs are identified by the government as one of the essential capabilities to enhance learning opportunities, to learn independently and to continue learning in both non-formal and formal settings for the marriage immigrants. The reasons will be outlined as follows.

Over the past 20 years, the information industries in Taiwan have gone from strength to strength which the profit value of the information technology industries had once reached the world top three (NPF Research Report, 2006). It is believed that the key factors responsible for this success resulted from the political policies of the government to support the industries, the advancement of the new technologies, the high level of education universalization, solid training programmes for the skilled and rigid technology infrastructures in Taiwan (Lai, 2009). Even if the information industries have been growing and profiting, the Taiwanese government has always been aware of the fierce competition globally and the challenges associated with the lack of

highly-skilled professionals in Taiwan (NPF Research Report, 2006). As a result, while the Taiwanese government tries to recruit those skilled professionals from overseas, it also puts a great amount of effort into popularising information education in Taiwan so as to stay competitive in the era of globalisation (Chen, 2007; Chou, 2003).

The gap between those who do and do not have access to new technologies because of the demographic characteristics such as gender, age, socioeconomic status and education is defined as the “digital divide” (Chen and Wellman, 2004). Like many other countries around the globe, the Taiwanese government has recognised the issues emerging from the digital divide when developing and pursuing an information society. This is still another reason for the Taiwanese government to promote information education as it believes that having the skills to use ICTs in the modern society assists in bridging the digital divide (Chen, 2007). In doing so, it potentially assists in promoting social inclusion as the digital divide has been identified as one of the important factors responsible for social exclusion nowadays (Wu, 2001).

The government believes that through the use of new technologies, it is possible to break the physical boundaries of the classroom, to create learning opportunities in daily life and achieve lifelong learning (PiL, 2011). Moreover, by using the new technologies, it potentially enables the sharing of learning resources between the rural and suburban areas to bridge the digital gap between them (Li, 2006). These resources along with the low cost of the ICT facilities and the high penetration rate of the Internet are able to create digital opportunities and potentially facilitate social exclusion (Chen, n.d.).

There are several important action plans implemented that aim to bridge the digital divide. Under the Intelligent Taiwan Plan, Bridging the Digital Divide Four-Year Plan carried out by NICI (National Information and Communications Initiative Committee) in 1994 and Create Digital Opportunity for Rural Areas implemented by the MOE are all branches of action plans that promote digital opportunities in Taiwan (MOE, 2009).

There are several different goals and tasks for the action plans to achieve in order to bridge the digital divide. The educational goals for the Create Digital Opportunities for Rural Areas are to enhance the abilities of the people in using ICTs, to develop lifelong learning and to provide learning assistance to primary and secondary schools around rural areas in Taiwan (MOE, 2009). Specific goals include offering the disadvantaged families personal computers and internet connections, setting up “digital opportunity centres” in 168 rural areas in Taiwan to allow access to both the Internet and ICT programmes and to provide children with after-school assistance. It also allows volunteers to create online learning courses and tutoring services (MOE, 2009).

The MOE in Taiwan suggests that the action plan has successfully enhanced the digital resources for the disadvantaged and rural areas in Taiwan. According to a survey conducted by the Research, Development and Evaluation Commission, Executive Yuan (Executive Yuan, 2011), it is suggested that from 2005 to 2010, the Internet penetration rate for women increased from 60.3% to 69.2% (Executive Yuan, 2011). From 2011-14, the government will further invest NT3 billion dollars to develop the internet infrastructure and create new digital

opportunities in rural areas in order to improve the locals' quality of life through exposure to ICTs (Chang, 2011; Executive Yuan, 2011). More specific goals include increasing the Internet usage and offering more ICT educational programmes for the disadvantaged in order to promote digital opportunities for them (MOE, 2011). In the action plan, the aged, the disabled, women, the indigenous people, people living in rural areas and the marriage immigrants are all identified as the disadvantaged (Executive Yuan, 2011). The MOI especially targets the aged group and the marriage immigrants with the aim of increasing their internet usage. The specific goal of the action plan regarding the marriage immigrants is to offer ICT programmes to 160,000 of them before 2015. The educational policies and strategies tailored to the marriage immigrants will be further discussed in section 2.2.

Indeed, ICTs have been viewed as an important means in "the development and delivery of learning opportunities" and facilitating lifelong learning for all different groups of people (Devins, Darlow and Smith, 2002: 941). Recognising the potential benefits of using them, ICTs in education have become key political concerns for many nations (Selwyn, Gorard and Williams, 2001). Many governments have set up ICT-based programmes to promote the equal opportunities that ICTs may bring to people (Selwyn, 2002). While the expectations of ICTs to reduce inequalities have not always been met, the Taiwanese government is one of the governments around the world that has been making efforts to promote effective use of the Internet and equal digital opportunities between different groups of people, especially among the disadvantaged (Wang, 2007).

Marriage immigrants are identified by the Taiwanese government as one of the disadvantaged groups that may be excluded from the digital opportunities mentioned above (Hsiu, 2010) because most of them are from lower socioeconomic status families with lower educational qualifications (Liu, 2004). In fact, the marriage immigrants may not only be excluded from the digital opportunities, they may also be socially excluded. Burchardt, Le Grand and Piachaud (1999) propose the definition of social exclusion in which the key element is whether one is able to participate in “normal” social activities. In 2001, they refined their definition of these normal social activities to consumption, employment, political engagement and social interaction (Richardson and Le Grand, 2002). Research has shown that female marriage immigrants normally marry Taiwanese men from lower socioeconomic status with lower incomes (Liu, 2004) which puts them at a disadvantage with regards to consumption activities. The Taiwanese laws and regulations depriving their employment right at their initial arrival also contribute to their social exclusion. More than that, their new arrival in a society with language and cultural differences worsens their situation as they do not belong to any of the community organisations and social networks.

The digital divide would potentially limit the marriage immigrants’ access to possible learning opportunities and furthermore, their social participation because the skills to use ICTs is essential for active citizenship in the information society (Wills, 1999). Therefore, the government provides ICT-based programmes for the marriage immigrants to assist them in developing the general skills needed to live in Taiwan. It is hoped that with the skills to use ICTs, the marriage immigrants can have more direct routes to

accessing learning opportunities. And while accessing those opportunities with ICTs, it is hoped that they can develop abilities and practices associated with both independent and lifelong learning which leads them to actively participate in social activities.

Indeed, the rise and emphasis of both ICTs and lifelong learning in today's society has urged policy makers and educationalists to tackle the relationships between technology, education and social exclusion (Selwyn, 2002). The Taiwanese government takes the optimistic stance in dealing with this issue through believing that promoting the skills and the use of ICTs can facilitate learning and social inclusion. However, the new technologies are not the panacea to address the issues. While it can be argued that using ICTs broaden the channels to access learning opportunities, it is also worthwhile to consider the *needs* of the marriage immigrants. What challenges do the marriage immigrants encounter when they move to Taiwan? What do they need when they face the aforementioned challenges?

Up until now, only the government's policies and overall stance regarding what is thought helpful for the marriage immigrants have been mentioned; this is due, in part to the surprisingly limited numbers of studies exploring the learning needs of the marriage immigrants in Taiwan. This results from the fact that educational policy makers often think from the perspective of 'the kinds of knowledge and skills "we" (the host country) want to teach "them" (marriage immigrants)' instead of 'the kinds of knowledge and skills they need' (Liu *et al.*, 2007).

The main purpose of the current study is to explore how educational programmes in ICTs assist the marriage immigrants to adapt to their new lives in Taiwan. The main focus of the study is to explore the usefulness of ICT programmes for the marriage immigrants in Taiwan. A specifically targeted ICT programme is used to examine the effects of ICTs and the relations between them and the marriage immigrants. There are increasing numbers of marriage immigrants in Taiwan who experience new learning needs and life challenges due to the change of living environment. It is believed that the skills associated with ICTs and their uses are important to exercise social participation in today's society. As a result, the Taiwanese government has been focussing on promoting ICT skills among the marriage immigrants by offering ICT learning programmes. It believes such skills are essential in both supporting their learning needs and allowing their full participation in society. The main focus of this study is to explore the usefulness of ICT programmes in such policy context.

By exploring the assistance the educational programmes offer to the marriage immigrants, it is hoped to bridge the existing gaps between the educational policies for the marriage immigrants and the actual needs of the marriage immigrants. In addition, in order to understand the role of ICTs in assisting marriage immigrants' adaption to their lives in Taiwan, the study particularly investigates an ICT programme specifically targeted for the marriage immigrants. As the specifically targeted ICT programme is chosen as the case of this study, it will employ a qualitative case study research approach looking from the perspectives of the marriage immigrants to explore how the programme and the skills acquired assist their adaptation. It is hoped that the

study will illuminate the similarities and differences between what the government thinks ICT programmes and the associated skills can do for the marriage immigrants and what they can actually do for them.

## 2. Literature Review

The main purpose of the study is to investigate how education programmes facilitate the adjustment of marriage immigrants' to life in the context of Taiwan. The focus of the current study is to explore the usefulness of the ICT programmes in supporting the marriage immigrants' life in Taiwan. A specifically targeted ICT programme is chosen as the case to explore such relations. Before further investigating the topic, it is important to examine and discuss existing related theories and literature to frame the structure and provide guidance for this study. The primary objective for reviewing the literature is to look into the relations between marriage immigrants' learning needs and ICTs, as well as the relations of the characteristics of adult learning and ICTs and how ICT can support immigrants' learning.

The first section of the literature review examines the results of empirical studies examining marriage immigrants and especially, Taiwanese marriage immigrants' learning needs. It is followed by a discussion of the potential means for ICTs to facilitate these learning needs. Then, discussions on different education programmes offered by the Taiwanese government and NGOs for marriage immigrants designed to address their needs is presented. The next section takes the inherent nature of marriage immigrants as adults to discuss theories and concepts of adult learning including adult learning motivations and barriers. This section aims to provide insights into adult learning strategies.

## 2.1 Learning Needs of Marriage Immigrants

A growth in the number of cross-border marriage immigrants could be observed in Taiwan in the late 20<sup>th</sup> century to the early 21<sup>st</sup> century. Marriage immigrants here refer to women who marry men with different nationalities and therefore have to reside abroad (Simons, 2001). A great number of marriage immigrants leave their home countries to settle down in Taiwan. They experience major personal, environmental and psychological changes which bring about new needs for them.

There is a plethora of research studying the needs of immigrants when they settle down in new countries (see Dwyer and Brown, 2005; Slesinger, 1979; Waxman, 1998 for example). Education programmes have been shown to be one of the crucial means to address immigrants' needs (Berry, 1997; Suárez-Orozco, 2001). It is suggested that immigrants have experienced a disruptive process where they "have to deal with changes or ruptures in their identities, occupations, families and social networks" (Jones-Correa, 1998: 326). Similarly, Johnston's (2003) study focuses on common issues raised by the formation of new citizenship and how to cope with them. She suggests that cultural and language differences accompanied by political and educational issues for immigrants often result in social exclusion and poverty. Those issues should be addressed by the appropriate educational approaches to support them. While the marriage immigrants in Taiwan experience similar problems when they resettle in Taiwan, the type of educational programmes suitable to cope with their newfound needs merit serious consideration.

The following discussion will draw on existing literature and empirical studies to discuss the various kinds of important learning needs of Taiwanese marriage immigrants as perceived by them and also discuss the potential of ICTs to support these needs.

### **2.1.1 Language Learning Needs**

Language learning support is often listed as one of the essential and fundamental educational needs for immigrants. This may result from the fact that linguistic differences are one of the most obvious dissimilarities experienced when immigrants move to a new environment. It is not difficult to imagine that a lack of language proficiency would lead to difficulties in communicating and interacting with people and participating in social activities (Chiswick and Miller, 1998; Imamura, 1990; McNair, 2009; Nicassio, 1983).

Language proficiency is important for immigrants' resettlement because it is believed to be related to the adjustment to a new environment (Berry, 1997; Lanca *et al.*, 1994). For example, English proficiency is identified as one of the important factors for immigrants to integrate in the British society (McNair, 2009). McNair (2009: 54) proposes that "[o]vercoming language difficulties is a priority as a matter of human right, and also because lack of English limits people's ability to contribute to society, [and] perpetuates social isolation". Governments and educational institutions have long been putting efforts into providing language programmes for immigrants. For example, the Norwegian government requires the newly arrived adult immigrants to participate in language and social learning programmes (Ministry of Children, Equality and

Social Inclusion, n.d.). The US government provides ESL (English as Second Language) programmes for immigrants to acquire related skills needed in the US (MPI, 2010). Similarly, the Greek government provides language training programmes to address the need for adult immigrants to learn Greek language (Mattheoudakis, 2005).

There have been limited numbers of studies into the difficulties and learning needs of marriage immigrants in Taiwan. Nevertheless, it is concluded from the few studies that are available that language learning is of utmost importance as the major difficulty marriage immigrants encounter is the linguistic difference (Lin and Chou, 2007; Huang, 2006; Shi, n.d.). Marriage immigrants suffer from interacting with people around them because of their Mandarin language deficiency (Chang, 2002; Cheng, 2000; Li, 2004; Teng, 2005; Wu, 2000).

Basic Mandarin speaking, listening, reading and writing abilities are the most needed language skills for marriage immigrants (Teng, 2005). A Lack of Mandarin speaking proficiency does not only affect marriage immigrants' everyday communication with people, it also influences their ability to acquire living information and social resources since obtaining the information require the aforementioned skills (Li, 2009). Language barriers can also lead to the unawareness of their own status, welfare and rights (Raj and Silverman, 2002). Furthermore, from marriage immigrants' perspectives, they feel that mastering Mandarin boosts their confidence and self-esteem as well as helping them to be more independent as they don't need to depend on other people to tell them about the information they need (Lin and Chou, 2007). In addition, they believe that mastering Mandarin helps them to build a new social network in Taiwan

(Lin and Chou, 2007).

### **2.1.2 The Potential of ICTs in Supporting Language Learning Needs**

ICTs have been used extensively in different educational contexts to support learning. The following discussion will draw on the existing studies to discuss the potential means for ICTs to facilitate language learning.

The concept of ICT is constantly developing. It is generally agreed that the broader term ICT represents three levels of heterogeneous concepts (e.g. OECD, 2002; Selwyn, 2004). First, it represents the hardware of digital technologies that we use to connect to information. Examples of hardware are computers, mobile phones, PDAs, and digital televisions. The second level of its meaning lies in the software and the application it represents, namely: the information, services, communication and resources that can be accessed by the hardware just mentioned. Thirdly is the access to ICTs. This level normally represents one's perceived abilities to use ICTs and one's perceived ease of access to ICTs (Marcelle, 2000; Selwyn, Gorard and Furlong, 2006).

There are four key ways that ICTs may facilitate language learning (UNESCO, 2007a). Firstly, the use of ICTs can enhance learning experiences. Media such as television, DVD and related technologies are able to combine both visual and audio data. It offers an environment for learners to be exposed to the target language. Also, those technologies can be taken as a form of entertainment which is said to be motivating the learners (UNESCO, 2007a). Also, the abilities for ICT to provide collaboration and interaction with learners can potentially enhance learning opportunities; however, those opportunities need to be

guided, carefully designed and implemented to be beneficial for the learners (Murray, 2005).

Secondly, ICTs can assist to overcome time and space barriers to provide wider access to the language education (UNESCO, 2007a). With the characteristics ICTs that provide easy and affordable access, the learners can get access to the learning materials of their own choices at their own pace. Furthermore, technologies such as videoconferencing are able to offer interactive communications over long distances which save time and money (UNESCO, 2007a).

Third is the autonomy provided by new technologies to create personalised learning content. It is suggested that there are different software and applications that make it possible to create, modify and distribute culturally and linguistically appropriate learning content (UNESCO, 2007a).

Finally, it is proposed that ICTs are able to create or enhance a literacy-conducive environment (UNESCO, 2007a). Written materials of the target learning language can be distributed through ICTs such as television, and short message service (SMS) which enhance the contact between the learners and the written form of the language. Also, the easy access of a wide range of information in the form of written texts on the Internet can also potentially expose people to the text based materials in their daily lives. It is suggested that exposing learners extensively to the target language facilitates their reading and writing skills (UNESCO, 2007a).

Thus, ICTs may support language learning both in formal and informal learning contexts. As a first step towards accessing such learning opportunities marriage immigrants would need a range of ICT skills. Marriage immigrants need at least very basic ICT skills such as the ability to use a mouse and the keyboard, to access the new technologies and benefit from what they can offer them. The current study aims to explore the extent to which ICTs can facilitate marriage immigrants in their learning by acquiring basic skills with regard to ICTs usage.

The next section will start by discussing other types of learning needs relevant to the marriage immigrants; how ICTs can support these needs will be followed after the discussion of each one in particular.

### **2.1.3 Learning that Assists with Adapting to Life in a New Country**

Wang (2008) comments on three different dimensions of life adaptation marriage immigrants would experience in a new society: individual, family and social and cultural. I would like to apply the dimensions he proposes to categorise the learning needs of marriage immigrants in Taiwan. The individual level of learning needs involve learning regarding self-development. The Family level of learning needs emerge from marriage immigrants' new roles as they get married: being a wife, a daughter-in-law, a sister-in-law and a mother. Lastly, the social and cultural level of learning needs emerge from new environmental and social contexts. I intentionally separate language learning needs from other types not only because it is often the most important for marriage immigrants - thus deserving its own section- but the issues it involves contain different levels that are difficult to categorise. I suggest that language learning need is

the need that involves individual and family as well as social and cultural dimensions.

At the individual learning level, marriage immigrants are concerned about laws and regulations. They would like to gain information regarding their status concerning residential and marital rights in particular (Li, 2004; Teng, 2005). According to the immigration regulations of the Taiwanese government, it takes at least three years for the marriage immigrants to obtain permanent residency. It will take at least one more year for them to gain the citizenship if they wish to (Wang, 2010). However, the law does not apply for marriage immigrants from Mainland China. It would take them at least six years to acquire Taiwanese citizenship (Wang, 2010). During the process of gaining permanent residency, their non-permanent immigrant status means that various legal restrictions are placed upon them which could result in their increased vulnerability and difficulties in seeking and getting help (Raj and Silverman, 2002).

Men can also take advantage of their unawareness of status and rights to control them (Raj and Silverman, 2002). There are cases when the husbands of the marriage immigrants in Taiwan illegally withhold their passports or use domestic violence on them and/or their children to threaten their freedom of action (Taiwan Coalition Against Violence, 2006). For those who are unclear about their legal status would be under their husbands' threats and control. Obtaining the information about the related laws and regulations not only decreases their vulnerability, it makes them understand their status, rights and benefits. It would assist them in being more independent of their husbands. It can be taken as an important form of legal empowerment for the marriage

immigrants.

ICTs have been employed as channels for raising political issues and exchanging legal information. It is suggested that there are cases for marginalised women to use ICTs as channels to publicise their voices and defend their rights (Opoku-Mensah, 2000). For example, the Forum for Women in Democracy is used for women in Uganda to access and discuss critical political issues and the participants of the forum also pass those issues on to the Members of Parliament (Opoku-Mensah, 2000). Similarly, the characteristic of ICTs that allows information exchanges and access over the Internet can be used as media for the marriage immigrants to understand their legal rights.

One of the key challenges for immigrants is employment in the new societies especially during their initial arrival (Chiswick, Cohen and Zach, 1997; Miller, 1986). It is suggested that learning and acquiring skills specific to their new environment, such as the dominant language, attending job-related training and gaining formal education, would partially assist their economic adjustment and employment status (Chiswick and Miller, 1994). Similar to what research in other contexts has suggested, the marriage immigrants who would like to be employed in Taiwan feel the need to acquire employment and job-related skills (Li, 2004; Liu *et al.*, 2007; Teng, 2005). For employment related skills, they would like to know more about how to obtain higher educational qualifications and domain expertise that would assist them in finding a job (Li, 2004).

While keeping up with the skills necessary for the new countries facilitates the immigrants to adjust themselves to the new societies and labour markets, they

inevitably notice that wherever they go to, acquiring skills to use new technologies would always be beneficial in any labour market around the world. It is without doubt that the advancement of new technologies has reshaped the society and impacted on the nature of work in workplaces (Czaja, 1996; Lowe and Krahn, 1989; Rubery and Grimshaw, 2001) as ICTs facilitate various aspects of production processes and services which inevitably requires workers to possess basic computer skills. Therefore, it establishes an interwoven relationship between technology skills and employment. While the advancement of new technologies increases the demand for a skilled and educated workforce, individuals have to continually return to education and training to ensure they keep up with the advancement in preparation for their jobs (Dunne and Schmitz, 1995).

Acquiring the skills to use ICTs does not only promote employment opportunities (Czaja, 1996; Labour Canada, 1982), ICTs also make trading possible beyond time and space constraints which bring the opportunities for e-business (Mitter, 2003). It is suggested that women are one of the group of people taking advantage of the advancement of ICTs (Mitter, 2003; Weinberg, 2000) as they transform their old economic activities such as home-based work and self-employment work into ICT-assisted economic activities (Mitter, 2003). There are several successful cases to illustrate the stated point: Some women in Bangladesh sell communication services through mobile phones to other women. Some Indian and Malaysian women work as freelance journalists and deliver their journals through the Internet (Mitter, 2003). With the help of new technologies, those women do not need to devote their time to commuting to work and are still able to create business opportunities and earn money. In

short, in the digital era, acquiring ICT skills does not only increase employability, it can also create different forms of employment opportunities.

Research has indicated that accessing health care resources in Taiwan is one of the crucial needs for marriage immigrants (Li, 2004). It is proposed that immigrants often experience serious health inequalities due to language and health literacy difficulties as well as cultural and structural barriers (Kreps *et al.*, 2008). The difficulties mentioned above make it hard for them to get access to the health care system and health information (Ginossar and Nelson, 2010).

While immigrants potentially suffer from the issues mentioned above, studies have shown that ICTs can decrease those issues by providing access to a great amount of health information. It is suggested by Rippen (cited in Lamp and Howard, 1999) that over 36 % of consumers search medical and health information on the Internet. To promote access to such knowledge, Ginossar and Nelson (2010) report community-based educational interventions integrating the use of the Internet for Latino immigrants in a community in America. The project implements a participatory method which involves community members as the designers and the trainers of the interventions in order to provide culturally appropriate programmes. It is concluded that the use of the Internet does facilitate health information access. Sharf (1997) investigates communications between participants within an online group, the Breast Cancer List and concluded that the online group offers forms of information exchanges, social support and empowerment; members make informed decisions and take action based on the feedback from other participants of the online group. Another example is Uganda's Healthnet that

promotes women's health information through the Internet (Robins, 2002).

To best utilise the online health information for the marriage immigrants, the abilities to access information on the Internet and the basic literacy level are required. It is suggested by Cline and Haynes (2001) that there are growing numbers of consumers seeking health information through communication technologies, especially through the Internet. For consumers to do so, they need to have basic skills and internet infrastructure to access online information. Other than acquiring skills to search for health information through the Internet, literacy level is another key factor in determining whether an individual can utilise the health information. Birru *et al.* (2004) suggest that being unable to access or understand health materials can decrease the likelihood of individuals identifying symptoms of diseases which may lead to poor health outcomes. Furthermore, their study also concludes that health information on the Internet requires readers to have a certain literacy level without which users would encounter difficulties in finding health information on a particular and relevant topic (Birru *at al.*, 2004).

The changes of roles in their lives after marriage have greatly affected the learning needs of marriage immigrants at the family level. After they get married, they have to face new challenges and tasks associated with being mothers and wives. As they are inexperienced in looking after and educating children, the most sought after learning need at the family level is parenting education (Lin and Chou, 2007; Liu *et al.*, 2007; Teng, 2005).

Investigating intermarriage families in Taiwan, scholars have discovered that

95% of couples have babies in their first two years of marriage (Hsia, 2000). While they are still trying to adapt themselves to the new cultures and the new environment, most of them have to face the challenge of parenting at the same time (Guo and Hsueh, 2004). For those who still struggle with language differences, they find it even harder to cope with the challenges associated with parenting as language barriers obstruct the usual information channels such as reading books about parenting education and asking experts, family members and friends (Guo and Hsueh, 2004). To facilitate parenting education for intermarriage families, Guo and Hsueh (2004) proposed that offering regular community-based parenting education interventions and counselling services as well as language training would be helpful for their knowledge acquisition.

It is proposed by Simpson (1997) that almost every form of mass media, from books to television to the Internet, have been sending a large amount of information about parenting to parents. Mass media and new technologies potentially play important roles in accessing parenting education and information. As mentioned previously, parents have already been exposed to a large amount of parenting information by the printed media (Simpson, 1997) and television programmes (Long, 2004). More than that, there is an increasing number of parenting education resources and websites to be accessed on the Internet. For example, the Parenting 24/7 website includes the news and advices on parenting (<http://parenting247.org/index.html>). The Child and Family WebGuide website offers parents useful online resources links and practical advices to parenting (<http://www.cfw.tufts.edu/>). As a result, having basic computer skills that enable one to access information on the Internet is very helpful in acquiring various resources about parenting and child-rearing.

Lastly, at the social and cultural learning level, they would like to acquire information on the traditions and customs in Taiwan in conjunction with learning more about the local geography (Li, 2004). The lack of understanding of cultural and traditional differences can often result in misunderstandings. Studies also suggest that differences in religious beliefs and worships can cause friction between marriage immigrants and family members on their husbands' side (Lu, 2001; Guo and Hsueh, 2004). It is important to learn about the cultural differences in order to help prevent conflicts (Chang and Huang, 2007). With the easy and convenient access to a large amount of information on the Internet, ICTs can potentially enhance the understanding of the cultural and traditional aspects of a society. For instance, through the website of the Taiwanese Tourism Bureau (<http://taiwan.net.tw/w1.aspx>), people can gain basic knowledge about the population, geography, natural environment, traditional art forms, common religions and people of Taiwan.

## **2.2 Strategies to Address the Needs**

After understanding the learning needs marriage immigrants have encountered in Taiwan and how ICTs may support such learning needs, the following section will draw on reports of NGO's educational programmes and governmental documents to discuss how NGOs and the Taiwanese government are responding to those learning requirements.

### **2.2.1 NGO's Educational Programmes**

The educational programmes in Taiwan provided by NGOs are mostly literacy programmes with limited programmes on ICTs. The primary aim of the

programme is to teach the marriage immigrants the basics of Mandarin including listening, speaking, reading and writing to build up their abilities to communicate with people in Taiwan. It is generally agreed that literacy programmes are the key elements for empowerment (Chiou, n.d.; Hsia, 2008; Wu, 2000) since literacy skills are necessary for effectively performing daily activities in a range of settings (Scribner, 1984). The following paragraphs will discuss the concept of “empowerment” before discussing in detail the kind of educational programmes NGOs offer in Taiwan.

The concept of “empowerment” has become very popular and has been used across numerous disciplines yet the definitions of it are not very consistent (Alsop, Bertelsen and Holland, 2006; Mohanty, 1995; Rodwell, 1996). Here I would like to employ the definition of empowerment given by Alsop, Bertelsen and Holland (2006) as I believe learning is a process of gaining abilities and resources to expand choices in life. Alsop, Bertelsen and Holland (2006: 1) define empowerment as “the process of enhancing an individual’s or group’s capacity to make purposive choices and to transform those choices into desired actions and outcomes” (p.1). The concept of empowerment is often applied in education because one of the benefits and/or goals of education is to improve livelihood (UNFPA, n.d.).

There are wide ranges of educational programmes offered by NGOs for the marriage immigrants in Taiwan. Practical programmes such as language learning programmes, parenting education, cookery programmes and training programmes to obtain driving licences are all popular educational courses offered by NGOs. More than that, the NGOs in Taiwan often hold social activities

such as pot luck parties and dancing performances aim at enabling the marriage immigrants to meet new people from the communities.

Literacy is identified as one of the means to empower because it is “an indispensable means for effective social and economic participation, contributing to human development and poverty reduction” (UNESCO, 2007b: 11). Indeed, literacy is one of the key factors necessary for one to actively participate in social activities, as Maddox (2008: 185) has pointed out, “[l]iteracy has consistently been presented as a key determinant of well-being, an important social entitlement and goal of human development”. Certainly, acquiring literacy skills opens up more opportunities for individuals as they would be aware of the resources they have and the abilities to participate in activities they wish to take part in. Governments and NGOs have been putting effort into promoting literacy education to improve social participation and social inequalities. For example, UNESCO has been promoting literacy education all over the world. Likewise, NGOs in Taiwan work hard at promoting adult literacy for immigrants to eliminate the life adjustment problems resulting from language barriers.

The first educational programme targeted at the marriage immigrants in Taiwan was a literacy programme offered by Hsia (2008), a researcher from a university, who worked closely with marriage immigrants. She decided to offer a free Mandarin literacy programme for marriage immigrants in July 1995 after realising that the biggest barrier for them to live in Taiwan was their inability to speak Mandarin. The teaching approaches of this literacy programme focused on promoting marriage immigrants’ expressions in Mandarin. The contents of

the taught programme were linked to their everyday life experiences. By relating marriage immigrants' learning objectives to their real life contexts, those marriage immigrants were able to learn something practical as well as express their life experiences at the same time (Hsia, 2008). Hsia's literacy programme is very important not only because it was the first systematic educational programme offered for marriage immigrants, but also because it recognised and incorporated the characteristics of adult learning strategies (which will be discussed later) into the programme.

Generally speaking, the educational programmes offered by NGOs for the marriage immigrants in Taiwan focus not only on the practical aspects of the learning, they also emphasise the offering of social and emotional support (Chen, 2007). For these practical aspects, the curriculum is designed to try to recognise the difficulties the marriage immigrants encounter and provide the kinds of educational support they need. Recognising the linguistic differences and communication difficulties the marriage immigrants have suffered, NGOs provide a wide range of literacy programmes specifically targeted to them. The goal of such programmes is to improve their social participation through acquiring basic literacy skills. The design of the learning content of the literacy programmes takes the topics of family, community and culture into consideration and therefore integrates themes of life adaptation and Taiwanese traditions (Chen, 2007). For the social support aspect, the NGOs also offer counselling services for those who need additional help.

### **2.2.2 Taiwanese Government's Educational Policy**

There are three main educational policies for marriage immigrants in Taiwan.

Firstly, the Action Plan was officially implemented by the MOI (Ministry of the Interior) in 2003. The nature of the Plan is to provide services and guidance for Taiwanese marriage immigrants. The aims of the plan are to assist them in adapting themselves to life in Taiwan, in understanding the traditions and cultures in Taiwan, in building up general abilities needed in daily life and, in meeting more people from different nations in the same community thus building up social support systems (MOI, 2003).

To achieve the above aims, the MOI has budgeted a ten-year NT \$3 billion (about £ 6 million) special fund responsible for the care and the counselling services associated with the marriage immigrants in Taiwan (MOI, 2004). One of the main expenditures of this fund goes to the educational programmes for marriage immigrants. As a result, marriage immigrants in Taiwan are entitled to attend the government offered target-specific programmes for free. To be more specific, governmental financial support for marriage immigrants' educational programmes primarily goes to literacy education, parental education and career/job training (Lin and Chou, 2007). Under the Action Plan, the central government financially supports 23 local governments around Taiwan to offer language and life adaptation related educational programmes for marriage immigrants. During 2009, there were 156 educational programmes offered for marriage immigrants around Taiwan (MOI, 2009b).

The other two policies concerning marriage immigrants are both planned and executed by the MOE (Ministry of Education): Towards the Lifelong Learning Society and Lifelong Learning project. The aim of this project that is directly related to marriage immigrants is the one associated with the promotion of

continuing and lifelong learning among marriage immigrants through formal and non-formal learning settings, all in order to improve social participation (Wong, 2004). One of the specific aims of this scheme was to provide remedial language education for both the illiterate and marriage immigrants to improve their literacy rate from 97.74% to 98.2% in 2007 (Huang, 2006).

### **2.2.3 The Role of ICT Programmes within Government Educational**

#### **Policy in Taiwan**

Besides supporting educational programmes on the topics mentioned above, the government has been promoting ICT programmes for marriage immigrants in Taiwan. The access and the use of ICTs are considered by the government a way to increase adult learning opportunities and widen channels for lifelong learning (MOE, 2000) because of their abilities to provide flexible and convenient ways to access learning opportunities (Oliver, 2002).

It has now become a key political concern for people to continue learning throughout their lives (Selwyn and Gorard, 2004). For example, the UK government has placed important emphasis on promoting lifelong learning to prepare people to keep up with the ever-changing nature of the job market (Lynch, 2008). Alongside the concern to promote lifelong learning, ICTs have been considered to play an important role in education (Selwyn, Gorard and Williams, 2001), especially in adult learning settings as it potentially offers increased access, motivation and economic values (Learning and Skills Council, 2002). As a result, the ability to use ICTs has been viewed by politicians as “the indispensable grammar of modern life” (Wills, 1999: 10) and is often found to

have a firm place in policy agenda (Selwyn, 2002).

In fact, governments around the world have been promoting equal opportunities with regards to ICT access not only because of the belief that it facilitates lifelong learning, but also because of its potential to overcome social exclusion. Indeed, the policy agenda often associates social exclusion with digital exclusion whereas the use of ICTs predominantly aims to bridge the digital divide and promote social inclusion (Selwyn, 2004). Burchardt, Le Grand and Piachaud (1999) define an individual to be socially excluded if he or she is not able to participate in normal social activities: consumption (consuming at the minimal level for goods or services), savings (saving money), production (participate in work, education and related activities that are socially valued), political (participate in activities to improve the environment) and social activities (participate in social interactions). They later refined the category and classified savings into consumption activities (Richardson and Le Grand, 2002). As for the access to ICTs, research has shown that it is “patterned along the lines of socioeconomic status, income, gender, level of education, age, geography and ethnicity” (Selwyn, 2004: 5). For those groups who are digitally excluded, they are likely to be those who have already been characterised as socially excluded, especially for those who are from a lower socioeconomic status with low income. Thus, in order not to exacerbate such divisions, governments place high priority on offering disadvantaged groups access to digital opportunities (Selwyn, 2004).

The Taiwanese government has also been putting effort into offering equal access to ICT-based opportunities; one of the ways of achieving this is through

including ICT skill acquisition in the educational policies. For example, in Taipei city, there were five ICT programmes for marriage immigrants in different Taipei districts in 2010. Although all five ICT programmes offered are financially supported by the Taipei government, each district office is responsible for its own participant recruitment, course design, teaching materials and the hiring of lecturers. The Taipei government only set up the overarching goal for the ICT programmes as it wishes to assist the marriage immigrants in acquiring the basic skills they need to live in Taiwan, the district offices have total autonomy with regards the delivery of the programmes.

There have been a limited number of studies that explore the experiences and learning outcomes of marriage immigrants who participate in these courses. There is only one study found conducted by the scholars of National Pingtung University of Science and Technology exploring how one ICT programme in Pingtung empowers the marriage immigrants who attended it. The primary objective of the ICT programme was to enhance marriage immigrants' computer skills for employment. The course design is based on a survey about the computer skills relevant to women and therefore this dictated the general teaching goals for the marriage immigrants which are centred around learning to use e-mails, MS office and the Internet to search for information. The topics of the courses include an introduction to computers, basic skills in using Microsoft® Word and the use of the Internet. The course content was adjusted after each lesson ended to align with the teaching and learning progress.

The importance of this study to my research is that it empirically investigates the learning experiences and outcomes of the ICT programme on marriage

immigrants. The study summarised the computer learning process in four stages: initial motivations, learning barriers and achievements, changes of their attitudes after attending the ICT programme and lastly, changes in their lives (Chung, Lin and Chao, 2008). It is concluded from Chung, Lin and Chao's (2008) study that ICT programmes facilitated some changes to the participants. Those changes will be discussed in terms of their individual, family and social and cultural learning needs.

At the individual level, the ICT programme helped the marriage immigrants to build self-confidence and further their learning. They appeared to be more confident when facing problems and tried to figure out the solution online by themselves. Furthermore, most of them expressed their wishes to continue learning. The programme also appears to enhance job opportunities and mobility. At the family level, it facilitates communication between family members here in Taiwan and back home. They had more topics to talk about with their family and ICTs enhanced their communication back home via internet phone calls. At the social and cultural level, it facilitated expanding the marriage immigrants' social network. Attending the ICT programmes offered those marriage immigrants chances to meet and make new friends. It is suggested that it also widened the marriage immigrants' life perspectives. ICTs made them aware of places they wanted to visit and it helped them to know more about the cultures and traditions in Taiwan via using the Internet (Chung, Lin and Chao, 2008).

Other than the changes the ICT programme had facilitated, the study summarised the main difficulties for marriage immigrants using ICTs in the

programme. They included such points as recognising Chinese characters in order to understand what they were looking at, looking at a computer monitor for a long time and a lack of personal computers at home for practice (Chung, Lin and Chao; 2008). While this project provides contextual background and will help to facilitate analysis of the current study; Chung, Lin and Chao, did not employ a clear theoretical framework for the project and thus the presented findings were highly descriptive. These issues will be addressed in this study by drawing on adult learning theories to provide stronger analytical results.

It is mentioned in Chung, Lind and Chao's (2008) study that there are no existing standard ICT teaching materials specifically designed for marriage immigrants in Taiwan. However, there is a project supported by the government in developing multi-cultural digital learning content for marriage immigrants (Sun *et al.*, 2007). One of the main goals of the project is to reach collaborative learning between the marriage immigrants and their families as well as the people in the communities; therefore, there are particular courses designed for the marriage immigrants and many of the learning activities in the project are designed to be solved by both the marriage immigrants and their family members. Other than the courses designed particularly for the marriage immigrants, there are various seminars and activities such as art exhibitions and film festivals showing works from different cultures to promote the local community's understandings of the marriage immigrants. The long term goal of this is to enhance marriage immigrants' social support system, promote lecturers' background knowledge for marriage immigrants and re-use the contents through sharing across different platforms online. (Sun *et al.*, 2007).

The project indicates that the government has been putting effort into addressing the learning needs for marriage immigrants and trying to promote lifelong learning. It recognises that there are no methodical learning systems for marriage immigrants and the learning materials for them do not take their cultures and prior life experiences into account. The scheme incorporates four subject matters important for marriage immigrants including Chinese learning, health education, local geography and parenting education, into digital content and publishes them online for reference. The design of the content integrates theories and frameworks of adult learning and lifelong learning. The project had been practiced in three community colleges in Hsin-chu with its aim being to promote the scheme with particular focus on other educational institutions in Taiwan (Sun *et al.*, 2007).

While this project offers very sound learning materials for the marriage immigrants and the people in the community, the ICT programme chosen for this study did not employ the learning materials. For one thing, all the community colleges in Taiwan work independently; therefore, the programme chosen does not necessarily exhibit strong link to other programmes if they are not previously publicised. Secondly, the project focuses more on the cultural aspect of learning involving the marriage immigrants and the people in the community. It is important to note that the aim of the ICT programme is focused only on teaching the marriage immigrants basic skills regarding ICT use.

## **2.3 Adult Learning**

After examining the learning needs of marriage immigrants in Taiwan, how the

government and NGOs respond to these needs and the empirical results of the potential benefits ICT programmes bring to marriage immigrants, some questions still remain unanswered: What types of learning suit them the best? Why could ICT be beneficial and important for their learning? The following sections will discuss adult learning theories as these are most appropriate for the target group of this study and the relations between adult learning and ICTs in order to begin to address these questions.

Adult learning has long been a distinct category and practice of education; Malcolm Knowles (1913-1997) proposes andragogy as opposed to pedagogy to characterise adult learning. The concept of andragogy has remained influential in the field of adult learning (Griffin, 1983). The importance of Knowles's work to this study lies in his assumption that children and adults have different characteristics which make them learn differently. The following section will introduce the concept of andragogy based on adult characteristics.

### **2.3.1 Andragogy: Characteristics of Adult Learning**

Andragogy is defined by Knowles, Holton and Swanson (2005) as the art and science of helping adults to learn. As the assumptions of the andragogical model are derived from pedagogy; it would be useful to briefly describe the pedagogical model before moving on to this more relevant case.

Pedagogy originates from the Greek word meaning "to lead the child" (Knowles, Holton and Swanson, 1998). It represents the art and science of teaching children. According to Knowles, Holton and Swanson (1998), the pedagogical model is based on the assumptions that learners only need to know what

teachers teach them and that learners are dependent on teachers. Therefore, in a pedagogical model, learning is teacher-directed. As opposite to these assumptions, the main assumption for an andragogical model are that maturity moves learners from dependent to self-directed with increased readiness to learn (Davenport and Davenport, 1985; Norrie and Dalby, 2007).

To further demonstrate the andragogical model, Knowles, Holton and Swanson (1998) identify six distinct characteristics of adult learners: first of all, they have the need to know the importance of their learning. Therefore, one of the facilitators' missions in adult learning is to make the learners realise the value of the learning in improving some aspect of their lives to help them learn better. The "conscience-raising" method developed by Freire is an elaborate development of letting the learners understands the importance of the learning.

Secondly, adult learners are self-directed; they have the self-concept of being responsible for themselves and therefore do not like being imposed upon. They are able to identify their learning needs, set their learning goals, search for learning resources and teach themselves a particular subject they are interested in. They are also responsible for planning their learning process and evaluating their learning outcomes.

Third, adult learners' life experiences are critical learning resources. Compared to younger learners, adult learners bear greater quality and quantity of experiences. As their prior experiences acting as adult learners' learning resources, one of the teaching techniques for adult learning is to implement

experiential learning. Consequently, class activities involving relating and sharing their own experiences such as group discussion, case discussion, peer-helping and problem-solving approaches are very useful and practical in adult learning contexts. However, Knowles also points out that adults' life experiences can create negative effects in learning because of the already-developed habits and bias from them.

Fourth, adult learners' readiness to learn is linked to what they want to know at different stages of their life. Knowles, Holton and Swanson (1998:67) suggest that "developmental tasks associated with moving from one developmental stage to the next" are critical resources related to adults' readiness to learn. The best incentives for adults to learn occur when the timing of those learning experiences corresponds to the developmental tasks. For example, a woman is not likely to be interested in studying parental education until she is having a baby. In this example, the woman's learning need is coincident with her developmental task: becoming a mother. Knowles further proposes that readiness to learn can be fostered through techniques such as simulations or exposure to role models.

Fifth, adult learners are life-centred. Unlike children or youth learners who learn by subjects, adult learners learn better when they are presented with real-life problems and when learning is associated to their real-life situations such as solving their problems in life or improving their performance in life.

Lastly, the motivations for adults to learn are internal rather than external (Holton, Swanson and Naquin, 2001). Adult learners are motivated to learn if

the goals of learning are to solve their problems or achieve internal payoffs.

Although andragogy remains an important theory in adult education, it received a number of criticisms after it was initially proposed. A large number of them question the unclear nature of andragogy. Some question whether it is legitimate to claim andragogy as a theory suggesting that it is only a set of assumptions of adult learners' characteristics as it does not suggest the process of adult learning (Smith, 1999). Hartree (cited in Anderchek, 2005) also argue the ambiguous nature of andragogy as it does not state that it is a theory or model about how adults learn or how to teach adults. Others state that the assumptions of andragogy are not based on empirical research evidence (Anderchek, 2005). Furthermore, on closer examination of the six characteristics of adult learning proposed by Knowles, it is argued that children do not learn entirely differently from adults i.e. they share similar characteristics (See Anderchek, 2005 and Smith, 1999 for detailed analysis).

Even if andragogy receives a large amount of criticism, it provides insights into the instructional designs in teaching. It encourages lecturers in the classroom to be the facilitators developing different strategies such as experiential learning for their life experiences are important or problem-based learning because they learn better when presented real-life problems. These approaches facilitate learning for adults and even children through drawing from the characteristics of how people learn.

The concept of andragogy is important as it informs the research questions and frames the understanding of the marriage immigrants themselves. The adult

learners' characteristics of knowing the importance of their learning, being self-directed and internally motivated are important to inform the research question concerning learning motivations. Before the marriage immigrants attend a learning programme, they may already know why they are doing it; they would set up their own learning goals and pace and their motivations are driven internally. Therefore, it is important to know the motivations they have in mind prior to the course so as to enable a critical assessment of whether these goals are addressed during the programme. Furthermore, the aforementioned concepts are useful in informing and interpreting the marriage immigrants' learning motivations.

The other three characteristics of andragogy imply potential learning strategies suitable for adults. The tasks and activities performed in the courses are supposed to be more practical in connection to their experiences. Potentially if a learning programme accommodates adult learners' characteristics to learn, it can lead to better learning results in the end. These issues will be explored further in the findings chapter.

Having introduced the andragogical model based on adults' characteristics, the following discussion will focus on the motivations and barriers associated with adult learning.

### **2.3.2 Motivations of Adult Learning**

The issues of motivation are also crucial when it comes to adult learning because they help to promote adults' participation in learning. In 1960s, Houle conducted empirical research using interviews to investigate reasons for adult

learners to be involved in educational activities. His typology of adult learner motivations is still an important point of reference for later studies (Cross, 1981; Dollisso and Martin, 1999).

Houle (1961) divides adult learners into three subgroups. The first are goal-oriented learners who engage in learning for achieving particular objectives. These learners identify their learning needs before they become involved in learning and they do not constrain themselves in particular institutions or learning methods. As long as they accomplish their objectives, they do not care where or how they learn.

Activity-oriented learners form the second group. Learners who belong in this group engage themselves in learning for the social relationships and social contact they get in the learning process. For this type of learner, social interactions are the most important. In Houle's study, he finds out that those learners hardly ever do readings for the learning activities.

In contrast to the second group, the third group, learning-oriented learners, involve themselves in learning for knowledge-seeking. Learning-oriented learners believe self-development is achieved through learning. Most of them are avid readers. The choices they have made in their lives are mostly based on the future growth the decisions will offer them (Houle, 1961).

Tough (1968) builds on the work of Houle, and studies the reasons for adult learners take on self-directed learning projects. Compared to Houle's work, Tough's adult learning motivations appear to be simpler and more descriptive.

He concludes from the interview data of his study that the three adult learning motivations are summarised as the need to increase self-esteem, the need to impress others and the enjoyment and satisfaction of learning.

Later Lieb (1991) outlined six factors that motivate adult learners: external expectations, social welfare, social relationships, escape/stimulation, personal advancement and cognitive interests. These six sources of adult learning motivation can be categorised into Houle's (1961) motivation orientation categories.

External expectations can be categorised as goal-orientation with learners' objectives being to fulfil someone's expectations. Similarly, social welfare, which is the individual need to improve his/her skills to participate in communities and societies, can also be taken as goal-orientation. Learners have the goal to participate in societies and it is this goal that drives them to learn and improve their skills and abilities. The factors of social relationships and escape/stimulation can be categorised into activity orientation. When learners engage in learning to build up social networks, to escape boredom or to break from routine by taking part in learning activities, they are actually activity-oriented learners. Personal advancement and cognitive interests can be described as learning-oriented in that adults learn for self development and for the sake of learning.

After understanding the different motivations of adult learners, it is worthwhile to discuss the relationships between ICTs and users' motivations. Some of the empirical research has shown evidence of ICTs increasing users' motivations.

For example, Reynolds, Treharne and Tripp (2003) suggest that the use of ICTs assist learners in being more resourceful and innovative whilst at the same time supplying motivation. Similarly, it is proposed in the report of Passey *et al.*'s (2004) that the use of ICTs leads to positive motivational results because ICTs assist research, engagement and presentation of the work. That being said, the use of ICTs in learning requires proper selection of the type of technology and its implementation. However, ICT “does not automatically add quality to teaching and learning” (Dellit, 2002: 56). The use of technology should be incorporated with the learning materials because of its appropriateness (Richards, 2005), not because of the belief that the use of ICTs in learning promotes learner motivations.

Judging from the existing literature that discusses the learning needs of the marriage immigrants in Taiwan, their motivations to participate in the ICT programme can be mainly goal-oriented: to acquire skills needed for jobs and to access extensive information on their interests. Another possibility would be activity-oriented, given the fact that they are away from their friends and families. Attending such programme offers them opportunities to meet new people, make new friends and rebuild their social network. These questions will be further explored in the current study.

### **2.3.3 Barriers for Adult Learning**

As important as it is to understand the motivations for adults to learn, there is a great volume of literature that attempts to understand the reasons for adults not participating in learning activities. Unlike children, adults have more responsibilities and distractions in life to stop them from participating in

learning. Identifying and overcoming the barriers is helpful to get more adults involved, especially those who need education or learning for social participation. Also, understanding learning barriers for adults can be helpful for educational policy makers and lecturers to identify the difficulties and come up with means to deal with them.

Cross (1981) suggests three categories of barriers in adult learning based on the national survey for the Commission on Non-traditional Study in the US (1974):

1. Situational barriers: issues relating to circumstances one is in. Poor economic status, lack of transportation, lack of time and insufficient technological skills are possible situational barriers one can have.
2. Institutional barriers: issues concerning practices that discourage or stop adults from learning. Course availability, tuition fees and difficult access to the location are all institutional barriers.
3. Dispositional barriers: issues concerning personal values and attitudes toward learning. Lacking confidence to learn, lacking interests to learn and laziness are all dispositional barriers of adult learning.

Proposed in 1981, Cross's categories of barriers for adult learners have been widely applied in various literature to date. Examining the three categories of barriers to adult learning, it can be concluded that the access issue is the fundamental barrier. Difficulties in accessing resources and educational programmes prevent adult learners from participating in learning activities

and their psychological willingness to access learning also affects their participation in such activities. Therefore, one of the crucial factors for encouraging adult learners to learn is to promote convenient access to resources. This may assist reducing institutional and situational barriers. Enhancing adult learners' confidence in learning would be another effective way of improving their motivation as it would decrease their dispositional barriers.

While there are various barriers for adults to learn, features and characteristics of ICTs are believed to assist overcoming some of those barriers. Firstly, ICTs are able to provide better access to learning materials and opportunities despite the time and space barriers (Hendriks, 1999; Koper and Tattersall, 2004). They also potentially offer alternative channels for easier access to learning opportunities. Drawing on the features mentioned above, ICTs can potentially overcome situational barriers such as lack of time and transportation to access learning. Considering the roles of the marriage immigrants in Taiwan as wives and mothers, their time may be occupied by domestic issues. Furthermore, they may not yet acquire valid driving licenses which would potentially make it difficult for them to access learning. The use of ICTs may facilitate means to overcome these types of learning barriers.

Other than the potential to reduce situational barriers for adults, studies have shown that ICTs appear to have positive effects on learning experiences which includes enhancing motivations and engagement for learning (Passy *et al.*, 2004; Denning, cited in Reynolds, Treharne and Tripp, 2003). It is also suggested that the use of ICTs increases self-confidence (Chung, Lin and Chao,

2008; Passy *et al.*, 2004; Reynolds, Treharne and Tripp, 2003). The attitudinal impacts of ICTs on learning can also play a part in decreasing learners' dispositional barriers such as lack of interests and motivations to learn; however, even if it is suggested that using ICTs in learning brings positive learning effects mentioned above, it does not mean that using ICTs is a panacea for learning (Eynon, 2009). What is more important is to explore the types of opportunities and effects enhanced by using ICTs in learning. These issues will be explored in this study.

## **2.4 The Research Questions**

From the above discussion, it was established that marriage immigrants experience various challenges in daily life due to the change of environment. Appropriate education programmes are one kind of effective support to address their needs. Strategies stemming from both government and NGOs to employ different educational programmes to address their needs were discussed earlier in this chapter. However, there are limited numbers of studies aligning the learning needs of the marriage immigrants and the learning outcomes of the educational programmes. As a result, the overarching research question of the current study is:

*How do educational programmes in ICTs assist the marriage immigrants in adapting to their lives in Taiwan?*

The use of ICTs is identified by the government as a means to assist the marriage immigrants in acquiring general living skills in Taiwan, in widening learning participation and in promoting lifelong learning. As a result, a

specifically targeted ICT programme is chosen as the case to explore if acquiring ICT skills assist in achieving the goals mentioned above. To explore the assistance of the programme of interest to the marriage immigrants, it is crucial to firstly know what they really need and why they want to attend the courses. Common learning needs of the marriage immigrants and different typologies of adult learning motivations were reviewed to assist answering the above question. Furthermore, possible ways for ICTs to support the learning were also discussed to better understand the government's stance in promoting ICT skills to the marriage immigrants. To fill the gaps of the government policies and the actual needs of the marriage immigrants, the first step is to identify the expectations the marriage immigrants have of the ICT programme. Therefore, the first research question of this study is:

1. Why do the marriage immigrants attend the ICT programme? What do they expect it to offer them?

Other than understanding their motivations to learn, it is also important to know what factors stop them from learning; since one of the most effective ways to promote learning is based on trying to remove some of the learning barriers for them. The chapter draws on Cross' (1981) study to discuss common learning barriers for adult learners: institutional, situational and dispositional barriers. The second research question is asked to understand the learning barriers of this particular group of people better:

2. From the marriage immigrants' perspectives, what are the barriers to learning? What support is helpful in overcoming those barriers?

The government's goals for the ICT programme were discussed; the motivations and the expectations for the marriage immigrants to attend the programme were asked. The important question to examine here is related to the learning outcomes of the marriage immigrants after attending the ICT programme. It is important to know what has been achieved by the ICT programme in order to ask the following questions: do the achievements fulfil the needs of the marriage immigrants? Do the achievements fulfil the goals set up by the government? To answer these questions, the third research question of this study is:

3. What learning outcomes have the marriage immigrants achieved by attending the ICT programme? What effect has the ICT programme had on them?

After outlining the overarching research question and the three research questions, the next chapter will discuss the appropriate research methods to be employed by the current work in order to approach and answer the above questions.

### 3. Methodology

As noted in the introduction, this study employs a qualitative case study approach to explore the implications of a specifically targeted ICT programme for marriage immigrants in adapting to life in Taiwan. This chapter justifies the research strategy of this study.

To better understand the social phenomenon to be examined, a qualitative research approach is appropriate for this study. Although both aim at generating theories to describe and explain certain things or phenomena, qualitative and quantitative inquiries are believed to be of “alternative cultures” that involve different traditions and norms (Mahoney and Goertz, 2006). Similarly, Brannen (2007) suggests that the two inquiries represent fundamentally different paradigms. It is argued that the different knowledge claims and data collection strategies of a study would contribute to the choices of qualitative or quantitative research approaches (Creswell, 2003; Patton, 1990). While the quantitative approach aims to answer “what” or “how many” and cause and effect questions by the use of measurements and experiments, the qualitative approach aims to understand personal experiences or a social reality through people’s words or behaviours to answer “how” and “why” questions (Creswell, 2003; Denzin and Lincoln, 2000; Merriam, 1988; Taylor and Bogdan, 1998; Denzin and Lincoln, 2000).

Judging from the overarching research question of the study, employing the qualitative method is better for addressing the research question. In the

qualitative methodological tradition, it is essential to conduct research naturalistically to “make sense of, or to interpret, phenomena in terms of the meanings people bring to them” (Denzin and Lincoln, 2000: 3). By doing so, the researcher is able to observe unforeseen findings and describe a phenomenon in-depth and in detail (Bryman, 1984; Hoepfl, 1997). As the study aims to explore the degree of help the ICT programme offers to the marriage immigrants in adjusting to life in Taiwan, it is necessary for me to conduct the research in the natural setting, the ICT programme, and to understand their perspectives and experiences by observing their behaviours and interpreting their spoken words. It is hoped that the rich information provided by the participants of this study can contribute to the understanding of this particular social phenomenon for the readers because “it may be epistemologically in harmony with the readers’ experiences” (Stake, 1978: 5).

### **3.1 Case Study as Research Strategy**

The study examines a current event (marriage immigrants attending ICT courses) occurring in Taiwanese society and tries to understand the participants’ opinions of this event through their own experiences. A case study is considered a suitable research strategy for this work because it aligns with the definition and the aims of the case study approach. Yin (2003: 13) proposes the definition of a case study to be “an empirical inquiry that investigates a contemporary phenomenon within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident.” Similarly, Stake (1995) suggests that the case study method is appropriate for studying human affairs for it contributes a detailed description and explanation of a particular phenomenon rather than providing general findings to be

applied to different circumstances.

The level of control over an event is another method of deciding the preferred research strategy. Unlike an experiment that separates the phenomenon and the context to gain control over the event, a case study does not try to separate them because the context is deliberately chosen for its relations to the phenomenon being studied (Yin, 2003). The underlying assumption of the case study is that the human system is developed as a whole rather than collections of different characteristics. To study a case and to understand how things happen, it requires “an in-depth investigation of the interdependencies of parts and of the patterns that emerge” (Sturman, 1997: 61). Punch (2009: 119) summarises the case study as a strategy of knowing a case “in depth, and in its natural setting, recognizing its complexity and its context.” With the context of this study being the ICT courses, separating it from the phenomenon of how ICT assist acclimatisation would be impossible since the phenomenon is situated within the context itself. It is important for me to learn how the phenomenon emerges from the context.

There are several categories of types of case studies summarised by different researchers; the study identifies the regularly used categories proposed by Yin (2003). He proposes three types of case studies which contain exploratory, descriptive and explanatory case studies. An exploratory case study is often applied when questions or hypotheses need to be defined. A descriptive case study is intended for describing events in its context. Lastly, an explanatory case study looks for the causality between phenomena and its effects. This study is recognized as an exploratory case study since the topic of how an ICT

programme assists marriage immigrants in adjusting to their lives in Taiwan remains underexplored. Only very little research has been conducted regarding the related topics and there is still uncertainty about the effects and the results of the study.

An exploratory case study can be seen as a theory building case study using de Vaus's (2001) word as this type of case study often only starts with basic propositions without any theories to support the case. To refine the propositions by the case(s) selected for the investigation, it employs an inductive reasoning to derive a general rule from the case(s) and "end up with a more specific theory or set of propositions" (de Vaus, 2001: 223). Likewise, Davey (1991) states an exploratory case study to be suitable as it helps to define questions and select measures to investigate the uncertainty that exists in the study. He further illustrates that an exploratory study is a condensed case study that can be conducted before large-scale research. The description is relevant to this study as it is a small-scale single case study to explore the value of the ICT programme in assisting the marriage immigrants. It is hoped that this study facilitates defining the questions and highlights possible results brought by the ICT programme to assist future research in related areas.

The case study approach is selected as the overarching research strategy in accordance with the research aim and the control over the events of this study. This being said, the following questions to ask here would be: what is a case and what is the case in this study?

### **3.1.1. Describing the Case**

A “case” is a broad term as it can be anything: an individual, a programme or a community (Punch, 2009). Stake (1978:7) defines a case as a “bounded system” of interest using Louis Smith’s term. Likewise, Miles and Huberman (1994: 25) identify a case as “a phenomenon of some sort occurring in a bounded context”. The case in a case study represents a contemporary occurring event with boundaries. A governmental offered ICT learning programme for marriage immigrants in Taiwan is identified as the case of this study with the ICT programme being the contemporary event and the classroom settings being the boundary.

The study implemented a purposive sampling strategy. As Stake (2008) indicates that case study is not a study about sampling; the case is not selected to represent other cases but for its uniqueness and distinctiveness. An ICT programme set up by the government was purposefully selected as the single case of this study because it is believed that by investigating this case in detail, it is likely to answer the research question.

The programme was the first ICT programme ever offered by the district office for the marriage immigrants in WS district. WS district is famous for its culturally-rich environment housing many well-known higher education institutions. As mentioned previously, learning to use ICT is identified by the central government as an essential skill for lifelong and independent learning. The programme was set up under the guidance and support of the central government to help marriage immigrants gain the basic skills and knowledge

they need to live in Taiwan. As it was the first ICT learning programme for marriage immigrants in the district, I believe this case would assist me in capturing the uniqueness of the expectations of the participants regarding what this programme could bring to them and to observe and understand if the courses had achieved their expectations in the end. As argued by Stake (1978: 7), the selection of the case is to recognise its distinctiveness and its contribution to increasing “existing experiences and humanistic understanding”.

The government offered a free ICT programme whose duration was from the 4<sup>th</sup> of August until the 24<sup>th</sup> of September 2009. The programme took place in the computer room in the district office. There were 27 computers including the one for the lecturer; however, only about 24 of these were working properly in the classroom. There were two courses each week and each course lasted for three hours. The topics of the courses included an introduction to ICTs, basic ICT skills, an introduction to the Internet, and an introduction to both PhotoCap, Microsoft® Word and Microsoft® Excel. 25 marriage immigrants had signed up for the computer courses and only one of them was male. Both the courses and the participants of the study will be introduced in detail in the findings chapter.

A very high percentage of the students in the programme were from Mainland China. This might be because one of the course requirements was for students to have basic Mandarin efficiency. Four of the students were from Vietnam; one was from Hong Kong and one from Indonesia. All of them were able to read and recognise Chinese characters and speak in Mandarin. The age of the participants within the programme ranged from 28 to 50 and their educational

qualifications varied from primary education to university.

As this was the first ICT programme within the district and the design of the curriculum was planned by an experienced ICT lecturer, this would set a strong case to examine the motivations of the marriage immigrants, how the administration addresses their learning needs and if it could in reality achieve the goals set by the government.

After defining the case of this study, the following section presents the research design of this study. Kelly (2004) points out key principles for designing social research and one of which is to implement appropriate research methods that are able to address the research question and produce robust data analysis. These methods are important as they would decide the data collected and further direct the conclusion of the research, Yin (2003:19) considers it to be difficult to design case study research due to the fact that a comprehensive “catalog” is not presented to aid in such endeavours. However, I feel it is this characteristic of not having a comprehensive “catalog” that gives the advantage of the flexibility in the design of such studies. It allows the researcher to choose different approaches that he/she thinks appropriate to answer the research questions.

### **3.2 Research Methods**

Traditionally, case study research combines multiple data collection methods for collecting the necessary sources of evidence (Eisenhardt, 2002; Punch, 1998; Yin, 2003). Yet, case study research does not claim any one central source of evidence or data collection methods and as such, it can employ qualitative

and/or quantitative evidence depending on the research question of the study. Indeed, the methods for collecting data can be highly flexible (Stake, 1981; Eisenhardt, 2002). Commonly used data collection methods of case study research summarised by Yin (2003: 85) include analysis of documentation, archival records, interviews, direct observation, participant-observation and physical artifacts.

A small-scale pilot study was conducted before the main study to help inform the selection and design of the data collection methods for the main study. A pilot study refers to a smaller-scaled study conducted before the main study (Polit, Beck and Hungler, 2001) to detect potential practical issues regarding research protocols or research methods (van Teijlingen and Hundley, 2001). As a result, the pilot study conducted for this study was useful not only to inform the direction of the main data collection process but also to understand potential issues that may arise before the main study takes place. For example, it was originally designed that interviews would be the primary data collection methods. However, after conducting the pilot study, it was found that the marriage immigrants were very shy and it was not easy for them to share their perspectives. More than that, it was difficult for me to understand what they referred to regarding the learning programme. As a result, observation was thought to be an important method as it would assist in building a rapport between the participants and myself and allow me to experience the learning programme with them.

Interviews were selected as the principal data collection method for this study while analysis of documents and participant observation were employed to

provide supporting evidence. While conducting interviews is a way to understand the perceptions of the interviewees on a certain topic (Patton, 1990), it is not easy to imagine and understand what the interviewees have experienced regarding the topics of interest through interviews. Conducting participant observation assists to explore the interviewees' experiences within the culture under study (Becker and Geer, 1969); it enables the researchers to describe and analyse what has been seen (Mays and Pope, 1995). It also assists in gathering sufficient amount of information about the event being observed (Becker and Geer, 1969). By conducting both methods, it allows one to collect sufficient data on the topic of interest as interviews explore and examine the interviewees' perceptions on a certain topic and the participant observation gives an understanding and appreciation of the culture being studied (Emerson, 2001).

Documentary analysis was conducted as the first data collection method to identify and define the background of the study and the research question. Participant observation was performed after these documentary reviews. Semi-structured interviews were conducted after observation in order to better understand the marriage immigrants' perceptions. Second interviews were conducted over the phone one year after the ICT programme ended to investigate the longer-term effects of the programme to those specific marriage immigrants. Utilizing these three methods offered insights into the contexts of the current study, the studies related to the current one and the culture being studied; they also helped to gain an understanding of what the participants perceive they have done and what they actually did.

### **3.2.1 Analysis of Documents**

Documents, production of recording people's thoughts, behaviours and words, are one of the important sources of data in social research (Prior, 2004; Punch, 1998). While documentation can take different forms such as, personal diaries, letters, newspapers, government proceedings (Bryman, 2008; Yin, 2003), the documents are normally analysed by the words recorded in them (Prior, 2004).

Different research approaches treat documentation differently. In case study research, documents are often used along with other research methods to triangulate the evidence collected (Punch, 1998). Yin (2003: 87) further illustrates that documents are important data resources in case study research because they "corroborate and augment evidence from other sources". Firstly, documents help to verify the information collected by other methods. If documentary data contradicts other sources of data, it is important to look in greater depth in order to ascertain potential problems. Second, they help to form important background knowledge and shape the research questions for this study.

There were two main categories of documents reviewed in this study: the government reports and white papers and academic journal articles. The government reports and white papers were used to inform educational policies for marriage immigrants and policies regarding ICTs in education in Taiwan. In the process of searching documents related to the topic of this study, it became clear that the research topic was underexplored. Academic journal articles researching about educational issues regarding marriage immigrants in Taiwan

were heavily focused on their initial learning needs and language education.

The Taiwanese Annual educational policy white papers and the longer-term (5-year and 10-year plans) policy white papers such as the Action Plan (MOI, 2003), Towards the Lifelong Learning Society and Lifelong Learning project executed by the Ministry of Education (MOE, 1998) were reviewed to understand the goals for the government to achieve regarding marriage immigrants. The common themes that emerged from those reports which focus on accommodating the marriage immigrants' educational needs to adjust to the life in Taiwan will be further reviewed in the findings chapter.

Somewhat surprisingly, there was only one policy document relating to ICT and education for the marriage immigrants in Taiwan. The report, Towards the Lifelong Learning Society and Lifelong Learning project (MOE, 1998), stated the goals to be achieved for the ICT programmes specifically targeted for marriage immigrants. However, it is to be noted that the goals described in the paper were very broad with the ultimate goal being to assist the marriage immigrants in adjusting to life in Taiwan. This, as a result, set the proposition for this study of whether the use of ICTs could assist their life adaptation.

Government statistical reports and announcements for marriage immigrants in Taiwan were examined to understand the contemporary immigrant flows in Taiwan and migration policies for immigrants. These documents gave a picture of flow patterns of marriage immigrants in Taiwan such as how many there are and where they are, the process and the procedures they need to go through to move to Taiwan, the rights and the responsibilities they have after moving to

Taiwan, the potential social phenomena shaped by the immigration flows, their educational needs observed by the government and similarly, how the government address such needs.

The search for the government reports were mainly conducted on the official governmental websites such as those belonging to the Ministry of Interior and the Ministry of Education of Taiwan. The main categories for searching were categorised under “statistics”, “publications” and “important policies”. The keywords used for searching primarily contain “foreign”, “immigrants” and “marriage immigrants” in relation to “education”, “learning”, “ICTs” and “new technologies”.

Other than the government documents, academic journal articles were extensively reviewed according to the themes that emerged from the research questions of this study. The first theme was to understand the initial learning needs for the marriage immigrants as they move to Taiwan. The second topic concentrated on how ICTs can support such learning needs. The third one was about adult learning theory, motivations and barriers.

Academic journal articles in both Mandarin and English were reviewed. The Mandarin sources of the articles were searched mainly within Networked Digital library of Theses and Dissertations while the English resources were obtained via using the SOLO (Search Oxford Libraries Online). Similar keywords were used to search for related literatures such as “foreign”, “immigrants”, “marriage immigrants” in relation to “ICTs”, “new technologies”, “e-Learning” and “education”, “learning”, “learning programmes” and etc.. In

addition, literature in English regarding andragogy and adult learning theories were searched and reviewed.

All the journal articles were analysed and reviewed by the texts and the contents they contained (Krippendorff, 2004). The first step for analysing the documents involved data reduction. The textual materials of the documents were reduced to manageable sizes while keeping the core concepts (Coffey and Atkinson, 1996; Weber, 1990). Then, it was important to categorise the data after reduction with categories emerging from the background information and the research questions of the current study. Contents were grouped under a category if they share commonality (Krippendorff, 2004). Categories were roughly divided into six which include “learning needs for marriage immigrants”, “ways and strategies to support learning needs”, “ICTs support learning”, “andragogy”, “adult learning motivations” and “adult learning barriers”. During the process of categorising, the categories were constantly refined and focused. For example, there were abundant academic articles focusing on how ICTs support learning; the search criterion was narrowed down by focusing only on the learning needs of the marriage immigrants. Before drawing conclusions, the process of reducing and categorising were concurred several times to produce robust conclusions (Huberman and Miles, 1983).

There were a few papers researching the topics and yet the learning needs concluded were highly descriptive without categorising. As a result, those papers formulated similar difficulties and/or learning needs of the marriage immigrants with dissimilar terms. To better group the marriage immigrants’

learning needs, a categories proposed by Wang (2008) to describe different dimensions of life adaption was employed: individual, family and social and culture level.

The third theme for document review was conducted to understand how the marriage immigrants possibly learn better by drawing on adult learning characteristics. Important theories including andragogy proposed by Knowles and adult motivations and barriers were reviewed and summarised.

Although documentation contains rich information for analysis, one consideration for the analysis of documentary data is the credibility of it. As authentic as it is, all documentary data was written for a specific audience to serve a particular purpose (Bryman, 2008; Prior, 2004; Yin, 2003). The governmental documentary data was not the central source of data in this study. It provided the initial question and the basic proposition to begin the research. It also served as a prominent source for cross-examining the credibility of other evidence collected from the case. For an exploratory case study, it is vital to examine the actual case for more specific propositions or to develop a theory (de Vaus, 2001).

### **3.2.2 Participant Observation**

Observation is a traditional research method that has been widely used in social research. It is also one of the frequently implemented data collection methods in case study research because it allows close examination of the case and interpretation of the results gathered from other data collection methods (Simons, 2009). Simons (2009: 55) concludes that there are five reasons to

conduct observation in case study research: to gain a complete picture of the setting, to gain rich information from the observed incidents, to determine patterns of the culture being observed, to comprehend the experiences of the people being observed and finally, to cross-verify the data collected from interviews.

There are several techniques for conducting observation. Participant observation is conducted in this study due to the nature of the context selected. The main feature of participant observation is that the researcher does not only observe but also immerse him/herself in the situation by taking part in the activities within the chosen setting (Flick, 2009). Similarly, Becker and Geer (1969: 322) describe participant observation as a method that “the observer participates in the daily life of the people under study...observing things that happen, listening to what is said, and questioning people, over some length of time”. As the ICT programme required the participants to perform tasks on their own computers, the problems they encountered were very diverse and individual. Participating in the programme would assist my understanding of the happenings and the issues that arise during the courses. As ethnographers stress, participant observation is one of the most important techniques for data collection not only because it allows the researchers to experience and examine the social life of the chosen setting, but also because it allows the researchers to jot down fieldnotes as a way of producing written descriptions of the culture studied (Emerson, 2001).

Participant observation was conducted for a 2-month period during the ICT programme. Prior to the courses, I explained to the participants the purpose of

what I was doing and the reasons why I was there. This is what Gillham (2000) refers to as openness. He believes that by doing so, it is easier for the researcher to gain trust.

As the primary goal for observation was to establish a rapport with the participants and to experience the ICT programme with the chosen participants, unstructured observation was used where I entered the field without predetermined behaviours to observe. Traditionally unstructured observation aims to understand the culture within a naturalistic setting while a structured observation is used to “record physical and verbal behaviour” (Mulhall, 2002: 306). As I participated in the ICT programme (the naturalistic setting) along with the marriage immigrants, I was able to gain an “indigenous sense of the social setting being studied” (Whitehead, 2005: 11). In addition to the nature of the unstructured observation mentioned above, Mulhall (2002: 307) proposes several reasons for conducting unstructured observation: to explore the interactions within the group, to depict the whole picture of the setting being studied, to capture context/process, to inform the influences of the physical environment. For the current study, the observation conducted focused on the interactions between both the participants themselves and the participants and the lecturer. In addition, the happenings within the classroom and what had/had not been going well, and the problems and the difficulties that emerged during the courses had been noted down to offer insights of the case being studied. An extract from the fieldnotes which I have translated into English is enclosed in Appendix 2 as an example.

This method employed was helpful to understand the cultures within the

programme and the learning process of the participants. What had been observed in the ICT programme did not only provide evidence to answer the second and the third research questions, it also informed the interview questions as many of the questions were asked based on the interactions, activities and tasks being observed. In addition, it was particularly helpful in providing insights into the development of their skills, the interactions between peers in the classroom and in answering the research questions of their learning outcomes and the difficulties they experience during learning. Examples of the skill development they built during the learning process, the establishment of the new friendship and peer collaboration can be found in the observation fieldnote. They are further discussed in the findings chapter regarding the unsupportive elements of the programme, the skill development of the participants and the evidence for the learning results.

Building rapport is recognized as one of the main objectives for observation because from the pilot interview experiences, the marriage immigrants were very shy and hence not very talkative during the interviews. Also, since I was not involved in the programme they enrolled in; they sometimes had to make extra efforts to explain things in a clearer manner for me. It was hoped that through participant observation, the participants and I would establish mutual understanding and trust for greater disclosure during interviews. It turned out that participant observation did assist in achieving this aim and therefore, the participants were willing to share their perceptions and experiences with me during interviews.

Fieldnotes of the observation were noted down after each course. The content

of the fieldnotes consisted of incidences, happenings and learning processes that occurred in the classroom that seemed interesting to me. The purpose of making notes on these events was linked to the desire to recreate the happenings within the unique case of the ICT programme in written forms. As what is being suggested, fieldnotes “are a form of *representation*,...fieldnotes (re)constitute that world in preserved forms that can be reviewed, studied and thought about time and time again” (Emerson, Fretz and Shaw, 2001: 353). Furthermore, it is proposed that fieldnotes are highly selective; the observers only write down things they feel that are significant. Examining the fieldnotes of this study, the incidences written down were mainly concerned with the difficulties the marriage immigrants had experienced during the learning processes and the disruptions of learning that occurred in the classroom. These fieldnotes are helpful to answer the research question regarding the marriage immigrants’ learning difficulties and barriers.

### **3.2.3 Semi-structured Interviews**

Interview, probably the most extensive method used for qualitative research (Bryman, 2008), intends to find out information in people’s mind that cannot be directly observed, such as emotions, intentions and perceptions (Patton, 1990). It is suggested that the interview method is employed in qualitative research in order to explore and understand people’s lives, thoughts and behaviours (Rubin and Rubin, 1995) and it allows in-depth examination of those understandings (Arksey and Knight, 1999).

There are three types of interviews: unstructured, semi-structured and structured interviews. An unstructured interview allows the most flexibility as

the interview questions are not pre-planned and the directions of the interviews flow while the interviews unfold (Punch, 1998). On the contrary, a structured interview offers the least flexibility as all the interview questions are predesigned and the direction of the interviews predetermined.

Semi-structure interview method is in-between these two extremes. In this study, semi-structured interviews were employed because of their open nature and the assumption that it is easier for the interviewees to express themselves meaning that it is more likely to lead to disclosure of an unexpected topic due to its inherent flexibility when compared to structured interviews or questionnaires (Flick, 2009; Simons, 2009). Yin (2003: 90) further suggests that case study interviews are often of an “open-ended nature” whereas the questions asked can be both about the facts and the opinions of an event. Interview was the central data collection method for this study.

The sampling of the interviewees was conducted by convenience sampling strategy. Convenience sampling is a sampling strategy that selects the most accessible participants for the study (Marshall, 1996). Interviewees were recruited from the participants of the programme who were willing to devote their time for interviews and share their experiences and opinions. All participants in the programme were invited to participate in the study. 14 marriage immigrants out of 25 agreed to participate in the first interviews in September 2009 and they were all aware that there would be follow-up interviews and initially all agreed to participate in the second one.

The interview schedule used in the first set of interviews is included in Appendix 3 and it contains three main parts: the first part is based around

questions regarding their life stories while the second part focused on understanding the challenges and the learning needs they had when moving to Taiwan. The first part of the information was rarely explicitly mentioned in the study; however, it was important for me to know the participants better and to make it easier to ask the following questions. The second part of the questions were asked to understand their learning needs and barriers in relation to the first and the second research questions of this study. The third part was about the ICT programme and the use of ICTs in their daily life such as their background knowledge of ICTs, how ICTs were used by them, their perceptions about the programme and what they had gained from it. This part was the primary section of the interview questions that informed the second and the third research questions of the study.

The characteristics of the participants from the first interviews are listed in Table 1. It can be observed from the table that most of the participants were female marriage immigrants with their age ranging from 28 to 41 years old. Most of their educational qualifications were at the secondary or vocational school levels and the majority were unemployed. The participants were mainly from Mainland China; only three of them were from Vietnam and one of them from Indonesia. They were predominantly prior computer users. Only three of them did not have any experience using computers before the courses and interestingly all three were from Vietnam. In fact, having prior computer knowledge and skills or not had effects on their learning. This topic will be further explored in Chapter 4.

Name	Age	Years stay in TW	Education	Number Of Children	Work	Home Country	Computer Ability
Amei	34	7	Vocational school	2	Unemployed	China	Prior user
Bintang	32	5	University	0	Part-time translator	Indonesia	Prior user
Cay	30	3	Secondary School	1	Unemployed	Vietnam	Novice user
Dawei	28	1/2	Secondary school	1	Unemployed	China	Prior user
Ejun	28	6	N/A	2	Unemployed	China	Prior user
Fang	30	6	Vocational school	2	Unemployed	China	Prior user
Guan	33	6	N/A	2	Unemployed	China	Prior user
Hua	41	10	Vocational school	2	Unemployed	China	Prior user
Iting	29	4	Vocational school	1	Unemployed	China	Prior user
Jiais	37	8	N/A	2	Cleaner	Vietnam	Novice user
Kaili	35	13	Secondary School	2	Insurance seller	China	Prior user
Lan	39	8	Secondary School	1(previous marriage)	Unemployed	China	Prior user

Makena	35	12	Secondary school	2	Cleaner	Vietnam	Novice user
Niu	36	5	Vocational school	1	Unemployed	China	Prior user

**Table 1. The characteristics of the interviewees**

Examining their demographic characteristics, it could be observed that most of the marriage immigrants were female in their 30s with one or more children. They were mostly unemployed and without high educational qualifications. Ethnically, they were mostly Chinese people. The demographic characteristics of the participants of this study well-represent typical marriage immigrants in Taiwan. As mentioned in Chapter 2, a great number of the marriage immigrants in Taiwan are female and most of them have a child in the first year of their marriage (Hsia, 2000). Furthermore, a very high percentage of them are from lower socioeconomic status households without professional skills and employment (Liu, 2004). Lastly, about 63% of the marriage immigrants in Taiwan are from China (MOI, 2009a). While the sample reflected a typical profile of the majority of marriage immigrants in Taiwan, these characteristics were not used as important factors to analyse data. The main reason is that the demographics were so similar that no great differences between participants had been shown in the data. Instead, it was found in agreement with other studies (Broos, 2005; Chen, 1986; Shashaani, 1994; Tsai, Lin and Tsai, 2001) that having previous experience of using ICTs did affect their perceptions and behaviours of using them during this programme. This factor was, therefore, employed in the data analysis process.

The locations of the interviews included the computer classroom, in fast food restaurants or the interviewee's house depending on their preferences. All the interviews were audio taped and the length of each interview lasted from 25 minutes to 60 minutes. The objectives for employing the interview approach were to explore marriage immigrants' perceptions about ICTs and to explore how the ICT programme assisted in their adaptation to life in Taiwan from their viewpoints.

The second interviews were conducted in July 2010, a year after the programme ended. Instead of face-to-face interviews, telephone interviews were employed considering the expensive travel cost from U.K to Taiwan. Phone calls were made to all 14 participants of the first interviews. Six of them agreed to take part in the interviews and their written consent was obtained through emails before conducting the interviews. The interview questions focused on understanding both the short and longer-term effects of the ICT programme on them. Questions about their daily use of ICTs were also included. The main aim of the second interview was to understand the longer-term effects of the ICT programme to answer the third research questions of the study. The outline of the interview questions are enclosed in Appendix 4 for reference. Interviews lasted for around 20 minutes. All the interviews were all audio taped by call recording software. Important issues raised during the interviews were also noted down.

As mentioned above, interviews were conducted at two stages during the research: the first interviews were conducted immediately after the programme ended and the follow-up interviews were conducted a year later.

The objective of the first interviews was to understand their motivations to attend the programme, their expectations from the programme and the learning barriers. The aims of the second interviews were to explore the learning outcomes of the ICT programme and longer-term effects directly linked to the courses such as the changes in their learning attitudes and their daily routines. It was also hoped to shed light on whether the students had achieved the goals they had initially set for themselves.

The interview took the form of an interactive and conversational style. They were not mere question-and-answer interviews; the interviewees were curious about my life experiences and they sometimes asked questions. The advantages of conducting conversational styled interviews are to “indicate informality, friendliness and an attempt to equalize the relationship between interviewer and interviewee” (Simons, 2009: 44). Oakley (1981: 41) further states that “finding out about people through interviewing is best achieved when the relationship is non-hierarchical and when the interviewer is prepared to invest his or her own personal identity in the relationship”. By the time I was interviewing, the participants already knew about me and my background. They often drew on my own experiences as the basis for generalisation; they would say, “You must know the feelings because you are also living abroad alone”. I found it helpful if they knew me better before interviews because it was easier for them to share their thoughts and experiences with me and have empathy during the interviews themselves.

### **3.3 Data Analysis**

Miles (1979: 590) depicts qualitative data as an “attractive nuisance”. The data

are attractive because they are voluminous and holistic. On the other hand, they are a nuisance in the sense that analysing them can be very demanding and tiring; it is agreed that finding an analytical path through rich and disorganised data is challenging (Bryman, 2008; Miles, 1979; O'Dwyer, 2004). However, it is the nuisance that makes the research meaningful. As Wolcott (1990: 1) puts forward, "The real mystique of qualitative inquiry lies in the process of using data rather than in the process of gathering data".

This study employed the analysis framework proposed by Miles and Huberman (1994). The analysis framework they suggest consist of three activities: data reduction, data display and conclusion drawing and verification.

Data reduction is the process of reducing the amount of data collected during the project. As the data collected for the study included documentary data, observation fieldnotes and interview transcriptions, the first step for me to conduct data analysis was to decide what data was to be used through referring to the research questions, identify irrelevant data and in doing so remove them. For example, during the interviews, many of the participants talked about their lives in their home countries and how they met their husbands. Although these were examples of interesting life stories, they were not relevant to the research questions and were excluded from this study.

Data display is a process of organising and categorising the data with matrices to help the patterns and themes to emerge. The plan in this phase is to conduct open coding to explore themes centred on learning and the support offered by the ICT programme to the marriage immigrants. Coding, as defined by Strauss

and Corbin (1990: 3), is “[t]he analytic process through which data are fractured, conceptualized and integrated to form theory”. The purpose of employing code is to “identify, develop and relate the concepts that are the building blocks of theory” to originate an explanation and conclusion of the phenomenon being studied (Strauss and Corbin, 1990: 13). When examining the motivations of the marriage immigrants, Houle’s (1961) motivational typology was implemented; after coding their motivations into goal-oriented, activity-oriented and learning-oriented, it was found that there were different goals they had within their goal-oriented motivations. Some expressed their wish to acquire skills for jobs; others stated they would like to learn the skills to teach their children; still others would like to learn skills to facilitate managing domestic affairs. Therefore those motivations were sub-categorised into motivations for job, parenting and life management.

Conclusion drawing and verification is the process of analysing the patterns and regularities to hypothesize possible explanations and theories. Before drawing any conclusions for the study, data reduction and display occurred concurrently several times throughout the entire project. As data display process greatly influences the conclusions (Huberman and Miles, 1983), it is hoped that implementing data reduction and especially data display throughout the entire study would help produce robust and reliable conclusions.

### **3.4 Reliability and Validity of the Study**

This study proposed to investigate the extent of support offered by a specifically targeted ICT programme for the marriage immigrants in Taiwan

employing a qualitative approach. One of the important issues to consider when presenting the findings of this study is the trustworthiness of the conclusions drawn. Lincoln and Guba (1985) suggest an alternative set of criteria to examine the validity of a qualitative research similar to those which are traditionally employed by quantitative research: credibility, transferability, dependability and conformability.

Credibility refers to the creditability and believability of the findings of the research. Lincoln and Guba (1985) proposed various activities to ensure the credibility of the findings and one of which is to employ multiple research methods to look at the same phenomenon. This study employed different methods including documentation reviews, observations and interviews to (re)present the same social phenomenon from different aspects. It is hoped that by doing this, it would provide a more comprehensive picture of the issues to be studied.

Transferability refers to the ability to generalise the results of a qualitative research to other settings (Malterud, 2001). As Lincoln and Guba (1985) proposed that reaching transferability in qualitative research is impossible, the only way to enhance transferability is to provide readers with as thick descriptions of the study as possible for those who are interested in making generalisations to decide whether conclusions can be transferred. This study aims to provide the readers with rich information and thick description of the social phenomenon examined so as enable conclusions to be drawn on their vicarious experiences.

Dependability refers to the consistency of the findings (Seale, 1999) and conformability refers to the neutrality of the research. Lincoln and Guba (1985) propose a procedure of inquiry audit of examining the consistency between the process and the results of the research. As auditing is a reflexive procedure involving critical and methodological accounts of how the research is done, it is also useful to enhance the conformability of a research (Seale, 1999). For this study, I wish to constantly go back to the data and data analysis process to examine the reliability of the conclusions drawn.

### **3.5 Ethical Considerations**

Having a plan for data collection is crucial for doing research; however, all eventualities cannot be anticipated before the data collection process begins. There may be times when researchers encounter ethical dilemmas or what Guillemín and Gillam (2004: 262) refer to as “ethically important moments” when conducting research. The measures researchers take to respond to those critical moments should draw on key ethical principles to protect the rights and respect the privacy of those who participate in research (Finch, 1993).

The conduct of this research was approved by the University of Oxford Central University Research Ethics Committee (CUREC) and it also followed British Educational Research Association (BERA, 2004) ethical guidelines and the ESRC Research Ethics Framework (ESRC, n.d.). The following discussion includes two of the key ethical principles for undertaking research that involves human beings: informed consent and confidentiality. Lastly, I will talk briefly about the potential issues arising from observing and interviewing marriage immigrants.

An entirely voluntary informed consent obtained from those being studied is one of the key issues for doing research that involves human beings (Gregory, 2003). As Bryman (2001) suggests, the prospective research participants should be provided with detailed information about the research to decide whether or not they wish to participate in it. As discussed previously, the purpose of the study and participants' rights were explained to the attendants of the ICT programme before the observation was conducted.

For interview participant recruitment, the purpose of the study, general interview questions, the duration of the interviews and their rights to refuse or drop out from participating were explained before interviews. They were also informed how the interview data would be used prior to the interviews. After the participants agreed to be interviewed, they were given the written information relating to the project and sufficient time was given to them to ask any questions prior to the interviews.

They were aware of their own rights. For example, it happened during the interviews that some of the interviewees chose not to answer some of the questions I asked and some of them requested to disregard some of their responses. Written consents were all obtained from the interviewees. For the telephone interview, consent for participation was obtained through email. The participants' contact information and email addresses were obtained through asking them in person. They were also informed that further contacts from me were possible to obtain supporting information.

There were no known risks to the participants or myself, however, some of the participants expressed positive feelings about sharing their life experiences and challenges in life to let Taiwanese people know them better. Some of them expressed that they were willing to participate in the study because they were happy that someone took interest in their experiences and hardships. They felt their needs were taken into account. In addition, some of them expressed that I was a new friend they made through interactions and through talking to me; they felt someone cared about who they were. The situation is similar to what Oakley (1981) describes in one of her papers discussing women interviewing women. She suggests that it is possible for the interviewees to describe their relationships with the researchers beyond question-asking and answering if the researcher is willing to invest her own personal identity in it. Similarly, Finch (1984) proposes that the structural position between women can contribute to effective interviews as it reduces social distance which facilitates the sharing during interviews. It is as Duelli Klein (1983: 95) describes that “allows women studying women in an interactive process without the artificial subject/object split between researcher and researched”.

Although there were no known risks for participation, it was important to assure confidentiality of the participants in this research. In the BSA (British Sociological Association) statement (2002), the participants’ privacy was listed to be protected by keeping the related information confidential and anonymous. It was assured that all the personal information gathered for this study was kept anonymous. The names of the participants were coded using my own system. No person other than myself was able to identify the participants and all personal information was removed before data analysis. As for the data

collected and the fieldnotes, no one other than myself is able to see the information collected for this study. The information will be stored for up to 5 years and then removed and deleted.

It has often been discussed that the process of interviewing women and men are intrinsically different (Finch, 1993; Oakley, 1981). It is argued that it is easier for women to answer questions relating to their personal lives and experiences (Finch, 1993). However, this may lead to unanticipated disclosure of information that involves legal implications (Guillemin and Gillam, 2004). As marriage immigrants are often considered to be vulnerable, it is possible that the situation in question would occur when doing research. If some of them do disclose any of their problems that require legal actions, I would make clear about my role as a researcher as clear as possible. I would be willing to listen and understand their problems but I could not do anything to help them. If they wanted to resolve their problems, I would be happy to provide information about related institutions for consultation. And they would be referred to those institutions and foundations if they so wished.

In summary, a qualitative research approach was employed for this study concerning the type of research question to be answered. A case study research strategy was chosen based on the nature of the study: to investigate a contemporary social phenomenon and also for the flexibility of research design the aforementioned method offers. The specifically targeted ICT programme was identified as the case of this study. Documentation reviews, participant observation and semi-structure interviews were the main data collection approaches. It is hoped that the findings of the case studied will be

strengthened by implementing different data collection approaches to examine the same event from different aspects. The reliability and the validity of the study were achieved by constantly going back to the data and the data analysis process to examine if the analysed data was biased. Lastly, the study was conducted under BERA ethical guidelines. All the data of the participants will be protected.

## 4. Findings

The guiding research question of this study is to investigate how education programmes in ICTs facilitate the adjustment of the marriage immigrants' lives in Taiwan. A specifically targeted ICT programme was chosen as the case to be investigated. This chapter will outline the findings of different levels of support emerging from the ICT programme for those marriage immigrants including the support the marriage immigrants expect, the support received during the learning process and the support they perceived to be provided from the ICT programme. These different dimensions of support are laid out in the subordinate research questions of this study:

1. Why do the marriage immigrants attend the ICT programme? What do they expect it to offer them?
2. From the marriage immigrants' perspectives, what are the barriers to learning? What support is helpful in overcoming those barriers?
3. What learning outcomes have the marriage immigrants achieved by attending the ICT programme? What effect has the ICT programme had on them?

This chapter will start by describing the case of this study. The key findings developed from analysing data collected from observation and interviews will be presented as follows.

## 4.1 Description of the Case

The bounded system chosen for this study was the target-specific ICT programme in WS district. There were 25 marriage immigrants signed up for the programme. However, as the computer course schedule coincided with the Taiwanese dialect learning course, some marriage immigrants who signed up for both courses would choose to attend the language course and only go to the ICT course when the topic was of particular interest. Some other marriage immigrants might be caught up with domestic affairs and unable to attend the course, therefore, there were only about 15 to 20 attendants each time. The programme offered childcare services; however, some of the older children would rather stay in the classroom with their parents. Consequently, there were often around 5 children present during in the courses too.

The lecturer of the ICT programme, Mr. Young, was a very experienced teacher who had been teaching adult learners ICT courses for many years. As the ICT programme in question was the first one within the district, the administrators of the programme trusted Mr. Young to design the topics, learning tasks and learning activities of the whole programme. During the courses, Mr. Young video recorded all the lectures which made it easier for the marriage immigrants to review the material and for me to revisit and recall the happenings in the classroom.

The ICT programme consisted of six main topics including the introduction to computers, basic computer skills, the introduction to the Internet, the introduction to PhotoCap, the introduction to Microsoft® Word and the

introduction to Microsoft® Excel. To obtain as great an understanding of aspects of the courses as possible, five of the six topics were observed face to face. However, due to time and resource constraints, I was not able to observe Microsoft® Excel courses. That said, the other five still offered sufficient data to address the research questions. Each topic of the courses will be introduced individually in the following section to offer a better understanding of what had been taught during the courses. Below is a summary of what happened in each of the classes for the five topics observed.

#### **4.1.1 Introduction to Computers**

The main objective of these courses was to help marriage immigrants obtain a basic knowledge of computers. The courses consisted of mainly lectures with relatively few hands-on learning activities.

Basic instructions on using computer hardware were delivered. At the end of the section, Mr. Young asked the marriage immigrants to practice using the keyboard and to try to familiarise the keys at home so that it would be easier for him to introduce the Mandarin typing system in the next course.

From my observation, basic computer knowledge was gained after this section. The marriage immigrants were at least able to tell the differences between software and hardware. However, they needed to spend more time on hands-on tasks such as using a mouse for right and left clicks or using a keyboard to type. As using the mouse is essential for operating a computer, the lecturer spent considerable time demonstrating how to use it and allowed them to practice. The section appeared to be quieter with less interactions compared to other

sections. This might have resulted from the fact that the section was predominantly lectures based and that it was the first course meaning that the lecturer and the attendants had not had enough time to become acquainted.

#### **4.1.2 Basic Computer Skills**

This section consisted of two courses. The first one focused on introducing Windows Explorer and the concept of files. The objectives were for the attendants to be able to locate, open, close, save and delete files and applications in computers. The second course focused on Mandarin typing skills. The course introduced Zhuyin (注音, Mandarin Phonetic Symbols) typing system, Chinese handwriting inputting system and the ways to switch between Zhuyin and Pinyin (拼音, Chinese Phonetic Spelling) typing system.

Mandarin is a logographic language in which one “character” roughly represents a word (Han and Bi, 2009). Phonetic systems are needed to know how to pronounce a Chinese character. Although the official language of mainland China and Taiwan are both Mandarin, the two areas employ different phonetic systems: Pinyin and Zhuyin systems. Similarly, for those from Mainland China, they use Pinyin system while people in Taiwan normally use Zhuyin system when entering Mandarin texts on ICTs. Consequently, even if some of the marriage immigrants were able to use Pinyin typing system, they were eager to learn the Zhuyin typing system as they felt it essential for easier use of ICTs in Taiwan<sup>1</sup>, for their work use and for teaching their children ICTs.

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<sup>1</sup> In Taiwan, mobile phone texting systems and PDAs also employ Zhuyin system as default Chinese inputting system.

Many issues arose in the second courses. For one thing, each participant had different levels of knowledge of the Zhuyin system. The more they familiarised themselves with the symbols, the better and faster they mastered the Zhuyin typing systems. Mr. Young introduced Chinese handwriting inputting system as a substitute method; however, he strongly urged everyone to get familiarised with Zhuyin to speed up their Mandarin typing. Also, many of them needed individual demonstrations of how to switch between English and Mandarin typing systems because they were still not familiar with the locations of the keys on the keyboard and they had difficulties in using combined keys functions.

After the courses, they were able to perform basic file manipulations and they gained a firm foundation in the Zhuyin system. As for typing, the course only offered basic concepts and skills. They would need to put efforts into familiarising themselves with the keys and practicing typing to master it.

#### **4.1.3 Introduction to the Internet**

The main objectives of the courses were for the marriage immigrants to be able to search information on the Internet, to successfully apply for an email account and send and receive emails.

Mr. Young introduced what the Internet was, ways of information sharing between ICTs, tips on searching for information on the Internet, steps to apply for free email accounts and how to send and receive emails. There were in-class exercises regarding searching on the Internet as well.

During the courses, they performed tasks online including opening web browsers, connecting to web search engines and typing key words to search for information (under the condition that the computers were already connected with the Internet). 4 online search tasks were assigned during the course for the participants to practice. Most of them were able to perform the search without problems as Mr. Young had demonstrated the basic principles beforehand. Still, some needed help to successfully complete all the tasks. Most of the problems encountered were related to Mandarin typing. Also, all the attendants successfully sent a test email to Mr. Young's email account which indicates that they were able to log onto their email account webpage to edit/send emails. The lecturer sent them a test email after receiving their emails and they were able to open and read these with no problems.

#### **4.1.4 Introduction to PhotoCap**

The main objective of this section was to be able to use the software, PhotoCap, to process images and photos. The courses involved numerous hands-on learning activities of performing functions and special effects in PhotoCap to process the aforementioned data. Mr. Young mentioned that the reason for teaching PhotoCap was centred on the fact that it was free software with an easy-to-use interface which provided sufficient image processing functions. The attendants of the programme can easily download the application and load it on to the computers.

All of them had sufficient time to practice opening the application and loading photos onto it after the courses. Their individual performances were checked by Mr. Young and I to make sure all of them could complete the tasks. During

the courses, they were asked to apply special effects to the photos in order to personalise them with/without help. From my own observation, those who had previous exposure to ICTs had fewer problems completing the tasks compared to novice ICT learners. In fact, some of the advanced learners such as Amei and Guan could apply other special effect functions without instructions or help.

#### **4.1.5 Introduction to Microsoft® Word**

The main aim of the courses was to acquire basic knowledge regarding the functioning of Microsoft® Word and to create a Word document.

Basic and common functions of Microsoft® Word were introduced which include copying and pasting texts, redo and undo typing, insert functions, setting fonts, format functions and Asian Layout. After the attendants of the courses had practiced all the functions following step-by-step demonstrations, they were offered an in-class exercise where they role-played as workers in a company who needed to create a plain text document for the supervisor. Other than the demonstrations by the lecturer, detailed step-by-step instructions were also offered in the handouts for them. All the Word documents created by them were checked by Mr. Young and I to make sure they were able to perform the tasks mentioned above. After the exercise, the courses moved on to introduce more advanced functions of a Word document such as inserting formulas, tables, pictures and SmartArt.

This section provided the marriage immigrants with the basic ideas and operations of Microsoft® Word. For more advanced features like adjusting formats or adding pictures, a greater amount of practice was needed.

To sum up, by attending the ICT programme, the marriage immigrants were able to gain basic concepts and skills about computers. These include knowledge regarding the hardware and software of a computer, learning Mandarin typing system and file management skills, understanding the concept of the Internet and how to search for information, and basic use of PhotoCap and Microsoft® Word. However, I believe all those skills need to be practiced and used often to retain them. For those who do not have a computer and the Internet connection at home or who do not use ICTs in their daily life, it is likely that they would forget about what they had learnt after a short period of time.

After providing an insight into the happenings in the ICT programme, the following sections will draw on both fieldnotes from observation and the interview data to address the three research questions.

## **4.2 Motivations and Expectations of the ICT Programme**

Chapter 2 has reviewed the literature of the various learning needs of marriage immigrants in Taiwan as well as the motivations for adults to learn. This section will draw on Houle's (1961) typology of adult learning motivations as the basic framework to discuss the marriage immigrants' motivations to enrol in the ICT programme. The reason this study implements Houle's typology is because the framework is broad enough to accommodate almost all adult learners' motivations into the model. However, since the motivations for adults to learn are so complex the typology is not sufficient to explain those of the marriage immigrants in detail. As a result, I will further subcategorise the motivations by the skills/learning the marriage immigrants need.

### **4.2.1 Goal-Oriented Motivations**

Houle (1961) categorises adult learners into three groups: goal-oriented learners, learning-oriented learners and activity-oriented learners. The following discussion will implement the basic category he uses, however, in terms of motivations instead of learners. Goal-oriented motivations are those learning needs identified by learners before taking part in any learning activities. This type of motivation is centred around goals set up by learners themselves that are to be achieved at the end of the learning activities.

Analysing the interview data, the motivations of the marriage immigrants to attend the ICT programme evidently showed strong goal-orientation. 12 out of 14 marriage immigrants being interviewed identified what they would like to learn and achieve before participating in the ICT programme. This result reconfirms the andragogical model that adult learners are self-directed (Knolwes, 1980). They know what they want to learn before engaging in a learning activity. It is also found that their prior computer use influenced the goals they had set for themselves. Examining what their goals were, I would like to further subcategorise their goal-oriented motivations into three types: for jobs, for life management and for parenting.

Many of their reasons for attending the ICT programme was to acquire ICT skills as they believed they would be either very useful when they tried to find a job or for job use itself. Observing their employment status, a very high percentage of the interviewees were unemployed hinting that increasing employability was a major factor in seeking professional qualifications:

*“I think the teacher will teach me how to use Word and Excel. I believe knowing how to use them is helpful for me to find my future job” —Dawei, prior computer users, male.*

*“I learned Word and Excel a long time ago and now I have completely forgotten how to use them. It would be helpful to be able to use Word and Excel again. I think I would need the skills for my future job” —Iting, prior computer user, female.*

*“The most important skill to use ICTs is the ability to type in Mandarin or you need to be very fluent in English. You need a teacher to teach you how to use keyboards and how to type. I learned a little bit of ICTs in China on my own, but I want to receive professional training on basic ICT skills. Also, I would like to be good at using the Internet because I think it would help me to find a better job” —Niu, prior computer user, female.*

For those who already had a job or a part-time job, they considered ICT skills very useful in their current positions:

*“I would like to learn the skills regarding image processing. The skill is helpful for my online shopping business. I would also like to know how to zip and unzip files” —Amei, prior computer user, female.*

*“I want to learn how to type in Mandarin or I always need to ask for my husband’s help. If I learn the skill, it is not only helpful for my job as I produce*

*a business proposal, it also means that I do not need to depend on other people's help as well*"—Kaili, prior computer user, female.

Examining the goals they wanted to achieve through attending ICT programmes, some of them felt ICT skills assist them in better managing their everyday life:

*Hua: Learning to use the new technologies is essential in modern life. For example, paying bills, registration and basically most of things can be done through the Internet. I didn't know what to do when I got a website address to visit. I would have to find the actual address....*

*Interviewer: What did you want to learn in particular when you signed up for this programme?*

*Hua: Everything including finance management. If I can do this, I can help my husband to manage the family and business finance. That's why I need to learn to use the new technologies. It helps make my life a little easier* —Hua, prior computer user, female.

Actually the motivations Hua described were more than just the belief that ICT skills can assist to make her life easier. She also expressed her wish to acquire ICT skills to manage family finance. This was not a single case. Some of the marriage immigrants' motivations were strongly connected to their roles as wives. As a result, their goals were not merely for their own life management, but to help their husbands' business or to assist with domestic affairs:

*Cay: I like computers. I was learning Mandarin in the district office. The*

*administrator told me about the ICT programme. I asked her to sign me up for it.*

Interviewer: *Why did you want to sign up for the ICT programme?*

*Cay: I wanted to learn how to use them when I was young. I told myself, one day I will attend computer training programmes. And I want to learn how to print as well. I also want to learn how to copy and save files. It is important for my husband's business. Another benefit is that I can teach my son to use ICTs in the future when he needs to—Cay, novice computer user, female.*

The motivation for parenting was also strongly related to their roles as mothers. It is not difficult to imagine that as the marriage immigrants consider ICT skills practical both in jobs and life, as parents, they would like to pass these useful skills to their children:

*“I can use ICTs with no problem if they appear to be in English. My main aim is to learn typing in Mandarin here. After I know how to use them in Mandarin, I am able to teach my children to use ICTs.” —Bintang, prior computer user, female.*

*“When my children want to find or learn anything online, I want to be able to help with that. If there is any problem regarding using ICTs, they can turn to me for help. Being a parent, you really need to have the skills and knowledge to teach the children”—Jiais, novice computer user, female.*

There was an obvious trend from investigating the interview data that most of the marriage immigrants' goals were not single oriented. As the reasons to

participate in a learning programme are complex, most of the marriage immigrants had multiple goals in mind when they enrolled in the programme. For example, while Guan's goals were both for job use and parenting, Makena wanted to acquire skills for job and for life management.

*"I mainly want to learn Word and Excel. I think I might need the skills to find a job. And if I know how to use ICTs, I can teach my children when they encounter problems regarding using them. I don't need to ask other people's help"—Guan, prior computer user, female.*

*Makena: I want to learn to use ICTs. I signed up for the programme after I read the course information.*

*Interviewer: Why do you want to learn to use ICTs?*

*Makena: I have a lot I want to achieve through using ICTs but I don't know how to perform them.*

*Interviewer: Can you give examples of what you want to achieve through ICTs?*

*Makena: I want to call home by the Internet so as to save money. I also want to know how to use video calls to see my parents' images.*

*Interviewer: So the main aim is to stay in contact with your family in Vietnam?*

*Makena: Yes. And I could also save important documents in the computer. This way, I could reuse them whenever I wanted to. I work in a travel agent. There are many important documents I need to save and reuse. Lastly, if I can go on the Internet, I can see my younger son's activities in the kindergarten by just typing in a web address his teacher gave me—Makena,*

novice computer user, female.

Having prior computer knowledge or not affected how they described their goals relating to the programme. For those who had already been using ICTs, they could state the specific ICT skills they wanted to acquire to reach their goals. For instance, Amei, prior computer user, wanted to learn image processing skills and how to zip and unzip files for her online business. Bintang, prior computer user, wanted to learn Mandarin typing to be able to teach her children in the future.

On the contrary, for those who did not have any prior knowledge about computers, they only expressed their desire to learn how to use ICTs instead of naming particular skills:

*“When I go out, I see many people using those new technologies. I also want to be like them. I also want to learn how to use them. I think the skills are useful for getting me a job. Also, after I learn to use the new technologies, I can teach my children how to use them. Or I can help them to find learning materials online”*—Jiais, novice computer user, female

Overall, this type of learner expressed their worries of falling behind if they did not acquire ICT skills. For example, Lan stated that as society is under rapid change and development, it was important that she “forces” herself to learn ICTs to keep up with the trends:

*“Now I want to learn to use ICTs. You must know how to use them because*

*almost all jobs need this skill. It is important that you continue to learn and use them or you are not able to stay competitive. Also, the new technologies have already integrated into our daily life. For example, I would like to know how to do online shopping because I think I can start a business online. And I often call back home by Skype”—Lan, prior computer user, female.*

In short, most of the marriage immigrants had strong goal-oriented motivations when it came to attending ICT programmes. However, the goals they set up for themselves could be highly influenced by different factors such as the skills they need in their lives, their roles as mothers and wives and their prior knowledge about ICTs. Also, most of the goals they had in mind were not single-oriented. They would identify several goals to be achieved prior to the ICT programme.

#### **4.2.2 Learning-Oriented Motivations**

Learners who have learning-oriented motivations believe they achieve self-development through learning. They learn for the sake of learning. Some of the participants in the ICT programme had shown learning-oriented motivations:

*“I like to learn new things. I feel great if I understand what the teachers teach me. You know, gaining one more skill is always better than having one less skill”—Ejun, prior computer user, female.*

*“I come here only to learn....I think learning ICTs may be beneficial for you in some ways, like in your life or for your job”—Fang, prior computer user,*

female.

Examining the data closely, it could be concluded that the motivations for those marriage immigrants to participate in learning activities were of multiple dimensions. It was actually difficult to categorise one participant into having only single-oriented motivation. One person could have goal-oriented, learning oriented as well as activity-oriented motivations at the same time. Many of the marriage immigrants, too, had both goal-oriented motivations and learning-oriented motivations. For example, Guan had set the goal to learn Microsoft® Word and Excel; she, at the same time, stated that:

*“I had a little basic knowledge of ICT skills when I was in China, but I forgot most of them. I am here to learn more about ICTs. With learning it is, of course, a case of the more the better”*—Guan, prior computer user, female.

Likewise, Kaili wanted to learn typing in Mandarin as the skill could be useful for jobs. In the interview, she also expressed her wish to continue learning:

*“Learning should be continued throughout life because it is an important means for self-development. I am willing to attend any available learning programmes of any type”*—Kaili, prior computer user, female.

Nonetheless, for those with both goal and learning-oriented motivations, the former motivations were much stronger than the latter ones. From the data collected, the participants enrolled themselves in the ICT programme to learn particular skills they would like to acquire; they did not express strong

learning-oriented motivations. Instead, they stated specific goals they had in mind before attending the learning programme. Only after being prompted that the ICT programme did not seem to fulfil the goals they had initially set out to achieve, did they express their learning-oriented motivations. In short, most of their learning-oriented motivations became apparent after the courses when their goal-oriented motivations were not fulfilled.

What they had described here is similar to the adult learning characteristics proposed by the theory of andragogy (Knowles, Holton and Swanson, 1998) that adults are self-directed and motivated internally. They set up their own learning goals before enrolling in the learning programme and they are clear of why they participate in it. Also, adult learners understand what's important for them as well as the importance of the learning. Studies have concluded similar results that adults participate in learning for their own reasons. Their motivations to learn emerge "naturally" at different stages of their lives according to the various tasks they need to undertake (Boshier, 1961; Burgess, 1971; DeWitt, 2003; Zemke and Zemke, 1995). Also, adult learners' motivations can be both goal-oriented and learning-oriented as the former ones satisfy their needs to maintain self-effectiveness while the latter ones satisfy their intellectual curiosity (Adair and Mowesian, 1993).

The marriage immigrants of this study stated that they would not be disappointed if the programme failed to help them complete their goals because they considered learning valuable and they valued every learning opportunity they had. Amei had already attended ICT programmes in China and held an ICT skill certificate. She signed up for the ICT programme because she

wanted to learn image processing. When asked if the introductory courses were too easy for her, she said the courses still added new understandings for the existing knowledge. She said, “I enjoy learning of any kind because it is always beneficial for me”. She also stressed that she enjoyed learning and she would grab chances to learn when she had time. Similarly, although Lan had identified what she wanted to learn before the programme. She also stated:

*“No matter if a learning programme is useful for you or not, you should do it because once you acquire the skills or knowledge, they belong to you. I cherish all the opportunities to learn and I have attended various learning programmes when time permits”*—Lan, prior computer user, female.

Comparing learners with goal-oriented motivations and learning-oriented ones, learners more strongly affiliated with the former category care about whether the learning tasks in the programme satisfy their learning needs. Some of them only attended courses on topics they were interested in. Amei, for instance, signed up for the ICT programme and Taiwanese dialect learning programme at the same time. Most of the time she attended the Taiwanese dialect learning programme, but came to the courses teaching to use the Internet and PhotoCap. Also, there were two attendees who only came to the courses teaching Microsoft® Word and Excel. They told me that they already had a basic grounding in ICT. They were only attending the courses because they wanted to learn those particular skills.

On the other hand, learning-oriented learners were concerned about the learning process and experiences. They felt every course was important

because it was a component of the whole learning process. Fang expressed that physically going to class was very vital to her because she felt she could concentrate on learning and enjoyed learning more in the courses. More than that, learners with learning-oriented motivations did not tend to miss a course. In fact, the two participants with strong learning-oriented motivations, Ejun and Fang, did not miss a single course at all.

In summary, the motivations for those marriage immigrants to take part in learning activities were not clear cut. They normally consisted of more than one type of motivation which made it difficult to categorise their motivations into a single group. Even if most of the interviewees had shown strong goal-oriented motivations, some of them had learning-oriented ones as well. However, for those who had both types of motivations, their learning-oriented motivations seem to be subordinate to those that were more goal-oriented: they had identified their learning goals before learning. At the same time, most of them enjoyed learning and believed that learning of any kind is beneficial.

#### **4.2.3 Activity-Oriented Motivations**

For learners with activity-oriented motivations, they take part in learning activities for the social interactions and connections. Investigating the data of the first interviews, only one interviewee among 14 of them expressed the activity-oriented motivation:

*“I like meeting new people and make new friends. If I don’t have friends, I can only spend time with my husband, children and my computer the whole day. It is a bit stressful. Even if I contact my friends through ICTs, it is still not*

*enough for me”—Iting, prior computer user.*

It was surprising to find out there was only one marriage immigrant with an activity-oriented motivation as many of the marriage immigrants expressed their loneliness and lack of social contacts when they first moved to and lived in Taiwan:

Interviewer: *Do you feel anything you need to learn from scratch again?*

Ejun: *not really, but I felt very bored because I was not allowed to work under the government's regulation.*

Interviewer: *Did you have any learning needs at the beginning?*

Ejun: *Learning needs? When I first came here, my only wish was to get out of the house because it was very boring staying indoors every day. But even if I went outside, I had no friends here and no one to talk to. How do I describe it? Everything was foreign and alien to me—Ejun, prior computer user, female.*

*“When I moved to Taiwan, there was a serious homicide case that happened here. It stopped me from wanting to make friends because I felt that the better a friend knew you, the easier s/he could hurt you. I had very few friends at the beginning”—Kaili, prior computer user, female.*

*“I have been here for 7 to 8 years already but I had very limited contact with the outside world. I devoted most of my time taking care of my grandfather and my husband. My life was between home, traditional markets and the hospital”—Lan, prior computer user, female.*

Under the Taiwanese government's regulations, the marriage immigrants from Mainland China are allowed to obtain a work permit only after they have been in residence in Taiwan for two years or after they have a child in Taiwan. As most of the interviewees were from Mainland China, this was one of the reasons why their social contacts were very limited at the start:

*"It was regulated so that only when we have lived in Taiwan for two years or have had a child can we apply for a work permit. The regulation was changed in August. We can now apply for the work permit after we pass the interview. Still, there is lots of paperwork to be done"*—Dawei, prior computer user, male.

*"It was very painful when I first came here. In China, I had a job, but I couldn't work here for two years. I would just stay at home watching TV and learn Zhuyin"*—Niu, prior computer user, female.

I would imagine that many of them would want to attend learning programmes to increase their social connections or just to pass the time. Similarly, it is also suggested by Dæhlen and Ure (2009) that attending educational programmes is a way to meet new friends for immigrants whose family and friends are abroad. Therefore, activity-oriented motivations may be an important one for immigrants to participate in educational programmes. However, it turned out that, on a conscious level at least, the marriage immigrants' goal-oriented and learning-oriented motivations were much stronger than the activity-oriented ones.

There are two possible explanations for the above phenomenon: firstly, all the interviewees had been living in Taiwan for over three years except the male marriage immigrant who had been in Taiwan for half a year. Most of them had already familiarised themselves with the environment and built up social network of their own. Secondly, I feel that activity-oriented motivation was a “hidden” motivation for them. When one thinks of attending a learning programme, normally social interactions would not be the primary thing one is looking for. One tends to attend activities and events with social interaction purposes such as joining social clubs for activity-oriented motivations.

Even though activity-oriented motivations were not salient when asking the participants about the reasons for them to attend the learning programme and what they expected to gain from it, social interactions actually appeared to be important for the marriage immigrants as many of them stated that one of the important gains was to extend their social network in the programme.

According to andragogy, adult learners’ readiness to learn is linked to real-life situations they need to cope with (Holton, Swanson and Naquin, 2001). These marriage immigrants experience substantial changes in living environments where the extents of their social circles were drastically reduced. At the current stage of their life, they would like to meet new people, increase social interactions and rebuild their social network. As a result, incorporating what they considered important (social interactions in this case) into course delivery strategy may enhance their motivations to learn.

Activities that require collaborations and interactions between the programme attendants would potentially be beneficial and welcomed as many of them

stated they enjoyed working with others as well as making new friends. For instance, given the task-based nature of the programme, it would be a good strategy to incorporate tasks and activities that require working with peers to increase interactions between the marriage immigrants as building up new social links was seen to be important at their current stage of life (Knowles, 1980; Zemke and Zemke, 1995). Other than delivering the course activities that enhance interactions, teaching them tools and applications that facilitate online communications and interactions such as social networking websites, instant message applications, would also satisfy their activity-oriented motivations.

Overall, the marriage immigrants had something they want to learn in mind and they attended learning programmes for the sake of learning. Increasing their social network was more of a benefit or added extra that came along with participating in classroom learning. I will discuss this in more detail in section 4.4.

### **4.3 Overcoming Learning Barriers**

The barriers for adults to stop learning can be categorised into situational, institutional and dispositional barriers (Cross, 1981). To effectively support learning, it is important to try to overcome or reduce those barriers for adults. The following section will combine fieldnotes and data from the first interviews to discuss the support the learners received from the ICT programme. The discussion will focus on how those supports assist in overcoming the adult learning barriers. When examining their learning barriers, one might argue that those barriers originate from their social structure as well as the gendered structure (Risman, 2004; Sewell Jr, 1992). Indeed, barriers such as poor

financial status or childcare responsibilities resulting from the situation one is in seem to dominate their learning barriers; it is, however, valuable to separate their structural learning barriers from barriers originating from the learning institutions and individual attitudes and perceptions. By separating different types of learning barriers, it would be easier to identify ways to reduce those barriers either by improving administrative support from the institutions or by improving individual circumstances as well as changing their perceptions about learning. Furthermore, by recognising those different types of barriers, it would be helpful for the learning institutions to improve the participants' quality of learning by trying to reduce each type in turn.

#### **4.3.1 Overcoming Institutional Barriers**

Institutional barriers refer to procedures that discourage adults from learning (Cross, 1981). Here I would like to apply the definition Norland (1992) gives to "institution" as "educational service providers" to the current study. Norland (1992) defines institutional barriers as "factors pertaining to the educational service provider". Normally it is the learning institutions that can reduce these types of barriers for the adult learners. It can be observed from the first interview data that one of the key factors for the ICT programme to run well was the administrative support the marriage immigrants received. This support clearly reduces the institutional learning barriers for the marriage immigrants.

On the other hand, an obvious example of an institutional barrier occurred in the ICT programme: the overlapping schedule between it and the Taiwanese dialect learning programme. This timetable conflict meant that some of the

attendants who wanted to participate in the ICT programme chose to skip some of the courses because of the overlapping schedule. Another example of the institutional barrier did not occur in this particular ICT programme but the programme of the pilot study. Some of the participants expressed that instead of offering the programme for free like other learning institutions, paying deposits (which would be given back when they finish the course) made the registration procedure more complicated and therefore lowered their motivation to attend the programme.

#### **4.3.2 Overcoming Situational Barriers**

A situational barrier refers to situations an adult is in that discourage him/her from learning (Cross, 1981). Poor financial status is one of the most common situational barriers stopping adults from attending learning programmes. Recognising this barrier, the Taiwanese government has been offering various learning programmes for marriage immigrants around Taiwan for free (MOI, 2004). The first interview data had shown that the government's financial assistance with regards to the ICT programme affected their decisions to participate in it:

*“It is good that the government has provided free learning programmes for us. It offers many learning opportunities for me here....It would be very expensive for me to go to ICT programmes in Vietnam. But it's free for me here”*—Makena, novice computer user, female.

*“You know, it's free and three hours per course is not long. Why not go!?”*—Niu, prior computer user, female.

Other than the financial support from the government, the courses offered specifically for them made them feel looked after. It was, in a way, emotional support for them:

*“The Taiwanese government really takes good care of us marriage immigrants. It offers us various learning programmes such as language learning and social relationships. I don’t know if other governments offer marriage immigrants the same thing. I feel it is very nice to do that. I felt those learning programmes helped me to adapt to the society easier”*—Hua, prior computer user, female.

*Interviewer: How do you feel after attending all the government-offered learning programmes?*

*Dawei: I feel like I have gained new knowledge and understandings about the things here.*

*Interviewer: Do you feel that you are being looked after knowing there are such programmes specifically for you?*

*Dawei: Yes! I don’t feel I am left alone in Taiwan*—Dawei, prior computer user, male.

The responsibility to take care of children is another common situational barrier for adults to attend learning activities. The ICT programme provided the participants with childcare services which helped decrease this barrier. When the marriage immigrants attended the courses, they could bring their children and they would be placed in another classroom for afternoon nap and

then Mandarin learning. As almost all of them had children already, they viewed this service as one of the important support structures that allowed them to attend the programme:

*“The main factor for me to attend the programme is that it offers a childcare service. There are lots of things I would like to learn but I wouldn't be able to if I needed to look after my children”*—Amei, prior computer user, female.

Interviewer: *You said you wanted to be a teacher, did you attend any PGCE or related training courses?*

Iting: *No, I just looked for information online for teachers' training, compulsory subjects for the examinations and the examination schedules.....It is very troublesome for me to attend the training programme because it does not provide childcare services. I need to take care of my children*—Iting, prior computer user, female.

*“Through attending the programme I can learn new things and I don't need to worry about taking care of my children”*—Guan, prior computer user, female.

*“I have wanted to attend an ICT programme for a long time and I have signed up in a vocational school on several occasions but I couldn't go because the length of each course was too long and no one could take care of my children”*—Makena, novice computer user, female.

Lack of time to attend the courses is another common situational barrier

among adults. In each course, the lecturer video recorded all the course contents and sent the files to the attendants before each course ended. By doing so, the attendants had more chances to review and practice what they had learned. For those who missed the course, they had a chance to catch up by watching the video clips. The video clips proved to be a very popular way of reducing situational barrier and providing learning support:

*Interviewer: Do you watch the video clips of the courses at home?*

*Hua: Yes, I watch those topics I am not familiar with. I found them very helpful for my learning—Hua, prior computer user, female.*

*Interviewer: Do you find the video clips from the lecturer useful?*

*Lan: Yes. For the particular parts I didn't understand, I could review them by watching the video clips at home. Otherwise I forgot a lot of what has been taught. They offer me a chance to review the course—Lan, prior computer user, female.*

In fact, this support could not only be beneficial for those who did not have time to attend the courses, it could also potentially benefit those who had difficulties in transportation. The video recorded files provided the learners with an alternative way to learn what had been taught at a time and place of their convenience.

### **4.3.3 Overcoming Dispositional Barriers**

Dispositional barriers refer to individual attitude and perceptions that discourage one from learning (Cross, 1981). Other than the administrative

support, the in-class support that occurred during the learning process was a major part of their overall experience. First of all, many of them expressed their appreciation of having to physically go to the class to learn as they enjoyed the studious atmosphere very much. Their appreciation could be viewed as positive attitudes that reduce dispositional barriers:

*“I had attended e-learning courses offered by the government before. I learned both how to create and upload my CV and basic ICT skills online but I tend to easily forget about what I have learned remotely. I prefer going to the classroom and listening to a teacher lecturing. It reinforces what I have learned. I personally think learning can be much more effective if I attend the physical courses first and then practice what has been taught online at home”*—Kaili, prior computer user, female.

Besides the learning atmosphere they experienced in class, the lecturer’s professional teaching abilities also enhanced their learning motivations. This could be taken as another way of overcoming their dispositional barrier of learning. Almost all interviewees stated that Mr. Young was a very detailed and patient lecturer:

*“Mr. Young pays attention to details. I had a headache one time in the course. He noticed that and asked if I was fine. The next course he asked me if I still had a headache. I was touched that he still remembered that”*—Fang, prior computer user, female.

Interviewer: *How do you feel about the ICT programme?*

*Lan: It is very good. It is impossible to meet another lecturer teaching us basic ICT skills as detailed as Mr. Young—Lan, prior computer user, female.*

*“I like the lecturer because he is very patient and teaches the skills slowly, step-by-step. I feel learning is easier this way. I like it” —Cay, novice computer user, female.*

From my own observation in the courses, Mr. Young was indeed a very patient and experienced lecturer. He knew what would be difficult for them and was willing to demonstrate repeatedly the complex tasks. Moreover, he introduced alternative ways of performing the same task such as different ways to locate and open a file. Also, he understood they were not very confident using ICTs and therefore encouraged them a lot and left sufficient time for them to practice.

In-class support from the lecturer was highly valued by them. The support from peers was also a key factor in enhancing their learning experiences which assist to overcome dispositional barriers. There were many in-class tasks and practices for the course attendants to complete and it was impossible for the lecturer to check individual progress or deal with individual problems at the same time, it actually created situations and opportunities for collaborative learning and support. Many times for those who had already completed a certain task, they taught those who had difficulties completing them. Similarly, those who encountered difficulties sometimes turned to their peers for support. For example, Hua and Guan were sitting right next to each other. In the section of introduction to PhotoCap, Guan was demonstrating to Hua how to

personalise the photos and make them into a calendar. Another example was that Fang helped out the marriage immigrant who sat right next to her most of the time as Fang was a very fast learner and the marriage immigrant often chose to attend the Taiwanese dialect learning courses. She missed several lectures and therefore was unfamiliar with certain basic ICT skills. Later in the interview, Fang told me that she felt she could be friends with her.

*“I sit beside her for several times. She missed some courses because she attended the Taiwanese dialect learning programme at the same time. I helped her when she had difficulties performing the in-class tasks.... She always brings her son into the class. I feel he is very cute and I also started to like her maybe because of her son. I would like to be friends with her”*—Fang, prior computer user, female.

Examining the elements the marriage immigrants considered to be supportive in their learning, it was clear that they value real-life interactions over the flexibilities of ICTs and easy access to learning opportunities. Being together with other participants and to have face-to-face interactions was one of the reasons why they would like to attend the programme:

*“I don’t want to learn with ICTs. I like to have a teacher to teach me face-to-face. I learn better this way”*—Ejun, prior computer user, female.

*“I feel the Internet very illusionary. Talking to people is more realistic”*—Dawei, prior computer user, male.

*“Although you don’t need to pay tuition fees to come here, it feels like going to school to study because of so many people being together. I like this kind of learning atmosphere”*—Fang, prior computer user, female.

#### **4.3.4 Unsupportive Elements of the ICT Programme**

Even though the ICT programme went well and the learners were satisfied with it overall, there were still some happenings in the courses that obstructed the learning.

Firstly, the facilities in the classroom were one factor causing difficulty in the ICT programme. There were 27 personal computers in the classroom but some of the software applications on some computers were not functioning properly. Each time, some of the marriage immigrants had to switch seats trying to find a computer that worked properly. An obvious example was in the courses introducing Microsoft® Word. Not all the computers in the classroom were loaded with Word 2007 but Word 2003. Mr. Young had to spend more time explaining the similar functions on Word 2003 while instructing and demonstrating Word 2007. Still, this frustrated those who were not able to use Word 2007. One marriage immigrant told me she wanted to give up this section because the lecture and demonstrations were meaningless to her. She asked me where she could purchase Microsoft® Word 2007 so that she could load it to her computer at home and learn what the lecturer taught from the video clips.

Besides the factors mentioned above, children were another factor obstructing the course pace. Although the childcare service was provided for the attendants of the programme, not all children wanted to leave their mothers and stay in

another classroom with other children. Some children insisted on staying in the classroom with their mothers. Since some were still quite young, their mothers needed to pay a great deal of attention to them. This meant that some of the learners missed certain parts of the lessons which required individual instructions afterwards. For the older children, they each occupied a single computer which they used for playing games across the internal network. Some of them became friends after the courses and started to discuss with one another the ways to get around the firewall so that their computer would not be controlled by the lecturer. To do so, they had to walk around and talk to each other which tended to disturb the flow of the courses. Mr. Young was a very well-tempered lecturer but he got upset on occasion and once had to ask the children to sit in their own seats and keep quiet. He stated that they had greatly interrupted the pace of the learning.

Third, the time of the programme overlapped with the Taiwanese dialect learning programme. Many of them wanted to attend both and so had to miss some of the courses:

*“The time of the ICT programme overlaps with the Taiwanese dialect learning programme. It is very difficult for me to choose which courses to go to”*—Amei, prior computer user, female.

*“I was actually going to sign up for the Taiwanese dialect learning programme. Somehow, I signed up for the ICT programme by mistake”*—Bintang, prior computer user, female.

Another minor issue mentioned by the only male participant in the programme was that he felt the social interactions between the course mates were not active:

*“The courses are alright. It is a little bit boring. I also feel less interaction between course mates. We don’t tend to talk to each other that often during the break. I don’t even know the people sitting at the front of the classroom”*—Dawei, prior computer user, male.

The possible cause of his claim might result from the fact that most marriage immigrants used the break in courses to stay in front of their computers practicing the tasks learnt. Therefore, there were not many opportunities to walk around and talk to each other during the breaks unless discussing the taught tasks with those who sat near. Also, as Dawei was the only male attendant of the programme, all other female attendants tended to choose to talk to other female attendants during breaks.

Having looked into both the positive and negative contributions offered by the in-place support system in this particular ICT programme, the following section will discuss the learning outcomes of the marriage immigrants after attending the aforementioned courses.

#### **4.4 Marriage Immigrants’ Learning Outcomes**

There are several different approaches to evaluating training programmes with different models having different evaluation procedures. This study will focus on the learning outcomes of the marriage immigrants in the ICT programme.

These outcomes will be discussed on two levels with regards to learning and results; the following discussion will begin with the initial learning outcomes of the participants in the ICT programme as identified from the first round of interviews. Longer-term effects of the programme as identified from the second round of interviews and discussion of the results in relation to the goals set up by the government will be presented in the latter sections.

#### **4.4.1 Initial Learning Outcomes**

It could be observed from the first interview data that the participants of the programme showed skills and attitude changes shortly after the courses ended. As it was previously mentioned that learners' prior ICT knowledge and skills affect their learning process, the following discussion will take prior computer skills to be a factor in influencing the learning outcomes and present them in relation to both prior computer users and the novice users. By doing this, it would be easier to see if the prior computer skills have influenced the initial reactions and learning outcomes.

The participants of the programme have generally shown satisfaction towards it. For novice computer users, they were happy about gaining basic computer skills and knowledge. They have expressed that attending the courses was fun and they liked how each course was arranged, feeling a sense of achievement as their knowledge about computers and how to use them grew.

*“Although I only learned a little bit about computers, it is much better than before when I knew next to nothing. At least I know what a keyboard is now; at least I know a little bit of everything now!”*—Jiais, novice computer user,

female.

Similar to the former case, those prior computer users have showed great satisfaction regarding the programme despite the fact that they had learned most of what was been taught prior to attending. Most of them stated that although they already had some of the skills, the courses still gave them new perspectives on this basic material:

*“The programme is good. I have learnt some new things about new technologies....Before attending the programme, I knew how to perform some functions on the computer but I didn’t know the logic behind it. Now I do”*—Dawei, prior computer user, male.

*“I enjoyed the courses very much because I have learnt a lot. I knew a little bit of computer skills before, but after the course I realised that there was much about computers I didn’t know”*—Iting, prior computer user, female.

The fact that the course contents were taught and explained in detail in addition to their enthusiasm towards the programme had led to the development of skills and an increase in confidence. As will be covered in the following sections, both phenomena could be observed in novice and prior computer users alike.

#### **4.4.1.1 Skill Development**

From the in-class tasks and the first interview data, they had demonstrated their abilities to perform what had been taught and their expressed

appreciation of understanding more about computers implies improved skills and knowledge. The skills they had acquired could be further grouped into three categories: information searching skills, communication skills and image processing skills.

The prior computer users and novice users had shown a difference in the perception of their skill developments. For the former computer users, they had expressed and demonstrated their capabilities in applying the skills mentioned above in their daily life. The skills taught in the programme serve as opportunities to practice using them which assist their skill retention or to “add new understandings” or perspectives as some of them have described it.

For novice users, they were excited to learn new skills; however, they still had no opportunities to practice what they had learnt in daily life. Hence, their descriptions of their skill development were more uncertain and wishful as they used many sentences like “I think I could” or “I think I would”. Examples to highlight these differences will be illustrated as follows.

Regarding information searching skills, they were widely used by the prior computer users in daily life. When asked about what types of information they looked for the most, many of them focused on the search for welfare information and the regulations concerning Taiwanese marriage immigrants:

*“It was said that the regulation for marriage immigrants from Mainland China to obtain the right of residence would change. I checked the website everyday to see if there was any change in the regulations”*—Iting, prior

computer user, female.

*“I would like to know any type of welfare concerning us marriage immigrants. I often visit the National Immigration Agency’s website to see the latest news. Related welfare policies are what I am after”*—Niu, prior computer user, female.

Prior computer users also searched for a great amount of information about parenting which again reflected their new roles as mothers in life:

*“When my children are sick, I search for information online to understand the possible illness and the symptoms. It makes me less worried. I mostly look for information related to my children”*—Fang, prior computer user, female.

*“My children can learn to sing, learn some English and even learn to draw on some websites. They like to draw”*—Guan, prior computer user, female.

*“My daughter is far-sighted. I downloaded a programme from the Internet to help her adjust to this problem. It is helpful because I have already seen some progress”*—Iting, prior computer user, female.

Other than the two types of information mentioned above, information about entertainment and personal development were very much sought after by the prior computer users. These two types of information mirrored their status when they moved to Taiwan: lonely and jobless. They had limited social networking which made their life boring. They turned to the Internet for some

entertainment to pass the time. Secondly, they searched for information for personal development in preparation for future/present jobs:

*“I like handmade crafts. I often visit American and Japanese websites introducing handmade crafts.....I basically search for anything I don’t know on the Internet. I even look up food recipes”*—Amei, prior computer user, female.

*“I often listen to music on the Internet. I read a lot of online novels and short stories written by Internet users”*—Dawei, prior computer user, male.

*“I would often read some financial information online to increase my knowledge for my job”*—Kaili, prior computer user, female.

*“I will look at the stock market in Mainland China. I would also read entertainment news....I like interior designs. I search for related pictures online as well”*—Lan, prior computer user, female.

As for novice computer users, they did not have much practice regarding online information searching. Although they felt that using the Internet to search for information was very easy and fast, when asked about what type of information they would like to look for, their answers were vaguer. More than that, when they were asked what they would like to search for online, all three novice computer users mentioned bus route information, which was actually demonstrated and practiced in the course:

*“I feel searching information online is convenient and quick. Now I know I can search for information I need on the Internet. For example the bus routes as taught by the lecturer”*—Cay, novice computer user, female.

*“I feel the bus route information is very practical....I don’t have a computer at home. It is difficult for me to practice the skill”*—Jiais, novice computer user, female.

*“Through computer and the Internet, I can search...the lecturer taught us how to search for bus routes. Now wherever I want to go, I can search for transportation routes online”*—Makena, novice computer user, female.

Besides the practical use mentioned above, the skill was viewed as a way for business potential:

*“I can see many things on the Internet. There is a cosmetic company asking me to sell their products for them. The company is very famous in Vietnam but its products are not sold here. If I know how to do business online then I can just stay at home selling the cosmetics products on the Internet”*—Makena, Novice computer user, female.

The only ICT communication skill carried out in the course was the introduction to using email. Although some prior computer users still stayed in contact with their friends and family from their home countries using emails, most of them tend to use phones, make internet calls or internet instant message services such as MSN to stay in touch. Many of them agreed that using

the Internet to communicate was a much cheaper and faster way. Still there were inconveniences associated with using internet communication most noticeably due to the fact that it could only be used under the condition that both parties had an Internet connection or used the same applications:

*“Before I bought telephone cards to call back home, I used Skype. Using Skype is much cheaper but I have to use landlines to call my son. He lives in school accommodation. It is easier to call him using landlines”*—Lan, prior computer user, female.

*“When I first came here, I often called back home using video calls through the Internet. It is not only free, but it also allows you to see family members. That was how I met my niece and also how they met my daughter. My mother cannot use computers and she doesn’t own one so I can only contact her by video calls when she is in my brother’s house”*—Niu, prior computer user, female.

As for novice users, they also used landlines to call back home and they used mobile phones to stay within their social network. They called their husbands and their friends using their mobile phones or by sending text messages.

Makena, the novice computer user expressed her wish to use internet calls to stay in contact with her family back in Vietnam because “it is cheaper that way”.

Handling digital photos proved to be one of the most popular skills among the participants. As they and their original families were in separate countries, it was impossible for them to physically participate in each other's lives meaning

that sharing digital photos became very important. It was a good way to update their families back home on daily events. Many of the prior computer users said that they had been sending their photos to friends and families back home through emails. In addition, some prior computer users had their own online photo albums or blogs. They would like to acquire the skill to personalise their photos and make uploading photos online easier:

*“I registered for an online album. I tried to use PhotoCap to personalise my photos and upload them onto the album. Somehow, I didn’t seem to resize the photos correctly. It took me so long to upload the photos and I felt exhausted”*—Hua, prior computer user, female.

For novice users, the handling of digital photos represented a way of keeping a record of their lives:

*“After the courses of how to manage digital photos, I uploaded many of my photos onto my computer. I didn’t know how to download the photos from the camera before; therefore I couldn’t see the photos that were taken”*—Makena, novice computer user, female.

#### **4.4.1.2 Increased Confidence**

The participants of the programme, both novice and prior computer users, had shown an increase in confidence over time. At the beginning, some of them had shown discomfort in using ICTs as they were afraid they would break them easily. One course attendant told me that she felt much stressed undertaking tasks on the computer as she did not have any prior experience of using one

before. This was the main reason why she required constant reassurance from Mr. Young or myself. After the programme had ended, some of the participants showed an increase in confidence in using ICTs:

*“I feel more confident and comfortable using computers now. Before the programme, when I visited my brother who had a computer in his house, I didn’t dare to use it as I was afraid I would break it. Now I have the confidence to use it. I took my children to the zoo and there were some computers around. I was using the computer for the Internet and for typing”*—Jiais, novice computer user, female.

*“I like learning ICTs because it gives me a great sense of achievement. It feels very different after I know how to use the new technologies. You know how white collars stay in the office and type on computers while blue collars run around outside. I feel that I have upgraded myself after I learned how to use a computer”*—Hua, prior computer user, female.

Confidence is a critical factor in learning and increased confidence has positive effects on the learning process (Norman and Hyland, 2003). It could be observed from the interview data that many of the participants wished to continue learning. This indicated that their beliefs in their capabilities had nurtured further learning ambitions. For prior computer users, they hoped to carry on learning in advanced ICT programmes:

*“If I have the chance, I am definitely going to attend more ICT learning programmes”*—Amei, prior computer user, female.

*“I like the programme very much. I will sign up for more ICT programmes if there are more. In fact, I am going to attend another ICT programme in SD district”*—Bintang, prior computer user, female.

*“After two months, I think I have learnt most of the basic skills. But if I want to learn more advanced image processing skills or something like doing online business, I have to go to other learning institutions. Since I am already familiar with the fundamental skills, it will be easy for me to move on to advanced ICT programmes”*—Lan, prior computer user, female.

Even though many of them had expressed their ambitions for further learning, they all conveyed the desire to continue learning in formal educational settings. This might imply that even if they were sure of their own ability to learn advanced ICT skills, they were not confident enough to learn independently without facilitation and supervision.

As for novice computer users, they also expressed their wish for further learning, however, not for ICT programmes but advanced language learning programmes. Their desire to continue language learning might result from the fact that all three novice computer users from this programme were from Vietnam. They did not feel that their language ability was of a high enough standard to master ICT skills:

*“I still want to enrol in Mandarin learning programmes. I didn’t learn well before because my children were too young. I needed to look after*

*them*”—Makena, novice computer user, female.

*“I would like to learn Taiwanese dialect, but my Mandarin is not good enough. I am afraid learning Taiwanese dialect would affect my Mandarin ability”*—Jiais, novice computer user, female.

Overall, the participants of the programme had shown increased knowledge, improved skills and increased confidence. This latter increase in their practical ICT competence had -over time- helped enhance their motivation for further learning.

#### **4.4.2 Learning Results: What Has Been Achieved?**

The overall aims for the Taiwanese government to set up and support the learning programme for marriage immigrants are centred around assisting them in adapting to life in Taiwan. This is to be achieved through developing the basic abilities needed in daily life, in meeting more people from different ethnical backgrounds within the same community thus building up social support systems and in gaining an understanding of the traditions and cultures of Taiwan (MOI, 2003). Evaluating from the participants’ perspectives on the effects of the ICT programme after a year, it did assist the marriage immigrants in gaining general skills for living in Taiwan and meeting new people facilitating the extension of their social network.

Firstly, the learning results of the ICT programme/skills in their daily life were investigated. The main areas of influences were further divided into communication, information searching, parenting and occupational skills.

Positive learning results regarding communication had been shown on Makena and Cay. Cay stated that she now used Skype to call her brother in Vietnam which was much cheaper. Makena indicated that she had bought a computer and connected to the Internet after the ICT programme. She was taught to use internet video calls by the salesperson.

*“Once I connect to the Internet, Skype is automatically logged in for me and I can talk to my mother and see her images immediately. It costs only NT800 (£16) dollars a month. It saves me a lot of money”*—Makena, novice computer user, female.

Makena’s case also illustrated that the increase of competence and confidence encouraged her to try new technological functions and motivate her to continue learning:

*“I am more confident now.....I know how to surf on the Internet after the programme. The computer salesperson just configured Skype for me and then I learned how to call back to Vietnam using it....Some skills are still difficult for me. I am looking into new ICT programmes to go to because I want to know more; I want self-development”*—Makena, novice computer user, female.

Jiais and Niu also expressed their increased confidence and both of them had enrolled themselves in different learning programmes. Jiais had joined a secondary school education programme and as for Niu, she attended a

six-month mechanical computer-aided drawing programme. She stated that the increase in confidence of her ICT skills had made her use the computer more often in daily life. Moreover, it enhanced her interest in learning computer-related skills. She also expressed her enthusiasm to enrol in more advanced ICT programmes.

As for information searching ability using the Internet, some participants stated that after attending the programme, they relied on the computer and the Internet for information more than before because “all the information you get online is first-hand” and “it’s a much easier and more convenient way to look for information”. They proposed that they had been extensively using the Internet to search for the information they needed for over a year. For example, Niu recently found a volunteer opportunity online for Taipei flora exposition and she passed the message onto Hua. They both filled in online applications and got the positions.

Positive perspectives were expressed in parenting. Niu and Jiais said that they were able to teach their children computer skills when they encountered any problems. As for others, like Amei and Iting, they would search for useful information on the Internet for their children such as nursery rhymes and creative drawings.

Compared to the time when the participants attended the ICT programme, many of them had found a job or progressed well with their job after it. For example, Makena had three different jobs now and Guan started to work for part-time; however, Fang was the only one using the Internet to search for

information related to her field of knowledge for personal development. I would like to believe that after the ICT programme, the increase in confidence in abilities had had a constructive influence on them. They actively searched for job opportunities and grabbed with both hands any opportunities that came their way. Take Makena for example, she was talking about how she could sell cosmetic products for a company online if she knew how to. She is now actually selling them for the company through phone orders.

*Makena: I am very busy now. I have started selling the cosmetic products I have mentioned to you last time.*

*Interviewer: Do you sell them over the Internet?*

*Makena: No. I still don't know how to sell things online. I sell them by the phone. People place orders by calling me—Makena, Novice computer user, female.*

Positive results of the ICT programme regarding general abilities in daily life had been presented; however, some of the marriage immigrants stated that the programme or ICT itself did not bring any significant differences for them. This might result from the differences of priorities they had in lives. Those who suggested so stated that lack of time and the effort they put in looking after the family and the children had stopped them from using ICTs.

Many of the participants had stated that meeting new people and building social support networks were the biggest gains in attending the ICT programme. In fact, many of them still keep in touch and find time to meet. As

Niu had said, “Sharing your life with your friends helps relieve much pressure. I am much happier than before”:

*Interviewer: Did you make any new friends in the ICT programme?*

*Iting: Yes, I did. This is very important to me. For the first three years of me living in Taiwan, I didn't have any friends at all. I met some people when I took my children to the park. We would chat but we never exchanged contact information to stay in touch. But I made many new friends through the programme. I felt I belonged to this family. Talking and hanging out with them makes me feel less lonely—*Iting, prior computer user, female.

*“Making new friends is very helpful. Knowing all of you is also a very important gain for me as I mainly make friends through the learning programmes. I am no longer in Indonesia and all my Indonesian friends are not staying in touch”*—Bintang, prior computer user, female.

Lastly, one of the goals for the learning programme was to get to know Taiwan more; however, most of the participants did not feel the programme had achieved this aim. They felt that the best way to get to know the local traditions and cultures well was through experiencing them. Nonetheless, Niu suggested that she could feel the respect of human rights and the spirit of appreciating diverse cultures through the programme as the marriage immigrants were well-supported and treated equally. She appreciated this culturally aware atmosphere:

*“I can feel the democratic and humanistic culture of Taiwan through the programme. The Taiwanese government provides marriage immigrants*

*with various benefits showing that they view us equally. We are not inferior to Taiwanese people*”—Niu, prior computer user, female.

In summary, this chapter presents the findings of this study by addressing each research question. It is hoped that this chapter highlights an understanding of the different types of motivations for marriage immigrants to attend the ICT programme, the support that can be offered to overcome their learning barriers and lastly, the learning outcomes and the longer-term learning results the ICT programme brings to them.

In the next chapter, these findings will be discussed in the light of other literature. The differences and the similarities of the findings between the studies and the possibilities of the causes will also be discussed.

## 5. Discussion

After presenting the findings of this study in relation to the research questions, the following discussion will draw on the key findings of the current study along with those of other related studies to discuss the similarities and differences between them and the possible reasons for these.

### 5.1 Participation of the ICT Programme: Motivations

Clear patterns had emerged while investigating the motivations and reasons for the marriage immigrants to attend the ICT programme. As all marriage immigrants were adults, their motivations were conceptualised under the adult learner typology proposed by Houle (1961). The motivations stated by the participants of this study fit well into three proposed categories: goal-oriented, learning-oriented and activity oriented motivations.

Similar categories of motivations for adults to enrol themselves in educational programmes have been found in various studies, such as financial aspects, personal aspects and social aspects of motivations (Dæhlen and Ure, 2009), intellectual, personal and instrumental motivations (Dench and Regan, 2000), for personal development, sheer interest, referential motivations and learning for the sake of learning (Lee, 2009). Note here that I used the word “similar” with regards to categories of motivations as there is a plethora of research studying adult learning motivations but not necessarily using Houle’s typology. However, most of the reasons or categories found “appear to confirm the structure of Houle’s original typology, even if the fit is occasionally rather

forced” (Courtney, 1992: 72). Take Dæhlen and Ure’s (2009) research for example, financial aspects of motivation can be thought of as goal-oriented ones while personal and social aspects can fit into learning and social-oriented categories respectively.

In fact, there are different theories and typologies to explain motivations for adults to learn and many of the theories suggest that adult motivations originate from individuals internally (Cross, 1981; Knowles, 1980; Merriam, 2001; Wlodkowski, 1999). One of the suggested definitions of motivation is “the process whereby goal-directed activity is instigated and sustained” (Pintrich and Schunk, 2002: 5). The strong goal-driven motivation as the assumptions of adult learners’ motivation is similar to what has been shown as the motivations of the participants in this study. They had shown strong goal-oriented motivations to enrol in the programme. However, the various goals for adults to achieve by attending educational programmes depend on each individual’s life situation. As for the marriage immigrants in this study, their roles as mothers and wives were one of the dominant factors affecting the goals they would like to achieve through the programme. Therefore, they wished to acquire skills that could potentially assist parenting and life management. Similar result can be found in Chung, Lin and Chao’s (2008) study where one of the motivations for the marriage immigrants to attend the ICT programme is for parenting.

This emphasis on developing IT skills to support parenting is very different to other groups. For example, university students, their goal-oriented motivations are often related to their roles as students. As a result, their goals are directly

associated with academic motivations (Schunk, 1991; Vansteenkiste, Lens and Deci, 2006; Wentzel and Wigfield, 1998). It is generally agreed that students' goal-oriented motivations fall into learning, performance, social and work avoidance goals (Seifert and O'Keefe, 2001).

While university students are quite a specific group of learners, in general, adults normally have strong job-related and personal developmental goal-oriented motivations, whether they are employed or not (Dench and Regan, 2000; Dæhlen and Ure, 2009; Knowles, 1980). Similar results can also be seen in this study as well; the marriage immigrants' job-related motivations were relatively strong as most of them did not have a job and wished to acquire skills to increase employability. Indeed, it is argued by Illeris (2003) that employment status can affect one's learning motivations. As for unemployed people, they tend to enrol in educational programmes with the wish to attain qualifications for work. Also, Olsen (cited in Dæhlen and Ure, 2009) suggests that enrolling in educational programmes is one of the ways for unemployed immigrants to enter labour markets.

Although both examined the motivations for the marriage immigrants in Taiwan to enrol in ICT programmes, this study and the study of Chung, Lin and Chao (2008) have shown different results in learners' motivational orientations. In this study, the participants had shown strong goal-oriented motivations while their learning motivations (which were key in Chung, Lin and Chao's study) were less obvious. Similarly, activity-orientated motivations were less explicit in the current study. Furthermore, even though only one of the participants in this study had shown activity-oriented motivations, it was not

her only motivational orientation to attend the programme. Similar multiple orientations can also be observed in the study of Chung, Lin and Chao (2008). While in Chung, Lin and Chao's study the participants have shown stronger learning-oriented and activity-oriented motivations as they learn merely for the sake of learning and to pass time than is the case here, their motivations for attending the programme were not single oriented.

Examining the goal-oriented motivations, what the marriage immigrants expected to learn from the use of ICTs could be gained from them as well. In general, they would like to acquire skills for communication, information searching, image processing and document management. According to the research conducted to understand the learning needs of marriage immigrants, it is concluded that the following are of greatest relevance: language learning, self-development, information and regulations regarding their status, parenting and health education, job-related skills and cultural information on Taiwan (Li, 2004; Lin and Chou, 2007; Liu *et al.*, 2007; Teng, 2005). On comparing their learning needs to their ICT learning goals, it could be observed that the participants viewed ICT skills and the use of ICTs as one of the methods to fulfil their learning needs. Obtaining communication skills not only helped in maintaining their social network, it also acted as a potential way to practice their language skills. Information on regulations, parenting and health and Taiwanese cultures and traditions could be found on the Internet employing information-seeking skills. Finally, image processing and document management were job-related skills sought after by them.

From the findings of the study the marriage migrants had goal-orientated

motivations that could benefit them as individuals and society more widely. This supports the argument put forward by Courtney (1992) who suggests two sides of goal-oriented motivations comparing several adult learning motivation orientation theories. He expounds that goal orientation is comprised of two halves: a personal side where the goals benefit the individual only and a social side where the goals benefit communities or societies; while the personal development goals mentioned above are obviously from the personal side of the goal orientation, job-related goals are more complicated: it can be beneficial for both the individual, companies and societies because they can result in personal promotion in the workplace and increase work efficiency which benefits both individuals and companies. Although the social side of the job-related goals were not noticeable for the marriage immigrants in this study, it is important in other groups of adults as many of them often attend training programmes offered by companies (Dench and Regan, 2006; Illeris, 2003).

The study had found that the adult learners' motivations to learn are not single-oriented. It was especially true that those who had goal-oriented motivations also had learning-oriented motivations at the same time. Similar findings can be seen in Illeris's (2003) research on adult learning motivations. It is suggested by Illeris (2003) that motivations for adults are multi-faceted comprising of a mix of personal, social and technical elements. However, the finding in Illeris's (2003) research that adult learners are to some extent persuaded to enter educational or training programmes (e.g. being sent to a training programme by the company) did not show in this study. A possible explanation is that those marriage immigrants were in need of educational support and therefore they had stronger internal motivations to learn. Another

possibility is that most of the marriage immigrants did not have jobs. They could afford to take time to attend educational programmes.

Activity-oriented motivations were the least obvious motivations shown in this study. This finding was in contrast to other studies that examine the motivations for the marriage immigrants to participate in education programmes. Take Chung, Lin and Chao's (2008) study for example, many of the participants have shown strong activity-oriented motivations by stating their wish to get out of daily routines and boredom.

## **5.2 Barriers to Learning**

It is assumed that one of the means to promote and motivate learning is to identify the learning barriers and try to overcome or remove them (Ahl, 2006; Koper and Tattersall, 2004). It has been mentioned in Chapter 2 that three types of adult learning barriers exist: situational, institutional and dispositional barriers (Ahl, 2006; Cross, 1981). It is advised by Ahl (2006) that effort can be put into financing education programmes, creating job-oriented learning opportunities, publicising programme information, offering childcare and providing ICT-based learning programmes.

The issue of funding is very important for promoting participation in education and it has also become one of the salient policies (Adams, 2008). For major or national educational programmes, they are often funded by the government to promote participation and achieve predetermined educational goals. For example, the American government has passed several acts for funding educational programmes such as the American Recovery and Reinvestment Act,

Adult Education and Family Literacy Act. Those government funded programmes lessen the issue of study financing and potentially increase participation. As for the participants of this study, they identified funding as one of the key factors in them enrolling in the programme. For example, Makena had expressed her appreciation for the government to financially support her to learn. The government was offering the programme free for the marriage immigrants as a means to work at an institutional level to help overcome the participants' situational barrier. Not only did the participants of this study take the government's financial support as a means of overcoming the situational barriers, they also viewed it as an emotional support with many of them stating that they felt well taken care of by the government. The government's financing viewed as a kind of emotional support is rarely found in other types of studies and reports.

As all except one of the participants of this study had children, an educational programme with a childcare service was one of the key factors determining participation. In this study, Amei indicated that she would not be able to attend the programme without the childcare service. Home responsibilities such as taking care of children may lower adults' motivations to take part in educational programmes (Carp, Peterson and Roelfs, 1974). Ahl (2006: 395) lists "absence of childcare arrangements" as an institutional barrier while Malhotra *et al.* (2007) have categorised it as a situational barrier. In my opinion, I would categorise it as one of the situational barriers as having to take care of children is a situation one is in. As a result, childcare service reduces participants' situational barrier whether the services are offered by the institution or not; however, for institutions, it is important to take childcare

arrangements into consideration because they do not only affect the desire for adults to participate in an educational programme, a lack of the arrangement can actually have a negative effect on the programme's quality and pace. It was mentioned in Chapter 4 that some of the children of the participants refused to leave their parents and the classroom and therefore occupied some of the facilities and resources thus directly having a detrimental impact on the course itself.

Another source of support often mentioned by the participants of the programme was from the lecturer, Mr. Young whose teaching methods were liked by the majority of participants. The teacher was a very experienced lecturer who had been teaching computer learning to adults for many years. He was able to anticipate where the participants would have more problems and illustrate the tasks patiently and in detail. Indeed, the pedagogy of a programme and the quality of it are two of the major institutional concerns for adults to enrol in a programme (Ahl, 2006; Malhotra *et al.*, 2007).

Based on the data of this study, the barriers for the participants to use ICTs in their daily life were strongly related to “what they do not have”. Lack of time, interest, access and facilities were the main reasons for not using computers and the Internet. Unlike what had been found in this study, the study of Kabbar and Crump (2006) has shown that physical access and the Internet connection availability are not the major barriers for refugee immigrants. Other than physical access, van Dijk and Hacker (2003) suggest that lack of skills and opportunities to use ICTs are two significant factors with regards to immigrants not adopting them. Whilst these are clearly legitimate points, they are not

elaborated on here due to them not being considered significant as main barriers for the participants of this study.

Given that the focus here is on learning to use ICTs, it is useful to consider how certain characteristics of new technologies may be able to overcome or at least partly address some of the situational and dispositional barriers to learning encountered in this study.

It is generally agreed that with the access and proper use of ICTs, learning anytime, anyway and anywhere is possible (Collins and Halverson, 2010; Huang, 2010; Hunt, Lola and Chen, 2010). Theoretically, this feature of ICTs is able to assist in overcoming situational barriers such as those related to a lack of time or transportation; the participants of this study were not obviously affected by these factors as most of them were jobless and thus had more time. Also, the fact that the programme was held within the community meant that there was easier access to the classroom. This might be one of the reasons why they did not ask for the support of e-learning tools.

In this study, the lecturer recorded the courses and gave the participants the recorded files after each course. The participants indicated that viewing those files was a good way to review and practice the taught courses. None of them relied on the files if they missed a course; however, one of the participant's husbands had learned what had been taught by watching the videos at home. This case does illustrate ICTs' ability to overcome issues of fixed time and space for learning.

It is also suggested that the use of technology in learning increases access to learning materials and removes geographic limitations (Daniel, 2002). Indeed, ICTs have been used for learning in a wide range of different forms from those as simple as videos to as complicated as technology systems (Paulsen, 2003; Shephard, 2003). The flexibility ICTs offer is clearly beneficial when delivering learning programmes. The study of Huggins and Izushi (2002) suggest that ICTs enable delivery of training programmes in any room within the community which support the learning for “transport-poor”. Lin *et al.* (2002) discuss how a technology-supported learning system, Flex-eL, offers users flexibility of learning time and pace. Indeed, LMS (Learning Management System) has been widely applied in learning because it enables convenient delivery of the training courses over the Internet/Intranet and it allows users to decide when and where to use the systems along with other potential benefits (Avgeriou *et al.*, 2003; Barchino, Gutiérrez and Otón, 2005; Coates, James and Baldwin, 2005).

It is evident that learning with the assistance of ICTs overcomes time and space limitations for learners; however, different aspects need to be considered when utilising this feature. One important aspect to be considered is related to the needs of the ICT users. In this study, the participants did not request for more e-learning tools to support their learning. Possible reasons were that the participants did not encounter obvious learning barriers regarding lack of time or transportation. Also, the participants’ learning preferences of physical attendance over learning with ICTs contributed to the fact that e-learning tools were not very much sought after in this study.

In addition to the potential of ICTs to reduce situational barriers, ICTs may also decrease dispositional barriers in a number of ways. Researchers and practitioners have been interested in understanding the impacts of learning with ICTs (Higgins, 2003; Reynolds, Treharne and Tripp, 2003). Empirical research evidence has shown positive effects of using new technologies in learning which include enhancing engagement, interests, enjoyment and a sense of achievement in learning and increased self-esteem (Denning, cited in Reynolds, Treharne and Tripp, 2003).

Indeed, there are various empirical studies supporting the claim that the use of ICTs assists to motivate learning. For example, Balanskat, Blamire and Kefala (2006), Bolliger, Supanakorn and Boggs (2010) , Passey *et al.* (2004) and Reynolds, Treharne and Tripp (2003) all suggest the positive motivational effects of the use of ICTs in learning. Although slightly different from the studies mentioned above as the participants in this study were learning to use ICTs (while learning with ICTs at the same time) rather than learning with ICTs alone, it also showed positive effects on their learning. Many of them expressed a sense of achievement after completing the tasks the lecturer asked them to perform. This sense of achievement resulted in a very important effect on the participants: increased self-confidence. I will discuss more about this effect in the next section.

Last but not least, while working on the tasks the lecturer assigned in each course, the participants developed collaborations with one another in the class. The programme was not planned to have the participants work in teams; however, the task-based nature of the programme, where the participants

needed to solve tasks assigned by performing the correct functions using computers, made teamwork possible. They tended to group up with the person sat next to them and worked as a team to work on the tasks together.

Working in teams brings various benefits to the learning process itself. It is suggested that working collaboratively can enrich the learning experiences whether it leads to actual improvement of the work or not (van Offenbeek, 2001). Also, different levels of competence and sophistication brought by different people in groups contribute to the performance and innovation of the work (Agrell and Gustafson, 1996).

In this study, it was difficult to evaluate if there was an increase of performance or creativity during/after collaboration but this was not the main focus of this work. It could be observed that through working together, those with higher levels of computer competence or those who comprehended the lectures were able to help those who were not go through the tasks step by step; they were also able to deepen their learning and understanding by illustrating and contributing what they had learned. This may facilitate overcoming the dispositional barriers by enhancing their confidence and performance about learning. More than that, after the participants had assisted one another to master a function or a task, they normally would go on to explore more advanced functions related to what they had just learned. This may be categorised as enhancing creativity or motivation during teamwork. Furthermore, working together in pairs allowed them to outreach their social interactions with others and make new friends.

Indeed, team learning has long been considered an effective instructional strategy in education (Bandura, 1977; Gomez, Wu and Passerini, 2010). With the development of new technologies, there are various studies researching how different forms of ICTs support team-based learning (Gomez, Wu and Passerini, 2010). For example, it is proposed that computer-mediated communication tools enhance active learning by engaging students in communication exchanges (Berge and Collins, 1993; Gomez, Wu and Passerini, 2010b; Wu, Bieber M. and Hiltz, 2009). Similarly, the use of collaborative meeting technologies enables group members to work on problem solving processes and therefore, sharpen their problem-solving skills (Hunt, Lola and Chen, 2010). It should be noted here that most studies have discussed the computer-mediated communication tools; it is safe to conclude that for collaboration to function well, communication and interaction between members plays a crucial role.

For adults to be involved in learning, it is vital to make efforts to remove institutional, situational and dispositional barriers for them. This section has drawn on existing empirical evidence to discuss how the ICT programme and the uses of ICTs help overcome those barriers.

### **5.3 Longer-term Results of the ICT Programme**

From the data, it is clear that the most significant effect of the ICT programme for the majority of participants was an increase in confidence. The possible cause of the phenomenon may result from their increase in computer-related skills. Similar findings can be observed in the studies researching teenagers' internet use which show that skill development and confidence are interrelated

(Eastin and LaRose, 2000). Having recognised the relationship between self-efficacy and confidence, however, there are unclear boundaries between the two elements. Self-efficacy is defined as an individual's *belief* in his/her own capacity (Bandura, 1997) instead of one's actual competence. For studies conducted to explore self-efficacy, sometimes the measures can lean towards competence (e.g. Livingstone and Helsper, 2010) as it is not easy to itemise and measure one's beliefs.

Computer self-efficacy is defined by Compeau and Higgins (1995: 191) as “an individual's perceptions of his or her ability to use computers in the accomplishment of a task... rather than reflecting simple component skills ...”. Much empirical research has been conducted to understand the relationship between computer self-efficacy and the use of ICTs in learning. It has been found that lower computer self-efficacy is linked to lower use of ICTs in higher educational settings and higher computer anxiety (Mcilroy, Sadler and Boojawon, 2007; Wilfong, 2006).

While there is no obvious link found between computer self-efficacy and computer use in this study (which will be discussed in more detail), strong links between computer self-efficacy and computer anxiety can be found in this study. At the beginning of the programme, most of the participants were not comfortable using computers. They were afraid to break computers and they constantly sought reassurance. After the programme ended, their computer self-efficacy had increased a great deal and most of them had expressed their confidence in using them.

Another effect of increased confidence on the participants was the motivation for further learning. Drawing from the first interview data of this study, many of the participants stated that acquiring ICT skills increased their confidence and prompted their further learning motivations. Many of them wished to continue attending educational programmes. Not at all the same, however studies have confirmed the relations between a lack of confidence and low participation in continuing learning (James and Nightingale, 2005; Kennedy, 1997; Norman and Hyland, 2003). Therefore, inference can be made from the above finding that increased confidence can facilitate participation in further learning. Moreover, the empirical study conducted by Norman and Hyland (2003) highlight similar findings as this study namely, that an increase of confidence assists individuals to enjoy learning and to be more motivated in learning. Other findings related to this point are that it has been found that continued learning enhances confidence. Therefore, it can be concluded that further learning and an increased of confidence are two interrelated factors affecting individual learning attitude and learning motivation.

Second interviews were conducted one year after the programme ended to understand the longer-term learning results of the programme on the participants. Some of them had found new technologies useful and were continuing to use them while others did not use them very much in their daily life. A year after the programme ended, some of them became more dependent on computers and the Internet because they have found information online abundant and easily accessible. On the other hand, some had different priorities in their lives and felt their missions were to focus on what they cared about i.e. looking after families and children. They felt that using computers

and the Internet took up too much of their time.

Unlike the results of the first interviews that showed differences of motivations and goals between novice and prior computer users, there were no obvious differences found between the two groups of users in adapting and using ICTs in their daily life. This might result from the fact that the interviews were conducted by selected people and those people who agreed to be interviewed and shared their experiences were more likely to be the ones that found ICTs useful and continued using them regularly.

For those who widely used ICTs in their daily lives, they described the benefits of ICTs which include its use in staying within their social network in Taiwan and keeping in contact with their families back home. As for information searching, once they had searched on the Internet, they realised it was a fast and convenient way to look for relevant information. The skills and knowledge they had attained had also made an impact on their parenting as well. They expressed their ability and confidence to be able to teach their children computer skills. Also, some of the participants had found jobs afterwards.

On the other hand, those who did not experience a great deal of positive effects from ICTs stated that they did not feel that using them was necessary. Their lack of time or interest clearly stopped them from using ICTs in their daily life. Also, having different priorities in life was another main reason for not adopting technology in their daily routine. They felt that they should focus on taking care of their family and children instead of spending time on new technologies. Yet another reason for not using the skills they had picked up was

due to not having computers at home for them to use.

From above discussion, it could be concluded from this study that the reasons dictating an individual's use/non-use of ICTs were complicated. Similarly, Straub (2009) puts forward that individuals' adoption to technology is a complex process involving personal perspectives on cognitive, emotional and contextual concerns. It is indeed complicated to investigate individuals' perceptions and decisions of whether to adopt new technologies; however, it is worth understanding those factors affecting one's decisions to improve technology implementation. As a result, there are various theories that attempt to explain technology adoption.

In this study, it was found that those who heavily rely on ICTs in their daily life had recognised the advantages the new technologies could bring. There are also other models and studies trying to investigate and explain people's use of ICTs. The Technology Acceptance Model that is commonly applied in educational settings investigates personal perspective about the ease of use and the usefulness of technology (Davis, 1989; Straub, 2009). Overall, those who adopt ICTs in their lives have shown strong perceived usefulness towards ICTs; they hold a positive attitude towards the use of ICTs and believe that the new technologies are in some way helpful to them.

This finding confirms Davies's (1989) model. Similarly, other empirical studies have proposed that perceived usefulness and positive attitude towards ICTs are crucial when individuals decide whether to use new technologies or not (Kabbar and Crump, 2006; Umrani and Ghadiaily, 2003). It is worth noting that

Kabbar and Crump (2006) suggest in their study that the relative advantage of technology is an important factor for immigrants to adopt ICTs. Many of the immigrants feel the need to use the new technology because they have to stay in contact with their families and friends overseas and ICTs offer a relatively cheap way for them to do so.

Lastly in this section, I would like to discuss whether the effects of the ICT programme and the use of ICTs facilitate one of the overarching goals set up by the government: enhancing social participation. Examining the data from the second interviews along with the normal activities for social participation defined by Burchardt, Le Grand and Piachaud (1999) focusing on production, political and social activities, it is concluded that the learning programme and the ICT use can potentially facilitate social inclusion.

Firstly, some of the marriage immigrants had shown positive effects on their employment which indicated the facilitation of their production activities.

Similar empirical evidence has shown that the use of ICTs can enhance production activities. For example, it is suggested in Mitter's (2003) study that women can use ICTs to transform older forms of commerce into e-business.

Secondly, some of the marriage immigrants searched for information about Taipei flora exposition on the Internet and volunteered to work for the exposition. This has illustrated that the use of ICTs potentially encourages their political participation. Indeed, research has shown that ICT use has changed the nature of people's political participation (Häyhtiö and Rinne, n.d.). For example, the Internet allows people to share resources and raise issues about citizen-based content. This breaks down the physical hurdles for participating

in political activities (Häyhtiö and Rinne, n.d.).

Lastly and possibly the category enhanced the most after the programme and the use of ICT, is their social activities. For one thing, the ICT programme had offered them opportunities to make new friends and build up their new social network. Similarly, as Makena had suggested, the use of ICTs facilitates their communication with their family members back home. Similar findings have been shown in Chung, Lin and Chao's (2008) study where the use of ICTs is shown to enhance the marriage immigrants' communications with friends and families across geographical divides.

In summary, this chapter draws on the findings of the study in comparison with the results of existing research to discuss their similarities and dissimilarities and the possible causes of them. It is hoped that this chapter offers a common ground for the understanding of how ICT learning programmes and the use of ICTs support the kind of learning needed for adult learners. Concluding comments, the limitations of the current study and the future research will be introduced in the following chapter.

## 6. Conclusion

The flow of migration has raised complicated issues regarding both the immigrants themselves and the society they migrate to. And yet, it is impossible to stop the migration flow in the era of globalisation. Taiwan is one of the popular destinations for immigrant relocation, especially for marriage immigrants i.e. those who marry Taiwanese people and therefore, move to Taiwan.

The increased number of marriage immigrants in Taiwan has made the government realise that their needs merit serious consideration. As a result, the government has been putting effort into supporting the marriage immigrants during their integration into Taiwanese society. One of the primary means to achieve this aim is via offering various educational programmes to enable the acquisition of general skills. The local government of Taipei identifies the ability to use ICTs as important for further learning and for gaining other types of skills and therefore offers the marriage immigrants free ICT programme enrolment. In addition, ICTs have been viewed by governments as an important means to promote social participation. As a result, ICTs have been placed into policy agenda for social inclusion purposes (Selwyn, 2002).

This educational strategy and policy mentioned above served as the starting point of this study. The overall purpose of the work presented here is to examine the value of how educational programmes in ICTs assist in adjusting the marriage immigrants' lives in Taiwan. This study focuses on a specifically

targeted ICT programme; beyond this, it also aims to examine the significance of this programme from the marriage immigrants' perspective. Thus, this study first examines the reasons and the motivations for the marriage immigrants to attend the ICT programme. It aids in identifying their learning needs and their expectations of the programme and ICT itself. It then looks at the factors which influences the success of the ICT programme. Lastly, it investigates longer-term learning outcomes and effects of the programme. This would assist the understanding of what the programme has achieved and whether it fulfils the goals of the government and the marriage immigrants.

As the nature of this study has involved multi-faceted elements including ICTs, gender, immigrants and adult learning, Chapter 2 covers literature regarding topics of the learning needs of marriage immigrants, educational support for them, adult learning characteristics and the interrelations between ICTs and immigrants. It tries to shed light on the possible difficulties and needs that emerge from moving to a new environment and the types of educational support that prove helpful. Furthermore, it discusses the effects and facilitations of ICTs in adult learning processes and in immigrants' learning in general.

Although many studies have shown the importance and impact of ICTs on adult learning and also on specific learners, there is limited literature on how ICT programmes and the use of ICTs assist (marriage) immigrants' life adaptation. This study aims to offer empirical evidence to investigate the effect and the value of the ICT programme on marriage immigrants. It is hoped that it can contribute to the understanding of the role of ICT programmes and ICTs in

marriage immigrants' lives.

The research methodology employed in this study is introduced in Chapter 3. This study implemented a qualitative case study approach by using three different research methods including documentation reviews, participant observation and two sets of interviews. Documentation review offered a starting point because it helped identify the gaps between the educational policies of the government and the practices in reality. Participant observation did not only provide me with opportunities to experience and understand how the marriage immigrants learned to use ICTs, it also assisted in understanding this group of people better. Interviews were conducted to explore the value of the ICT programme to the participants. The first interviews were conducted immediately after the programme ended so as to understand their initial perspectives while the second interviews were conducted one year after the programme to explore the longer-term effects of the ICT programme on them.

Chapter 4 presented the main findings of this study. It was found that the marriage immigrants had strong goal-oriented motivations to participate in the ICT programme. Their goals could be further categorised into goals for job, life management and parenting. It was found that their goals were closely related to their roles as mothers and wives. Compared to goal-oriented motivations, learning and activity-oriented motivations were much weaker, the latter one in particular.

As for the support to overcome learning barriers, administrative was important for the marriage immigrants as they assisted to reduce institutional barriers.

Financial supports are important to reduce situational barriers resulting from poor economic conditions. Childcare service and video clips offered by the courses assisted to decrease common situational barriers like domestic responsibilities and lack of time. The learning atmosphere, the lecturer's way of teaching and the in-class collaborations were key elements in combating dispositional learning barriers for the marriage immigrants. As for the learning outcomes of the programme, all of the participants had demonstrated their abilities to perform basic ICT skills which included information seeking, communication and image processing skills. In addition, most of them had expressed satisfaction toward the programme. Many of them had shown increased confidence after attending the courses. This increase of confidence had also been shown to be a dominant factor influencing their pursuit of further learning.

Aligning the goals of the government and the learning results of the marriage immigrants, the positive results brought by the programme did fulfil the goals the government initially set up. First of all, there were constructive influences brought after using ICTs in different aspects of their life: communication, information searching, parenting and occupation. Secondly, many marriage immigrants stated that one of the biggest gains to attend the courses was to meet different people and extend their social network. However, most of the marriage immigrants felt that the programme did not help them achieve their specific goals that were related to acquiring a better understanding of Taiwanese culture and tradition.

Chapter 5 discussed the findings of the current study along with those of other

related research. Drawing from different studies, it was found that the adult learning motivations were normally multi-faceted and also highly related to the roles they had in their lives. As for reducing adults' learning barriers, funding issues played an important part in promoting participation in education. As for the features of ICTs that might assist learning, it was concluded that the use of ICTs could indeed overcome some learning barriers; however, the benefits brought by ICTs to overcome the barriers such as breaking time and space boundaries to provide flexible learning were not the main concern for the marriage immigrants. As a result, the benefits did not have a significant effect on their learning or their use of ICTs.

The results and effects of participating in educational programmes were also discussed in chapter 5. It was summarised that continuing learning and increased confidence were intertwined together: while continued learning increased learner's self-confidence, increased confidence also led to further learning motivations. In addition, it discussed the complexity for individuals to integrate ICTs into their daily life. The perceived usefulness and the positive attitude toward ICTs would affect the decisions of whether to use ICTs or not.

After the concluding comments summarising each chapter, the following sections are going to discuss the limitation of the current study and the scope for future work.

## **6.1 Limitations of the Study**

There are three limitations that need to be addressed regarding the current study. The first limitation is its ability to generalise the findings. This is a single

case study with only 25 participants in the ICT programme (the case). For the interviews, only 14 participants were interviewed in the first interviews and 6 participated in the second interviews. As the study is limited by its small sample size, it would be difficult to form broad generalisations based on this single case study. Despite the ability to generalise the findings, it offers a rich picture of the phenomenon studied. It is hoped that this study contributes to increasing “existing experiences and humanistic understanding” (Stake, 1978: 7) of the topic of interest.

Secondly, the study employed different data collection methods including documentation reviews, participation observation and interviews to provide different views on the topic of interest. However, it is not possible to take all the views regarding the topic into account. For example, the perspectives of the government officials, the course administrators and the lecturer were absent in this study.

The third limitation is related to the interdisciplinary nature of the current study. This study involves topics about adult immigration, technology and education. As there is limited literature concerning exactly the same topics mentioned above in the specific context of this study, the judgement of whether there is existing empirical and theoretical evidence to support the current study is primarily based on my own analysis and knowledge about the existing literature. As a result, the readers should be aware of the limitations while drawing on the conclusions of the current study.

## 6.2 Future Research

This study has reported positive effects of the ICT programme and the use of ICT in assisting the marriage immigrants in adapting to their new lives in Taiwan. The marriage immigrants reported positive results on aspects concerning communication, information searching, parenting and occupation; however, due to the time and resource constraints, a small-scale research study was conducted. It is still unclear what types of ICT skills are particularly useful to promote their communication, information searching, parenting and occupation skills. To align the types of ICT skills practical to them to facilitate each skill and to design course contents of what they need, further research needs to be conducted to address the issues. For example, skills to use communication tools such as emails, instant messaging services and internet phone calls can greatly assist the marriage immigrants' communication and contact in Taiwan as well as back home.

The second interviews were conducted one year after the programme ended to understand the longer-term effects; however, only a relatively small number of participants took part in the interviews. It would be worthwhile to conduct a larger-scale longitudinal study to examine the long term effects of the programme and the skills of ICTs in assisting marriage immigrants' life adaptation. In addition, it is also valuable to identify the more important needs that exist for those who choose not to prioritise ICTs as part of their daily routine. Furthermore, many studies have shown that participating in learning have positive effects on individual's psychological health (Feinstein *et al.*, 2003; Hammond, 2004); and even on civic and political participation (Feinstein *et al.*,

2003). These effects are absent in the findings of the current study. Conducting a longitudinal study may assist in determining these effects and facilitate a better understanding of the effects for adults who participate in learning programmes.

There are increasing number of studies examining the relationship between self-efficacy and computer and internet use; however, some research focuses more on individual's computer and ICT skills while the measurement of other research that examine individual's confidence to use ICTs do not seem robust enough. Indeed, self-efficacy is the concept of individual's belief of self-capacity which is difficult to approach let alone measure. Yet, it is worthwhile to understand the effects of self-efficacy on learning. For this study, further research can be conducted to develop measurements to understand the relationships between self-efficacy and learning effects as well as ICT adoption.

In conclusion, this research employs a qualitative case study approach to examine the effects of educational programmes assisting marriage immigrants' life adaptation. It offers empirical evidence regarding this particular topic by investigating an ICT programme specifically targeted for the marriage immigrants in Taiwan. It is hoped that the results of this study can serve as important resources for policy makers and educational practitioners in understanding the marriage immigrants' learning needs, the expectations they have regarding using ICTs, the learning barriers and the longer-term learning effects of the programme.

# References

- Adams, J.E., Jr. (2008) *Funding Student Learning: How to Align Education Resources with Student Learning Goals*. University of Washington Bothell: The School Finance Redesign Project.
- Agrell, A. and Gustafson, R. (1996) Innovation and Creativity in Work Groups. In *Handbook of Work Group Psychology*, ed. M.A. West, Chichester: Wiley, pp. 317-343.
- Ahl, H. (2006) Motivation in adult education: a problem solver or a euphemism for direction and control? *International Journal of Lifelong Education*, 25 (4), pp. 385-405.
- Alsop, R., Bertelsen, M.F. and Holland, J. (2006) *Empowerment in Practice: From Analysis to Implementation*. USA: The World Bank.
- Anderchek, P. (2005) *Andragogy: A Concept for Today*. Available from: <http://spin.mohawkc.on.ca/pa/portfolio/documents/athabasca/Adult%20Ed%20foundations/AndragogypaperPat.anderchek.doc> (Accessed 07 June, 2009).
- Arksey, H. and Knight, P. (1999) *Interviewing for Social Scientists*. 1st ed. London: Sage Publications.
- Avgeriou, P., Papasalouros, A., Retalis, S. and Skordalakis, M. (2003) Towards a Pattern Language for Learning Management Systems. *Educational Technology & Society*, 6 (2), pp. 11-24.
- Balanskat, A., Blamire, R. and Kefala, S. (2006) *The ICT Impact Report: A Review of Studies of ICT Impact on Schools in Europe*. European Communities: European Schoolnet.
- Bandura, A. (1997) *Self-efficacy: The Exercise of Control*. New York: W.H. Freeman.
- Bandura, A. (1977) *Social Learning Theory*. New York: General Learning Press.
- Barchino, R., Gutiérrez, J.M. and Otón, S. (2005) An Example of Learning Management System. *IADIS Virtual Multi Conference on Computer Science and Information Systems*. IADIS, pp. 140.

- Becker, H. S. and Geer, B. (1969) Participant Observation and Interviewing: A Comparison. In *Issues in Participant Observation: A Text and Reader.*, eds. George J. McCall and J. L. Simmons. Reading, Mass.: Addison-Wesley.
- BERA (2004) *Revised Ethical Guidelines for Educational Research*. BERA.
- Berry, J.W. (1997) Immigration, Acculturation, and Adaptation. *Applied Psychology: An International Review*, 46 (1), pp. 5-68.
- Birru, M.S., Monaco, V.M., Charles, L., Drew, H., Njie, V., Bierria, T., Detlefsen, E. and Steinman, R.A. (2004) Internet usage by low-literacy adults seeking health information: An observational analysis. *Journal of Medical Internet Research*, 6 (3), pp. e25.
- Bolliger, D.U., Supanakorn, S. and Boggs, C. (2010) Impact of Podcasting on Student Motivation in the Online Learning Environment. *Computers & Education*, 55 (2), pp. 714-722.
- Brannen, J. (2007) working Qualitatively and Quantitatively. In *Qualitative Research Practice.*, eds. C. Seale G. Gobo J.F. Gubrium and D. Sliverman, Concise Paperback ed. London: Sage, pp. 282-296.
- Broos, A. (2005) Gender and Information and Communication Technologies (ICTs) Anxiety: Male Self-Assurance and Female Hesitation. *CYBERPSYCHOLOGY & BEHAVIOR*, 8 (1), pp. 21-31.
- Bryman, A. (2008) *Social Research Methods*. 3rd ed. Oxford: Oxford University Press.
- Bryman, A. (2001) *Social research methods*. Oxford: Oxford University Press.
- Bryman, A. (1984) The Debate about Quantitative and Qualitative Research: A Question of Method or Epistemology? *The British journal of sociology*, 35 (1), pp. 75-92.
- BSA (2002) *Statement of Ethical Practice for the British Sociological Association*. BSA.
- Burchardt, T., Le Grand, J. and Piachaud, D. (1999) Social Exclusion in Britain 1991-1995. *Social Policy & Administration*, 33 (3), pp. 227-244.
- Carp, A., Peterson, R. and Roelfs, P. (1974) Adult Learning Interests and Experiences. In *Planning Non-traditional Programs: An Analysis of Issues for Post-Secondary*

*Education.*, eds. K.P. Cross J.R. Valley and Associates, San Francisco: Jossey-Bass, pp. 11-52.

Castles, S. (2004) Migration, Citizenship, and Education. In *Diversity and Citizenship Education: Global Perspectives.*, ed. J.A. Banks, San Francisco: Jossey-Bass, pp. 17-48.

Chang, W. and Huang, F. (2007) A Study of learning problems of foreign spouses in Taiwan (in Chinese). *National Academy for Educational Research Paper*, 19, pp. 49-78.

Chang, Y. (2002) An Investigation of the Practice of Language Education for Marriage Immigrants (in Chinese). *Adult Education*, 68, pp. 25-34.

Chen, C. (2007) *An Investigation on the Needs and Factors of Foreign Spouses Participating in Non Profit Organization's Immigrant Education* (in Chinese). Master thesis. Vocational and Technological Education, National Yunlin University of Science & Technology, Taiwan.

Chen, W. (2007) An Exploration of Information Education and the Digital Divide in Taiwan (in Chinese). *Journal of Cyber Culture and Information Society*, 13, pp.193-228.

Chen, M. (1986). Gender and computers: the beneficial effects of experience on attitudes. *Journal of Educational Computing Research* 2:265 - 282.

Chen, W. and Wellman, B. (2004) The global digital divide-within and between countries. *IT & Society*, 1 (7), pp. 39-45.

Cheng, Y. (2000) *From Southeast Asia to Taiwan. An Investigation of Marriage Immigrants' Marriages and Lives in Taiwan: A Case Study of Tainan City* (in Chinese). Master thesis. National Dong Hua University, Taiwan.

Chiou, S. (n.d.) *Educational Rights for Southeast Asian Immigrant Brides: Literacy/Life Class for Southeast Asian Immigrant Brides in Chiayi* (in Chinese). Available from: <http://www.ncnu.edu.tw/ncnu/38/%BD%E1%C5v%BBP%AAF%ABn%A8%C8%B7s%AEQ%A1G%A1u%B9%C5%B8q%B7@%B0%FC%C3%D1%A6r.doc> (Accessed 24 March, 2010).

- Chiswick, B.R., Cohen, Y. and Zach, T. (1997) The Labor Market Status of Immigrants: Effects of the Unemployment Rate at Arrival and Duration of Residence. *Industrial and Labor Relations Review*, 50 (2), pp. 289-303.
- Chiswick, B.R. and Miller, P.W. (1998) English Language Fluency Among Immigrants in the United States. *Research in Labor Economics*, 17, pp. 151-200.
- Chiswick, B.R. and Miller, P.W. (1994) The Determinants of Post-immigration Investments in Education. *Economics of Education Review*, 13 (2), pp. 163-177.
- Chou, C. (2003) Ways to Strengthen the Competitively of the Taiwanese Higher Education. *NCCU Institutional Repository*, Available from <<http://nccur.lib.nccu.edu.tw/bitstream/140.119/38868/1/%E5%A6%82%E4%BD%95%E5%A2%9E%98%80%B2%E8%87%BA%E7%81%A3%E9%AB%98%E7%AD%89%E6%95%99%E8%82%B2%E7%AB%B6%E7%88%AD%E5%8A%9B.pdf>> (Accessed 30 March, 2011).
- Chung, F., Lin, Y. and Chao, S. (2008) An Analysis of How Learning ICTs Empower Female Marriage Immigrants (in Chinese). *Community Development Quarterly*, 123, pp. 336-360.
- Clark, D.R. (2009) *Kirkpatrick's Four-Level Evaluation Model*. Available from: <<http://www.nwlink.com/~donclark/hrd/isd/kirkpatrick.html>> (Accessed 25 June, 2010).
- Cline, R.J.W. and Haynes, K.M. (2001) Consumer Health Information Seeking on the Internet: the State of Art. *Health Education Research*, 16 (6), pp. 671-692.
- Coates, H., James, R. and Baldwin, G. (2005) A Critical Examination of the Effects of Learning Management Systems on University Teaching and Learning. *Tertiary Education and Management*, 11 (1), pp. 19-36.
- Coffey, A. and Atkinson, p. (1996) *Making Sense of Qualitative Data: Complementary Research Strategy*. London: Sage Publications.
- Collins, A. and Halverson, R. (2010) The second educational revolution: rethinking education in the age of technology. *Journal of Computer Assisted Learning*, 26 (1), pp. 18-27.
- Compeau, D.R. and Higgins, C.A. (1995) Computer Self-Efficacy: Development of a Measure and Initial Test. *MIS Quarterly*, 19 (2), pp. 189-211.

- Courtney, S. (1992) *Why adults learn: towards a theory of participation in adult education*. London: Routledge.
- Creswell, J.W. (2003) *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*. 2nd ed. London: Sage Publications.
- Cross, K.P. (1981) *Adults as learners: Increasing Participation and Facilitating Learning*. 1st ed. San Francisco: Jossey-Bass.
- Czaja, S.J. (1996) Aging and the Acquisition of Computer Skills. In *Aging and Skilled Performance: Advances in Theories and Applications.*, eds. W.A. Rogers A.D. Fisk and N. Walker, New Jersey: Lawrence Erlbaum Associates, pp. 201-220.
- Dæhlen, M. and Ure, O.B. (2009) Low-skilled adults in formal continuing education: does their motivation differ from other learners? *International Journal of Lifelong Education*, 28 (5), pp. 661-674.
- Daniel, J.S. (2002) *Technology is the Answer but What is the Question?* UNESCO. [Online]. Available from: [http://portal.unesco.org/education/en/ev.php-URL\\_ID=5909&URL\\_DO=DO\\_TOPI C&URL\\_SECTION=201.html](http://portal.unesco.org/education/en/ev.php-URL_ID=5909&URL_DO=DO_TOPI C&URL_SECTION=201.html) (Accessed 15 August, 2010).
- Davenport, J. and Davenport, J.A. (1985) A Chronology and Analysis of the Andragogy Debate. *Adult Education Quarterly*, 35 (3), pp. 152-159.
- Davey, L. (1991) The Application of Case Study Evaluations. *Practical Assessment, Research & Evaluation*, [Online]. 2 (9). Available from: <http://pareonline.net/getvn.asp?v=2&n=9> (Accessed 22 February, 2010).
- Davis, F.D. (1989) Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly*, 13 (3), pp. 319-340.
- de Vaus, D. (2001) *Research Design in Social Research*. 1st ed. Thousand Oaks, CA: Sage Publications.
- Dellit, J. (2002) *Using ICT for Quality in Teaching- Learning Evaluation Processes*. Thailand: UNESCO.
- Dench, S. and Regan, J. (2000) *Learning in Later Life: Motivation and Impact*. U.K.: Department for Education and Employment.

- Denzin, N.K. and Lincoln, Y.S. (2000) Introduction: The Discipline and Practice of Qualitative Research. In *Handbook of Qualitative Research.*, eds. N.K. Denzin and Y.S. Lincoln, 2nd ed. London: Sage Publications, pp. 1-29.
- Devins, D., Darlow, A. and Smith, V. (2002) Lifelong Learning and Digital Exclusion: Lessons from the Evaluation of an ICT Learning Centre and an Emerging Research Agenda. *Regional Studies*, 36 (8), pp. 941-945.
- DeWitt, T. G. (2003) The Application of Social and Adult Learning Theory to Training in Community Pediatrics, Social Justice and Child Advocacy. *Pediatrics*, 112, pp. 755-757.
- Dollisso, A.D. and Martin, R.A. (1999) Perceptions Regarding Adult Learners Motivation to Participate in Educational Programs. *Journal of Agricultural Education*, 40 (4), pp. 38-46.
- Duelli Klein, R. (1983) How to do what we want to do: Thoughts about Feminist methodology. In *Theories of Women's Study.*, eds. G. Bowles and R. Duelli Klein, Routledge and Kegan Paul: London, pp. 88-104.
- Dunne, T. and Schmitz, J.A., Jr (1995) Wages, Employment Structure and Employer Size-wage Premia: Their Relationship to Advanced-Technology Usage at US Manufacturing Establishments. *Economica*, 62 (245), pp. 89-107.
- Dwyer, P. and Brown, D. (2005) Meeting Basic Needs? Forced Migrants and Welfare. *Social Policy and Society*, 4 (4), pp. 369-380.
- Eastin, M.S. and LaRose, R. (2000) Internet Self-Efficacy and the Psychology of the Digital Divide. *Journal of Computer-Mediated Communication*, 6 (1).
- Eisenhardt, K.M. (2002) Building Theories from Case Study Research. In *The Qualitative Researcher's Companion.*, eds. A.M. Huberman and M.B. Miles, 1st ed. Thousand Oaks, CA: Sage Publications, pp. 5-36.
- Emerson, R.M. (2001) *Contemporary field research : perspectives and formulations.* 2nd ed. Prospect Heights: Waveland Press.
- Emerson, R.M., Fretz, R.I. and Shaw, L.L. (2001) Participant Observation and Fieldnotes. In *Handbook of Ethnography.*, eds. P. Atkinson A. Coffey S. Delamont J. Lofland and L. Lofland, Los Angeles ; London: Sage Publications, pp. 352-368.

- ESRC (n.d.) *Research Ethics Framework (FER)*. Swindon: ESRC.
- Eynon, R. (2009) Mapping the digital divide in Britain: implications for learning and education. *Learning, Media and Technology*, 34 (4), pp. 277-290.
- Feinstein, L., Hammond, C., Woods, L., Preston, J. and Bynner, J. (2003) *The Contribution of Adult Learning to Health and Social Capital. Wider Benefits of Learning Research Report No.8*. London: Centre for Research on the Wider Benefits of Learning.
- Finch, J. (1993) 'It's Great to Have Someone to Talk to': Ethics and Politics of Interviewing Women. In *Social Research: Philosophy, Politics and Practice.*, ed. M. Hammersley, 1st ed. London: Sage Publications, pp. 166-180.
- Flick, U. (2009) *An Introduction to Qualitative Research*. 4th ed. London: Sage Publications.
- Gillham, B. (2000) *Case Study Research Method*. London: Continuum.
- Ginossar, T. and Nelson, S. (2010) "La Comunidad Habla": Using Internet Community-Based Information Interventions to Increase Empowerment and Access to Health Care of Low Income Latino/a Immigrants. *Communication education*, 59 (3), pp. 328-343.
- Gomez, E.A., Wu, D. and Passerini, K. (2010) Computer-supported team-based learning: The impact of motivation, enjoyment and team contributions on learning outcomes. *Computers & Education*, 55 (1), pp. 378-390.
- Gregory, I. (2003) *Ethics in Research*. London: Continuum.
- Griffin, C. (1983) *Curriculum Theory in Adult and Lifelong Education*. 1st ed. New York: Nichols Publishing Company.
- Guillemin, M. and Gillam, L. (2004) Ethics, Reflexivity, and "Ethically Important Moments" in Research. *Qualitative Inquiry*, 10 (2), pp. 261-280.
- Guo, J. and Hsueh, H. (2004) A Study of the Barriers and the Needs of Role Transition for Marriage Immigrants from Southeast Asia (in Chinese) . *Community Development Quarterly*, 105, pp. 116-133.

- Häyhtiö, T. and Rinne, J. (n.d.) *ICT and political participation: two discourses of political citizenship*. Department of Political Science and International Relations, University of Tampere.
- Hammond, C. (2004) Impacts of lifelong learning upon emotional resilience, psychological and mental health: fieldwork evidence. *Oxford Review of Education*, 30 (4), pp. 551-568.
- Han, Z. and Bi, Y. (2009) Oral Spelling and Writing in a Logographic Language: Insights from a Chinese Dysgraphic Individual. *Brain and language*, 110 (1), pp. 23-28.
- Hendriks, P. (1999) Why Share Knowledge? The Influence of ICT on the Motivation for Knowledge Sharing. *Knowledge and Process Management*, 6 (2), pp. 91-100.
- Henry, G. T. (1990) *Practical Sampling*. Sage Publications.
- Higgins, S. (2003) *Does ICT Improve Learning and Teaching in Schools?* Nottingham: British Educational Research Association.
- Hoepfl, M.C. (1997) Choosing Qualitative Research: A Premier for Technology Education Researchers. *Journal of Technology Education*, 9 (1), pp. 47-63.
- Holton, E.F., Swanson, R.A. and Naquin, S.S. (2001) Andragogy in Practice: Clarifying the Andragogical Model of Adult Learning. *Performance Improvement Quarterly*, 14 (1), pp. 118-143.
- Houle, C.O. (1961) *The Inquiring Mind*. Madison: University of Wisconsin Press.
- Hsia, H. (2008) Beyond victimization: the empowerment of 'foreign brides' in resisting capitalist globalization. *China Journal of Social Work*, 1 (2), pp. 130-148.
- Hsia, H. (2000) Intermarriage in the World of Capitalism: A Case Study of Marriage Immigrants in Taiwan (in Chinese). *Inter-Asia Cultural Studies in Taiwan*, (39), pp. 45-92.
- Hsiu, W. (2010) *Bridging the Digital Divide from the Aspects of the Digital Inclusion* (in Chinese). Taiwan: China Times.

- Huang, L.K. (2010) Planning and Implementation Framework for a Hybrid E-learning Model: The Context of a Part-time LIS Postgraduate Programme *Journal of Librarianship and Information Science*, 42 (1), pp. 45-69.
- Huang, M. (2006) *A Study of Learning Motivation and Satisfaction of Marriage Immigrants in Pingtung* (in Chinese). National Pingtung University of Education.
- Huberman, M.A. and Miles, M.B. (1983) Drawing Valid Meaning from Qualitative Data: Some Techniques of Data Reduction and Display. *Quality and Quantity*, 17 (4), pp. 281-339.
- Huggins, R. and Izushi, H. (2002) The Digital Divide and ICT Learning in Rural Communities: Examples of Good Practice Service Delivery. *Local Economy*, 17 (2), pp. 111-122.
- Hunt, S.C., Lola, B.S. and Chen, M. (2010) Incorporating Collaborative Technologies into University Curricula: Lessons Learned. *Journal of Computing in Higher Education*, 22 (1), pp. 24-37.
- Illeris, K. (2003) Adult Education as Experienced by the Learners. *International Journal of Lifelong Education*, 22 (1), pp. 13-23.
- Imamura, A.E. (1990) Strangers in a Strange Land: Coping with Marginality International Marriage. *Journal of Comparative Family Studies*, 21 (3), pp. 171-191.
- James, K. and Nightingale, C. (2005) *Self-esteem, Confidence and Adult Learning: Briefing Sheet*. Leicester: NIACE.
- Johnston, R. (2003) Adult Learning, Citizenship: Clearing the Ground. In *Adult learning, Citizenship and Community Voices: Exploring Community-based Practice*, eds. P. Coare and R. Johnston, Leicester: NIACE, pp. 3-21.
- Jones-Correa, M. (1998) Different Paths: Gender, Immigration and Political Participation. *International Migration Review*, 32 (2), pp. 326-349.
- Kabbar, E.F. and Crump, B.J. (2006) The Factors that Influence Adoption of ICTs by Recent Refugee Immigrants to New Zealand. *Informing Science Journal*, 9, pp. 111-121.
- Kelly, M. (2004) Research Design and Proposals. In *Researching Society and Culture*, ed. C. Seale, 2nd ed. Thousand Oaks, CA: Sage Publications, pp. 130-142.

- Kennedy, H. (1997) *Learning Works: Widening Participation in Further Education*. Coventry, U.K.: Learning Works: Widening Participation in Further Education.
- Knowles, M.S. (1980) *The Modern Practice of Adult Education. From pedagogy to andragogy*. Englewood Cliffs: Prentice Hall/Cambridge.
- Knowles, M.S., Holton, E.F. and Swanson, R.A. (1998) *The Adult Learner: The Definitive Classic in Adult Education and Human Resource Development*. 5th ed. MA: Butterworth-Heinemann.
- Knowles, M.S., Holton, E.F. and Swanson, R.A. (2005) New Perspectives on Andragogy. In *The Adult Learner : the Definitive Classic in Adult Education and Human Resource Development.*, eds. M.S. Knowles, E.F. Holton and R.A. Swanson, 6th ed. Amsterdam; Oxford: Elsevier, pp. 183-203.
- Koper, R. and Tattersall, C. (2004) New Directions for Lifelong Learning Using Network Technologies. *British Journal of Educational Technology*, 35 (6), pp. 689-700.
- Kreps, G.L., Neuhauser, L., Sparks, L. and Villagran, M. (2008) The power of community-based health communication interventions to promote cancer prevention and control for at-risk populations. *Patient Education and Counseling*, 71 (3), pp. 315-318.
- Kreppendorff, K. (2004). *Content Analysis: An Introduction to its Methodology*. 2nd ed. London: Sage Publications.
- Labour Canada (1982) *In the Chips: Opportunities, People, Partnerships*. Ottawa: Report of the Labour Canada Task Force on Micro- Electronics and Employment. Supply and Services Canada.
- Lamp, J.M. and Howard, P.A. (1999) Guiding Parents' Use of the Internet for Newborn Education. *The American Journal of Maternal/Child Nursing*, 24 (1), pp. 33-36.
- Lanca, M., Alksnis, C., Roese, N.J. and Gardner, R.C. (1994) Effects of Language Choice on Acculturation: A Study of Portuguese Immigrants in a Multicultural Setting. *Journal of Language and Social Psychology*, 13 (3), pp. 315-330.
- Lee, H.K. (2009) *A Theory of Adults' Motivations for Learning the African Drums in Hong Kong*. Nottingham: University of Nottingham.

- Li, S. (2009) *An Exploratory Study of Foreign Spouses' Employment and Learning Challenges in Taiwan* (in Chinese). Kinmen, Taiwan: Kinmen Community University, Taiwan.
- Li, S. (2004) *Marriage Immigrants' Learning Needs and Factors Related to the Needs: A Case Study in Tainan County* (in Chinese). Taiwan: National Chung-Cheng University.
- Lieb, S. (1991) *Principles of Adult Learning*. Available from: <http://honolulu.hawaii.edu/intranet/committees/FacDevCom/guidebk/teachtip/adults-2.htm> (Accessed 05 May, 2009).
- Lin, J., Ho, C., Sadiq, W. and Orlowska, M.E. (2002) Using Workflow Technology to Manage Flexible e-Learning Services. *Educational Technology & Society*, 5 (4), pp. 116-123.
- Lin, Y. and Chou, H. (2007) A Study of Life Adaptation and Literacy Education for Marriage Immigrants (in Chinese). *Inservice Education Bulletin*, 24 (6), pp. 125-138.
- Lincoln, Y.S. and Guba, E.G. (1985) *Naturalistic inquiry*. Newbury Park ; London: Sage Publications.
- Liu, I., Chang, C., Cao, X. and Chen, L. (2007) *A Study of the Learning Needs of the Foreign Marriage Immigrants in Kaohsiung*. Available from: <http://w4.kcg.gov.tw/~cadc01/web/file.php?file=../programs/files/27808130702.pdf> (Accessed 05 May, 2009).
- Liu, J. (2004) *The Plan of Educational Policies for the Marriage Immigrants in Taiwan* (in Chinese). Department of Education, Hsinchu City Government, Taiwan. [Online]. Available from: <http://fcu.org.tw/~cblee/foreignpartner/article/jsliu.html> (Accessed 02 October, 2010).
- Livingstone, S. and Helsper, E. (2010) Balancing opportunities and risks in teenagers' use of the internet: the role of online skills and internet self-efficacy. *New Media & Society*, 12 (2), pp. 309-329.
- Long, N. (2004) E-Parenting. In *Handbook of Parenting: Theory and Research for Practice.*, eds. M. Hoghughi and N. Long, London: Sage, pp. 369-379.

- Lowe, G.S. and Krahn, H. (1989) Computer Skills and Use among High School and University Graduates. *Canadian Public Policy / Analyse de Politiques*, 15 (2), pp. 175-188.
- Lu, M. (2001) *Life Adjustment and Marital Satisfaction of Foreign Bride from Southeast Asia* (in Chinese). Master thesis. Chinese Culture University, Taiwan.
- Lynch, H. (2008) Lifelong Learning, Policy and Desire. *British Journal of Sociology of Education*, 26 (6), pp. 677-689.
- Maddox, B. (2008) What Good is Literacy? Insights and Implications of the Capabilities Approach. *Journal of Human Development*, 9 (2), pp. 185-206.
- Mahoney, J. and Goertz, G. (2006) *A Tale of Two Cultures: Contrasting Quantitative and Qualitative Research*. Available from: <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.134.7712&rep=rep1&type=pdf> (Accessed 11 February, 2010).
- Malhotra, N.K., Shapero, M., Sizoo, S. and Munro, T. (2007) Factor Structure Of Deterrents To Adult Participation In Higher Education. *Journal of College Teaching and Learning*, 4 (12), pp. 81-90.
- Malterud, K. (2001) Qualitative research: standards, challenges, and guidelines. *Lancet*, 358, pp. 483-488.
- Marcelle, G.M. (2000) *Transforming Information & Communications Technologies for Gender Equality*. New York: Gender in Development Monograph Series #9; UNDP.
- Marshall, M. N. (1996) Sampling for Qualitative Research. *Family Practice*, 13, pp. 522-525.
- Mattheoudakis, M. (2005) Language education of adult immigrants in Greece: current trends and future developments. *International Journal of Lifelong Education*, 24 (4), pp. 319-336.
- Mcilroy, D., Sadler, C. and Boojawon, N. (2007) Computer phobia and computer self-efficacy: their association with undergraduates' use of university computer facilities. *Computers in Human Behavior*, 23 (3), pp. 1285-1299.
- McNair, S. (2009) *Migration, Communities and Lifelong Learning: IFLL Thematic Paper 3*. Leicester: National Institute of Adult Continuing Education.

- Merriam, S.B. (2001) *Andragogy and Self-Directed Learning: Pillars of Adult Learning Theory. New Directions for adult and continuing education*, 2001 (89), pp. 3-13.
- Merriam, S.B. (1988) *Case study research in education : a qualitative approach*. 1st ed. San Francisco: Jossey-Bass.
- Miles, M. B. and Huberman, A. (1994) *Qualitative Data Analysis: An Expanded Sourcebook*. 2nd ed. Thousand Oaks, CA: Sage Publications.
- Miles, M.B. (1979) Qualitative Data as an Attractive Nuisance: The Problem of Analysis. *Administrative Science Quarterly*, 24 (4), pp. 590-601.
- Miller, P.W. (1986) Immigrant Unemployment in the First Year of Australian Labour Market Activity. *Economic Record*, 62 (1), pp. 82-87.
- Ministry of Children, Equality and Social Inclusion (n.d.) *Introductory Programme and Norwegian Language Training for Newly Arrived Immigrants*. Ministry of Children, Equality and Social Inclusion. [Online]. Available from: <http://www.regjeringen.no/en/dep/bld/Topics/Integration-and-diversity/introductory-programme-and-norwegian-lan.html?id=1141> (Accessed 13 September, 2010).
- Mitter, S. (2003) *Globalisation and ICT: Employment Opportunities for Women*. United Nations Commission on Science and Technology for Development.
- MOE (2000) *Short-Term Educational Plans (From Year 2001 to 2004)*. Taipei, Taiwan: Ministry of Education.
- MOE (1998) *White Paper of Towards the Lifelong Learning Society*. Taipei, Taiwan: Ministry of Education.
- Mohanty, M. (1995) On the Concept of 'Empowerment'. *Economic and Political Weekly*, 30 (24), pp. 1434-1436.
- MOI (2010) *Week 23, 2010 Interior Statistics Report: Report on Newlywed and Remarried Couples* (in Chinese). Taiwan: Department of Statistics, MOI.
- MOI (2009b) *Important Policy- A Description of Project Contents* (in Chinese). MOI, Taiwan. [Online]. Available from: [http://www.moi.gov.tw/infreport\\_detail.aspx?type\\_code=&sn=68&pages=2](http://www.moi.gov.tw/infreport_detail.aspx?type_code=&sn=68&pages=2) (Accessed 24 March, 2010).

- MOI (2009a) *Interior Statistical Report for 2009* (in Chinese). MOI. [Online]. Available from: <[http://www.moi.gov.tw/stat/news\\_content.aspx?sn=1990](http://www.moi.gov.tw/stat/news_content.aspx?sn=1990)> (Accessed 12 March, 2009).
- MOI (2003) *Action Plan for Foreign Marriage Immigrants in Taiwan* (in Chinese). MOI. [Online]. Available from: <<http://www.immigration.gov.tw/OutWeb/ch9/f9a-24-1.doc>> (Accessed 06 April, 2008).
- MPI (2010) *Adult Learning and Literacy*. National Center on Immigrant Integration Policy. [Online]. Available from: <<http://www.migrationinformation.org/integration/language.cfm>> (Accessed 13 September, 2010).
- Mulhall, A. (2003) In the Field: Notes on Observation in Qualitative Research. *Journal of Advanced Nursing*, 41(3), pp. 306-313.
- Murray, D.E. (2005) Technology for Second Language Literacy. *Annual Review of Applied Linguistics*, 25, pp. 188-201.
- Nicassio, P.M. (1983) Psychosocial Correlates of Alienation: Study of a Sample of Indochinese Refugees. *Journal of Cross-Cultural Psychology*, 14 (3), pp. 337-351.
- Norland, E. (1992). Why adults participate. *Journal of Extension*, 30(3). <Available from: <http://www.joe.org/joe/1992fall/a2.php>> (Accessed 30 March, 2011).
- Norman, M. and Hyland, L. (2003) The Role of Confidence in Lifelong Learning. *Educational Studies*, 29 (2/3), pp. 264-270.
- Norrie, P. and Dalby, D. (2007) How adult are our learners: A cross-sectional exploration of the learning characteristics of nursing students in a United Kingdom University. *Journal of Research in Nursing*, 12 (4), pp. 319-328.
- Oakley, A. (1981) Interviewing Women: a Contradiction in Terms. In *Doing Feminist Research.*, ed. H. Roberts, London: Routledge & Kegan Paul, pp. 30-61.
- O'Dwyer, B. (2004) Qualitative Data Analysis: Illuminating a Process for Transforming a 'Messy' but 'Attractive' 'Nuisance'. In *The Real Life Guide to Accounting Research: A Behind-the-Scenes View of Using Qualitative Research Methods.*, eds. C. Humphrey and B. Lee, 1st ed. Elsevier Ltd., pp. 391-408.

- OECD (2002) *Measuring the Information Economy*. Paris: OECD.
- Oliver, R. (2002) The role of ICT in higher education for the 21st century: ICT as a change agent for education. *HE21 Conference* Miri, Sarawak: Curtin University.
- Opoku-Mensah, A. (2000) ICTs and Tools of Democratization: African Women Speak Out. In *Gender and the Information Revolution in Africa.*, eds. E. Rathgeber and E.O. Adera, Ottawa: International Development Research Centre, pp. 187-213.
- Passey, D., Rogers, C., Machell, J., McHugh, G. and Allaway, D. (2004) *The Motivational Effect of ICT on Pupils*. Lancaster: University of Lancaster.
- Patton, M.Q. (1990) *Qualitative Evaluation and Research Methods*. 2nd ed. CA: Sage.
- Paulsen, M.F. (2003) Experiences with Learning Management Systems in 113 European Institutions. *Educational Technology & Society*, 6 (4), pp. 134-148.
- Pintrich, P.R. and Schunk, D.H. (2002) *Motivation in education: Theory, research, and Applications*. 2nd ed. Columbus, OH: Merrill-Prentice Hall.
- Prior, L. (2004) Doing Things with Documents. In *Qualitative Research: Theory, Method and Practice.*, ed. D. Silverman, 2nd ed. Thousand Oaks, CA: Sage Publications, pp. 76-94.
- Punch, K.F. (2009) *Introduction to Research Methods in Education*. London: Sage Publications.
- Punch, K.F. (1998) *Introduction to Social Research: Quantitative & Qualitative Approaches*. 1st ed. Thousand Oaks, CA: Sage Publications.
- Raj, A. and Silverman, J. (2002) *Violence against immigrant women: The roles of culture, context, and legal immigrant status on intimate partner violence*. Thousand Oaks, CA: Sage Periodicals Press.
- Reynolds, D., Treharne, D. and Tripp, H. (2003) ICT—the Hopes and the Reality. *British Journal of Educational Technology*, 34 (2), pp. 151-167.
- Richards, C. (2005) The Design of Effective ICT-supported Learning Activities: Exemplary Models, Changing Requirements and New Possibilities. *Language Learning & Technology*, 9 (1), pp. 60-79.

- Richardson, L. and Le Grand, J. (2002) Outsider and Insider Expertise: The Response of Residents of Deprived Neighbourhoods to an Academic Definition of Social Exclusion. *Social Policy & Administration*, 36 (5), pp. 496-515.
- Robins, M.B. (2002) Are African Women Online Just ICT Consumers? *International Communication Gazette*, 64 (3), pp. 235-249.
- Rodwell, C.M. (1996) An Analysis of the Concept of Empowerment. *Journal of Advanced Nursing*, 23 (2), pp. 305-313.
- Rubery, J. and Grimshaw, D. (2001) ICTs and Employment: The Problem of Job Quality. *International Labour Review*, 140 (2), pp. 165-192.
- Rubin, H.J. and Rubin, I.S. (1995) *Qualitative Interviewing: the Art of Hearing Data*. Thousand Oaks, CA: Sage Publications.
- Schunk, D.H. (1991) Self-Efficacy and Academic Motivation. *Educational Psychologist*, 26 (3), pp. 207-231.
- Scribner, S. (1984) Literacy in Three Mataphors. *American Journal of Education*, 93 (1), pp. 6-21.
- Seale, C. (1999) Quality in Qualitative Research. *Qualitative Inquiry*, 5 (4), pp. 465-478.
- Seifert, T.L. and O'Keefe, B.A. (2001) The relationship of work avoidance and learning goals to perceived competence, externality and meaning. *British Journal of Educational Psychology*, 71 (1), pp. 81-92.
- Selwyn, N. and Gorard, S. (2004) Exploring the role of ICT in facilitating adult informal learning. *Education, Communication & Information*, 4 (2), pp. 293-310.
- Selwyn, N. (2004) Reconsidering Political and Popular Understandings of the Digital Divide. *New Media & Society*, 6 (3), pp. 341-362.
- Selwyn, N. (2002) 'E-Stablishing' an Inclusive Society? Technology, Social Exclusion and UK Government Policy Making. *Journal of Social Policy*, 31 (1), pp. 1-20.
- Selwyn, N., Gorard, S. and Furlong, J. (2006) *Adult learning in the digital age : information technology and the learning society*. London: Routledge.

- Selwyn, N., Gorard, S. and Williams, S. (2001) Digital Divide or Digital Opportunity? The Role of Technology in Overcoming Social Exclusion in U.S. Education. *Educational Policy*, 15 (2), pp. 258-277.
- Shashaani, L. (1994). Gender-differences in computer experience and its influence on computer attitudes. *Journal of Educational Computing Research* 11:347 – 367.
- Sharf, B.F. (1997) Communicating Breast Cancer On-Line: Support and Empowerment on the Internet. *Women & Health*, 26 (1), pp. 65-84.
- Shephard, K. (2003) Questioning, Promoting and Evaluating the Use of Streaming Video to Support Student Learning. *British Journal of Educational Technology*, 34 (3), pp. 295-308.
- Shi, Y. (n.d.) *Schools Can Be the Learning Center for Immigrants - a Case Study of Fusing Elementary School in Taipei* (in Chinese). Available from: [http://m2.takes.tpc.edu.tw/lifelearn/modules/fdms/index.php?op=down\\_file&filesn=73](http://m2.takes.tpc.edu.tw/lifelearn/modules/fdms/index.php?op=down_file&filesn=73) (Accessed 05 May, 2009).
- Simons, H. (2009) *Case Study Research in Practice*. London: Sage Publications.
- Simons, L.A. (2001) *Marriage, Migration, and Markets: International Matchmaking and International Feminism*. Doctor of Philosophy. University of Denver.
- Simpson, A.R. (1997) *The Role of the Mass Media in Parenting Education*. Boston: Center of Health Communication, Harvard School of Public Health.
- Slesinger, D.P. (1979) *Health Needs of Migrant Workers in Wisconsin*. Madison: Bureau of Community Health, Division of Health.
- Smith, M.K. (1999) *Andragogy*. Available from: <http://www.infed.org/lifelonglearning/b-andra.htm> (Accessed 17 June, 2009).
- Stake, R.E. (2008) Qualitative Case Studies. In *Strategies of Qualitative Inquiry*, eds. N.K. Denzin and Y.S. Lincoln, 3rd ed. Thousand Oaks, CA: Sage Publications, pp. 119-150.
- Stake, R.E. (1995) *The art of case study research*. Thousand Oaks, Calif ; London: Sage.
- Stake, R.E. (1981) The Case Study Crisis: Some Answers. *Administrative Science Quarterly*, 26 (1), pp. 58-65.

- Stake, R.E. (1978) The Case Study Method in Social Inquiry. *Educational Researcher*, 7 (2), pp. 5-8.
- Straub, E.T. (2009) Understanding Technology Adoption: Theory and Future Directions for Informal Learning. *Review of Educational Research*, 79 (2), pp. 625-649.
- Strauss, A.L. and Corbin, J. (1990) *Basics of qualitative research: Techniques and procedures for developing grounded theory*. Newbury Park ; London: Sage Publications.
- Sturman, A. (1997) Case Study Methods. In *Educational Research, Methodology, and Measurement: An International Handbook*, ed. J.P. Keeves, 2nd ed. Oxford: Elsevier Science Ltd., pp. 61-66.
- Suárez-Orozco, M. (2001) Globalization, Immigration, and Education: The Research Agenda. *Harvard Educational Review*, 71 (3), pp. 345-365.
- Sun, C., Shen, T., Ger, H., Chou, C., Wu, M., Sun, J., Feng, B., Chen, Z., Yu, Y. and Liu, C. (2007) *A Complete Report on Developing Multi-cultural Digital Learning Content for Immigrant Spouses in Taiwan* (in Chinese). Taiwan: Taiwan e-Learning and Digital Archives Program, National Science Council.
- Taiwan Coalition Against Violence (2006) *Valentines Day, the Pain for the Marriage Immigrants* (in Chinese). Taiwan Coalition Against Violence. [Online]. Available from: <<http://tcav-tw.myweb.hinet.net/Interview/Interview95021402.htm>> (Accessed 13 September, 2010).
- Taylor, S.J. and Bogdan, R. (1998) *Introduction to Qualitative Research Method: A Guidebook and Resource*. 3rd ed. New York: John Wiley & Sons, Inc.
- Teng , C. (2005) *An Exploratory Research on the Need of Adult Education for Foreign Spouses* (in Chinese). Master thesis. Yuan-Ze University, Taiwan.
- Tough, A. (1968) *Learning Without a Teacher: Tasks and Assistance During Self-Planned Learning Projects*. Toronto: Ontario Institute for Studies in Education.
- Tsai, C., Lin, S.S.J., & Tsai, M. (2001). Developing an Internet attitude scale for high school students. *Computers and Education* 37:41 – 51.

- Umrani, F. and Ghadially, R. (2003) Empowering Women through ICT Education: Facilitating Computer Adoption. *Gender, Technology and Development*, 7 (3), pp. 359-377.
- UNESCO (2007b) *Literacy Initiative for Empowerment LIFE: Vision and Strategy Paper*. France: UNESCO Institute for Lifelong Learning.
- UNESCO (2007a) *ICT and Literacy*. UNESCO. [Online]. Available from: <http://www.unescobkk.org/education/ict/online-resources/features/ict-and-literacy/> (Accessed 06 September, 2010).
- UNFPA (n.d.) *Education and Empowerment: Moving from Information to Action*. UNFPA. [Online]. Available from: <http://www.unfpa.org/adolescents/education.htm> (Accessed 24 March, 2010).
- van Dijk, J. and Hacker, K. (2003) The 'Digital Divide' as a Complex and Dynamic Phenomenon. *The Information Society*, 19, pp. 315-326.
- van Offenbeek, M. (2001) Processes and Outcomes of Team Learning. *European Journal of Work and Organizational Psychology*, 10 (3), pp. 303-317.
- Vansteenkiste, M., Lens, W. and Deci, E.L. (2006) Intrinsic Versus Extrinsic Goal Contents in Self-Determination Theory: Another Look at the Quality of Academic Motivation. *Educational Psychologist*, 41 (1), pp. 19-39.
- Wang, K. (2007) Bridging Digital Divide, Creating Digital Opportunity (in Chinese). *National Elite*, 3 (3), pp. 15-34.
- Wang, L. (2010) A Discussion of Multiculturalism in Taiwan from the Residency, Naturalisation, and Employment Rights of Marriage Immigrants: A Case Study of Marriage Immigrants from Mainland China and Southeast Asia (in Chinese). *E-Soc Journal*, [Online]. Available from: <http://society.nhu.edu.tw/e-j/87/A33.htm> (Accessed 26 August, 2010).
- Wang, S. (2008) *Collective Care for Marriage Immigrants' Life Adaptation* (in Chinese). National Policy Foundation, Taiwan. [Online]. Available from: <http://www.npf.org.tw/post/1/5101> (Accessed 26 March, 2010).
- Waxman, P. (1998) Service Provision and the Needs of Newly Arrived Refugees at Sydney, Australia: A Descriptive Analysis. *International Migration Review*, 32 (3), pp. 761-777.

- Weber, R. P. (1990). *Basic Content Analysis*. 2nd ed. London: Sage Publications.
- Weinberg, B.A. (2000) Computer Use and the Demand for Female Workers. *Industrial and Labor Relations Review*, 53 (2), pp. 290-308.
- Wentzel, K.R. and Wigfield, A. (1998) Academic and Social Motivational Influences on Students' Academic Performance. *Educational Psychology Review*, 10 (02), pp. 155-175.
- Wilfong, J.D. (2006) Computer anxiety and anger: the impact of computer use, computer experience, and self-efficacy beliefs. *Computers in Human Behavior*, 22 (6), pp. 1001-1011.
- Wills, M. (1999) Bridging the Digital Divide. *Adults Learning*, December, pp. 10-11.
- Wlodkowski, R.J. (1999) *Enhancing Adult Motivation to Learn*. Revised ed. San Francisco: Jossey-Bass.
- Wolcott, H.F. (1990) *Writing Up Qualitative Research*. London: Sage Publications.
- Wong, T. (2004) *The Educational Policies for the Marriage Immigrants and Their Children* (in Chinese). Taipei: Dajiyuan.
- Wu, D., Bieber M. and Hiltz, S.R. (2009) Asynchronous Participatory Exams: Internet Innovation for Engaging Students. *IEEE Internet Computing*, , pp. 44-50.
- Wu, M. (2000) *Language Education as a Means of Empowerment: A Case Study of Life Adaptation Programme for Marriage Immigrants* (in Chinese). Master thesis. Shih Hsin University, Taiwan.
- Yin, R.K. (2003) *Case study research : design and methods*. 3rd ed. Thousand Oaks, Calif ; London: Sage.

# Appendix 1: CUREC Form

**University of Oxford**  
**CENTRAL UNIVERSITY RESEARCH ETHICS COMMITTEE (CUREC)**

**IDREC Checklist**

<b>*Principal investigator/supervisor/student researcher:</b>	Chia-Ying Lee
<b><u>FOR STUDENT RESEARCH PROJECTS ONLY</u></b> <b>Name of Supervisor:</b>	Rebecca Eynon
<b>Department or institute:</b>	Department of Education
<b>Address for correspondence:</b>	Lincoln College, Oxford, OX1 3DR
<b>E-mail and telephone contact:</b>	Removed from online version of thesis.

FAQ  
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**Before completing this checklist**, please ensure you have consulted the following CUREC guidance documents available on the CUREC website at <http://www.admin.ox.ac.uk/curec/resrchapp/index.shtml>:

- [Guidance on approval process](#)
- [Glossary](#)
- [FAQs](#)

This checklist is the first stage of the University of Oxford’s scrutiny procedure for \*research involving \*human participants. (Definitions of terms marked with an asterisk are to be found in CUREC’s glossary and guidance).

The University aims to ensure that all research is subject to *appropriate* ethical scrutiny. This form is designed to identify those projects which fall outside CUREC’s remit; those which fall within CUREC’s remit but which pose low risks to participants and so need scrutiny only through this checklist; and those which fall within CUREC’s remit and which pose greater risk to participants and so need more scrutiny. If you need further advice or if you have comments about this form, please consult the [relevant IDREC officer](#) (please see: <http://www.admin.ox.ac.uk/curec/oxonly/contact.shtml>).

FAQ  
25

The checklist should be completed by the \*principal investigator/supervisor/student researcher (under the guidance of his/her supervisor) undertaking or supervising research which comes under CUREC’s responsibility. Please carry out a risk assessment of the project, in consultation

with all researchers involved, using the checklist and CUREC's other documentation.

This form does not cover research governance, satisfactory methodology, or the health and safety of employees and students. As principal investigator, it is your responsibility to ensure that requirements in these areas are met.

Office use only:

IDREC Ref. No. _____
Date of confirmation that checklist accepted on behalf of IDREC:     //     //

**Section A**

*Title and brief lay description of \*research (about 150 words), plus description (about 200 words) of the nature of participants (including the criteria for inclusion/exclusion, method of recruitment, attaching samples of participant information and consent forms), purpose of the research, methods to be used, and use to which the results/data will be put.*

Title: A Case Study of How ICT Programme Assist Marriage Immigrants in Adjusting to Living in Taiwan

This Research intends to explore the value of a specifically targeted ICT (Information and Communication Technology) programme that is designed to support marriage immigrants, people who have married men/women in Taiwan and therefore have to resettle in Taiwan, in adjusting to living in Taiwan. There are increasing numbers of marriage immigrants in Taiwan. They experience new challenges in life, including language barriers and cultural differences, when they move to Taiwan. The purpose of this study is to understand how they cope with the new issues in life and to examine how attending ICT programme can help them.

14 participants will be interviewed. They are selected because of their life experiences as marriage immigrants in Taiwan who have attended a government-offered ICT programme from August to September 2009 (As there was only one government-offered ICT programme at the time, it may be possible to identify who has been interviewed). It is hoped that by interviewing them, they will be able to contribute their actual life experiences to the understanding of the aim of this study. Possible interview questions include their daily ICT use, the learning outcomes of the ICT programme they attended, what changes have occurred after attending the programme and the role of ICT in their life. Telephone interviews will be used as the primary research method in this stage. All 14 participants will be contacted through phone calls and they will be informed about the purpose of the telephone interview. Oral consent will be obtained at the beginning of the phone call whether they wish to participate or not. For those who agree to participate in the study, a consent form and the information form will be sent to them via email or post. Telephone interviews will be conducted after receiving their written consent.

<b>List all *sites where project will be conducted:</b>	Interviews will be conducted via telephone
<b>Anticipated duration of project:</b>	_2_ months
<b>Anticipated start date:</b>	01/04/2010
<b>Anticipated end date:</b>	30 /09/2010
<b>Name and status (e.g. 3<sup>rd</sup> year undergraduate; post-doctoral research assistant) of others taking part in the project:</b>	

## Section B

(Please put a tick in the yes/no column as appropriate to indicate your response).

<b>1) Does your study primarily aim to monitor and/or improve the performance of a particular service provider?</b>	<b>YES</b>	<b>NO</b>
		√
<b>2) Will your conclusions be applicable wholly or primarily to that service provider?</b>	<b>YES</b>	<b>NO</b>
		√
<b>3) Are you conducting your study on behalf of or at the request of a service provider?</b>	<b>YES</b>	<b>NO</b>
		√

If you have answered 'yes' to any question in section B it is likely that your study is \*audit, not \*research. Please check CUREC glossary and if your study is audit you need not submit your proposal for ethical scrutiny. If you have answered 'no' to all questions please proceed to section C.

## Section C

(Please put a tick in the yes/no column as appropriate to indicate your response).

1) Will the research involve *human participants recruited by means of their status as present or past NHS *patients or their relatives or carers or present or past NHS staff?	YES	NO
		√
2) Will the research involve *personal data of any of the people listed in question C 1 above ?	YES	NO
		√
3) Will the research in whole or part be carried out on NHS premises or using NHS facilities?	YES	NO
		√
4) Does the research involve administering any drug, placebo, or other substances to participants in the European Union (EU)?	YES	NO
		√
5) Does the research involve ionising radiation in the EU?	YES	NO
		√
6) Does the research involve human genetic research in the EU?	YES	NO
		√
7) Does the research involve magnetic resonance imaging in the EU?	YES	NO
		√
8) Does the research involve use of organs or other bodily material of past and present NHS patients?	YES	NO
		√
9) Does the research involve any other *invasive procedure (Class A) not described above?	YES	NO
		√
10) Does the research involve *human participants aged 16 and over who do not have *capacity to consent for themselves?  [Please note that the definition of *capacity has been altered by the Mental Capacity Act 2005; see the <a href="#">Glossary</a> on the CUREC website for further information]	YES	NO
		√

If you have answered 'yes' to any question in section C please stop work on this checklist as you will need to submit your proposal to the appropriate NHS ethics committee.

Further details may be obtained from the website <http://www.nres.npsa.nhs.uk>. Please submit the NHS Ethics Committee approval to the relevant IDREC officer for information when received.

If your research involves any of the above procedures but will be carried out by University of Oxford staff wholly outside the EU your research will be scrutinised by OXTREC (<http://www.tropicalmedicine.ox.ac.uk/oxtreccframeset.htm>). If you have answered 'no' to all questions so far, please proceed to section D.

## Section D

(Please put a tick in the yes/no column as appropriate to indicate your response).

<b>1) Is the study to be funded by the US National Institutes of Health or another US federal funding agency?</b>	<b>YES</b>	<b>NO</b>
		√

If you have answered 'yes' to the question in section D please stop work on this checklist as you will need to submit your proposal to OXTREC which uses separate documentation (<http://www.tropicalmedicine.ox.ac.uk/oxtreceframeset.htm>).

If you have answered 'no' to all questions so far, please proceed to section E.

## Section E

(Please put a tick in the yes/no column as appropriate to indicate your response).

<b>1) Are all the data about people to be used in your study previously collected anonymised data which neither you nor anyone else involved in your study can trace back to the individuals who provided them (e.g. census data, administrative data, secondary analysis)? Please refer to the definition of *personal data in the glossary and FAQ no. 6 for further guidance.</b>	<b>YES</b>	<b>NO</b>
		√



If you have answered 'yes' to the question in section E please stop work on this checklist as you do not need to secure ethical approval for your study. There is no need to submit any details to IDREC as such research does not constitute research involving human participants for review purposes.

If you have answered 'no' to all questions so far, please proceed to section F.

## Section F

Methods to be used in the study (**tick** as many as apply: this information will help the committee understand the nature of your research and may be used for audit).

<b>METHOD USED</b>	<b>PLEASE TICK</b>
<i>Unstructured interview</i>	
<i>Semi-structured interview</i>	√
<i>Structured interview</i>	
<i>Questionnaire</i>	
<i>Analysis of existing records</i>	

<i>Participant performs verbal/paper and pencil/computer based task</i>	
<i>Measurement/recording of motor behaviour</i>	
<i>Audio recording of participant</i>	√
<i>Video recording or phtotography of participant</i>	
<i>Physiological recording from participant</i>	
<i>Participant observation</i>	
<i>Systematic observation</i>	
<i>Observation of specific organisational practices</i>	
<i>Other (please specify)</i>	

## Section G

(Please put a tick in the yes/no column as appropriate to indicate your response).

<b>1). Have you made arrangements to obtain written *informed consent from participants?</b>	YES	NO
	√	
<b>2) Have you made arrangements to ensure that *personal data collected from participants will be held in compliance with the requirements of the Data Protection Act?</b>	YES	NO
	√	
<b>3) If your research involves any use of *personal data obtained from a *third party, have you checked to ensure that the *third party has arrangements in place to permit disclosure?</b>	YES	NO
	√	
<b>4) Does the research involve as participants *people whose ability to give free and informed consent is in question?</b>	YES	NO
		√
<b>5) Does the research involve any alteration of participants' normal patterns of sleeping, eating, or drinking?</b>	YES	NO
		√
<b>6) Is there a significant risk that the research will expose participants to visual, auditory, or other environmental stimuli of a level or type that could have short- or long-term harmful physical effects?</b>	YES	NO
		√

7) <i>Is there a significant risk that that the research will induce anxiety, stress or other harmful psychological states in participants that might persist beyond the duration of the test/interview?</i>	YES	NO
		√
8) <i>Does the research involve exposing participants to any physical or psychological hazard, beyond those of their usual everyday life, not covered by questions 9 and 10?</i>	YES	NO
		√
9) <i>Does the research involve any *invasive procedure (Class B)?</i>	YES	NO
		√
10) <i>Will the research elicit information from participants that might render them liable to criminal proceedings (e.g. information on drug abuse or child abuse)?</i>	YES	NO
		√
11) <i>Does the research involve the *deception of participants?</i>	YES	NO
		√
12) <i>Will the research require a participant to spend more than 2 hours in any single session on activities designed by the researcher (NB this time restriction does not refer to situations where participants are observed going about activities not devised by the researchers e.g. observation of lessons in schools)?</i>	YES	NO
		√
13) <i>Will the research involve a significant risk of any harm of any kind to any participant not covered above?</i>	YES	NO
		√
14) <i>Do you intend to follow any professional/CUREC guidelines (please provide details)</i>	YES	NO
	√	

If any of your answers in section G are in a shaded box, please complete section H. If all your answers in section G are in the unshaded boxes, please complete section I.

### Section H

One or more aspect(s) of your research project suggest(s) that it may pose risks to participants (see shaded box(es) ticked in section G).

<p><b><i>Are all the aspects of your project which caused you to tick a shaded box in section F fully covered by research protocol(s) which has/ve received IDREC/CUREC approval?</i></b></p>	<p><b>YES</b></p>	<p><b>NO</b></p>
	<p>Please give IDREC protocol number (s).</p> <p>Please proceed to section I.</p>	<p>Please complete this form AND form CUREC/2 and submit both to the relevant Inter Divisional Research Ethics Committee.</p>



**Section I**

**Complete this section only if you do not need to submit form CUREC/2.**

I understand my responsibilities as principal researcher/supervisor/student researcher as outlined on p.1 of this form and in the CUREC glossary and guidance.

I declare that the answers above accurately describe my research as presently designed and that I will submit a new checklist should the design of my research change in a way which would alter any of the above responses so as to require completion of CUREC 2/full scrutiny by an IDREC. I will inform the relevant IDREC if I cease to be the principal researcher on this project and supply the name and contact details of my successor if appropriate.

**Signed by principal researcher/supervisor/student**

**researcher:**.....

**Date:**...06.05.2008.....

**Print name** (block capitals)...CHIA-YING LEE.....

**Signed by supervisor:**.....(for student projects)

**Date:**.....

**Print name** (block capitals).....REBECCA EYNON.....

I understand the questions and answers that have been entered above describing the research, and I will ensure that my practice in this research complies with these answers.

**Signed by associate/other researcher:** .....

**Print name** (block capitals).....



Date .....

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I have read the research project application named above. On the basis of the information available to me, I:

(i) consider the principal researcher/supervisor/student researcher to be aware of her/his ethical responsibilities in regard to this research;

(ii) consider that any ethical issues raised have been satisfactorily resolved or are covered by CUREC approved protocols, and that it is appropriate for the research to proceed without further formal ethical scrutiny at this stage (noting the principal researcher's obligation to report should the design of the research change in a way which would alter any of the above responses);

(iii) am satisfied that the proposed project has been/will be subject to appropriate \*peer review and is likely to contribute something useful to existing knowledge and/or to the education and training of the researcher(s) and that it is in the \*public interest.

FOR DEPARTMENTS/FACULTIES WITH A DEPARTMENTAL RESEARCH ETHICS COMMITTEE (DREC) OR EQUIVALENT BODY (PLEASE DELETE IF NOT APPLICABLE):

(iv) confirm that this checklist (and associated research outline) has been reviewed by the Department's Research Ethics Committee (DREC)/equivalent body, and attach the associated report from that body.

**Signed:.....(Head of department or nominee e.g Chair of DREC, Director of Graduate Studies for student projects)**

**Print name** (block capitals).....

**Date:.....**

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**Please send an electronic copy and a signed paper copy of this completed checklist to whichever of the IDRECs is more suitable (Social Sciences or Medical Sciences) keeping a copy for yourself.**

IDRECs and/or CUREC will review a sample of completed checklists and may ask for further details of any project.

Revised February 2008

## Appendix 2: Observation Fieldnote

Date: 1<sup>st</sup> of Sep, 2010

Time: 13:00-16:00

Topic: An Introduction to Microsoft® Word

The lecturer starts to teach the ways to create tables in Word. Some of the participants complain about not having Word 2007 on their computers. They had Word 2003 instead. It didn't happen last time because more people come to the course this time.

Participant 1: Can you help me to find the function the lecturer is talking about? I can't find it. My computer is different from the lecturer's.

(I am showing her how to locate the function)

I: Look. It is not much different than 2007. You can still use Word 2003 to create a table. The functions are very similar.

Participant 1: Do you know where I can purchase Word 2007?

I: Yes, go to any store that sells computers and the software and ask for Microsoft Office 2007.

Participants 1: Okay. I will try to buy it and install on my computer at home. I want to give up this lecture and watch the video clips afterwards. It is meaningless as I don't understand what the lecturer is illustrating now.

I: Do you want to temporarily share a computer with the person sitting next to you? It would be easier to get an idea of what the lecturer is saying and you two can take turns practicing.

Participant 2 learns really fast. After the lecturer teaches a function, she can immediately apply it and start exploring other functions (she has previous experience of using ICTs).

Participant 3 (sits next to participant 2): how did you do that? How did you draw a chart like that? It looks better than the table.

Participant 2: the chart function is just right next to the table function. Go click on it, select the one you like and then click ok. And then you can edit the content of the chart by this pop-up window.

(Participant 3 is following the steps and successfully creates a chart)

Participant 3: oh, it's not very difficult!

# Appendix 3: Outline of the First Interview

## Questions

1. Can you briefly introduce yourself?
2. What are the difficulties you encounter when you first come to Taiwan?
3. What kind of learning needs did you have when you first come to Taiwan?
4. What kind of learning support did you receive? What learning programme have you attended? How do you feel about them?
5. Do you have previous experience of using ICTs? If you do, how do you normally use them in your daily life? Can you give examples?
6. Do you feel the use of ICTs is helpful in your daily life when you first move to Taiwan? Why or why not? If yes, what are they?
7. Why did you sign up for the ICT programme? What do you wish to gain from it?
8. How do you feel about the programme? How do you like the programme?
9. Do you think it is in any ways helpful to address your learning needs?
10. In your opinion, what did you gain from the programme?

# Appendix 4: Outline of the Second Interview

## Questions

1. Among what have been taught in the programme, what do you think is the most practical in your daily life?
2. Have you been using any of the skills learnt from the programme in your daily life? If yes, what are they? If no, why not?
3. Think of your motivations and the goals you have before attending the programme, do you think it has helped you to achieve the goals?
4. Is acquiring IT skills helpful for getting a job? Why or why not?
5. Some of you told me that you made some new friends in the programme. Did you? If yes, do you stay in contact with them?
6. From your own perspective, in what ways was the ICT programme helpful for you? In what ways was it not helpful for you?
7. Do you continue to watch the video clips recorded and provided by the lecturer and why?
8. Have you continued to attend other ICT programmes? Why or why not?
9. From your own perspective, what are the important gains from the programme?