

Women Entrepreneurs in the ICT-Related Business in Malaysia: A Demographic Survey

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Abstract

Women entrepreneurs has contribute important roles of business, includes the ICT-related business in Malaysia. Nowadays, women entrepreneurs are an integral part of ICT business which involved in Hand phone Shop, Computer Accessories, Cyber Cafe, Internet Shop, ICT-based Training, Photography Shop, Hardware Suppliers, Kiosk, and many more. Although women entrepreneurs are highlighted as have significance contribution toward the nation, however, research regarding the demographic characteristics of women entrepreneurs is still less. Common issues analyzed in the previous literature include gender and personal characteristics such as education, experience, age, marital status, and so on. This research developed a demographic profile revealing characteristics of the Malaysian women entrepreneur. This study was conducted among 150 women entrepreneurs in Malaysia that were listed in USAHANITA's online directory which who are focused on conduct ICT-based business. This analysis highlights the complexity of demographic issues among Malaysia women entrepreneurs. The suggestions of this study are briefly formulated to make the women entrepreneurs more competitive in the current environment of business marketplace.

Keywords: Demographic, Women entrepreneurs, ICT-related business

1. Introduction

Nowadays, women entrepreneurs has become a major role player in accelerating economic development, includes the ICT-related business in Malaysia and world wide business operation. Literature cited that a dramatic increase in the proportion of businesses owned by women. National Foundation for Women Business Owners (2001), reported that by the end of 2002, there was 26 percent of female-owned business in Pennsylvania, United State of America. This number indicated that there was 7 percent increasing from 1997 to 2002 (Women Owned, 2001). In fact, there are 46 percent of all privately held firms are either majority owned or 50 percent owned by females. Meanwhile, Batheja (2004) noted that business startups increased by only a small percentage in 2003 and that about 36 percent of those businesses were started by women. In fact, Wennickers (2006) believed that the interest in entrepreneurship has increased considerably. A growing number of people take on a positive attitude towards entrepreneurship. However, although statistics suggesting that across countries one-third of entrepreneurs are female, the literature on entrepreneurship and development contains relatively few studies concentrating on

women entrepreneurs as noted by Evers and Walters (2000) and Brush (2006). This is because of certain reasons as well as lack of expertise, gender issues, demographic bias, and many more.

Even though women entrepreneurs' development is world wide rising significantly, however, the research in this area is still lags. Only few research studies have examined women entrepreneurship. According to Brush and Edelman (2000) just a little research in entrepreneurship has explored only the female population of entrepreneurs. Greene, Hart, Gatewood, Brush and Carter (2003) argued that though global research of female entrepreneurship has taken place for the last 25 years and knowledge has expanded, there are still many questions unanswered garment women entrepreneurs. Some studies show that gender differences are found to impact on the responsiveness of business to fluctuations in economic activity. For example, survey findings reported in Liedholm and Mead (1999) suggest that female-headed Small Size Enterprises are more strongly affected (in terms of employment fluctuations) by changes in the overall level of economic activity both in the short and the long run. Supporting women-headed enterprises requires acknowledgement of the dynamic characteristics of female-headed SSEs, and particularly of the fact that large numbers of them are concentrated in highly volatile household-based, low return activities where growth prospects are bleak.

According to Tart (2009), over the last 10 years, entrepreneurship has become a growing trend with growing importance within the global marketplace. In fact, according to the Global Entrepreneurship Monitor (GEM), about 330 million people, or 14% of the adults in the 35 countries surveyed, are involved in forming new businesses. Within the scope of demographics entrepreneurship women entrepreneurs are increasing faster than ever. In 2002, the most recent year the U.S. Census Bureau collected business ownership data, there were 6.5 million women-owned businesses. That number is up 20% from 1997. Traditionally, women-owned businesses were most prevalent in the health care and professional services industries. But surprisingly, the fastest growing areas of women-owned businesses are construction (up 30%), agricultural services (up 24%) and transportation (up 20%).

Women entrepreneurs has seen as so important to entrepreneurs research because of it has contribution to both academic and the growth and performance of the sector. Existing research has shown the importance of demographic factors of entrepreneurs such as age, income, work status, and education in explaining entrepreneurial behavior and some of the related gender differences. However, no clear understanding exists of the generality of such causes and of whether these differences result exclusively from Malaysia local based women entrepreneurs. Within this context, we take a demographic approach to understand the insight of women entrepreneurs in Malaysia whereas may differs compared to others studies that have been done by before.

Women Entrepreneurs and Demographic

2.1 Basic Term of Entrepreneur

The discussion about definition of entrepreneur and entrepreneurship still remain in difficulty and challenging (Mitton, 1989). Meanwhile, Koh (1996) also said there is very little consensus on what entrepreneurship is and what an entrepreneur does. The word of entrepreneur derived from French verb *entreprendre*, meaning that "to undertake", as cited by Huse and Landstrom (1997). Cantillon (1931) suggests that the entrepreneur is the key figure who operates within a set of economic markets. He has the foresight to assume uncertainty; he reacts to profit opportunities and bears uncertainty. Furthermore, similar definition of an entrepreneur was defined by Blaug, Cantillon and Turgot (1991) whereas an entrepreneurs as persons who bear the risk and face the uncertainty of an activity.

Kirzner (1973, 1992) views the entrepreneur as a coordinating agent who is capable of exploiting unnoticed opportunities due to his/her special "alertness". However, German-Austrian tradition represented by Schumpeter (1934, 1958) views that the Schumpeterian entrepreneur plays a disequilibrating role by innovating, for instance introducing new goods or methods of production and the opening of new markets. Here an entrepreneur is regarded as a creator and a catalyst for change (Westhead & Wright, 2000). On the other hand, Shefsky (1994) defined entrepreneur based on the Latin roots of the word which are *entre* meaning "enter", *per* meaning "before", and *neur* meaning "nerve center". Therefore, entrepreneur could mean someone who enters a business in time to form (or change) meaningfully that business nerve center or decision center. On the other hand, Knight (1961) suggests that entrepreneurs are responsible for their own actions. Entrepreneurs are prepared to take risks in an uncertain environment. Knight also suggested that entrepreneurs have skills and competencies that enable them to successfully co-ordinate scarce resources, which distinguishes them from other individuals.

Moreover, Drucker (1994) defined an entrepreneur as one whom always searchers for change, responds to it and exploits it as an opportunity. Innovation is the specific tools of entrepreneurship which become the means by which they exploit change as an opportunity for a different business or service. Furthermore, this definition also

supported by Shapero (1975) who pointed out an entrepreneur takes initiative; organize some social –economic mechanism, plus, he is the person who knows the art of changing the production function for using the economic potential of various factors of production.

2.2 Entrepreneurship

Recently, researcher regards entrepreneurship as “pioneership” on the frontier of business. According to Timmons (1989) and Timmons, Smollen, and Dingee (1990) noted that entrepreneurship is the ability to create and build something from practically nothing: fundamentally it is a human and creative act. It is the application of energy to initiate and building an enterprise or organization, rather than just watching or analyzing. This vision requires a willingness to take calculated risks; both personal and financial and then to do everything possible to reduce the chances of failure”. Fundamentally, Brockhaus (1976) defined entrepreneurship as an activities connected with owning and managing a business firm. Meanwhile, Johnson (2001) conceptualized entrepreneurship in its narrowest sense that it is involves capturing ideas, converting them into products and, or services and then building a venture to take the product to market. Finally, one of the most recent definitions of entrepreneurship was offered by the Commission of the European Communities (2003) which defined entrepreneurship as the mindset and process to create and develop economic activity by blending risk-taking, creativity and/or innovation with sound management, within a new or an existing organization.

2.3 ICT-related business

Theoretically, the definition of ICT used here may be different from that used elsewhere. The OECD and EU definitions of ICT include the following categories as such telecommunications; consumer electronics; computers and office machinery; measurement and control instruments; and equipment and electronic components (Hamoudia, 2008). Principally, ICT-related business is refer to any firm or business that involved direct and or indirect with any kind of ICT product and services, such as computer sales, Internet services and digital printing (Haag, Cummings & McCubbrey, 2005). Online services such as online payment and delivery, hosting, includes online base business are categorising into ICT based business as well as argued by Kroenka (2005), Turban, McLean and Wetherbe (2007), Laudon and Laudon (2009) and O’Brian and Marakas (2009).

The rapid evolution of technology in the last fifty years plays a significant role in our day to day lives. Information and communication technology (ICT) builds and supports the processes of organizations on a competitive global platform. The shift from the physical world to the virtual world is also a noticeable trend as an increasing number of everyday functions and processes are shifting to an electronic realm (Skinner, 2008). According to the latest trend of ICT, women, includes women entrepreneurs face many barriers preventing them from taking full advantage of emerging economic opportunities, increasing productivity in their enterprises and accessing more productive and higher value added jobs and higher income generating employment opportunities (International Labour Office, Bureau for Gender Equality, 2010).

The idea of combining the traditional business skills and traits of entrepreneurship within information technology innovation practice is a relatively new concept. There are no clear methodologies or templates that aim to foster the process of creativity, innovation and entrepreneurship in the development of ICT. (Skinner, 2008). Supporting women entrepreneurs to introduce new technologies in their enterprises enhances the potential to increase productivity, create employment, reduce poverty, and promote local development. Women go into business in a variety of forms, including self-employment, Small and Medium Sized, social entrepreneurship, cooperatives and many more. For women to recognise their entrepreneurial potential, it is important to promote role models that coincide with their realities and aspirations (International Labour Office, Bureau for Gender Equality, 2010). Therefore, future study must focus in topic about investigating technology-based entrepreneurship with a focus on the contemporary issues with ICT innovation include in Malaysia.

2.4 Women Entrepreneurs Demographic

The early works that have been done by Hisrich and Brush (1984) was led to the model development of women entrepreneurs. Their study also assessed the management skills of women entrepreneurs and determined the problems that they have encountered in their business enterprise. The results from this study were that the female entrepreneur was age “between 35 and 45, married, has children and well educated”. The study found that they had lack of management skills in the areas of finance, marketing, and planning.

Moreover, Frear (2007) also reported almost the same result as Hisrich and Brush (1984). Research from Frear (2007) indicated that majority of women entrepreneurs started their first business at age of 33, married, has children, well educated and need for independence became the main reason for starting their business. Meanwhile, in 2002 Canadian study of entrepreneurs revealed that the average age of female entrepreneurs is 43.

Other characteristics for female entrepreneurs included the number of years in operation that averaged nine (Small Business Research, 2003).

In 1998, study of 92 female entrepreneurs in the Pittsburgh, PA area recorded demographic variables. The results indicated that 95.6 percent of the female entrepreneurs were 31 years old or older. 69 percent reported being married and 69.6 percent had two or more children. The report stated that 42.2 percent had a bachelor's degree (42.2 percent) and 26.7 percent had a Master's degree (Raya, 1999).

While, Greene, *et al.* (2003) noted that typical demographic issues mentions in the literature of women entrepreneurs include gender, personal characteristics such as (education, experience, age, marital status, children, motivation (ambitions and goals) founding strategies, initial capital, investment process, networks, inhibiting reasons, international, and public policy issues.

However, this study is initiated to add some new demographic profile, namely, ICT owned, Level of ICT skills, and Level of ICT Knowledge. The ICT variable is important because nowadays, ICT is one of an important tool for women entrepreneurs to become successful entrepreneurs.

3. Objective of the Research

This study examined the demographic characteristics of Malaysian women entrepreneurs in the ICT-related business in Malaysia. The study then developed the profile of Malaysian women entrepreneurs based on demographic characters that used in the study.

4. Research Methodology

The research used self-administrative questionnaire and the research design methods included were quantitative and descriptive. Quantitative measurements were determined based on the particular category, whereas adapted from Frear (2007) which contain variables such as Age, Highest Educational Level Attained, Marital Status, Number of Children; Ethnicity, Date of opening business, Type of Business, Number of Employees, Age of Starts opened the first business, and Primary reason(s) for opening business. As additional, there were three new variables introduced in the study, such as ICT owned, Level of ICT Knowledge and Level of ICT Skill. The used of these ITC variables are important because of ICT is considers one of newest demographic profile.

5. Findings and Discussions

The following are demographic results from the study conducted. They explained by individual category results where possible mean is calculated. A profile of Malaysian women entrepreneurs of ICT-related business is then developed by combining the results.

5.1 Current Age

They were hundred percent of female responded and completed the questionnaire. Therefore, all of respondents were reliable for the research topic and this type of gender (female) was valid for unit of analyses. Based on Table 1, the respondents' ages range from 22 to 57 with majority of respondents were come from group ages thirty (30) to thirty five years old (30-35 years) and minority was above forty five years old (Above 45 years) comprising 8.1 percents . In addition, mean value generated from respondent age data were 2.77, which is closed to category 30-35 years old. The mean age of the respondents of the study is 38.5.

Insert Table 1 here

Consequently, this result indicates that this is a good average age for work hard in running the business. Furthermore, individual in this range of age is more energetic, high aspiration, and still have long journey in business world. Therefore, government should pay more attention to this group of women entrepreneurs in order to encourage them to get involve in entrepreneurship sectors seriously, especially in ICT based business. This strategy is equivalent with Malaysia government's aspiration to build up human capital among society, as well as increasing the participant of women in business sector in Malaysia.

5.2 Highest Educational Level Completed

Education is an important step when women want to maximize their potential in entrepreneurship field because education is the only way to enhance their knowledge and skill. Furthermore, education also is required by knowledge based economy (K-Economy). Based on Table 2, majority of respondent (47.1 %) gained higher education where as bachelors (36.6 %), master (6.4 %) and PhD level (4.1 %). Meanwhile, most of respondent's data were achieved Bachelors level. Hence, higher qualification is not the only important element for success in business but all of women entrepreneurs must have good quality of knowledge and this can be thrived from participation in seminar, workshops, symposium, and so on.

Insert Table 2 here*5.3 Marital Status*

Based on Table 3, there were 44.2 % of respondents were married, widowed (32 %), single (7.6 %) and others (3.5 %). In Malaysia, women have a chance to get involve in entrepreneurship activities because the government always support and encourage women to play an important role in economic development. Status is not the important point to involve in business actively. Thus, women entrepreneurs should explore this opportunities and develop their capabilities in various type of entrepreneurship schemes.

Insert Table 3 here*5.4 Ethnicity*

Malaysia population comprises three main ethnic groups, such as Malay, Chinese and Indian. Table 4 indicated 83.1 % of samples were Malay and others were from subgroup, namely, Chinese (3.5%) and Indian (0.6 %). Actually, this portion of race does not give any effecting on hypothesis testing because race was not the moderating or intervening variable. Therefore, race was a free value and does not bring any implication on the results. Perhaps, for the next research, we can use and test item race as one of the variable.

Insert Table 4 here*5.5 Year of Establish Company*

Nowadays, the participation of women in business all over the world is gradually increased. Thus, there are many companies and businesses are registered under women entrepreneurs. Overall, there are 134 business owned by women has been operating after 1996, whereas only 16 companies were operating between the year of 1990-1995. In detail, based on Table 5 indicated that fifteen of the participants or 10 percent have been in business for two years or less; fifth-eight or 38.7 percent have been in business from 3-5 years and fifth-sixth or 37.3 percent have been in business from 6-8 years. Of those participants in business for 9 years or more, there are twenty one or 14 percent has been in business for more than 9 years. The mean numbers of years of establish company is 7.76.

Insert Table 5 here*5.6 Age of Starts opened the first business*

In general, nine respondents or sixth percent started the first business between the ages of 17 and 20, as shown in Table 6. Majority sixth-five respondents or 43.3 percent started the first business between the ages of 21 and 30 and sixth-one respondents or 40.7 percent started the first business between the ages of 31 and 40. The mean number of this item is 31.0.

Insert Table 6 here*5.7 Type of ICT-based Business*

Respondents were instructed to circle as only one type of businesses as applied from the four types of telecommunications, consumer electronics, computers and devices; and equipment and electronic components. Thirty-one respondents or 21 percent indicated owning a telecommunications, 51 respondents or 34 percent indicated owning consumer electronics, and sixty-one respondents or 41 percent indicated owning a computers and devices. Seventh participants or 4.7 percent indicated owning a computers and devices. Interestingly some of the ICT businesses owned by the respondents were combination among these four categories. In detail, among 150 respondents has involved in ICT-related business, there are comprising 41 respondents in Hand phone Shop; Computer Accessories (35), Cyber Café (13), Internet Shop (11), ICT-based Training (12), Photography Shop (10), Hardware Suppliers (10), Internet Kiosk (10), and others (8).

Insert Table 7 here*5.8 Primary reason(s) for opening business*

In general, every respondent has unique reasons on why they opening and involved in business. Obviously, forty-three respondents or 29 percent stated the desire to be in business for generating their own self-income. Thirty-three or 22 percents of respondent make entrepreneurs as their primary job and then, following by reason to support family comprised 29 respondents or 19.3 percents. In fact, reasons on hobbies and family business have shared same score, as cited at 20 respondents or 13.3 percents.

Insert Table 8 here*5.9 ICT owned*

For this question, respondents are required to response to any of ICT that they have personally. Table 9 shows all

of respondents or 150 respondents have four main ICT owned, as well as Internet, cell phone, computer, and PS2/Games. In specific, 150 respondents has cell phone, 142 (Internet), Computer (132) and PS2/Games (46). Importantly, the use of ICT for conducting the business is vital important to every business firms today's because ICT has ability to improvised some aspects of business, as well as promotion, online transaction, low costs, and many more.

Insert Table 9 here

5.10 Level of ICT Knowledge

ICT knowledge is vital important to women entrepreneurs today's because of some reasons. Levels of ICT knowledge can be important factor in determine the successful of business especially for facing treats of competitive in the marketplace. For this item, respondents are required to respond on what level of ICT knowledge that they have. In Table 10, there are four types of ICT knowledge, which is level of Internet Technology of respondents are mostly in the high level comprising about 116 respondents. For other types of ICT knowledge, the result shows low score for the scale of high level of skill, such as hardware where there are only 38 respondents belong to this level. Similarly, level of knowledge for the scale of high level of skill about software has score by respondents 39 and knowledge about others ICT devices such as Wi-Fi, Bluetooth, Storage, Wireless Internet, and so on has score by 40 respondents.

Insert Table 10 here

5.11 Level of ICT Skill

ICT skill is important to entrepreneurs today's because it can help them in generating more income especially by using online base business. ICT skill is important factor in determine the successful of business especially for challenging the competitors in the marketplace. For this item, respondents are required to respond on what level of ICT skill that achieved by them. In Table 11, there are five types of ICT skills, which are the level of Internet skill, emel/chatting/blogging, and Website/Blog / Facebook development among respondents, are mostly in the high level mode. In fact, Internet skill comprises about 124 respondents, emel/chatting/blogging comprising about 129 respondents, and Website/Blog / Facebook development comprising about 121 respondents. However, for other types of ICT skills, the result shows opposite with low score for the scale of high level of skill, such as Downloading and Uploading skills where there are only 42 respondents belong to this level. Similarly, level of ICT skill for the scale of high level of skill about maintains hardware has score by respondents 17.

Insert Table 11 here

5.12 A Profile of Malaysian Women Entrepreneurs

As indicated by the results the general demographic characteristics of the Malaysian women entrepreneurs of ICT related business on vary. Some of these characteristics vary widely. The researcher has attempted to show the demographic characteristics of the average female entrepreneur in Table 12.

Insert Table 12 here

The current Malaysian women entrepreneur is Malay (83.1%), married (44.2%), and started the first business in between of the ages of 21 and 30 years old comprising sixth-five respondents or 43.3 percent. Almost 36.6 percent has Highest Educational Level Completed on bachelors and 134 (89.3%) business has been operating after 1996. Majority of them comprise 61 respondents (41%) indicated owning a computers and devices and mostly the reason for starting the business was based on generating their own self-income comprised 43 respondents (29%). In term of ICT owned, 150 respondents has cell phone, 142 (Internet) and Computer (132). Level of ICT Knowledge has shows Internet Technology of respondents is mostly scored the high level comprising about 116 respondents, however, the respondents are in average of level 2 (medium level). In addition, for Level of ICT Skill, Internet skill comprises about 124 respondents, emel/chatting/blogging (129 respondents), and Website/Blog / Facebook (121 respondents) with on average of ICT Skill is in the level 2 (medium level).

6. Suggestions and Conclusion

Future research can investigate the correlation between demographic and entrepreneurial success specifically to multi-cultural races in Malaysia. For example, in Malaysia there are Malay, Chinese, Indian, Iban, Melanau, Kadazan, Penan, and many more have attention to become an entrepreneur. With different in cultural, location of settlement, language, and so on, thus, it is important to understand their demographic background. Here, specific focused on their demographic aspects, entrepreneurial success can be estimate based on profile of respondents. Furthermore, future research also is encouraged to learn more about the important interplay between cultural values or in the other word is people's moral and demographic, and the strategies that lead to success in business.

In addition, the question about correlation between psychological characteristics and women demographic entrepreneurial success, and what are psychological characteristics that have influenced more toward women entrepreneurial success could be an interesting topic for further research. This is because research that involves other population may yield findings that are different from those reported in the study. Meanwhile, future works could also focus on the influence of demographic profile on the entrepreneurial process. That is, do the demographic profiles directly influence entrepreneurial process or rather affects the business motivations and to what extent it is explain the behaviour latter. Finally, contingency analyses could be undertaken, such as the influence of demographic profile in different organisational and industrial contexts.

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Table 1. Statistics of Respondent Age

		Frequency	Percent
Valid	Less than 30 years	28	16.3
	30-35 years	42	24.4
	36-40 years	30	17.4
	41-45 years	36	20.9
	Above 45 years	14	8.1
Total		150	100.0

Table 2. Statistics on Level of Education

		Frequency	Percent
Valid	Doctoral	7	4.1
	Master's	11	6.4
	Bachelors	63	36.6
	Matriculation/ STPM	34	19.8
	SPM/MCE	19	11.0
	SRP/PMR	16	9.3
Total		150	100.0

Table 3. Statistics of Marital Status

		Frequency	Percent
Valid	Married	76	44.2
	Widowed	55	32.0
	Single	13	7.6
	Others	6	3.5
Total		150	100.0

Table 4. Statistics of Respondent Race

		Frequency	Percent
Valid	Malay	143	83.1
	Chinese	6	3.5
	Indian	1	0.6
Total		150	100.0

Table 5. Statistics on Year of Establish Company

		Frequency	Percent
Valid	2 or less	15	10.0
	3-5 years	58	38.7
	6-8 years	56	37.3
	Above 9 years	21	14.0
Total		150	100.0

Table 6. Statistics on Age of Starts opened the first business

		Frequency	Percent
Valid	17 - 20	9	6.0
	21- 30	65	43.3
	31 - 40	61	40.7
	41- 45	15	10.0
Total		150	100.0

Table 7. Statistics on Type of ICT-based Business

		Frequency	Percent
Valid	Telecommunications	31	21.0
	Consumer electronics	51	34.00
	Computers and devices	61	41.0
	Equipment and electronic components	7	4.7
Total		150	100.0

Table 8. Statistics on Primary reason(s) for opening business

Reasons	Frequency	Percent
Valid		
To support family	29	19.3
Hobbies	20	13.3
Family business	20	13.3
Self-Income	43	29.0
As primary job	33	22.0
Other reasons	5	3.3
Total	150	100.0

Table 9. Statistics on ICT owned

ICT Owned	Frequency
Valid	
Internet	142
Cell phone	150
Computer	132
PS2/Games	46
Others	12
Total	

Table 10. Statistics on Level of ICT Knowledge

Type of ICT Knowledge	Level of skill	Frequency
Internet Technology	Low	0
	Medium	34
	High	116
Hardware	Low	74
	Medium	38
	High	38
Software	Low	72
	Medium	39
	High	39
Other devices, such as Wi-Fi, Bluetooth, Storage, and so on	Low	75
	Medium	35
	High	40

Table 11. Statistics on Level of ICT Skill

Type of ICT Skill	Level of skill	Frequency
Internet Skill	Low	0
	Medium	26
	High	124
Emel/Chatting/ Blogs	Low	0
	Medium	21
	High	129
Downloading/ Uploading	Low	35
	Medium	73
	High	42
Website/Blog/ Facebook, and so on	Low	10
	Medium	19
	High	121
Maintains hardware	Low	78
	Medium	55
	High	17

Table 12. Demographic Profile of Malaysia Women Entrepreneurs of ICT-related Business

Demographic Profile	Result
Age	38.5
Highest Educational Level Attained	3
Marital Status	1
Ethnicity	5
Year of Establish Company	7.8
Age of Starts opened the first business	31
Type of Business	61
Primary reason(s) for opening business	4
ICT owned	3
Level of ICT Knowledge	2
Level of ICT Skill	2