

# BARRIERS TO WOMEN IN USING ICT FOR EDUCATION AND TRAINING IN SOME DEVELOPING COUNTRIES

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*This paper addresses barriers to women in using ICT for education and training in some developing countries. For the purpose of this paper, reference is made to the developing countries in the Asia-Pacific region, where women received less attention in ICT usage for education and training. Notwithstanding the UNESCO declaration on "Education For All" some research studies indicate that women faced barriers in ICT usage, such as e-learning in these countries. In general, these barriers are grouped into social and non-social barriers. Examples of social barriers are constraints posed by family members, peers and customs. Examples of non-social barriers are difficult situations at home and in institutions of education and training that hinder women's usage of ICT. This paper also discusses some steps to overcome these barriers.*

**Keywords:** Barriers, women, ICT, developing countries

Literature on investment in education illuminates the association between global competitiveness and usage of information and communications technology (ICT) (ILO, 2006; Quek, 2008; Thomas, 2007; Wilson, 2004; World Bank, 2002, 2004). Evidence of this is borne out by higher returns from jobs obtained by individuals using ICT skills. For instance, as reported by Thomas (2007), in terms of IT industry competitiveness for 2007 (Table 1) out of 64 countries, the United States was awarded first position, followed by Japan (2<sup>nd</sup>), South Korea (3<sup>rd</sup>), the United Kingdom (4<sup>th</sup>), Australia (5<sup>th</sup>), Taiwan (6<sup>th</sup>), Sweden (7<sup>th</sup>), Denmark (8<sup>th</sup>), Canada (9<sup>th</sup>) and Switzerland (10<sup>th</sup>). According to the same report, the Asia-Pacific countries namely Japan, South Korea, Australia, Taiwan, Singapore, New Zealand and Hong Kong have IT index scores ranging from 53.4 to 72.7. These countries also have moderate human capital scores. This indicates that more individuals were able to use IT to leverage higher productivity.

The other Asia-Pacific countries which have IT index scores of 19.9 to 34.9 are Malaysia, Thailand, India, Philippines, China, Sri Lanka, Indonesia, Pakistan and Vietnam (Table 1). The human capital scores for these countries are also lower.

Table 1  
*Indicators of IT Industry Competitiveness\**

2007 Rank	Country	Region	IT Index Score	Human Capital
1	United States	Americas	77.4	96.4
2	Japan	Asia-Pacific	72.7	67.4
3	South Korea	Asia-Pacific	67.2	74.8
4	United Kingdom	Western Europe	67.1	81.6
5	Australia	Asia-Pacific	66.5	76.2

6	Taiwan	Asia-Pacific	65.8	73.4
7	Sweden	Western Europe	65.4	64.5
8	Denmark	Western Europe	64.9	60.2
9	Canada	Americas	64.6	65.9
10	Switzerland	Western Europe	63.5	54.8
11	Singapore	Asia-Pacific	63.1	84.9
17	New Zealand	Asia-Pacific	57.5	69.5
21	Hong Kong	Asia-Pacific	53.4	49.2
36	Malaysia	Asia-Pacific	34.9	43.7
41	Thailand	Asia-Pacific	31.9	47.7
46	India	Asia-Pacific	29.1	49.6
47	Philippines	Asia-Pacific	28.7	40.7
49	China	Asia-Pacific	27.9	44.7
50	Sri Lanka	Asia-Pacific	26.0	32.7
57	Indonesia	Asia-Pacific	23.7	36.6
60	Pakistan	Asia-Pacific	20.2	19.4
61	Vietnam	Asia-Pacific	19.9	22.4

\* Adapted from Thomas, K. IT industry competitiveness scores and ranks. In D. McCauley (Ed.), *The Means to Compete: Benchmarking IT Industry Competitiveness*. The Economist Intelligence Unit 2007, p. 5; p. 7 & pp. 24-25. [Online] Available at <http://www.bsa.org/media.12FBG624FEB30C486>

This translates to mean that many of these Asia-Pacific countries are lacking in skilled IT/ICT workers. Here, some studies reported that lacking access to IT/ICT has led to lower productivity of individuals, including women workers (Gunderson, 2006; Quek, 2003, 2008; UNDP, 2004; UNESCO, 2001).

In this context, this paper addresses barriers to women in using ICT for education and training in some developing countries. This paper sources data from official documents, statistical reports and bulletins (on-line), library records, case studies and previous research to establish the review of literature.

### **Barriers to Women in Using ICT for Education and Training**

For the purpose of this paper, the term IT refers to computers including various hardware and software, telecommunications (such as, mobiles, Internet, Intranet, satellites, liquid crystal displays (LCD), websites) and related information technology systems (such as e-learning, international roaming, short messaging systems (SMS), global positioning systems (GPS), broadband and portal services with hot spots). In addition, the term, "ICT" refers to communicating by using IT (<http://www.oecd.org/dsti/sti/it/stats>).

In the context of developing countries in the Asia-Pacific region, the barriers to women using ICT for education and training are grouped as: (1) Social barriers which are constraints posed by family members, peers and customs; and (2) Non-social barriers which are difficult situations at home and in institutions of education and training that hinder women's usage of ICT.

Social barriers (Malaysia, 2001, 2006; Quek, 1994, 2000, 2003, 2005; UNESCO, 2001; World Bank, 2004) are constraints posed by family members, peers and customs. They hinder women in using ICT by way of:

1. Socialization of gender roles to accept domestic responsibilities – family caring, committed to family duties, spouse responsibilities.
2. Temporary acceptance of work – to give up working outside the family upon arrival of children.
3. Acceptance of bias at workplace – not to fight for rights at work.

Non-social barriers (ILO, 2006; Marquardt, 1999; Quek, 1999, 2004, 2008; UNDP, 2004) are difficult situations at home and in institutions of education and training that hinder women's usage of ICT in education and training. Examples are:

1. Lack of financial resources to pay for tuition fees for ICT education.
2. Inaccessibility to education and training opportunities- no computers/ software/ hardware.
3. Poor health.
4. Lack of opportunities- staying in rural areas.

### Conclusion

Several steps can be taken to improve women's access to ICT for education and training. These include:

1. Government action by promoting education for all (including ICT) to girls and women.
2. Eradicating domestic poverty.
3. Upgrading and sustaining the standard of living.
4. Linking the clusters of key industries.

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