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Observer paper

submitted by:

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I. Introduction – Learning for earning

1. With an estimated 500 million people entering the global workforce over the next decade, coming to grips with the technological challenge is crucial. Without being "plugged in", millions of women and men risk being left behind. In order to meet the technological challenge, especially in the context of the current economic crisis, there is a need for development strategies that combine new technological capacity with investments in a broad variety of traditional and non-traditional economic sectors. These strategies need to be supported by improvements in education, skills development and vocational training and research.¹ Training in the use of technology is essential and a key step in taking advantage of emerging economic opportunities. Both are critical to the ILO goal of creating greater opportunities for women and men to obtain full employment and decent work. This aligns with the theme chosen for the 55th Session of CSW, which could be summarised as "Learning for earning".

2. In 2009, 183 member States of the ILO present at the 98th Session of the International Labour Conference (ILC) adopted *Conclusions on gender equality* which state, inter alia, that:

* The views expressed in this paper are those of the author and do not necessarily represent those of the United Nations.

¹ ILO: *Skills for improved productivity, employment growth and development*, Report V, International Labour Conference, 97th Session (Geneva, 2008), p. xiii.

“Lifelong learning, apprenticeship opportunities, and vocational training policies need to be oriented and accessible to enable both women and men to adapt to changing skills and technological demands ... and ... Education, skills development and vocational training should proactively meet the demands of the labour market which includes the needs of the workers and employers, providing young women and men with the skills of the future.”²

II. Technology and gender

3. In many countries, there are more men than women acquiring technological knowledge and skills needed to apply new techniques and start innovative economic activities. Women 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.

4. More and more girls and boys are enrolling in primary and secondary school in many regions of the world; at the tertiary level enrolment of women has increased steadily and women are now approaching the 50 per cent mark of the total number of students worldwide.³ Even so, women are unevenly under-represented in science and technology (S&T) studies at all levels of education and in the workforce in different regions.

5. A recent OECD report⁴ found that in most OECD countries, less than a third of all students in advanced chemistry, physics or biology classes in secondary schools were women. In the United States, women represent only 15 percent of students enrolled in advanced computer science. But according to the UNESCO Institute for Statistics, in Latin America and the Caribbean, 43 per cent of science and technology researchers are women, exceeding the world average of 28 per cent. In most Central Asian countries which are able to report data, the figure is about 50 per cent; in the Commonwealth of Independent States, 43 per cent and in Africa, about 31 per cent.⁵

6. Why is there a wide gap in science and technical studies in some parts of the world and not in others? It is more a question of encouragement, pervasive gender roles and attitudes rather than aptitudes, according to the OECD. Girls are far less likely than boys to study engineering or computer or physical sciences. Though women earn more than half of the university degrees in the OECD countries, they receive only 30 per cent of degrees in science and technology. The percentage of female graduates advancing to research is even smaller, representing less than 30 per cent of science and technology researchers in most OECD countries and only 12 per cent in countries such as Japan and the Republic of Korea.

² ILO: *Sixth item on the agenda: Gender equality at the heart of decent work*, Provisional Record 13, International Labour Conference, 98th Session (Geneva, 2009), paras. 19 and 41 of the *Conclusions*.

³ United Nations Educational, Scientific and Cultural Organization (UNESCO) *Science, Technology and Gender: An international report*, Executive Summary (Paris, 2007), p. 10.

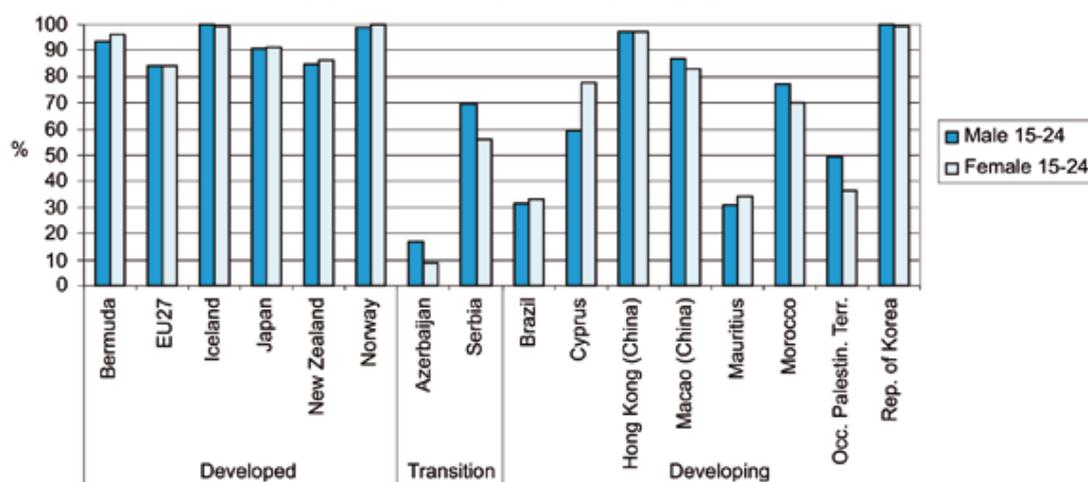
⁴ Organisation for Economic Co-operation and Development (OECD): *Gender and Sustainable Development, maximizing the economic, social and environmental role of women* (Paris, 2008), p. 23.

⁵ UNESCO: Institute for Statistics, Fact Sheet: *A global perspective on research and development* (Paris, October 2007), No. 05, pp. 1 and 2.

7. The internet use gap between developed and developing countries in 2006⁶ remains vast, despite the fast development pace in some regions. What is more, the gender divide in internet use is widely variable. While it ranges from 34 per cent to 50 per cent in developed countries, it can be as low as 4 per cent in some developing countries. On the whole, Internet users are largely male, college-educated and earn higher-than-average incomes⁷. But there is a positive evolution to note as the gender gap is much smaller and even inexistent among younger people in different parts of the world, thanks to higher literacy rates among younger people and the increased presence of computers in schools and further education facilities⁸.

8. At the 2005 UN World Summit for Information Societies (WSIS),⁹ world leaders recognized the key role of science and technology, including ICT, in the wider discussions on development. The WSIS contributed substantially towards setting the goals for establishing a more balanced, harmonious and solidarity-based information society. The Tunis Agenda of the WSIS provides, among other things, specific steps to bridge the “digital divide” between the developed and developing countries as well as focus on women’s access to ICT.¹⁰

Table on Internet use by gender, total percentage of population



Source: ITU, *Use of Information and Communication Technology by the World’s Children and Youth, A Statistical Compilation* (Geneva, June 2008), p. 22.

In order to bridge this gap, educational incentives for women are needed. These may include female science teachers functioning as role models; making technical subjects such as mathematics and science more attractive to women and girls; improving gender-awareness

⁶ UNCTAD reports that, of a total of 1.1 billion internet users, slightly more than 361 million Internet users live in Asia, 230 million in North America, 227 million in Europe, 105 million in Latin America and the Caribbean and 43 million in Africa (but it appears that the number in Africa increased by more than 400 per cent from 2002 to 2006).

⁷ Women’s Learning Partnership for Rights, Development, and Peace, *Technology Facts & Figures, 2007*, <http://www.learningpartnership.org/en/resources/facts/technology>, 2007 (accessed on 5 November 2008).

⁸ ITU: *Use of Information and Communication Technology by the World’s Children and Youth, A Statistical Compilation* (Geneva, June 2008), pp. 22-23 and pp. 41-42.

⁹ Website of the World Summit on the Information Societies <http://www.itu.int/ws/is/index.html>

¹⁰ see ITU’s webpages on gender <http://www.itu.int/ITU-D/gender/>

and UNESCO’s webpages on gender and ICT

http://portal.unesco.org/ci/en/ev.php-URL_ID=21461&URL_DO=DO_TOPIC&URL_SECTION=201.html

among school staff - male and female;¹¹ and encouraging communities and families to give up the resistance to girls studying technical subjects. These means can help promote science and technology education among women and girls as an entry point to higher end information technology (IT) jobs. Without them, occupational segregation along gender lines may perpetuate a digital or technological gap.¹²

III. Skills for rapid technological change and employability – recent ILO attention

9. In 2006, the ILO Governing Body (GB) examined how improving knowledge would lead to getting jobs, and good jobs.¹³ In 2007, the GB examined another aspect of upgrading skills so as to get better jobs.¹⁴ In 2008, the member States of the ILO at ILC 97th Session stated, in the *Conclusions on Skills for improved productivity, employment growth and development*, that “Training policies and programmes that aim to improve productivity and employability therefore need to ensure equality of opportunity, be free from discrimination and take into account family and household obligations ... A life-cycle approach has to be adopted to overcoming the challenges that confront women in gaining access to education and training and in utilizing this training to secure better employment. This includes: improving the access of girls to basic education; overcoming logistical, economic and cultural barriers to apprenticeships and to secondary and vocational training for young women – especially in non-traditional occupations; taking into account women’s home and care responsibilities when scheduling workplace-based learning and entrepreneurship training; and meeting the training needs of women re-entering the labour market and of older women who have not had equal access to opportunities for lifelong learning”.¹⁵

10. Indeed, education and skills training increase the ability of women and men to apply new scientific technologies, thus enhancing their employability as well as the productivity and competitiveness of enterprises. Effective skills development systems - connecting education to technical training, technical training to labour market entry, and labour market entry to workplace and lifelong learning - can help women benefit from existing and emerging opportunities.¹⁶

11. One successful example comes from the Inter-American Centre for Knowledge Development in Vocational Training (CINTERFOR/ILO). It developed *FORMUJER*, a specific programme to increase productivity and employment opportunities of low-income women as well as to support women’s participation in development and in contributing to the reduction of poverty in the region. The programme was launched in three pilot countries: Argentina together with the Ministry of Labour, Employment and Social Protection, Bolivia together with the National Institute for Labour Training (INFOCAL) and in Costa Rica with

¹¹ Education Development Centre, Inc.. *Building a gender friendly school environment: A Toolkit for Educators and their Unions*, 2007, Education International, Brussels.

¹² ILO, Report of the Committee on Skills. *Skills for improved productivity, employment growth and development*, Report V, International Labour Conference, 97th Session, Geneva, 2008, p. 131.

¹³ ILO: *Employability by improving knowledge and skills*, Committee on Employment and Social Policy, 296th Session (Geneva, March 2006), GB.295/ESP/2.

¹⁴ ILO: *Portability of skills*, Committee on Employment and Social Policy, 298th Session (Geneva, March 2007), GB.298/ESP/3.

¹⁵ ILO, *Skills for improved productivity, employment growth and development*, Report V, International Labour Conference, 97th Session, Geneva, 2008, p. xiii.

¹⁶ Murray, U.: *Gender and skills development: Practical experiences and ways forward, paper prepared for the ILO Skills and Employability Department (SKILLS)* (Geneva, ILO, 2008).

the National Training Institute (INA). Some 248 courses were undertaken, in 57 occupational areas and in 13 locations throughout the continent, and 3,400 individuals were trained directly, surpassing all goals. Moreover, 25 per cent of the participating women were trained in new or non-traditional areas. The theoretical framework, methodologies and materials produced and validated by the local and national Vocational Training Institutions became the joint, sustainable achievements that leave *FORMUJER* recognised as a technical reference point in training and gender policies.¹⁷

IV. Entrepreneurship for Decent Work

12. Technological “catching up” is also supporting the transition from the informal to the formal economy.¹⁸ In some countries, the growth in women-owned businesses is greater than for private firms as a whole.¹⁹ Women entrepreneurs are increasingly becoming the driving force of many economies particularly in Africa. Studies show that they account for 50 per cent of all businesses.²⁰ These businesses are often micro- and small- scale enterprises, in the informal economy and may not offer the same job security, social protection, access to training and career development as the formal economy. In fact, formal employment, with all its inherent advantages in terms of job quality and quantity, remains an illusive goal for many women.

13. 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, SMEs, 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. Women also need to overcome other barriers when deciding whether to start a business, such as limited access to credits or traditional patterns preventing women from taking part in income-generating activities or controlling financial resources.

14. To address these barriers, the ILO has adopted a twin-track approach of mainstreaming gender equality in entrepreneurship development, while at the same time providing targeted approaches to women’s starting, formalizing and growing their enterprises. This has been formulated into a comprehensive Strategy on Promoting Women’s Entrepreneurship Development (WED).²¹ In order to increase productivity, and diversify into higher value added activities, women entrepreneurs need to be empowered to access and adopt new technologies and apply them in different sectors in the economy. Promoting women’s entrepreneurship to help close the technology gap thus contributes to more decent and productive work. Yet education and training are not enough. To be fully effective, these need to be part of integrated national economic and employment development policies and strategies. Other key factors include the creation of an enabling environment for sustainable

¹⁷ See CINTERFOR/ILO website

<http://www.cinterfor.org.uy/public/english/region/ampro/cinterfor/temas/gender/formujer/index.htm>

¹⁸ ILO: *Women, gender and the informal economy: An assessment of ILO research and suggested ways forward* (Geneva, Bureau for Gender Equality, 2008), pp. 18-20.

¹⁹ International Finance Corporation (IFC): "Banks Team Up to Support Women Entrepreneurs Worldwide: Global Banking Alliance for Women Holds its Annual Summit", press release, Washington, D.C., 9 November 2006.

²⁰ International Organisation of Employers (IOE): *Women Entrepreneurs*, 2008, <http://www.ioe-emp.org/en/policy-areas/employment/women-entrepreneurship/index.html>

²¹ GB.301/ESP/4, adopted by the ILO Governing Body in March 2008.

enterprise development, social dialogue and fundamental investments in basic education, health and physical infrastructure.

15. The WED approach is proving highly successful. For example, in October 2009 in Egypt, ILO and the African Development Bank (AfDB) co-organized a regional forum to discuss the challenges and opportunities to promote women-owned enterprises in response to the financial crisis. This First Pan-African Forum on Women's Entrepreneurship Development offered voice and visibility to African women entrepreneurs and various WED players to discuss how to support sustainable women-owned enterprises across Africa in the context of the current global recession and beyond. The Forum adopted the *Cairo Platform for Action for the Development of Women's Entrepreneurship in Africa*, which stresses work relevant to the 55th Session of CSW: the need to upgrade technical, entrepreneurial and managerial skills of women entrepreneurs and potential young female entrepreneurs, and to raise the educational levels of women where they have inadequate technical and business skills to start and grow sustainable enterprises. And the *Cairo Platform for Action* calls for donor support for a multi-agency platform, coordinated by the ILO and AfDB called the "Women's Entrepreneurship Facility for Africa (WEFA)", that will function, inter alia, as a coordinator, knowledge manager, synergy creator and generator of "big ideas" that promote WED.

16. Another example of attention to this approach occurred in May 2010, in Sharm El Sheikh, Egypt, when ILO in cooperation with the Egyptian Ministry of Manpower and Migration organized an *International Knowledge Sharing Conference on Entrepreneurship Education*, under the patronage of H.E. Mrs Suzanne Mubarak, First Lady of Egypt. This knowledge sharing opportunity for women and men policy makers, youth entrepreneurship promoters, teachers, trainers, and course developers from high schools, technical vocational training institutions and higher education, highlighted lessons learned on effective policies and implementation strategies to create the next wave of entrepreneurs in the MENA region.

17. ILO's Women's Entrepreneurship Development and Gender Equality Programme (WEDGE) has worked effectively across several regions for the last 8 years, with about 80,000 women entrepreneurs supported through various activities. It enhances economic opportunities for women entrepreneurs—including women living with HIV/AIDS or disabilities—through business knowledge and skills training; promoting and facilitating access to micro-finance institutions and markets; strengthening women entrepreneurs' voice and representation; and increasing constituents' ability to remove barriers that may impede women's entrepreneurship development. WEDGE, within the ILO Small Enterprise Development unit, uses many of the tools developed to strengthen the understanding of how sustainable enterprises can better serve employment goals, with a special emphasis on women and youth entrepreneurs. In particular it generates research.²² It also trains constituents with the *Know About Business* kit to develop an entrepreneurial society and positive attitudes towards entrepreneurship among young women and men by providing guidance for governments, social partners and educational institutions that want to integrate entrepreneurship education into their curricula. It also provides career guidance on entrepreneurship as an employment option directly to young men and women in schools.

²² Mayoux, L.: *Jobs, gender and small enterprises: Getting the policy environment right*. InFocus Programme on Boosting Employment through Small Enterprise Development (SEED) Working Paper No. 15 (Geneva, ILO, 2001).

V. Training responses

18. Skills development is a core element of the ILO's *Global Employment Agenda* (GEA), which constitutes the policy framework for employment promotion within the Decent Work Agenda. The Human Resources Development Recommendation, 2004 (No. 195) also provides valuable guidance for effective skills and employment policies that assist governments, employers and workers to put into effect education, training and lifelong learning policies and programmes for the 21st century, including the use of new information and communication technology in learning and training.

19. One practical example of the training response is the *Training for Rural Economic Empowerment Project (TREE)*. In Pakistan and the Philippines, it developed an alternative methodology for income generation for the most marginalized groups, including the rural poor (specifically women), disenfranchised young men and persons with disabilities. In Pakistan 56 per cent of those participating were women. The project also developed new ways of encouraging women to take part in skills training programmes. Training gave women new technology skills to generate income in areas such as tailoring, household appliance repair, welding, auto mechanics, building electrician, electronics and plumbing.

VI. Conclusion

20. The above-mentioned 2008 ILC *Conclusions on Skills* seek to engender a virtuous circle in which improving the quality and availability of education and training for women and girls fuels innovation, investment, technological change, enterprise development, economic diversification and competitiveness. The 2009 ILC *Conclusions on Gender Equality* are equally clear on the critical nature of 'Learning for earning' and broader contributions of women to economic growth. ILO constituents - governments, employers' and workers' organisations - continue to give high attention to a continuum of gender equality which resonates with:

Basic education → secondary and vocational training → higher education → life-long technical skills upgrading → WED → productive employment → Decent Work. This EGM can play a major role in understanding these inter-faces.

Annex

Resources and documents on ILO's gender strategy and activities, including tools, publications and statistics on gender equality in employment, entrepreneurships and education

ILO Bureau for Gender Equality: www.ilo.org/gender

ILO Department of Statistics: www.ilo.org/stats

ILO's strategy on gender equality

- [ILC: Background Report IV, Gender equality at the heart of decent work, 2009](#)
- [ILC: Report and conclusions of the Committee on Gender Equality, June 2009](#)
- [GB: Matters arising out of the work of the 98th Session \(2009\) of the ILC: Follow-up to the adoption of the resolution concerning gender equality at the heart of decent work, November 2009 \(GB.302/3/2\)](#)
- [ILO Action Plan on Gender Equality 2010-15: Phase I Aligned with the Programme and Budget 2010-11](#)

Employment and entrepreneurship

- [Guidelines on Gender in Employment Policies: Information Resource Book, December 2009](#)
- [Skills and entrepreneurship: Bridging the technology and gender divide](#) [November 2008], one of the twelve themes of the ILO Campaign on gender equality at the heart of decent work 2008-09
- [Women, Gender and the Informal Economy: an assessment of ILO research and suggested ways forward](#), ILO, 2008
- ILO WED (Women's Entrepreneurship Development) [programme](#) & [tools](#) and the *Voices of women entrepreneurs'* brochures (December 2008) - [in Uganda](#) ; [in Ethiopia](#) ; [in Ethiopia, Tanzania, Uganda and Zambia](#) ; [in Tanzania](#) ; [in Zambia](#)

Education

- International Programme on the Elimination of Child Labour (IPEC) website: www.ilo.org/ipec
- Sector Activities Department website > [Sector: Education](#), including:
 - [An HIV and AIDS Workplace Policy for the Education Sector in Southern Africa](#), ILO and United Nations Education, Scientific Organization and Cultural Organization, 2006
 - [An HIV/AIDS Workplace Policy for the Education Sector in the Caribbean](#), ILO and United Nations Education, Scientific Organization and Cultural Organization, 2006

Gender and statistics

- ILO, [Conditions of work and employment laws](#)
- ILO, [Key Indicators of the Labour Market \(KILM\)](#)
- ILO, [LABORSTA](#): ILO's premier database on all aspects of labour statistics
- [Women in labour markets: Measuring progress and identifying challenges; ILO, 2010](#)
- [Global employment trends for women, ILO, 2009](#)
- [Global wage Report 2008/09 and 2009 Update, ILO](#)

ILO Library: [Resources on gender](#)