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Information and Communication Technology in Africa

Women and ICT in Zambia

Background

There is a huge interest in African and developing countries on how to use ICT to increase their economic development. Zambia's Information and Communication Technologies (ICT) are limited and not well-developed. This area has great potential for development and investment, especially of foreigners. Currently, mobile networks are the most usual form of communication with over 450,000 subscribers compared to 90,000 users of land lines. The use of these mobile technologies is restricted to the most urban areas with limited access in more rural areas. There have been plenty of initiatives and forums since the mid 1990s that discuss mainly ICT such as the United Nations' Africa Information Society Initiative[1]. As in many countries there are initiatives in which women become entrepreneurs providing these services to their particular village. This proposal aims at creating an educational framework in which women can become key players in the development of ICT by having them being part of a training program to promote ICT as a career path.

Uses

- Increase opportunities for women in the labor force
- Develop partnerships with the private sector to increase ICT literacy
- It helps empower women and give them the opportunity to learn a skill they can later use to contribute to society
- Allows for the beginning of a grassroots movement in a certain community where women with specialized skills teach other women about them.
- It will integrate ICT education in the mainstream system
- Allows for entrepreneurship development
- Helps fight HIV/AIDS through diffusion of information through these technologies.
- Helps increase overall literacy
- Eventually help reduce levels of poverty

[1] A Country OCT Survey: Zambia. Sida.

Implementation Plan

There are a couple of isolated centers in rural areas that act as centers of training for computer use. These centers are mostly financed by European donors. The Zambian government should create a special fund or allocate a substantial amount of its budget for ICT training and education. There are different paths that ICT education could be promoted in different levels. One could be a program that works with literate women that lack specific skills. ICT training programs could promote the new technologies as a career path. For example, technical schools could be opened in different areas. These schools could be free because of government funding or outside donations or could charge a small fee. In these schools, facilitators who had been intensely trained in the basic computer applications, teach women basic computer skills such as hardware, software and basic maintenance. Other necessary skills such as communication, leadership, managerial skills and writing should also be emphasized. The teachers or facilitators would have to report the monthly improvement of the students as well as a report of the center's finances. It is also important to have an assessment or study of the overall acceptance rate of that program in any particular community. The "alumni" from this training program could go on to work as phone operators. If Zambia expands its optic fiber connection it will become a very attractive destination for outsourcing of American and European companies and these skilled women could support the booming industry.

Since the 1960s different private corporations in Zambia have been the one to train people in IT related fields. The government should therefore show interest in developing partnerships with private sectors to increase ICT literacy. Incentives such as tax cuts could be implemented so that the company has a reason to offer the education. Another program that could be implemented is debt-for-education swap. Companies could set up educational programs especially aimed at ICT and developing highly specialized individuals and have their debts reduced if the program proves to be comprehensive and successful.

Another path that could be taken is integrating specialized school in science and technology to the mainstream education system. This would create both men and women that know what technology and computers are from a very early age and could go on to study such things such as Computer Science. People with this kind of knowledge are lacking in Zambia because they usually leave the country looking for better opportunities elsewhere. In order to guarantee the permanence of those people in Zambia, the government needs to create a reliable network and attract foreign investors in order to set up a strong ICT sector/industry. These kinds of mainstream educational programs are usually NGO based and, for example, SchoolNet has had a great influence in various African countries.

All of these possible educational paths lead to emergence of entrepreneurship development amongst the trained women. After these women are trained they become great candidates for startup projects that can be facilitated by providing them with affordable access to ICT tools. This then is executed using good management practices that allows for the growth of such organizations and the interaction with other similar groups. This eventually creates a grass-roots movement were the community slowly starts to get interested and groups following the original structure ("formula") emerge.

Set-Backs

There are many obstacles that have prevented many previous initiatives from succeeding. The main one is the access to a simple power source for the computers. Besides that, limited internet connection, because of lack of phone lines and fiber optic, prevent the creation of a comprehensive network in rural or semi-urban areas. One of the most difficult tasks to do after computers are set up is giving them the proper maintenance. The majority of the persons is trained in basic computer skills and cannot deal with major breakdowns. Also, everything from cameras, to scanners, to printers need frequent maintenance in the form of batteries and toner. This complicates the logistics after the initial setup.

After the initial training to the teachers or facilitators in the centers there must be an organized scheme that provides for further and continuous training about the emergence of new programs, techniques or gadgets. In Zambia, the acquisition of computers is expensive due to the high tax (15%) on such electronics. The government needs to make an effort to reduce this fraction in order to improve the access its people have to such technologies. By doing so, the government will be taking the first step towards making Zambia a communication-era society.

The truth is that the majority of the people in Zambia live in poverty and computers are not even something they dream about. This has always been one of the main challenges of ICT promotion. The persons needed for ICT jobs need to be completely literate and must have the interest to learn a completely new task. Therefore, the government's prime challenge will be combating Zambia's illiteracy rate and creating educated citizens.

The government needs to start showing interest in the development of ICT by investing in equipment and furnishing at least some schools with comprehensive learning material and trained teachers. In the long run this will help Zambia direct its path towards becoming communication technologies enabled country.

Fall Back Options

There hardly exists any fall back options since many of the ideas proposed are new, have only succeeded in small scale initiatives or have completely failed. Nevertheless, there are ways of scaling down some of the recommendations given here in order to fit a certain budget or criteria. The programs could be limited to a certain area, one that is considered more promising.

One of the main points is that the government needs to allocate more funding towards the development of educational frameworks, especially those that specialize in ICT and women. Several policies from different government ministries should also be revised in order to facilitate the attraction of foreign investors. Such policies that should be revised are those having to do with licensing fees, the limiting of foreign shareholders and capital venturing. One of the biggest physical boundaries to the expansion of communication technologies is the lack of optic fiber. The solution has long been said to be to allow other companies to compete with Zamtel, which holds a monopoly position among Internet Service Providers. If private companies are allowed in the market they

will surely contribute to the expansion of fiber optics, and this in turn will benefit the private investors and the citizens by providing them with reliable and probably less expensive internet connection.

Summary

Zambia started out in the 1960s as one of Africa's pioneers in the use of ICT, but quickly fell behind. Funding allocation for ICT educational is essential in order for all of the recommendations. The government should allow private enterprises to enter the ICT market in order to help provide the excess demand for internet access and other types of communication technologies including mobile phones. The availability of these information technologies will reduce the amount of time needed for many transactions and will increase the possibilities for many small businesses that can thrive and contribute to Zambian society.

There are several educational efforts underway, the majority by NGOs and private organizations. The empowerment of women through technology is important because it allows them to contribute to society and it also acts as these women's income source, since in Zambia many women are head of the household. Programs with women in rural communities will surely create a grass-roots (snowball) effect, and its success will be widespread without the need of publicity. Eventually, this leads to a strong entrepreneurial sector that can attract foreign investments and contribute to Zambia's economic empowerment. It is also important to create a technical support program in order to maintain the computers after they have been initially installed in a center. Further training of the program facilitators will also be key to the perpetuity of such initiatives. Overall, Zambia shows great promise for the expansion of Information and Communication Technologies.

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