ICT FOR SUPPORTING PRODUCTIVE FAMILIES IN RURAL AREA IN SUDAN

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Abstract. Still many rural areas in the Sudan do not benefit from their products in spite of the mass production in some days of the year. This is due to the lack of knowledge required and tools for processing of primary products to convert them into secondary products, particularly in high production season, therefore, many of these products damage or deterioration of its monetary value. Here comes the importance of information and communications technologies (ICT) as a means of titling local people the necessary knowledge to make the most of their products [1][2]. Using of ICT can help in the optimal exploitation of rural products through good and qualitative training for local people [3][4]. This paper presents a proposal for a computing platform that consist of teaching and training that includes the use of computer techniques such as e-learning for the design of educational and training program, flexible solar panels use as a source of energy, in addition, possess the local people the knowledge, tools and plants used in the production of primary and secondary products [5][6]. The first phase will be implemented in the rural area in Blue Nile state, Sudan, targeting the productive families to be trained in dealing with farm products to increase their income. In addition it will contain educational modules for literacy and numeracy.

Background

Africa is rich in diverse resources; despite this fact, most African countries under develop which suffers from lack of energy, clean water and illiteracy [7]. This contradiction reflects on all human life activities such as education, health, agriculture, industrial development, economics, etc. These create development problems which has made a downward spiral at every level: national, regional, and the continent. Africa must have a radical change from its current development strategies in order to achieve a structural transformation and maximum utilization of its resources.

According to the Energy in Africa 1999 report published by the Energy Information Administration [7], Africa has the fastest population growth in the world. Population in Africa has more than doubled since 1970 and is growing around 2.7 % per year with highly uneven distribution. As result of population growth and resources that not been well utilized – the majority of African population lives in poverty, especially in rural areas. Moreover, the poor mostly do not realize about possibilities around in their struggle against poverty. It is due to many perspectives that include academic education. Education is the milestone to fight against poverty. ICT for Technical vocational education and training (TVET) together can form a powerful educational platform [8][9]. The platform will assist the local people in rural areas in Sudan, to get the necessary education and training in order to build their capacity.

Sudan one of the largest countries in Africa, which it consists of 18 states. Roseires city is one of the six localities of Blue Nile state, which is located on the east bank and Damazin city on the other bank of the Blue Nile River, and they are linked by the Roseires' Dam, which is represents most major sources of electricity for all regions of Sudan. Roseires is home for a large number of different tribes. Their main professions are grazing and agriculture in the extended area to the international border with Ethiopia.

This area has been chosen because the proportion of the large number of displaced and refugees people who affected by war, instability and suffering from multiple development's problems, especially the women's development, at a time when communities seek to achieve comprehensive development through human resources recruitment, training and development capabilities [10]. Therefore, supporting of productive families especially the process of integration women in development trend and challenging for comprehensive and successful development, since this process requires the provision of suitable jobs that require raising the efficiency of productivity women by raising the educational and training capabilities for them, which qualifies them to participate effectively in their society.

The support and empowerment of women and increase their competitiveness in the labor market is very helpful in advancing development [11]. Here comes the role of the use of information and communications technology for education and training where it can overcome some of the problems concerning the rural areas in Sudan, may be mentioned, for example, the scarcity of availability of qualified human resources.

Research Methodology

We proposed a computing platform that uses ICT for TVET project in Sudan. It will be implemented on the ground of ICT-based engagement with local community, the results and best practice sharing of which may provide valuable insights on the process of ICT-based for TVET initiatives design, legalization, funding and implementation in rural areas in Sudan. The basic steps to achieve the Sudan-based project's objectives are presented below:

1. Identification of reliable productive families as partners.

2. Precise analysis of end-user needs regarding access to ICTs and funds.

3. Choice of suitable technologies in terms of performance, robustness and flexibility for knowledge transfer and project implementation management.

4. On-site developments:

– identification of a local technical partner;

– organization of information exchange/sharing sessions for the project team members and for local staff;

– design of micro-finance monitoring mechanism.

Research Objectives

1. Offers some background information about current poverty situation in rural areas in Sudan.

2. Encourage all stakeholders in poverty eradication to be aware of their roles on poverty elimination through the use of ICT awareness phase.

3. Provides a case study of an ICT-empowered poverty-alleviation project in Sudan, as an example to demonstrate of how using modern ICT technologies (e. g. mobile, tablet Internet connectivity, and e-Learning) can change people's life, assist in poverty alleviation by teaching them skills to work and live better.

4. Promote literacy and numeracy among local people in rural areas.

Expected Outcomes

We expect by the end is to develop a computing platform using ICT for TVET that can be used to empowerment of local people in rural areas with knowledge and skills needed for development and poverty alleviation. In addition, promote literacy and numeracy among local people in rural areas.

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