

The role of community telecentres in helping citizens help themselves; The Egyptian Experience

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Abstract

The United Nations Development Programme (UNDP) in Egypt started its their first Community pilot telecentre in 1998. Through this pilot, a strategic framework for integrating ICT in sustainable human development has been established. The integration of different segments of society within this framework has also been attained. Since then, UNDP Egypt started several initiatives within the auspices of the Ministry of Communications and Information Technology (MCIT) to strengthen community telecentres and help them achieve social and financial sustainability. These initiatives are namely: (i) The Mobile ICT Unit (ii) The Community Development Portal, (iii) It for Illiteracy Eradication, (iv) Telecentres for individuals with special needs and, (v) ICT for Micro, Small and Medium Enterprise. This bundle of tools is highly interlinked. In addition, combined with an aggressive programme from MCIT to establish IT-Clubs (e.g. community centres and access points currently with over 1400 centres established), these initiatives provide several channels by which to distribute information nationwide. They also highlight the importance of making appropriate information and content available through a web-based information portal, literacy promotion efforts, and the creation of electronic libraries. Although some components of these initiatives have been implemented in other countries as well, this strategy is probably unique to Egypt given its forward-looking vision and its country-wide scale.

1. Introduction

In March 1998 the “Technology Access Community Centres (TACC)” project was launched in the Governorate of Sharkeya marking the first telecentre in Egypt [Hashem, 1999, Ryniak, 2002]. The telecentre was established by the United Nations Development Programme UNDP in partnership with the Egyptian Cabinet Information Decision Support, the Governorate of

Sharkeya, the Investors Association and the Sharkeya Chamber of Commerce. The objectives of the TACC was focused on providing the community with access to information technology and the skills needed for effective use of this technology to encourage sustainable development.

The Governorate of Sharkeya was selected due to its high unemployment rate and illiteracy rate, highlighting the need for a job creation and educational development catalyst. The project established three TACCs in Zagazig, 10th of Ramadan City and the Egyptian Chamber of Commerce building. The Governorate of Sharkeya is the 2nd most productive nationwide in the agricultural sector, in addition to the presence of a number of different industries which a significant concentration located in the 10th of Ramadan City. The health, education, and communication sectors of Sharkeya represent areas seen to be in need of the potential benefits of the introduction of the TACC project.

The TACC produced numerous achievements through providing the local community with access to information technology. This was achieved through combining the establishment of an ICT infrastructure and the necessary human resources, offering affordable services, and encouraging IT participation through community outreach. It was successful in providing the local community in Sharkeya, from a variety of population segments, with the skills needed to use information technology by offering training courses, actively assisting users, designing web pages and providing information in the local Arabic language. These achievements were supported by the human resources, infrastructure and outreach abilities that existed at the TACC centres. There is evidence that the TACC has beneficially impacted the local community by causing increases in resident profits and job creation, supporting sustainable human development, and promoting capacity building[Ryniak, 2002].

- **Increases in Resident Profits and Job Creation:** have been found to occur in some cases within the local community. In other cases, through observed job changes, increase in resident profits and job creation can be deferred as having occurred, and they are currently propagating. These increases are evident in the agricultural, education, business and Civil Society Organizations (CSOs) sectors. Farmers outputs have risen, teachers have advanced their careers and received promotions, business professionals have found

better jobs, Internet Cafés have opened and a CSO has begun preparing to hire, train and fund ICT professionals.

- **Improvements in Sustainable Human Development:** has positively been impacted by the presence of the TACCs through the benefits the centres provided to five thematic sectors of society. These sectors are: (i) agriculture, (ii) education, (iii) business, (iv) CSOs and (v) the child sector. In the agricultural sector farmers have increased the food resources available to the community, their participation in the local economy and the potential for improvements in the productivity of other farmers. The education sector has seen improvements in the quality of education available to the community. Teachers that have used the TACC are able to work more efficiently, and have transferred the knowledge they have acquired at the TACC to their peers and students, increasing the future prospects of both. The quality of education among community members has been further improved by the direct use of the TACC by researchers and students for the purpose of searching for information, developing educational web sites and consulting professionals. In the business sector, more employment opportunities have been generated for the community by upward movements of TACC trainees and Internet Café start-ups. Efficiency in the operations of businesses has been improved through the furthering of employee education and through increases in the direct application of computers by small and medium enterprises (SMEs). The quality and variety of services offered by Sharkeya's business sector was also improved through direct product base modifications and the introduction of a competitive Internet Café sector. The benefits the TACC brought to the CSO sector in Sharkeya have contributed to improvements in sustainable human development by expanding the services offered by the CSO sector. New employment opportunities will be generated as the new computer servicing needs of the CSO sector advance and as community members are trained, and the new services offered by the sector will improve the ICT education of community members and expand business opportunities. Sustainable human development was also supported through the emphasis the TACC placed on child education. Children that used the TACC were able to improve their future potential by beginning an ICT education, they worked to educate other children about the skills they acquired and their benefits and they bettered their view of themselves and the community.

- **Benefits of Capacity Building:** have been witnessed in the five sectors that the TACC focused on. TACC users have become more active in their involvement in their community, and in improving the quality of their lives. Numerous instances of community members serving as teachers and educators have occurred. The TACC has also expanded the view of the world among its users, improved citizens understanding of organizations concerned with development and solidified the acceptance and use of ICT in the community.

2. Community Outreach

Community outreach was conducted by the United Nations Volunteers staff (UNV) to support the TACC objectives. The UNV focused their outreach on five thematic societal sectors evident in the Governorate, namely (i) agriculture, (ii) education, (iii) small SMEs. (iv) CSOs and (v) health. In the agriculture sector the UNV sought to overcome the challenges of the high illiteracy rate among farmers, the highly traditionalized nature of agricultural practices in Sharkeya and reaching the remote villages the farmers lived in by establishing links with the agricultural ministry and the agricultural research community including its professors and employees. These organizations and their members are in frequent contact with farmers from the village Bilbies where they were able to further promote the use of ICT within the agriculture sector.

In the Education sector the UNV carried out outreach activity with schools and orphanages for the purpose of sensitizing teachers and students to the uses of ICT in the field of education. Web pages were developed that provided a database of educational resources available to students in the Sharkeya Governorate and a guide to village level and e-governance information. Additionally, an emphasis was placed on promoting the spread of ICT use in the field of education by encouraging teachers to communicate among themselves on ICT uses in the education field.

Outreach in the SME sector was conducted in the 10th of Ramadan City. UNDP TACC personnel coordinated with the Association for Developing Small and Medium-Scale Industries in the New Cities (ASMINC) to promote and establish the usage of websites among SMEs for the purpose of increasing product awareness and sales and improving the transfer of product

related information. Additionally, the outreach conducted also encouraged the participation of SME personnel in TACC ICT training courses by sensitizing the enterprises to the benefits of ICT use.

The UNV outreach to the CSO sector focused on improving the efficiency of local CSOs operations and of the promotion of their development functions through the use of ICT. In Zagazig the UNV supported the five main CSOs: Rotary Club, Women in the Shadow, Boys and Girls Orphanage, Egyptian Dream and Fat'het Kheir. Support was provided through training courses, demonstrative models and the establishment of web pages. The UNV also presented the benefits of the ICT to a local student body, "Engineers of the Future".

The UNV conducted outreach in the health sector by supporting the dissemination of health care related information via the Internet and by documenting health related information in Arabic. Community outreach was carried out in three villages: El Saadyne, Senhawwa, and El-Ghaar. In these villages women were educated on health issues using a laptop computer

3. TACC Impact

The achievements of the TACC, since its implementation in March of 1998, have resulted in an impact across varying sectors of the local society[Ryniak, 2002]. The individuals that have been exposed to and utilized, the services of the TACC have been effectively applying the knowledge they have acquired for the purpose of bettering themselves and the community.

Within the agricultural sector farmers that used the TACC have increased their productivity, communicated more easily and frequently with their families and with local community members and they increased their level of empowerment. As a result of their usage of the TACC, these farmers invested in fertilizers and better production methods, actively spread information they acquired at the TACC, contacted members of their families outside Sharkeya via the Internet, travelled outside of the region and viewed world and national news.

The TACC had positive impacts in the education sector through the efforts of teachers, students and researchers. Teachers that used the TACC benefited by increasing their productivity while

they impacted the community by educating others on ICT usage, functioning as a medium for the spread of information, and using ICT to more effectively teach basic subjects.

Students and researchers were also shown to benefit from the TACC. The TACC functioned as an aid for communication and research and a place where students acquired skills relevant to their university studies. Students and researchers consulted with experts in their field, searched for information related to their interests and augmented their studies in preparation for careers.

The TACC's impact on the business sector was evident in the improvements in the operations of business professionals and SMEs and the founding of private Internet Cafés. As a result of the TACC business professionals increased their marketability through the obtainment of better jobs and/or increased responsibilities in their current positions and they increased their efficiency by communicating with other professionals and utilizing computers for business operations. SMEs that used the TACC saw improvements in the quality and variety of their products and they saw increases in the national and international exposure of their company and products. SMEs were able to expand, vary and improve their product base through the communication with experts and the exposure to competitors' information that the TACC enabled. The TACC supported the exposure of SMEs and their products through webpage design training and the direct design of SME web sites by TACC personnel. The TACC was also responsible for adding a new dimension to the business sector by generating an Internet Café sub-sector consisting of 16 private Internet Café start-ups in the Governorate. The addition of this new dimension has resulted in increases in job opportunities, it has functioned as a multiplier of TACC related benefits and it has increased the ICT services offered to the community.

The CSO sector of Sharkeya also incurred benefits as a result of the TACC. The ASMINC, for example, promoted the use of the TACC to its SME members for the purpose of training its employees, incorporating the use of computers in their operations and promoting their companies and their companies' products. After seeing the benefits of ICT use at the TACC, ASMINC began expanding its services by making preparations to train community business professionals on ICT and Internet Café operations and it plans to make loans available for these services in the near future.

Within the youth sector the TACC furthered the education of children and supported empowerment and capacity building among them. Children that used the TACC learned to develop web pages on their own and use computers as a method of expression, and they were exposed to a broader view of society and world events.

4. Telecentre support Programmes

It is apparent through the TACC's achievements that they has been successful in training community members on ICT, creating a wealth of development related information and encouraging ICT use for development purposes. The manner in which community members have applied their new found skills, utilized the information produced at the TACC and integrated ICT with their personnel contributions to development has led to quality of life improvements and the furthering of sustainable human development in the Governorate of Sharkeya. The success of the TACC has encouraged MCIT to establish a nationwide telecentre programme, called IT-clubs [Hashem 2000, Wanas 2004]. Currently there are over 1400 telecentres that cover most geographical locations in Egypt. In order to support these centres, and based on the experiences gained from the TACC, a coordinated set of programmes has been created. These programmes included the (i) Mobile ICT unit (MICTU), (ii) The Community Development Portal (CDP), (iii) IT for illiteracy eradication CDROM, (iv)Telecentres for individuals with special needs, and (v) ICT for Micro, Small and Medium Enterprise (ICT4M/SMEs).

- **The Mobile ICT Unit (MICTU):** Community outreach has been found to be crucial to any community centre. In order to achieve this goal, alleviate the problem of computer scarcity, and to expose communities to ICT as a tool for development the MICTU programme was started in 2004. The solution involved the use of busses specially equipped with a fully functional media lab. These units service specific geographical areas and stop at schools and communities for periods as long as two weeks. The units aim to expose rural and remote communities to ICTs for the purpose of enhancing particularly human development and encourage the communities to benefit from local telecentres. The MICTUs are vehicles equipped with computers that travel to rural areas

offering short and focused courses in computer literacy. They also provide internet access to these communities. These units have the potential to effectively improve the extension of computer-based training by servicing communities in Egypt for periods as long as two weeks. The units also periodically revisit each area to carry out updated training sessions. During these visits the MICTUs offer computer tuitions at the basic and advanced levels such as (i) Basic computer skills and the use of productivity application including word processing, spreadsheets and graphics, (ii) Internet skills training, mainly browsing, searching and email, (iii) Support of existing school curricula, via a combination of material provided in the MICTU and online, and (iv) Advanced applications like graphics and web design. During each visit the unit provides information about the nearest telecentres to these communities.

- **The Community Development Portal¹**: In order to promote sustainable human development and the integration of rural and urban communities into the knowledge society and information generation capacities content, especially in local languages, is essential. Through the experience of the TACC the lack of Arabic content and its scattered presence has been noticed. To overcome this drawback, the Community Development Portal (CDP) was established. The CDP acts as a common entry point to information related to issues important to the citizen and with the potential to assist him or her in the pursuit and development of additional socio-economic opportunities, in the local Arabic language. The Portal lies at the core of the existing telecentres in Egypt and constitute the content/information backbone for a number of projects. The type of information presented, and the links to socio-economic, rural and development organizations will be mainly related to several sample areas. These range from local information, to news, employment opportunities, health and education. The CDP is a repository of locally pertinent and valuable information that will centre on assisting in the amelioration of viewers' standard of living. The CDP addresses community needs by providing communities with information related to business, small industry, health, agriculture and farming, educational and vocational training, in addition to general information covering a broad spectrum of socially and economically constructive issues. The portal is integrated with an outreach mechanism that is coordinated closely with the

¹ <http://www.kenanaonline.com>

project's partners that include local telecentres and NGOs. To foster substantial and meaningful NGO and telecentres participation regular outreach meetings are organized for experience sharing and to reinforce extensive local participation, which is a vital element of the project as a whole. The CDP allows users to build a thriving digital community, which seeks to provide valuable economic and social services to communities and individuals at large. To date CDP has focused its activities on five core sections relevant to participants. These are agriculture, small and micro enterprises, family health, personal skills and career advice, and general culture and information. Participating telecentres and NGOs play a crucial role in the CDP activities by responding to user interests and assisting in the accumulation of applicable content to the portal, thusly helping ensure the CDP is responsive to its users, which, in turn, strengthens the foundations of its collaborative efforts. Much of the CDP content was not previously available to its users, making this initiative invaluable in bridging the gap between rural and urban communities.

- **IT for Illiteracy Eradication (CD-ROM tutorial for basic literacy):** It has been observed that the use of ICT encouraged illiterate people to become literate in the TACC. In order to utilize this potential a set of CD-ROM tutorial software designed to teach reading and writing as well as math literacy has been developed. The distribution of the software is managed through the telecentres, schools, and NGOs. It also aims to help achieve "primary education for all" in Egypt, hence realizing a key MDG. It is worth noting that illiteracy is a major problem in Egypt, and there is a great need for huge national efforts towards rectifying this situation. This CD-ROM avails educational content for illiterates on a new medium, and on the internet, to fight illiteracy in Egypt, especially among the youth. Although the CD targets all illiterates alike, there is an emphasis on women.
- **Telecentres for individuals with special needs:** The purpose of these telecentres is to illustrate the positive role ICT has in assisting the population of visually impaired as well as deaf & mute to become productive individuals within their communities, it also allows them to start their own businesses and continue their education. Three telecentres have been piloted to be equipped to address the needs of those individuals with special needs through a partnership between the UNDP Egypt, MCIT, the UNDP regional programme

ICT for Development in the Arab Region (ICTDAR), Resala (an NGO), and Vodaphone Foundation. The purpose of this pilot is to illustrate the positive role ICT has in assisting the population of individuals with special needs and assist in better integrating them within the community.

- **ICTs for Micro, Small & Medium Enterprises (ICT4M/SME):** The success of the TACC in attracting more use of ICT within M/SME has encouraged the UNDP to pursue expanding its scope across Egypt. The UNDP, MCIT, International Development Research Centre and (IDRC) have partnered to create a collective set of tools and mechanisms for supporting M/SMEs. The overall objective of the programme is to build capacity and provide tools within Egyptian M/SMEs to leverage ICTs in order to generate employment and to create efficient, better connected and more competitive enterprises. The telecentres are involved within this programme not only in providing access, but also in identifying new socio-economic opportunities that can be leveraged through ICT, and to foster the understanding of the benefits of ICTs by M/SMEs while promoting their usage. The programme, and through the telecentres, also assists M/SMEs in connecting to new markets; create an awareness programme on the benefits of ICTs for M/SMEs development

These programmes are to be augmented by a networking and integration mechanism, IT Mega Club Portal², established in partnership between MCIT and Microsoft. The portal allows for increased cross fertilization between the different telecentres and resources sharing. It also includes resources and tools that are useful for telecentre activities. Another initiative adopted by the UNDP, in partnership between MCIT and Microsoft is the capacity building programme for telecentres. This programme covers advanced IT and management skills in addition to ICT for development concepts. The program has been piloted in more than 100 different telecentres to date, and is envisioned to expand. Both programmes aim to integrate the tools and activities of telecentres. It has been noted that the needs of telecentres intersect in many ways, not only in Egypt but also regionally [Wanas, 2006]. A regional programme is also under investigation, by telecentre.org, to aggregate efforts and utilize existing tools in the MENA region.

² <http://www.ict-megaclub.com.eg/>

5. Conclusions

Throughout the experience of the TACC it has been observed that ICT can be an effective tool in sustainable development within communities. The TACC was successful in placing a framework for the local community involvement with ICT. The TACC's involvement with the different sectors of society increased its impact, and addressed the possibilities for improvement and expanded its services. It was ascertained that there is a potential for further progress in meeting the objective of sustainable human development if the TACC were to coordinate with tools and supporting programmes. A special highlight on inclusion, content, SMEs and individuals with special needs have been observed from investigating this experience. This has led to the launch of several initiatives to support telecentres. The initiatives, unique to Egypt, have been aligned to integrate within a unified vision. The integration of telecentres, both nationally and regionally, is also being pursued. Collectively these initiatives aim to maximize the utilization of telecentres within communities to aid the involvement of communities, not only for the sake of improve the telecentres, but also increase their impact. Through this bundle of programmes, individuals can aspire to improve their livelihoods by integration within the knowledge society and increase their awareness of their own needs. The impact of these programmes is yet to be explored as they attain a level of maturity.

References

- [Hashem, 1999] Sherif Hashem (1999), *Technology Access Community Centers in Egypt: A Mission for Community Empowerment*, Proceedings of the INET'99, San Jose, CA, USA Available online at http://www.isoc.org/inet99/proceedings/3c/3c_1.htm.
- [Ryniak, 2002] Mark Ryniak and Magda Sabet (2002) Impact Assessment: United Nations Development Programme Technology Access Community Center project in Egypt, Technical Report, UNDP, Egypt, Available online at <http://www.undp.org.eg/TACC%20Impact%20Assessment.pdf>
- [Hashem, 2000] Sherif Hashem (2000), *Community Telecenters in Egypt*, Available online at <http://ip.cals.cornell.edu/commdev/documents/jdc-hashem.doc>.
- [Wanas, 2004] Nayer Wanas, (2004), *IT-Clubs, Egypt's Tele-centre Experience*, ITU Telecom Africa (Telecom Africa 2004), May 3-8, Cairo, Egypt, Available online at <http://www.k4dev.com/images/stories/publications/it%20clubs%20assessment.pdf>.
- [Wanas, 2006] Nayer Wanas (2006), *Telecentres in the Middle East and North Africa, A scoping study*, Technical Report, IDRC, Canada.