Employing Participatory Action Research to Augment Software Development for Rural Communities

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The paper proposes a software development methodology which also employs the participatory action research (PAR) method given that PAR has been successfully employed in projects in rural communities. Arguments for this approach are provided, discussed in the context of software development for rural communities.

Software development methodology, participatory action research, rural applications

1. TELECENTRES IN RURAL AREAS

Telecentres are established to furnish the rural communities with information and communication services, but many fail as the projects are not need-driven. The United Nations Economic and Social Commission for the Asia Pacific (UNESCAP) in a study of 11,160 telecentres in 16 countries in Asia Pacific region showed that 54% of the telecentres provided access to ICTs (UNESCAP, 2008) (refer Figure 1). In addition, telecentres were used for many areas such as ICT training, providing access to online learning, and e-Health services. It stands to reason many software applications are being created for specific community use as well as to allow the community to access information as mentioned above.

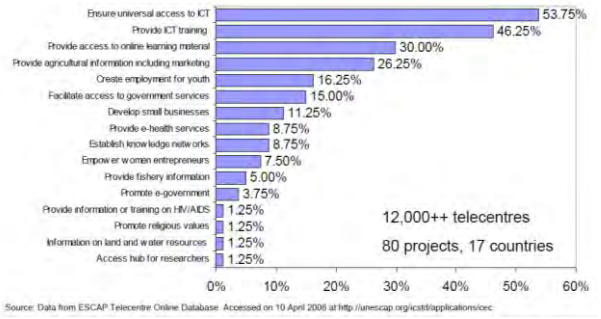

***Figure 1**: Distribution of telecentre projects by area of intervention, Year 2008.*

Also, these applications may also be in the local languages as Roman & Colle (2002) also argued that a telecentre may also lose relevance if information provided is in unfamiliar or inappropriate languages or dialects; especially when most of the information on available online is in English. Thus, of importance, is the need to introduce appropriate ICTs, that is relevant to the community; building good quality and relevant softwares by addressing their need in order to enhance the work of the telecentres in the communities.

2. GOOD QUALITY SOFTWARE

In software development, getting sufficient and correct requirements from the users is most important, because these requirements will determine the functionality of the system (Robertson & Robertson, 1999). There are many methodologies are widely being used for software development process however those are almost invariantly tailored for urban users and their urban settings (Yeo et al., 2010) as the urban context and cultural elements of urban developers and users would have been "incorporated" in the design. It is argued that urban users, target audience of the software, would have a better education, and higher literacy than their rural counterparts. Also, work processes in existing organisations are likely to exist; software would need to be started from scratch with rural communities, as there may be little work done in that area. The challenge of building relevant software for rural communities exists within the