

## Public ICT Hubs Success Factors

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**Abstract.** Public ICT hubs were proposed to ensure that community is ICT literate and able to contribute to the productivity of the country. Selangor state government sponsors public ICT hubs since 1999 in order to address the digital divide issues especially in the rural area. Designed to determine factors that contribute to the success of Public ICT hubs provided by the Selangor State Government; ICT hubs were analyzed through questionnaires, interviews and observation. Success factors for active ICT hubs were produced (31 success factors) and suggested as benchmark of successful Public ICT hubs in Malaysia.

**Keywords:** Public ICT hub, success factors, ICT State Research, Government Public ICT hub, Technical-Operation-Environment

### 1. Introduction

Information and Communication Technology (ICT) usage has become important in today's society. The role of ICT in archiving is very important [1]. Home users, organizations and communities are now relying on the ICT for various reasons. Reference [2] in their paper hooked up ICT and e-government. Effective usage of ICT hubs especially at the rural area had helped to solve the shortage of ICT facilities in schools [3]. Reference [4] studied on how ICT hubs can dissolve unnecessary expenses to community. This refers to electronic and online transactions widely available for the society. Reference [5] suggested government to drive ICT initiatives. Governments have to acknowledge the importance of ICTs [6]. Malaysian government work hard in optimizing the usage towards the transformation of Malaysian into a knowledge society [7]. The government had put much effort in enhancing the ICT literacy and usage among the societies [8]. ICT hubs are one of project initiated by Selangor state government to simulate ICT literacy. As in other project, this ICT hubs project has their own success and sustainability factors that are important for their stakeholders. Reference [9] analyzed the influencing issues on the ICT for public project success.

Reference [10] from Tshwane University of Technology, in South Africa, listed five best practices for successful ICT hubs which include sustainability; ownership; relationships; services; and financial. In another research done by the University of Ghana and Ghana Center of e-Governance, they concluded that it is important to provide the e-government application as a service to the public [11]. Reference [12] studied on the adopting technology or application, had found out there are three factors should involved that are

technological, organizational and environmental. The Dwesa Case Study presented 19 critical success factors [13] also mapped to Technical-Operation-Environment (TOE) framework. Reference [14] reported their outcome of 27 ICT hubs influencing factors mapped to TOE from their analysis of operators survey. Reference [15] suggested ICT implementation focus on mobilization of financial management. The purpose of the study was to determine factors that influence the success and of ICT hubs sponsored by Selangor State Government, Malaysia.

## 2. Methodology

Semi-structured interviews, open-ended questionnaires, observations and literature studies are techniques employed in data collection. Primary data for analysis were from the survey and interview. Interviews and observation were conducted to support data collected through survey. Questions were designed from suggestion of study done while preparing literature review. Questionnaires were pre-tested on two ICT hubs and minor amendments were made. Reliability test showed relevancy of the questions used. Table I report the cronbach alpha value of the reliability test.

Table 1. Reliability test result

Instrument	Overall $\alpha$	Construct and its respective $\alpha$	Item	$\alpha$ if item is deleted
For operator	0.730	0.73	Management of ICT hubs (28 Items)	Not Applicable
For Users	0.934	0.95	ICT experience and knowledge (38 items)	Not Applicable
		0.70	ICT hubs experience (46 items)	Not Applicable

Sample size of 26 from 39 ICT hubs was selected. Respondents were classified into two groups and given two different sets of questionnaire. This was planned to get two views of data from Public ICT hubs that have range of 7 to 10 personal computers. The first group of respondents is the people responsible to run the ICT hubs known as the operator (26 respondents); and the other group is the users (31 respondents). Data from public ICT hubs was collected and compared using thematic analysis to come out with ICT hubs success factors.

## 3. Results and discussion

Analysis for successful public ICT hubs was done on the data collected from operators', users' survey questions and supported by observation and interview. Operators' analysis showed they have 27 advantages mapped to the technical, operation and environment as stated in row operators of Table II. The successful public ICT hubs also share same user characteristics; 1. Average users for one ICT hub are 20 users and more than 80% (16 users) of the users are regular user, 2. 71% (22 users) located nearby the ICT hub, 3. Majority of users; 87.1% (37 users) have more than one year experience using ICT or computer application software and 4. 64.5% (20 users) not having other computer at home.

Table 2. Success factors of public ict hub

OPERATORS	<b>TECHNICAL</b> 1. Appropriate broadband of internet access 2. Up to date ICT infrastructure 3. Extra ICT services provided with minimum charge eg: scanning service, printing service 4. Reliable internet access facility 5. Technically Literate User
	<b>ORGANIZATIONAL</b> 1. Scheduled financial support 2. Proper organizational structure 3. Standard operating procedures 4. Continous monitoring and control 5. Strategic location at existing public facilities for each ICT services centre 6. Full time qualified operator 7. Suggest range of affordable membership fees

	8. Systematic document on facilities and operations 9. Systematic work handover due to change in management 10. Conducive ICT services centre 11. Continuous and scheduled maintenance of ICT devices 12. Provide computer classes with competent facilitator 13. Value added services to the user 14. Encouraged local ownership 15. Facilitating local content development 16. Establishment of Community Of Practice
	ENVIRONMENT 1. Systematic handover due to political change in management. 2. Well defined project ownership regardless of political changes in management. 3. Technology support infrastructure 4. Comply with government rules and regulations 5. Ethical usage by the user 6. Socializing platform for the community
USERS	TECHNICAL Experienced using ICT
	ORGANIZATIONAL Near location
	ENVIRONMENT Regular user Not having computer at home

#### 4. Conclusions

The study contributes to the discovery of 31 influencing factors (27 related to operators and 4 related to users) of the ICT hub success, recommended for successful implementation of ICT hubs. These factors were categorized into three elements: technical, organizational and environmental and then further mapped to Technical-Operation-Environment framework. This result only identified the influencing factors. For future work, these influencing factors can be further mapped into sustainability factors as in every ICT hubs project, sustainability is key element that contributes to their successful implementation.

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