Indonesia

Overview

Indonesia has low needs and readiness, but can probably achieve rapid improvement in the state of its public access to ICT because there is strong political will in the country for creating and supporting a stronger information society. The geography of Indonesia is particularly problematic, however with its vast population spread out over thousands of islands. Cultural barriers also exist—gender barriers, and a perception among underserved populations that computers are for the elite.

PUBLIC ACCES LANDSCAPE	
Challenges ahead	Quick wins
Needs	Low
Needs (rank)	19/25
Readiness	Low
Readiness (rank)	19/25

Findings

Indonesia's computer education and capacity-building programs were established in the 1980s, and there was a significant increase in Internet access in the mid-1990s. Large numbers of people began regularly using computers at Internet cafés, and improving economic conditions allowed more people to afford personal computers.

After 2000, the government began to prioritize ICTs in education. About that same time, the government and most private sector businesses also started using ICTs. This rapid widespread interest led to the sharp increase in the number of Community Access Points (CAP) where the public could access public information via ICTs.

By 2008, the use of ICTs was extremely popular, and increasing numbers of people sought access to the Internet. This is especially apparent in higher education, where huge numbers of students, faculty members, and administrators use the Internet to search for academic and scientific information, news, and entertainment.

This study focused on Indonesia's public libraries, Warmasifs (information society cafés), and Warinteks (technological service cafés). Indonesia has 1062 public libraries, 63 Warmasif, and 84 Warintek.

Warmasifs decrease the digital divide by accelerating access to information for Indonesian society and especially for underserved communities, although they still charge for user access. Each Warmasif serves three main topics: (1) e-commerce for small and medium businesses; (2) e-libraries for students, teachers, and the public; and (3) e-health information. Warmasifs are generally not used by underpriviledged communities due to their lack of awareness of the benefits of ICT usage and their perception that computers are for people of higher social status.

Warinteks empower documentation sources, information sites, and libraries, and are funded by the Department of Research and Technology. Most Warintek venues are located in local public libraries, higher education libraries, government documentation units, and NGOs. Warinteks are free or charge minimally for ICT usage.

Indonesia has three types of public libraries: traditional libraries in small towns and villages without ICTs, semi-

ACE Scores

- Country score
- 25-country average
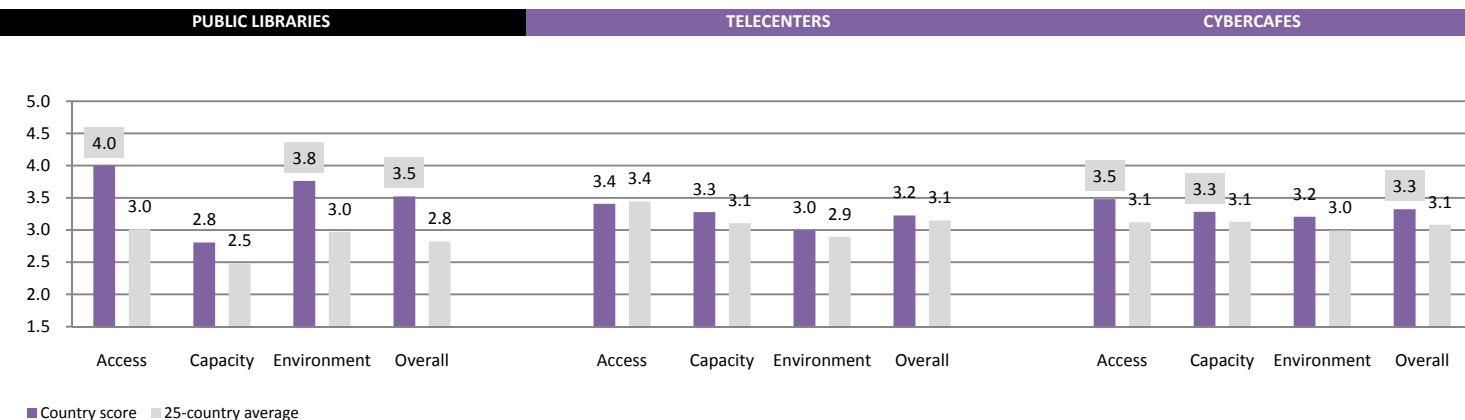
Shaded data points are outside standard deviation for 25-country set
See the last page for country-specific definitions of these venues
See the last page for a definition of the ACE scoring framework

Venue Distributions

	ALL PUBLIC ACCESS			PUBLIC LIBRARIES			TELECENTERS			CYBERCAFES			OTHER VENUES		
	Total urban & non-urban	25-country average	25-country median	Total urban & non-urban	25-country average	25-country median	Total urban & non-urban	25-country average	25-country median	Total urban & non-urban	25-country average	25-country median	Total urban & non-urban	25-country average	25-country median
VENUES	6,209	10,017	5,489	1,062	1,111	1,062	147	1,273	366	5,000	8,693	3,225	0	398	46
number with ICT	5,168	9,802	5,122	21	349	96	147	1,149	257	5,000	8,507	3,251	0	146	13
% with ICT	83%	98%	87%	2%	31%	20%	100%	90%	100%	100%	98%	100%	NA	37%	92%
% OF PUBLIC VENUES	100%	100%	100%	18%	11%	20%	0%	12%	11%	82%	73%	67%	0%	4%	1%
POP. PER VENUE ('000)	36	8	5	210	93	37	1,517	205	68	45	52	9	NA	419	103
with ICT ('000)	43	15	6	10,501	2,093	208	1,517	242	119	45	62	10	NA	1,354	198

NA=Not applicable
See the last page for country-specific definitions of these venues.
Data points are missing for some measures in some countries, which can result in oddities when comparing rows of data (for instance, the average number of venues with ICT appears high compared to the average number of venues). For a complete overview of comparative country data, please see the summary paper for this study.

User Profiles

		PUBLIC LIBRARIES				TELECENTERS				CYBERCAFES			
		Urban	25-country average	Non-urban	25-country average	Urban	25-country average	Non-urban	25-country average	Urban	25-country average	Non-urban	25-country average
INCOME	Low income	ND	28%	ND	35%	ND	26%	ND	24%	ND	26%	ND	24%
	Medium income	ND	54%	ND	46%	ND	56%	ND	45%	ND	56%	ND	45%
	High income	ND	7%	ND	6%	ND	9%	ND	4%	ND	9%	ND	4%
EDUCATION	No formal education	ND	3%	ND	2%	ND	5%	ND	6%	ND	5%	ND	6%
	Only elementary	ND	16%	ND	21%	ND	14%	ND	13%	ND	14%	ND	13%
	Up to high school	ND	50%	ND	36%	ND	37%	ND	32%	ND	37%	ND	32%
	College or university	ND	28%	ND	19%	ND	40%	ND	28%	ND	40%	ND	28%
AGE	14 and under	ND	12%	ND	15%	ND	9%	ND	14%	ND	9%	ND	14%
	15-35	ND	72%	ND	51%	ND	74%	ND	57%	ND	74%	ND	57%
	36-60	ND	12%	ND	23%	ND	12%	ND	8%	ND	12%	ND	8%
	61 and over	ND	2%	ND	2%	ND	0%	ND	1%	ND	0%	ND	1%
GENDER	% female	ND	53%	ND	49%	ND	39%	ND	39%	ND	39%	ND	39%

ND=No data
Percentages may not add up to 100% in all cases
See the last page for country-specific definitions of these venues
Data collected through interviews conducted by research teams. See country reports for details with regard to methodology, locations, timing, and data collection issues.

modern libraries in cities that have no online services, and modern big city libraries with 50% ICT access.

The following findings emerged from this study:

- There is a strong political will for creating and supporting an information-based society, and the government seeks to achieve this goal despite challenges in ICT investment and education.

- There is a perception among Indonesians that computers are generally expensive and are to be used by higher-income and higher social status people. In some cases, potential users are unaware that there are services provided by the government and venues where free access and ICT training are offered.

- Capacity-building and ICT training are urgent needs, and there is a lack of relevant content. In the venues studied, operators often lacked adequate training to aid users. Limited economic means limits huge numbers of people, and people with higher incomes and social status have more opportunities and skills to use ICTs. Most people who use public information venues are educated, young, and are ICT literate.

- Gender also hinders access, and men generally have more opportunities to access technologies. The culture favors men over women, and more males use public libraries than females. However, in non-urban areas, more women use the libraries than males. Warinteks show little imbalance between male and female users.

- Location is probably the most important access inequity. Many islands and widespread non-urban areas are populated mostly with people who lack sufficient education and employment opportunities. There are also many small- to medium-sized businesses located in non-urban areas selling hand-made crafts, and most of the workers in these businesses are women. Because little ICT infrastructure exists in these areas, there are few available venues.

Recommendations

- Most of Indonesia's population has no access to ICTs and cannot gain access because of venue location, gender, or educational inequities.

- Internet cafes are often unaffordable, especially for the underserved. There is also a cultural inequity between men and women, and women have lower accessibility.

- The government encourages small- to medium-sized businesses to set up more public access ICT venues in exchange for help with building more e-commerce facilities.

- There are no significant restrictions on using ICTs for entertainment, chatting, or social networking at public libraries, Warmasifs, or Warinteks, but some pornography websites have been banned.

- There is a significant penetration of mobile phones as personalized media that can be used to gain information, and there are a number of wireless hotspots in cafes and public places for those who can afford a laptop. These new communication methods hold many possibilities for improving government organizations, saving time and money, creating e-participation, and influencing public policies.

- Some government websites have implemented blog facilities, but this seems to be beyond the capabilities of those who lack ICTs skills. However, the use of ICTs for developing web-based communities will aid the public and will affect ICT development in the future.

- Indonesia has many public libraries, but only about one percent offer ICTs. The availability of ICT services should be increased to provide better information services, and these services should target undeserved communities and groups.

- There is little local content in public libraries, and local governments have a responsibility to develop local content needed by the underprivileged communities.

- Most public libraries are not sufficiently comfortable places for learning, and an improved learning environment is critical.

- Many underprivileged people still do not know about Warmasifs because the venues are relatively new (established in 2005 to 2008). Consequently, the government should publicize and promote Warmasifs in newspapers, television, and radio.

- Many underprivileged people perceive that computers are expensive and generally are used by people with medium or high social status. Local governments should provide free training in ICTs for underprivileged people.

Geography & Economy

Indonesia is the largest archipelago and the fourth most populous country in the world. The nation is composed of more than 17,000 islands that include five main islands and thirty smaller archipelagos. Java is the smallest of the main islands and has the largest population.

The national economy grew rapidly in the 1980s but suffered financial crises in the late 1990s. After 2000, the government instituted reforms that led to controlled inflation, and the economy then began to recover and unemployment decreased. These reforms created a slightly better environment for the underserved population, and the unemployment rate dropped by about one percent each year from 2004 to 2008.

The national population is estimated to be approximately 240 million. About 42 percent of the people live in urban areas, and 29 percent of the total population is under the age of 14. Education is compulsory for children between six and 15 years of age, and the literacy rate is said to be 92 percent.

COUNTRY PROFILE	
Total population* (millions)	223
Urban population* (millions)	110
Literacy (%)	92
E-readiness	3.4
Gini coefficient	0.36

*World Bank 2006 data

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About this study

CIS's Public Access Landscape Study examined how people around the world access and use information and computers in public settings such as libraries, telecenters, and cybercafes. Understanding public access is particularly important in developing countries where there is often limited private access to information and communication technologies (ICTs).

This study covered a carefully-selected sample of 25 developing countries containing over 250,000 public access settings. Local research teams surveyed over 25,000 people and conducted interviews and focus groups in order to develop a detailed picture of the public access ICT landscape in each country. CIS collected, interpreted, and analyzed these detailed county-level results, and also conducted cross-country comparative analyses to uncover common themes, challenges and opportunities.

The goal of this work is to help strengthen public access to information and ICTs around the world.

This project was conducted in two phases. During the first phase, country-based research teams prepared draft reports describing the information access landscape, presented a national assessment, and compiled a preliminary set of recommendations. In the second phase, teams identified the principal locations where people seek information: public libraries, cybercafés, telecenters, and other locations (such as private and religious libraries).

Local research teams used a combination of research methods to: (1) observe how people access information; (2) conduct surveys in information venues where they interviewed operators and users; and (3) perform secondary research and analysis of existing reports and documents using both local and international sources. Teams combined site visits and interviews to review the physical infrastructure and human resources of a variety of venues, and to determine the information content, service usage patterns, communication, and knowledge development. Additionally, teams examined the effects of environmental factors such as government policies, geography, and ethnic and linguistic differences.

Definitions

ACE scoring framework: Developed by CIS based on a modified bridges.org Real Access framework. The scale goes from zero to five, with 5 being the best possible score. ACE scores are calculated by evaluating dozens of variables having to do with ICT access, capacity and environment in public access ICT venues. "Access" includes variables such as accessibility, suitability, affordability, and the availability of technology; "capacity" includes training, relevant content and services, social appropriation, and collaboration capacity; and "environment" includes socio-cultural factors, popular support, political will, and a country's legal and regulatory framework.

Challenges ahead (from table on front page): Estimates based on combinations of ACE scores indicating difficulty in improving country's public access to ICT. From the fewest challenges to most, categories are: quick wins, steady gains, slow gains, and significant.

CIS: University of Washington Center for Information & Society (CIS)

Cybercafés/Warmasif/Warinek: Two different types: *Warmasif, the Information Society Café*, whose objective is to accelerate information access for the entire Indonesian society, especially underserved communities; provids three services: e-commerce for small and medium business, e-library for students, teachers, and the public, and e-health information for all society. *Warintek, the Information Technological Café*, mostly embedded within local public libraries and higher education libraries, funded by Department of Research and Technology (The Government of Indonesia); aim to improve local information resources to help underserved populations access information.

E-readiness: The ability to use ICT for economic development, as determined by measures of connectivity and technology infrastructure, business environment, social and cultural environment, legal environment, government policy and vision, and consumer and business adoption. E-readiness is scored on a scale from 1 to 10. In 2008, the global e-readiness score was 6.4, with the highest levels in North America and the lowest in Africa and Asia.

Gini coefficient: Measures the inequality of income distribution. A low coefficient indicates more equal income distribution, while a high Gini coefficient indicates more unequal distribution. The global average is around 0.6; the US Gini is around 0.45.

ICTs: Information and communication technologies (especially computers and the Internet)

Needs & Readiness indexes (from table on front page)**:** The needs index is comprised of three indicators: inequality, ICT usage and ICT cost. The readiness index is also comprised of three indicators: politics, skills and ICT infrastructure. Proxies are used for all indicators. See "Information Needs & Watering Holes" on the CIS Landscape Study website (www.cis.washington.edu/landscape) for a more detailed discussion of these indexes and proxies.

NGO: Non-governmental organization

Non-urban: Commonly labeled a rural area, but definitions of rural or periurban vary by country

Public libraries: Three types: traditional libraries (located in small towns and villages with no ICT), semi-modern libraries (located in cities; provides ICT, but no online services), and modern libraries (located in big cities; provides ICT services).

Front photo: Telecenter sign in Indonesia. Photo courtesy of Indi and Rani Soemardjan **(Flickr)**