

CHITTAGONG, BANGLADESH

IN BRIEF

Young Power in Social Action's (YPSA) Information, Communication, Technology Resource Centers on Disabilities (IRCD) are located in three subdistricts of Chittagong and two subdistricts of the Chittagong Hill Tracts of Bangladesh. Under their Digitally Accessible Information System (DAISY) for ALL program, they provide Digital Talking Books (DTBs), also known as audiobooks, on topics of relevance as determined by the needs of a diverse set of print-disabled users. The innovative operational model employs volunteers and visually impaired employees in the development and editing of audiobook content.

Short term goals include digitizing secondary and tertiary education level textbooks and increasing content usage by promotion through community radio.

DAISY for ALL- IRCD

Volunteers (part time): 25

Members: 500

Print-Disabled Regular Users: 1500+

Partner Organizations: 20 (including outside of Chittagong division)

Location

Chittagong: 3 subdistricts - Sitakund, Mirsharai and Chittagong

Chittagong Hill Tracts: 2 subdistricts - Kawkhali and Rangamati

Distribution (2011)

3000 CDs of 500 titles

Funding

DAISY Consortium, Nippon Foundation, Action Aid Bangladesh, Disability Rights Fund, Access to Information (A2I) Prime Minister's Office (PMO), UNDP and YPSA (All except YPSA attached to a block of work and not ongoing).

Languages

Bangla, English and Chakma (indigenous language of Chittagong Hill Tracts)

DESCRIPTION

Digital books in audio format. Designed for the print-disabled - visually impaired and illiterate- to access alternative and mainstream educational materials.

LESSONS FOR THE FUTURE

- Know your users through feedback collection and continual interaction. With a diverse set of users, acknowledging heterogeneities through program adaption will be important.
- Monitoring and evaluation is key to tracking project progress and identifying gaps for provision of meaningful access to information.

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List of Abbreviations

A2I: Access to Information

AMIS: Adaptive Multimedia System

APCD: Asia Pacific Centre on Disabilities

DAISY: Digital Accessible Information System

DTB: Digital Talking Books

IRCD: Information, Communication, Technology and Resource Centers on Disabilities

NGO: Non-governmental Organization

PMO: Prime Minister's Office

TTS: Text-to-Speech

UNDP: United Nations Development Program

YPSA: Young Power in Social Action

BACKGROUND

One hundred and fifty million people live in Bangladesh – 10 percent are visually disabled and over 50 percent are illiterate. Together, these marginalized populations comprise the print-disabled.

Young Power in Social Action (YPSA) is a social development organization based in Chittagong District of Bangladesh. Amongst numerous efforts to enhance youth participation in development programs, is YPSA's Information, Communication, Technology and Resource Centers on Disabilities (IRCD). The IRCD model was launched in 2005 and is used for improving accessibility of reading materials by print-disabled persons. It also aims to provide livelihoods for the visually impaired through employment.

In order to enhance their capacity to serve the illiterate and visually impaired, YPSA partnered with Digital Accessible Information System (DAISY) Consortium, a not-for-profit international organization dedicated to the promotion of advanced 'audiobooks', also known as Digital Talking Books (DTBs). The Consortium is comprised of 55 country and 110 NGO members. All members pay a fee for the development of new technologies and maintenance of the DAISY standard in all products. DAISY technologies promote a set of standards or functional specifications for production of software and audiobooks and use of players. DAISY Consortium uses over ten types of software to create DTBs. This includes OB open source software, and My Studio PC, Sigtuna and Dolphin Publishers proprietary software. A DTB under DAISY standards consists of a (n):

- Audio file – to convert from text and present aloud.
- Synchronization file – to link up text and audio.
- Navigation control option – to browse through the audio file with ease.

Audiobooks can be heard on standalone DAISY players, computers using DAISY playback software, mobile phones, DVD and MP3 players.

The YPSA-IRCD and DAISY partnership launched the DAISY for ALL program to leverage text-

to-speech technologies for converting written materials into audible works. Specifically, the initiative aims to develop DTBs for the print-illiterate throughout Bangladesh. The staff of YPSA-IRCD received training from the Delhi Resource Center, the South Asian focal point of DAISY activities in the region. Details of trainings given and received are discussed at a later point in this case study.

DAISY for ALL is a hybrid model, whereby the NGO is responsible for implementation, the Government of Bangladesh and UNDP provide funding, and the citizens are the users and ultimate beneficiaries. Today, DAISY for ALL has created over 500 DTBs. A Bangla language pack Adaptive Multimedia System (AMIS) was also created to play the audiobooks in local languages.

METHODOLOGY

STAKEHOLDER ANALYSIS

Since 2003, YPSA has been reaching out to various user groups through Digital Talking Book technologies. Current user groups include:

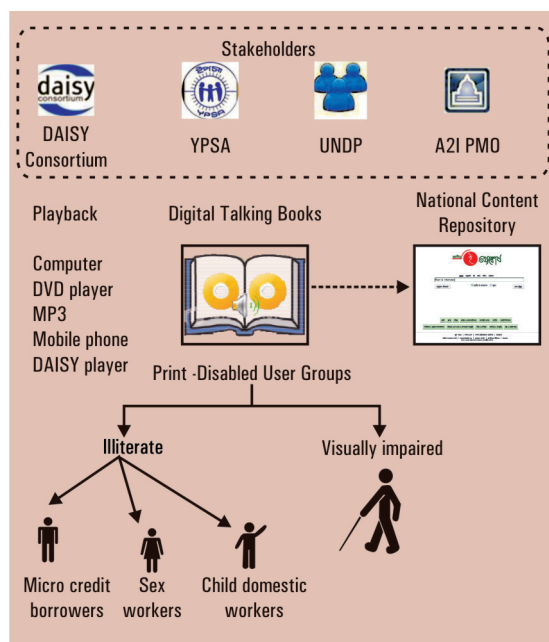
- Microcredit borrowers
- Sex workers
- Domestic workers
- Shipwrecking laborers
- Visually impaired persons

Users from marginalized populations such as those accessing the DAISY for ALL program are typically less vocal when approached individually, hence focus group discussions were determined to be the most appropriate platform for research. Five small groups, each with users from the similar backgrounds or occupations, were approached for group interviews based on their availability and widespread information needs.

Partner organizations help in many capacities, such as in developing Bangla screen reading software as achieved through cooperation with the Asian University for Women along with others. DAISY Consortium provides YPSA with technical support through training and expert advice. DAISY for ALL (in relation to the production and distribution of laws but not other

DAISY publications) is funded by the Access to Information (A2I) department of the Prime Minister's Office (PMO) and UNDP.

Figure 1: Key Stakeholders & Corresponding Roles



SWOT ANALYSIS

Strengths

- Targeted and localized knowledge dissemination to marginalized populations
- Sophisticated technology platform - Allows for navigation
- Innovative cost structure
- Engagement of citizens through publication on the public domain - National Content Repository (Refer to corresponding section below)
- User needs are matched through YPSA's employment of visually impaired persons

Weaknesses

- Difficult to explain what DTBs are
- Difficult to raise awareness among people about program value
- Limited amount of digital materials
- Low usage levels as compared to potential reach
- Restricted playback devices (DVD, MP3, etc.) due to high cost of certain technologies (DAISY players)

- Lack of a monitoring mechanism for tracking users and usage and/or collecting feedback

Opportunities

- Raise levels of DTB production
- Increase penetration of use
- Use of mobile for audio playback

Threats

- Financial sustainability – difficulty in conveying value of program to obtain donor funding
- Inability to match user needs to mode, form, and/or type of information dispersed

ANALYZING TECHNOLOGY

DAISY technologies are considered advantageous for a number of reasons. First, many are free of cost and all DTBs can be played back using free and open source software called AMIS. Anecdotal evidence suggests an inability to sustain operations under a model that would require use of costly software. Second, as open source products, DAISY technologies are easy to localize. Third, DAISY Consortium is an active supplier that continuously upgrades products, and offers training and assistance.

DIGITAL TALKING BOOKS

Type

At present, there are five types of DTBs:

1. Audio only – Quickest and least expensive way of generating DTBs. Contains a table of contents that users can use for navigating to a page, section and sub-section of a talking book. It also has a sentence level navigation that allows the user to skip, repeat and/or go to a particular sentence. It can be recorded in any language.
2. Full text, full audio – Human narrated audio synchronized with visible text. Text is highlighted as per voice narrative. This is most useful for those with partial vision, color blindness or dyslexia because it helps them to focus on the text.
3. Text-to-speech (TTS) audio only – Automatic robotic synchronization. Invisible text, only TTS.

4. Full text, full audio synchronized with TTS – Visible text and TTS.
5. Printed Braille books – Print outs in Braille format can be taken from DAISY standard text files.

Content

DAISY format focuses on key subject areas including the following:

- Legal Information
- UN Convention on Rights of Persons with Disabilities
- English textbooks
- Literature/novels
- Disaster Preparedness and Management
- Primary and Reproductive Health
- Livelihoods/Agriculture

Composition

Each DTB consists of an audio file, synchronization file, and navigation option. The synchronization file allows for the audio to match up with the text. The navigation enables users to locate any file, page, or subheading and change font size, or repeat sections.

Digital Talking Dramas

For the user groups that have little to no education, YPSA has designed over 100 Digital Talking Dramas. These audible stories are in local languages and present legal issues such as dowry and child marriage as simple and easy-to-understand concepts. Production of a digital talking drama, including topic identification, script development, and editing takes approximately one day depending on the length of material. Popular digital talking drama topics include:

- HIV/AIDS
- Arsenic
- Dowry
- Violence against women – rape, acid etc.
- Child marriage
- Polygamy
- Property rights

Distribution

DAISY books can be distributed on a CD/DVD,

memory card or over the Internet. 3,055 CDs have been distributed.

Playback

Audiobooks can be heard on standalone DAISY players, computers using DAISY playback software, mobile phones, DVD players and MP3 players (with limited navigation).

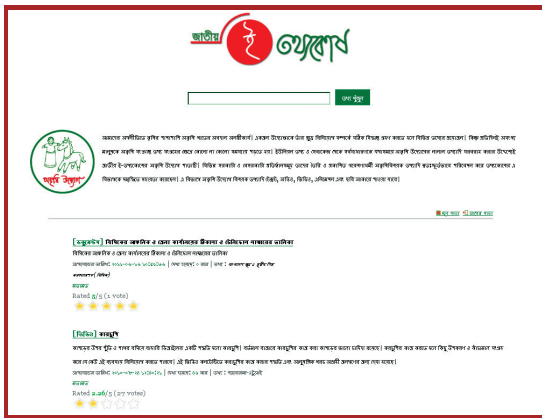
DAISY players range in cost from 300 to 1,000 USD but are expected to fall in price to 100 in the near future. Even so, due to the low cost alternatives, the DAISY for ALL program does not use DAISY players. The most popular playback device is the free DAISY software running on PCs in telecenters. The second most used tools are DVD and MP3 players. Many NGOs work with DVD players because it can serve a group audience. Students choose to use low-cost MP3 players because they are convenient to carry around, low cost, and multi-functional. Activists and grassroots workers also choose to playback DTBs on MP3 players because they are the best option for going door-to-door in remote areas.

NATIONAL CONTENT REPOSITORY

Over 20 organizations and 500 visually impaired students have become members of YPSA-IRCD. A selection of DTBs (approximately 100) is stored online at <http://www.infokosh.bangladesh.gov.bd/>. The online repository can be navigated in two ways: one, a keyword search and two, thematic selection. Themes include: agriculture, health, education, legal and human rights, disaster management, allied institutes, public services, tourism, job opportunities, science and technology, and institutions.

Figure 2: Screenshots of the National Content Repository





ASSESSING ACCESS

AWARENESS & USAGE

YPSA informs potential users about DAISY for ALL through awareness raising meetings, federation meetings focused on a single topic of discussion, fairs, workshops and seminars, and training sessions. Users access DTBs through four YPSA Resource Knowledge Centers (RKC) and one Multimedia Center or through doorstep MP3 playback services whereby users can listen to DTBs from their own home on a YPSA correspondent's portable device.

Awareness levels of DAISY technologies and YPSA's DTBs vary from urban to rural settings, visually impaired persons to other potential user groups, and institution to institution. In urban areas, visually impaired communities, government and disability and/or ICT-related organizations are highly aware of DAISY technologies and in turn, DAISY for ALL. However, rural communities and a significant amount of uneducated persons remain unaware, which leaves DAISY for ALL with great scope for expanding reach.

Focus Group Discussions

Five focus group discussions (FGDs) were held to gather insights from users of DTBs. Each FGD consisted of a semi-structured group discussion in which participants were asked about and shared their thoughts on their use of DTBs, satisfaction levels with the tool, and desires for the future.

#1 GRASSROOTS WORKERS/ACTIVISTS

Where: Youth Community Multimedia Center, Shitalkundu

Who: Grassroots activists working with YPSA

Feedback: During the discussion, participants elaborated on the benefits of DAISY in their specific constituencies. Digital content on women's health and disability laws were mentioned as particularly powerful topics that could be easily conveyed to other community members. One woman activist explained that she has both benefitted at an individual and community level by listening to talking dramas.

#2 GIRL DOMESTIC WORKERS

Where: Anandlok Learning Center

Who: Domestic workers – girls between 9 to 15 years old

Feedback: According to teachers at the learning center, fourteen domestic workers visit the AnandLok center every evening for two hours to receive basic primary education. A workshop is conducted at the start with the domestic workers' employers to explain the importance of education to underprivileged children. The students demonstrated their new skills in English, Mathematics and Picture Learning and expressed a high level of satisfaction with the program.

#3 SEX WORKERS

Where: Madhumita Center

Who: Street based sex workers

Feedback: According to Madhumita employees, the center focuses on the prevention of sexually transmitted diseases and HIV/AIDS through the following strategies. First, sex workers attend medical check-ups twice a week. Second, skill building programs such as candle-making, weaving, and batik work are offered. Finally, YPSA peer educators use DTBs to educate sex workers on issues related to their health and security. The sex workers expressed a high level of satisfaction with the DTBs, but also suggested including visuals with the voice recordings to make concepts easier to understand. They shared stories of spreading awareness in their own communities about what they had learned through the DTBs.

#4 MICROCREDIT BORROWERS

Where: Rural Knowledge Centre,⁴⁹ – Shayerkhali

Who: Women microcredit borrowers

Feedback: When asked about the most useful information provided to them through DTBs, a majority agreed upon learning about arsenic as a toxin in water and prevention of early marriage, dowry, and violence against women. In regards to understanding content and using DAISY, they expressed an ease in learning from audiobooks. They shared a preference to listen to Digital Talking Dramas because of easy comprehension. They also noted that telecenter information managers are present to help them in case they need assistance.

#5 VISUALLY IMPAIRED STUDENTS

Where: YPSA office

Who: Visually impaired students from poor economic backgrounds

Feedback: Many visually impaired students said that they found it difficult to perform well in school because Braille books are costly and limited. As such, they find audiobooks to be a viable alternative due to their simplicity and affordability. The students told researchers that they were trained by YPSA employees on how to use DTBs. They noted that they seek information from textbooks and newspapers in order to learn about policies and legal rights, job opportunities and current affairs. Students requested the production of audiobook dictionaries to search word meanings and increase their vocabularies.

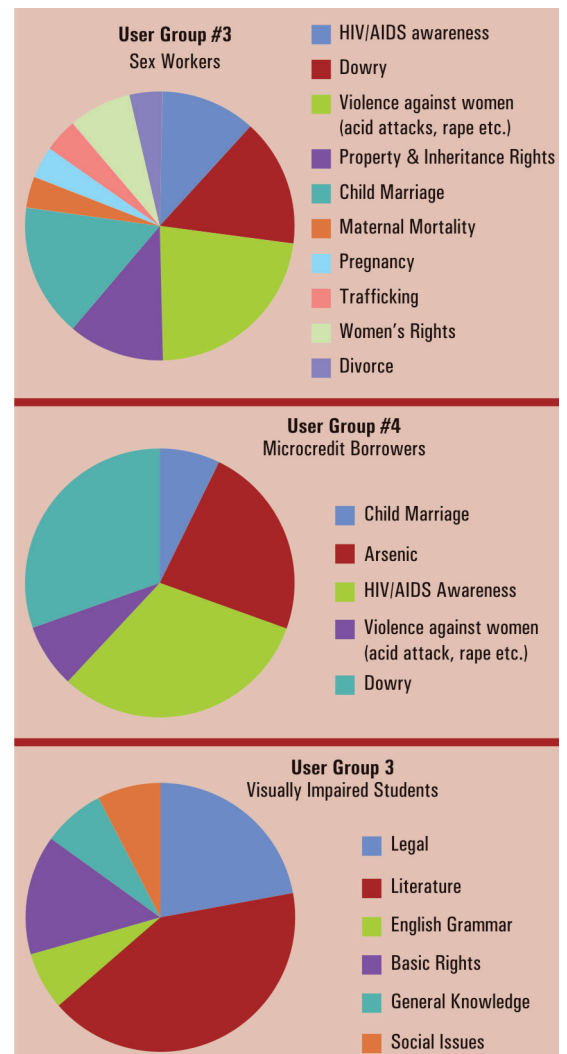
After group sessions, the microcredit borrowers, sex workers and visually impaired students were surveyed on a one-on-one basis.⁵⁰ Survey results indicate that information sought out and accessed through DTBs is variable and topics are many. In a sample of 21 surveyed users, 15 different topics were highlighted in total, each group with their own favorites.

Feedback from sex workers suggests that over 20 percent of their access to information through audiobooks is related to issues of violence against women and 15 percent on dowry, 15 percent on HIV/AIDS. More than 80 percent of the information accessed by microcredit borrowers, mostly women, is focused on child marriage, HIV/AIDS and arsenic in water.

Visually impaired students provide a dramatically different picture as 40 percent of their usage is of literature and more than 20 percent is legal issues. The variety in type of information desired and disseminated to meet needs illustrates the value of DTBs as enabling tools for many sectors of society towards impactful education.

Surveys also revealed that nearly all users became aware of DTBs through YPSA or partner NGO outreach staff. This suggests that engagement with DTBs and access to information is limited to those approached by owner organizations. Nearly all surveyed users indicated using DTBs a minimum of 10 times with the majority claiming a usage level much higher than 10. Moreover, 80 percent of the user sample expressed an ability to use DTBs with ease and no need for assistance. Analyzed

Figure 3: Usage of DTBs – Type of Information Accessed per User Group



⁴⁹ Rural Knowledge Centers were set up by UNDP, Government of Bangladesh and YPSA and act as community multimedia centers to provide computer training and access to knowledge to citizens at the local level.

⁵⁰ Activists were not individually surveyed because data collected from the FGD was determined to be comprehensive. Girl domestic workers were determined to be too young for surveying.

together, this data suggests that the mechanism through which DTBs are distributed limits the size of the audience it reaches; however those who have been introduced to DTBs find them useful and easy enough to repeat usage. Thus, the mode of technology and the type and form of information distributed may be appropriate, but the greater model of access may require some adjustments.

LINKING ACCESS TO PUBLIC INFORMATION (A2PI) TO EDUCATIONAL DELIVERY

1. **Diverse Education: DAISY for ALL** empowers marginalized citizens towards the pursuit of alternative and higher education. User groups are highly diverse and hence, demand varied materials; visually impaired students prefer to use audiobooks for higher education purposes - literature and legal rights, while illiterate and poor populations tend to use them for social education, such as gender-related issues - dowry, property rights, and violence against women. Advocacy efforts including informing shipwrecking workers of their rights and labor laws, and lay citizens of the ban on public smoking, are also led by YPSA through the use of DTBs. The ability to reach such diverse and underserved populations is a great advantage of this program.
2. **Bridging an often ignored educational divide:** Illiterate and visually impaired persons have a disadvantage in institutionalized learning as text is inaccessible to them. The situation is exasperated by the lack of providers of public information to these populations. As a result, they can suffer from unemployment and poor standards of living. DAISY for ALL has creatively leveraged technologies that are easy and low cost to produce and use with the goal of solving this problem.
3. **Adaptable Educational Materials:** YPSA-IRCD has created 3000 CDs based on 500 titles in Bangla, English and Chakma. Uneducated users groups including sex workers, domestic workers, microcredit borrowers, and shipwrecking workers have the option of listening to the audiobooks in a format known as Digital Talking Dramas –

legal knowledge presented as easy-to-understand stories. Such information is useful for illiterate persons to exercise their own rights and aware community members of the same.

CAPACITY BUILDING

EMPLOYMENT OF VISUALLY IMPAIRED

Seventy-five percent of employees at YPSA-IRCD telecenters are visually impaired. This allows for better servicing of the visually impaired user groups as needs are understood at a personal level.

TRAINING IN DAISY TECHNOLOGIES

Employees, including the program manager and focal person of DAISY in Bangladesh, received international trainers' training to develop local technical knowledge of DAISY technologies. This provided YPSA-IRCD with the know-how to develop the DAISY for ALL program. Today, YPSA promotes DAISY for ALL through local training courses and workshops on the use of ICT for development of visually impaired informational materials. This continual learning exchange helps to create a sustainable platform for capacity building. The following is a list of training courses taken and given by YPSA to date:

Duskin Leadership Training: A one year training program delivered to people with disabilities in Japan. Two YPSA employees had received this training on DAISY technologies prior to joining the organization.

International Trainers Training on DAISY: Three YPSA employees were trained under this program.

DAISY and Information Technology: One month training from The National Association of the Blind in New Delhi, India.

ICT training for visually impaired persons: Run by the Asia Pacific Centre on Disabilities (APCD) Foundation.

International Training Workshop on Computerized Braille Production: Held in Chittagong and supported by Japan Braille Library and Malaysian Association for the Blind.

DAISY focal point training: First YPSA training of 10 individuals in Bangladesh on DAISY technologies.

UTILIZING INFORMATION, SUSTAINABILITY & IMPACT

APPLIED LEARNING

Focus group discussions revealed users' learning of various social and legal issues resulting in their sharing of knowledge within their communities. Furthermore, they cited instances in which they practically applied concepts they learned. For example, one user shared her understanding of early marriage as an act that can be detrimental to a women's health and as a result, a story of her stopping a family in her village from marrying off their girl child. In another instance, an activist shared a story of sending a man to jail who had thrown acid on his wife. The practical application of information accessed through DAISY for ALL supports its ability to create real impact; in this case, it is clear that the use of audiobooks for information dissemination can result in educational services that deliver desired results.

FINANCIAL ISSUES

The DAISY for ALL financial model is unique because it uses innovative ways of keeping costs low. DAISY technologies are open source - some are free while others can be purchased; YPSA only uses the free of cost software. All content development and editing are done in-house by volunteers or employees. Playback devices are either supplied by YPSA to user organizations or are user's personal items. For example, DVD players are given to NGOs working with sex workers, while low cost MP3 players are owned and used by visually impaired students. The DAISY players have not yet been deemed necessary for playback, thus expenditure on

more than two of these devices has not been incurred.

Revenues are generated through production of new DTB materials. For example, Dhaka University might request DTBs on particular health-related issues for which YPSA will charge 3000 to 5000 taka per hour of production time.

Alternative revenue streams are from two sources. First, A2I and UNDP provide financial support when necessary. Second, through cross internal subsidization; YPSA runs a number of programs, some of which are profitable and are used to support DAISY for ALL operations.

Table 1: Financial Model

Revenues	
Production of New DTBs for user organizations	~3000-5000 Taka/hour (depends on quality)
Contractual-based Donor Funding	
Expenditure	
Content	FREE - developed by volunteers
Content Editing	Salaried YPSA employees - completed by visually impaired technicians
Software	FREE - DAISY products
Internal YPSA Hardware - PCs	Initial capital expenses
User Playback devices - MP3, DVD, etc.	Nominal costs - some provided by YPSA, some users supply their own

UPSCALING

YPSA plans to reach audiences outside of Chittagong through the airing of talking dramas on community radio and the enhancement of partnerships with local and national civil society organizations.

The Government of Bangladesh plans to launch an e-book program which will digitize all textbooks from class three to 10. The Prime Minister has announced the plan to incorporate text-to-speech in this process. This institutionalization of DAISY for ALL will deepen its penetration throughout the country.

RECOMMENDATIONS

MONITORING AND EVALUATION

For understanding program usage, reach and limitations.

DAISY for ALL lacks a systematic tracking and assessment system of current operations. It would be useful and feasible to collect and analyze data to understand program scope and limitations and to examine options for exploiting future opportunities. Pertinent data for collection would include:

User access to information

- Number of users accessing DAISY for ALL – How many people are using DTBs?
- User profile – Who is accessing the audio information?
- Information type being accessed – What type of audio information are users accessing?
- User needs/desires – For what purpose are they accessing the information?

Technologies preferred, used, desired

- Use of DTB playback tools – Which playback device is used by what user group?
- Type of DTB accessed – Which format of audiobook is accessed by whom?

Utilization of information for real impact

- Use of new knowledge for change creation – Which applied learning efforts have users pursued?

Targets are an effective way of ensuring program progress and when informed through data gathered from users, targets are useful for accurately assessing program success. As such, it is suggested that targets are defined for the above data sets.

A database of total DTB users with corresponding profiles would enable easy and personalized access to gather feedback. Feedback would provide the necessary information to carry out a comprehensive examination of program gaps; knowledge of gaps would then provide a stimulus for filling them for improving overall service and impact.

MATCHING USERS WITH APPROPRIATE TECHNOLOGIES & RELEVANT INFORMATION

Evidence from the field suggests that DAISY for ALL reaches a wide audience. Although this presents an opportunity for great impact, it simultaneously requires a more nuanced approach. User groups differ in a number of ways and as a result, their interests in informational type and form and mode of access also vary. These complexities are best addressed through acting on observations made about user behavior and through feedback.

In this case, focus group discussions revealed that illiterate women, such as the sex workers, preferred to both listen and watch digital talking dramas. They expressed an ability to better understand educational concepts if supported visually. Visually impaired students preferred a greater variety in digital materials, specifically requesting an audiobook dictionary and an expansive list of digital talking novels. With this feedback, we can conclude that it may be most appropriate to invest in pairing pictures with audible stories for illiterate populations, and digitize more high-level education materials for the visually impaired. The usage could grow if technologies and information are developed and adapted to user needs; avoiding the treatment of users as a homogenous group is paramount to ensuring this.

EXPLOITING POTENTIAL SCOPE

At present, YPSA operates DAISY for ALL on a 'on demand' basis with minimal planning for future production and distribution. As discussed earlier, awareness is currently limited to visually impaired persons and a confined illiterate population. With a proper monitoring system in place that would allow for sophisticated user profiling, the ability to upscale in an efficient and effective manner would be possible and is recommended. With print-disabled persons comprising half of the country's population, there is no end to the reach of audiobooks and the great change in educational services that they can usher in. The following should act as guidelines for increasing the reach of DAISY for ALL:

1. Strengthen existing partnerships with organizations through distribution of new audiobook materials. This will help to increase revenues that can be invested in hardware for distribution to NGOs or individuals who cannot afford them and/or production of further digital materials. By using these organized channels for DTB distribution, YPSA will spread awareness in a way that will effectively ensure long-term program sustainability.
2. Deepen penetration in Chittagong with current user groups through adapting materials according to identified user preferences and understanding level of potential usage.
3. Expand partnerships by seeking out organizations based in and outside of Chittagong. Approaching other areas of the country will require a well-established name in Chittagong. Comprehensive documentation of standardized methods of production and distribution will help to achieve this.

REFERENCES

DAISY Consortium. Web. May 2011. < <http://www.daisy.org/>>.

Young Power in Social Action. Information, Communication Technology and Resource Center on Disabilities. Web. May 2011. <<http://www.ypsa.org/ircds.php>>.

Government of People's Republic of Bangladesh. National Content Repository. Web. May 2011. <<http://www.infokosh.bangladesh.gov.bd/>>.

Bhattacharjee, Vashkar. Report on DAISY for ALL in Bangladesh. Young Power in Social Action. 2004-2008

ANNEXURE A - List of Daisy Legal Content

Sl. No.	Topic	Content Name
	Disability	
1		Disability Acts (Bangla)
2		Biwako Millennium Framework for Action
3		Shishu Audhiker Sonod O Bangladesh-a Protibondhider Audhiker
4		Convention on the Rights of Persons with Disability
5		Protibondhi Baktiborger Audhiker Sonod O Oichik Protipalonio Bidhi Bidhan
6		Shohoj bangla Protibondhi Baktiborger Audhiker Sonod
	Children	
7		Shishu Audhiker Sonod
8		Jatio Shishu Nity 1994
9		Jatishonghuo Shishu Audhiker Sonod, 1989
	Women	
10		Narir Proti Shokol Prokar Boishomo Bilop Shonod
11		Jatio Nari Unnaion Nity
12		Jatio Nari Unnaion Nity (Details)
13		Nari O Shishu Nirjaton Domon Ayeein 2002
14		Nari O Shishu Nirjaton Domon Ayeein 2003
	Law	
15		Jormo O Mirto Nibondon Ayeein 2004
16		Ballobibaho Nirod Ayeein 1929
17		Muslim Bia O Talak Registrikoron Ayeein 1974

Sl. No.	Topic	Content Name
18		Acid Auporad Domon Ayeein 2002
19		Joutok Nishidhokoron Ayeein
20		Authoradhiker Ayeein
21		Gram Adalot Ayeein
22		Proribesh Shongrokhon Ayeein
23		Madokdrobo Niotron Ayeein
24		Prokasho Jua Ayeein
25		Ayeeingoto Shohaiota Prodan Ayeein
26		Aso ayeein Jani
	Talking Drama	
27		Ballo Bibaho
28		Bibaho
29		Boho Bibaho
30		Denmohor
31		Dhorshon
32		Hindu Uttaradhiker Ayeein
33		Joutok
34		Khash Jomi
35		Kormojibi Mohila
36		Muslim Uttaradhiker Ayeein
37		Mutation
38		Ovivabokotto
39		Passport
40		Shishu Nirjaton Shomporkito Oporadh Shomuho Ebong Er Shasty
41		Tamak Shebon O Dhumpaner Khoti
42		Voronposhon
43		Wakf
44		Borga chash

ANNEXURE B - Stakeholder Interviews

YPSA-IRCD

1. According to our research, there are three major stakeholders in the DAISY for ALL program: YPSA-IRCD, DAISY- the technology provider, and the print-disabled users. Subsidiary components of the project have been carried out through partnerships with the UNDP (legal digitization, DTB local distribution and talking dramas), Dhaka University (digital textbooks) and A2I (PMO) (Talking dramas). Are there additional stakeholders in this project? If so, please indicate who they are.
 - a. Can you elaborate on the role of each stakeholder?
 - b. Please explain the organizational structure - how do all stakeholders work together under this program?
2. Can you explain the financial model of Digital Talking Books?
 - a. Through what funds are DAISY technologies procured? What does this amount to per DTB?
 - b. Are individual users charged for usage of DTBs? What about institutional users i.e. Dhaka University? If so, what is the user fee?
 - c. How does YPSA-IRCD ensure the financial sustainability of DAISY for ALL?
3. The following 10 focal areas have been addressed in some capacity under the DAISY for ALL program. Can you provide us with details - quantity of digitized materials to date, process of digitization, purpose of digitization - in each of these areas?
 - a. Disaster Preparedness and Management - 4
 - b. Legal - 500 pages (in partnership with UNDP)
 - c. UNCRPD - in Bangla
 - d. Livelihood
 - e. Literature
 - f. Primary and Reproductive Health
 - g. Agriculture
 - h. HIV/AIDS
 - i. English language textbooks (in partnership with Dhaka University)
4. Why was DAISY technology chosen for this effort? What is advantageous or unique about these specific technologies?
 - a. DAISY technologies are open source. Can you explain how this affects the program?
5. What is the current level of awareness of Digital Talking Books in Chittagong Division? In Bangladesh? (High, medium, low - what percentage of the population is aware of this DTBs?)
6. What is the current level of usage in Chittagong Division? In Bangladesh? What percentage of the targeted population uses the technologies?
 - a. How do users access DAISY for ALL materials?
7. Can you explain the purpose of the National Content Repository? Why has YPSA-IRCD determined it important to publish materials in the public domain?
8. DAISY for ALL materials can be played back on mobile technology. How does this work? Is this method being used? If so, by whom?
9. What have the major challenges been thus far? How were these overcome or how do these plan to be tackled?
10. Are there plans to enhance/upgrade the DAISY for ALL program? If so, what do the future plans entail?
 - a. How will awareness grow? Penetration of use?

DAISY

1. Can you explain the purpose/benefits of DAISY technologies working on an open source platform?
2. Please tell us the major DTB components and corresponding functions.
 - a. Audio file
 - b. Synchronization file
 - c. Navigation Option
3. Can you explain the avenues for distribution of DTBs?
 - a. CD/DVD
 - b. Memory card
 - c. Internet
4. Can you expand on the playback options of DAISY materials?
 - a. DAISY players - What are they? How do they operate?

- b. PC with DAISY playback software
 - c. Mobile phones
 - d. MP3 players
5. What is the organizational goal for the DAISY for ALL program? Are there quantitative targets in terms of penetration of use?
 6. What were the major challenges faced in program development, deployment and monitoring? How were these overcome?
 7. What are DAISY's plans for upscaling of the DAISY for ALL program?

Partner Organizations (UNDP, Dhaka University, A2I)

1. What was the motivation behind partnering with YPSA-IRCD for the DAISY for ALL program?
2. Can you explain your organization's role in the partnership?
3. What has been the outcome of the collaboration (quantitative & qualitative)?
4. Did your organization provide funding for this effort? What level of funds was required?

ANNEXURE C - User Survey

1. How many times have you used Digital Talking Books?
 - a. Once
 - b. 2-4 times
 - c. 5-10 times
 - d. 10+ times
2. How did you become aware of Digital Talking Books?
 - a. Word of mouth/friends/family
 - b. YPSA-IRCD telecenter worker
 - c. Partner Organization i.e. UNDP, Dhaka University, A2I (government)
3. How would you rate the level of ease/difficulty with which you use DTBs?
 - a. Simple, no need for assistance
 - b. Able to use with some assistance
 - c. Difficult, not able to use easily
4. For what purpose have you used DTBs? (circle one or more)
 - a. Disaster Preparedness and Management
 - b. Legal information
 - c. UNCRPD
 - d. Livelihood
 - e. Literature
 - f. Primary and Reproductive Health
 - g. Agriculture
 - h. HIV/AIDS
 - i. English language textbooks