Research Report on
OM and GEM II Analysis for
Bangladesh Country Component

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OM and GEM II Analysis for Bangladesh Country Component

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Abstract

This report describes the Outcome Mapping and GEM II analysis for the Bangladesh country component.
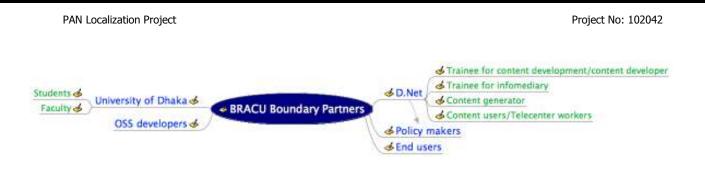
BRACU

Vision

End users are able to use ICTs in Bangla, their native language. Not only are the applications localized, users have access to relevant localized content, and to training facilities to make the best use of ICTs. There is national capacity for developing the localized applications and content. The policy makers make informed decisions regarding localization and use of ICTs for development. In short, there exists a supportive environment for increasing digital literacy.

Mission

CRBLP will develop the Computational Linguistics framework needed to develop localized applications, and develop some of the often used applications such as OCR, Text to speech, etc. It will work with local partners to develop capacity in Linguistics as well as in content development and end-user training. It will assist policy makers in making informed decisions in matters related to local language computing.

Boundary Partners

1. D.Net
2. DU Linguistics
3. End users
4. OSS Application developers
5. Policy makers

D.Net

Vision

Ensuring access to information for a balanced development in Bangladesh

Mission

Development of Local Language Computing Capacity in Bangladesh

Project Output

1. Training Curriculum (Content Development and Infomediary)
2. Training Manual
3. Training
4. Content requirement report
5. Content
6. Content development tool

Boundary Partners

1. Trainee for content development/ Content developer(need assessment and impact of technology in content development)
2. Trainee for infomediary
3. Content Generator
4. Content users/Telecentre workers

Trainee for content development/content developer

Boundary partner: Trainees for Content Development/ Content

Outcome challenge

Potential content developer understands the process of content development according to the needs of the target groups of the content. They also understand the technology options for content development and use a few of them. They can now identify content sources, develop content based on the needs and incorporate them in appropriate content management software.

Progress markers

Expect to see

1. Trainees develop content and have skills on the following elements:
   - understand and follow content development life cycle
   - familiar and can use technology for content development
   - collect content raw materials from various sources
   - develop content using learned tools
   - incorporate content in appropriate content management software

Like to see
1. Trainees can identify demand for content by different target groups
2. They can find new areas for content development

Love to see
1. Trainees are capable enough to train new content developers
2. They can update existing content
3. They can understand cultural context in developing content

Trainee for infomediary
Boundary partner: Trainees for Infomediary

Outcome challenge
Infomediaries are information literate. They can understand a specific need of information or knowledge and search it in multiple content sources, including web-based search engines, thematic content portals and web sites as well as off-line CDs.

Progress markers

Expect to see
1. Understand importance of information and knowledge
2. Understand multiplicity of sources for content
3. Understand specific needs and can perform ordinary search of information using search engines
4. Understand specific needs and can perform ordinary search of information using thematic content portals and off-line CDs

Like to see
1. Understand specific needs and can perform advanced search of information using search engines
2. Understand specific needs and can perform off-line search, i.e., collect information form local institutions, by phone call using directory
3. Capable to do mental mapping of information sources

Love to see

1. Capable enough to train new infomediaries
2. They set up their own telecentre given the understanding of importance of information and knowledge and capability

Content generator

Boundary partner: Content Generator

Outcome challenge

The content generators, like research institutions, data generating institutions, domain expert institutions, generate content in a form, which is compatible for incorporating in content management systems and other forms. They understand the importance of sharing content and act upon it through sharing with content development institutions and posting content directly through their own systems.

Progress markers

Expect to see
1. The content generating institutions go into agreement with content development institutions for sharing printed form of content (and soft form, where possible) with or without copyright obligations.

Like to see
1. Content generating institutions share their generated content in soft form with content development institutions with/ without any licensing obligations.
2. They produce content according to the demands of various user groups

Love to see
1. Content generating institutions produce content in a system following inoperability framework [both technical and non-technical]
2. Content generating institutions publish their generated content in open licensing mode(s)

Content users/Telecenter workers

Boundary partner: Content Users/ Telecentre Workers

Outcome challenge

Content users/ telecentre workers find the content developed under the project useful. They provide feedback for improvement of the content.

Progress markers

Expect to see
1. Content users/ telecentre workers know about the content developed under the project and use them

Like to see
1. They provide feedback for improvement of the content.

Love to see
1. They promote the content to others due to its usefulness and quality.

University of Dhaka
Boundary partner: Department of Linguistics, University of Dhaka

Outcome challenge

The Department of Linguistics develops capacity for computational linguistics through the development of linguistic resources for Bangla, with both the students and faculty taking part in the activities.

Progress markers

Expect to see
1. The students and faculty are involved in creating the basic language resources needed for Bangla NLP
2. The department holds seminars on Bangla linguistics

Like to see
1. Students pick topics of concern to PAN Localization for their undergraduate and graduate thesis work
2. Faculty members document the various Bangla linguistic phenonema

Love to see
1. DU Linguistics offers courses on Computation Linguistics
2. DU Linguistics faculty and students going for higher studies in Computational Linguistics
3. DU Linguistics take charge of developing and maintaining Bangla language resources

Students
Boundary partner:

Outcome challenge

Progress markers

Expect to see
Like to see
Love to see

Faculty
Boundary partner:

Outcome challenge

Progress markers

Expect to see
Like to see
Love to see

Policy makers
Boundary partner: Policy makers

Outcome challenge
The policy makers are informed of the localization aspects of ICT, making localization a key part of the ICT policy.

Progress markers

Expect to see
1. Policy makers are informed of the activities of PAN Localization project

Like to see
1. Policy makers are informed about the localization aspect of ICT

Love to see
1. Policy makers include localization as a key component in the ICT policy

OSS developers

Boundary partner: Open Source Software Developers

Outcome challenge

The Bangla OSS developer community will be engaged in further development and enhancement of the localized software developed by the project. The development community will also build new applications based on the technologies developed under this project, and support the software for the end users.

Progress markers

Expect to see
1. OSS developers download and build the various software (spelling checker, OCR, TTS, etc) from source

Like to see
1. OSS developers understand the basics of developing Bangla NLP applications
2. OSS developers fix problems reported by end users
3. OSS developers provide basic support to the end users

Love to see
1. OSS developers contribute enhancements to the software
2. OSS developers develop new applications using Bangla NLP technology

End users

Boundary partner: End users of Bangla NLP software

Outcome challenge

The end users are able to use the varoius Bangla NLP tools such as spelling checker, text to speech, etc in their daily computing. The end users are also capable in asking for new features and reporting problems with the software produced by the project. The users should be able to contribute towards future development of these tools by writing documentation to share, as well as contributing language resources such as lexical entries.

Progress markers

Expect to see
1. End users download and install the various software (spelling checker, OCR, TTS, etc) being developed

Like to see
1. End users report problems in the software
2. End users ask for enhancements in the software

Love to see
1. End users contribute documentation to enhance the software
2. End users contribute lexical resources, such as entries for lexicon
3. End users incorporate the use of Bangla NLP software tools in their daily computing