

Business Requirements Document (BRD)

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# Introduction

## Document Purpose

The purpose of this document is to describe business requirements of BEP program clearly, unambiguously and technology-independent manner. The document will cover existing system overview, problem of existing system and especially about new system design requirement. This document also used reference documents for software requirement specification document which will be useful during system design.

## Intended Audience

The main intended audience for this document are the business owners of BRAC BEP and BRAC ICT and other BRAC programs.

## Project Background

This document is based on meetings held between staff of ICT Department and BEP Department.

## Purpose of the Business Requirements

* Business requirements for a clear and precise definition of the scope of the project
* Business requirements for new application development

## Business Goals/Objectives and Outcomes

**Goals and Objectives:**

The business goal and objective of this document is fully automated BEP program. The new system will focus on following priority areas:

1. Unique system for the entire BEP components
2. Uniquely indentify each and every stakeholder
3. Faster data processing and reporting
4. Reduce paper work
5. Real time data tracking
6. Better time management
7. Standardize monitoring process
8. Interoperability
9. Data security & reliability
10. Track all kind of training like teachers training, PO training etc.
11. Easily manageable library activities like books, borrower list, etc.
12. Financial activities like fund, scholarship, loan etc. will be secure & highly manageable

**Expected Outcomes**:

1. Fully automated process.
2. Less paper work
3. Time efficient and cost efficient
4. Multi-user access to software
5. Up-to-date and reliable data
6. User friendly environment
7. Better budget planning and utilizationState major business goals/objectives that the implementation of these Business Requirements will achieve. Avoid describing Technical goals.

## Benefits/Rationale

This section describes the major benefits to be achieved with the implementation of the Business Requirements.

The features of the system are as follows:

1. No data loss
2. Fraud detections
3. At a glance view
4. Management dashboard
5. Multi-user with access control
6. Highly secure and reliable
7. Scalable
8. Data recoveryState the major benefits that the implementation of these Business Requirements will result in. Mention both tangible and intangible benefits expected. option

State the major benefits that the implementation of these Business Requirements will result in. Mention both tangible and intangible benefits expected.

## Stakeholders

The main stakeholders of the project are **BRAC Education Program** & Partner NGO’s.

List Stakeholders – that is, the individuals or groups who have a vested interest in this project and whose interests need to be considered throughout the project. Identify their roles in the project and commitment to the project.

## Dependencies on existing systems

Currently BEP has many desktop based applications. They use these applications for data consolidation and reporting. All these existing data will migrate to the new system.

## References

Following references documents has been provided by BEP team for understanding, design new system.

1. BEP expectation beyond the present MIS
2. BEP MIS indicators by components

# Functional Requirements

The education system for BEP was proposed, designed and developed to assist the BEP, automate certain processes to reduce work load and produce timely information for day-to-day operation of the program.

This document summarizes all the software requirements and specifications which the BEP Education Project requires. Below are the list of all functionalities that comprises the scope/ modules of the project:

## Authentication and Authorization

The application will be fully protected based on authentication and authorization. User Administrators should have the power to assign rights per module to a user account. This prohibits unauthorized use of modules, access of confidential data and generation of reports.

## Unique ID Generation Process

### 2.2.1 Household ID Generation

To identify each household individually, a unique household number, Household ID (**HID**) is being generated. Each household will be identified uniquely through this UID.

### 2.2.2 Beneficiary ID Generation

To identify each beneficiary individually, a unique beneficiary number, Beneficiary ID (**BID**) is being generated. Through this ID, beneficiaries of BRAC can be tracked uniquely.

## User / Personnel Management

User Administrators should have the power to create new user account, edit and delete user account. All information related to the staff of BEP, RM, BM, AM, PO and teacher will be recorded using this module.

Please see use case reference **2.6.1** for **Create**, **2.6.2** for **Update** & **2.6.3** for **Delete** user.

## School Management

BRAC operates approximately 12450 **Pre-Primary Schools** (usually rented) all over the country. These schools facilitate for one year (January-December) in support of the donors (i.e. SPA, UNICEF, BRAC etc.). One teacher is appointed for one school.

**Pre-Primary School** data (i.e. name, address/ locations, school type, donor etc.) will be collected in this module. Authorized user should have the power to create new school, update, delete and generate report from web based MIS.

Please see use case reference **2.8.1** for **Create**, **2.8.2** for **Update** & **2.8.3** for **Delete** school.

**Expected Outcomes from Pre-Primary School:**

* No. of pre-school
* By donor/fund (i.e. SPA, UNICEF, BRAC etc.)
* By schools type (i.e. BPPS, Urban, SBK, Ethnic etc.)
* No. of preschool located on Government primary schools(GPS)/ Registered Non Government Primary School (RNGPS)
* Number of SMC/ Parents forum organized

**Shisu Kanon** (SK) is 2 years course for the children of 4 years (+). Average class size per school is 35. With fee (monthly, admission and session etc.) and sitting in a small group formation. As Shisu Kanon is a cost recovery intervention, monthly, admission and session fees are collected from students.

All information related to **Shisu Kanon** will be recorded in this module. Authorized user should have the power to create new school, update/ delete school’s information and to generate report from web based MIS based on searching criteria.

Please see use case reference **2.8.1** for **Create**, **2.8.2** for **Update** & **2.8.3** for **Delete** school.

**Expected Outcomes from Shisu Kanon:**

* No. of Shisu Kanon
* By donor/fund (i.e. BRAC, Others)
* By Area (i.e. Rural, Urban etc.)
* Number of SMC/ Parents forum organized
* Total tuition fees collected in the reporting month by
* By year/ class (1st & 2nd)
* By sex
* Total overdue in the reporting month
* By year/ class (1st and 2nd)
* By sex
* Total admission/session and others fee collected
* By year/ class (1st and 2nd)
* By sex

The primary school of BEP consists of two categories of schools, one is **BRAC Primary** **School (BPS)**, operated directly by BRAC and the other is operated under the EducationSupport Program (ESP) and implemented in partnership with local NGOs.

**BRAC Primary Schools** cover a five year curriculum in four years. The age group of children is 9-12 years and small class size with 28-30 children. Schools are located at remote (i.e. Char/Haor/Baor/CHT), urban and plain land areas.

|  |  |
| --- | --- |
| Class | Duration of a Class |
| Class 1 | 9 Months |
| Class 2 | 9 Months |
| Class 3 | 9 Months |
| Class 4 | 10 Months |
| Class 5 | 11 Months |

There are 22,541 **BRAC Primary Schools** (including ESP schools) which cover 64 districts of Bangladesh.

Following are the types of primary school:

* Urban School
* Ethnic School
* Boat/ Shikha Tari School
* School for marginal Community
* Street Children School
* School for dropout children/ Bridge School
* ESP/ Partner NGOs operated Schools

Students of primary school complete DR (Descriptive Role) form at class/ grade 5 for attending the PSC (Primary School Certificate) exam. Finally they pass the PSC exam according to grading system (i.e. A+, A, A- etc.).

All information related to **Primary School** will be recorded in this module. POs visit schools, collect data & bring them to branch office. Authorized user should have the power to create new schools, update/ delete them and to generate report.

Please see use case reference **2.8.1** for **Create**, **2.8.2** for **Update** & **2.8.3** for **Delete** school.

**Expected Outcome from Primary School:**

* No. of BRAC primary school
* By donor/fund (i.e. SPA, EAC, BRAC etc.)
* By schools type (i.e. Urban, ESP, Ethnic etc.)
* Class/ grade (1-5) wise BRAC Primary School
* By donor/fund
* By schools type
* Number of partner NGOs

**Formal Schools** are same as Primary School. Differences between BPS & formal school are duration of BPS is 4 years for 5 grade (1-5) & duration of formal school is 5 years for 5 grade (1-5). It’s completely run according to government system. Exam segregation policy follows government rules. Here, teachers could be many for different subjects.

**Education Support Programme** (ESP) run by local NGO & follow **BRAC primary school** **(BPS)** model. ESP operates schools where BPS is not exists. ESP equips partner NGOs with the support and information to replicate the BRAC primary school model. Two BRAC members, Regional Manager (RM) and Area Manager (AM) at field level are engaged to support the partner NGOs. Currently ESP operates 4965 schools through 407 partner NGOs.

**Shisu Niketon** (Cost Recovery Intervention) is 5 years schooling (Class 1-5) and follows the methods of formal schools. Average class size per school is 30. Its fee based school (monthly, admission and session etc.) and students sit (chairs & round tables) by a small group formation (5 students per table).

All information related to **Shisu Niketon** will be recorded in this module. Authorized user can create new school, update/ delete schools all information, entry amount of fees collected from each school and generate reports based on requirements.

Please see use case reference **2.8.1** for **Create**, **2.8.2** for **Update** & **2.8.3** for **Delete** school.

**Expected Outcomes from Shisu Niketon:**

* No. of Shisu Niketon school
* By donor/fund (i.e. SPA, BRAC etc.)
* By schools type (i.e. Urban, Ethnic etc.)
* Class/grade (1-5) wise Shisu Niketon
* By donor/fund
* By schools type
* Total tuition fees collected in the reporting month
* By classes (1 to 5)
* By sex
* Total overdue in the reporting month
* By classes (1 to 5)
* By sex
* Total admission/session and others (i.e. sports, exam etc.)fee collected
* By classes (1 to 5)
* By sex

**Ethnic School** formed for those children who cannot understand Bengali. No. of students of this school may less than other schools. In this school different languages are used for different communities. There are two teachers in some ethnic school.

**Child with Special Needs** (CSN) is a cross cutting issues where each school has at least one child with special needs children.

All information related to **School of** **Ethnic & CSN** will be recorded in this module. Authorized user should have the power to create new school, update/ delete them and to generate report from MIS.

Please see use case reference **2.8.1** for **Create**, **2.8.2** for **Update** & **2.8.3** for **Delete** school.

**Expected Outcomes from Ethnic/ CSN School:**

* No. of Ethnic schools
* By donor/fund
* By schools type
* No. of schools with CSN students
* By donor/fund (i.e. SPA, EAC, BRAC, Unicef etc.)
* By education level (i.e. pre-primary, primary)

The main objective of **Secondary School (supported)** is to supplement the government’s effort to improve the quality of education particularly in poor performing rural-areas. The criteria, for selecting new schools are:

- Being registered for salary payments through the government

- Having an elected School Management Committee (SMC),

- Having a minimum of 8–10 teachers and at least 250 students, and

- Being within BRAC’s working areas.

BRAC provides management training for the Head teachers and Assistant Head teachers, subjects based training, School Action Plans (SAP) to the Head teachers and SMC chairpersons and members. These training will be predefined in the system. After visiting school PO will come to the branch office & update all information of secondary school in the system.

BRAC promotes **Computer Aided Learning (CAL)** in secondary schools to develop interactive software based learning on the national curriculum to improve teachers’ capacity and make lessons more interesting for students.

Please see use case reference **2.8.1** for **Create**, **2.8.2** for **Update** & **2.8.3** for **Delete** school.

**Expected Outcomes from Secondary School (supported):**

* No. of secondary schools (both total and new) supported by BRAC
* No. of BRAC supported secondary schools implemented CAL

Each school (BPPS, BPS, SK, SN, SS etc.) has a school management community (SMC) and parents’ forum. Purpose of this community is to monitor all activity of a school and ensures regular attendance for the children. Number of SMC & organized parents forum meeting in a school will be recorded in BEP MIS.

## Student Management

To get admit in a school children have to register at first. All category of student will be predefined in registration form. Admin will select the appropriate category before creating a new student. They are:

* General Students
* Ethnic Students
* Children with Special Needs (CSN)

Ethnic students will get bilingual texts and supplementary reading materials to overcome the linguistic gap and become proficient in Bengali.

Types of CSN will be predefined in registration form. These types are:

* Physical Disabilities
* Mental Problem
* Hearing Problem
* Eye Problem etc.

BRAC provides corrective surgeries, along with different assistive devices like wheel chairs, crutches, hearing aids and glasses; and even builds ramps to make classrooms more accessible to disabled children. Types of assistive devices will be predefined in system with their cost. In student profile it will be mentioned that what kind of support provided to him.

Students (CSN) also participate in national sports and cultural activities, as well as income-generating activities, like running small grocery stores or raising goats. This information also will be added in their profile.

Responsible PO (authorized user) can enter all new registration information using android application (through mobile phone). Additionally he will manually fill up registration format with all required fields and bring it to branch office. Branch officer will entry registration info into web MIS Application. When the entry process will be done, Area Manager, Regional Manager & HO staff can see this information instantly through web. Reports will automatically generate based on their search criteria.

Please see use case reference **2.7.1** for **Create**, **2.7.2** for **Update** & **2.7.3** for **Delete** student.

**Expected Outcomes from Pre-Primary Student:**

* No. of pre-primary school students
* By donor/fund
* By schools type
* No./proportion of female students
* By donor/fund
* By schools type
* Average attendance of the students (both girls and boys)
* By donor/fund
* By schools type
* No. of pre-school students completed the one year course
* By donor/fund
* By schools type
* No./ proportion of female students completed the course
* By donor/fund
* By schools type
* No. of pre-school course completed/graduated students transferred to formal primary school (GPS/RNGPS)
* By donor/fund
* By schools type
* Number/proportion of female students transferred to GPS/RNGPS
* By donor/fund
* By schools type

**Follow up BRAC Pre-Primary Graduates in Primary School:**

BPPS graduates progress in formal primary school (GPS/RNGPS) tracks on regular basic (Class I-V). POs visit the primary school (GPS/RNGPS) once a week to check on the attendance of BPPS graduates in primary school. They will have the facility in web MIS application where they (authorized user like PO) can add all information like attendance, results, class performance etc. of BPPS graduates & organize meeting with the parents in every alternative month that will focus on the importance of their children’s regular attendance in primary school, good use and care of student’s materials, and cleanliness, personal hygiene etc.

Following information will be identified from this module –

* No. of BRAC preschool students (male, female or both) completed DR form for attending PSC (primary school certificate) exam
* No. of BRAC preschool students appeared at the PSC exam
* No. of female students appeared at the PSC exam
* No. of BRAC preschool students passed the PSC exam by grading (A+, A, A-, B,C,D,F)
* No. of female students passed the PSC exam by grading (A+, A, A-, B,C,D,F)

**Expected Outcomes from Shisu Kanon Student:**

Shisu Kanon Student will have the same outcome as **Pre-Primary School**

**Expected Outcomes from Primary Student:**

* No. of students enrolled in BRAC primary school
* By donor/fund (i.e. SPA,EAC, BRAC)
* By schools type (i.e. Urban, ESP, Ethnic etc.)
* By grade/class (1-5)
* Number/proportion of female students to total number of students enrolled in BRAC primary school
* By donor/fund
* By schools type
* By grade/class
* No. of students dropped out from BRAC primary school
* By donor/fund
* By schools type
* By grade/ class
* No. of replaced students
* By donor/fund
* By schools type
* By sex
* Average attendance of the students (both girls & boys)
* By donor/fund
* By schools type
* No. of students (male, female or both) completed grade-5/ PSC exam
* By donor/fund (i.e. SPA, EAC, BRAC etc.)
* By schools type (i.e. Urban, ESP, Ethnic etc.)
* No. of students (male, female or both) completed the DR form
* By donor/fund
* By schools type
* No. of students (male, female or both) appeared in the PSC (Primary School Certificate) exam
* By donor/fund
* By schools type
* No. of students (male, female or both) passed in the PSC exam
* By donor/fund
* By schools type
* No. of students (male, female or both) attained A+, A,A-,B,C,D and F
* By donor/fund
* By schools type
* No. of graduated students (male, female or both) transferred to secondary school
* By donor/fund
* By schools type

**Expected Outcomes from Support to Secondary School Student:**

* No. of students (male, female or both) in secondary schools supported by BRAC
* Number of students (male, female or both) appeared in the SSC/JSC exam
* Number of students (male, female or both) passed the SSC/JSC exam.
* Number of students (male, female or both) attained the grading/GPA (A+, A, A-, B, C, D and F) in the SSC/JSC exam.

**Tracking BRAC Primary Graduates in Secondary School (TBS)**

TBS is a follow up programme for BPS students who completed class – 5 from BRAC schools. TBS formed to follow up the students’ attendants, participation in examination (i.e. yearly exam, JSC, SSC etc.), timely pay the school fees etc.

POs visit the secondary school to follow up all these information of BPS graduates. They will have the facility in web MIS application where they can add all these information of BPS graduates & organize meeting with the parents every alternative month that focus on the importance of their children’s regular attendance in primary school, good use and care of student’s materials, and cleanliness, personal hygiene etc.

Following information will be identified for this module –

* No. of secondary schools under TBS
* No. of students (male, female or both) under TBS
* By classes (6-10)
* No. of drop-out students (male, female or both)
* By classes (6-10)
* No. of Para community & parents forum formed
* No. of BRAC graduated (male, female or both) attended in JSC exam
* No. of BRAC graduated passed the JSC exam
* By grading / GPA: A+, A, A-, B, C, D and F
* By subject (i.e. English, Science, Math etc.)
* By proportion of female
* No. of BRAC graduated (male, female or both) attended in SSC exam
* No. of BRAC graduated passed the SSC exam
* By grading / GPA: A+, A, A-, B, C, D and F
* By proportion of female

**Expected Outcomes from Shisu Niketon Student:**

Shisu Niketon Student will have the same outcome as **Primary School**

**Expected Outcomes from Ethnic/ CSN Student:**

* No. of Ethnic students
* By schools type (i.e. pre-primary, primary, ESP)
* By donor/fund
* By ethnic community (i.e. chakma, marma, garo, tea-garden etc.)
* No. of female Ethnic students
* By schools type
* By donor/fund
* By ethnic community
* No. of CSN students
* By CSN type (i.e. physical, visual, hearing, speech, multiple etc.)
* By schools type (i.e. pre-primary, primary, ESP etc.)
* By donor/fund
* No. of CSN students received treatment
* By treatment types (i.e. eye, hearing etc.)
* By schools type (i.e. pre-primary, primary, ESP etc.)
* By sex and donor/fund
* No. of Assistive Device provided to CSN students
* By schools type (i.e. pre-primary, primary, ESP etc.)
* By sex and donor/fund

**Mentoring (student)**

Mentoring is a team of student which is formed by selecting approximately 25-30 students of grade 6-9 to mentor week students to improve their performance. Girls are given preference in the selection process. To become a mentor, a student needs to be a strong performer from all side, have a mind to help others, have the capacity to make others understand, have an influential personality and have leadership capacity.

Authorized user will have the facility in web MIS application where they can add new, update & delete mentoring student information.

**Expected Outcomes from Mentoring (student):**

* No. of BRAC supported secondary school involved with mentoring activities
* No. of teachers (male, female or both) trained on values and mentoring
* No. of students (male, female or both) trained on values and mentoring by classes

**Student Attendance Management**

In current process, POs collect all attendance information from school teachers & bring it to the branch office. Branch officer merge these information, prepare report with required information & send it to HO through courier or fax.

After implementing BEP MIS, authorized user can enter all attendance related information using web interface collected by PO from schools. Also, the system (BEP MIS) will have the options to review the collected data, make some correction or delete data if required. Average attendance information of that school will be auto calculated.

If required, authorized user (responsible PO) can send attendance information through SMS based service which can be automatically integrated with the system.

Please see use case reference **2.14.1** for Create, **2.14.2** for Update & **2.14.3** for Delete student attendance information.

**Student Drop out Information**

PO will collect student drop out information into hard copy & bring it to branch office. Branch officer will entry drop out info into web MIS Application. Average drop out information of that school will be auto calculated.

If required, authorized user (responsible PO) can send drop out information through SMS based service which can be automatically integrated with the system.

Please see use case reference **2.18.1** for Create, **2.18.2** for Update & **2.18.3** for Delete student drop out information.

**Student Replacement Information**

For any unavoidable circumstances if any student drop then there should be a student replacement option for new students. Authorized user will register replacement student information using web interface from hard copy record collected from schools. Replacement must be done as per BEP policy.

## Education Level Management

Authorized user will create education level i.e. pre-primary, primary, secondary using web interface. He/ she should have the power to create, update and delete educational level.

Please see use case reference **2.9.1** for **Create**, **2.9.2** for **Update** & **2.9.3** for **Delete** educational level.

## Class/ Grade Management

Authorized user will create class i.e. class 1, class 2 etc. according to education level using web interface. He/ she should have the power to create, update & delete class.

Please see use case reference **2.10.1** for **Create**, **2.10.2** for **Update** & **2.10.3** for **Delete** class.

## Subject Management

Authorized user will create subject according to grade/ class using web interface. He/ she should have the power to create, update & delete subject.

Please see use case reference **2.11.1** for **Create**, **2.11.2** for **Update** & **2.11.3** for **Delete** subject.

## Exam Management

Authorized user will create exam according to grade/ class & subject using web interface. He/ she should have the power to create, update & delete subject.

Please see use case reference **2.12.1** for **Create**, **2.12.2** for **Update** & **2.12.3** for **Delete** exam.

## Result Management

In current process, POs collect all result information from school & bring it to the branch office. Branch officer merge these information, prepare report with required information & send it to HO through courier or fax.

After implementing BEP MIS, authorized user can enter all result related information using web interface collected by PO from schools according to exam & grading policy. When he/she done entry, HO staff can see this instantly through BEP MIS & also can generate report for higher management with necessary criteria. Also, the system (BEP MIS) will have the options to review the collected data, make some correction or delete data if required.

If required, authorized user (responsible PO) can send result information through SMS based service which can be automatically integrated with the system.

Please see use case reference **2.16.1** for **Create**, **2.16.2** for **Update** & **2.16.3** for **Delete** result information.

## Medhabikash (Promoting Talent)

This intervention was initiated to provide financial support for helping poor and meritorious students to engage in higher education.

Following are the selection criteria of scholars:

* Students, who have golden GPA 5 or A+ in SSC or HSC
* Students who have talent with scarcity of sufficient amount of finance get scholarship
* Students who have completed their primary education from BRAC primary schools
* Students who will give good performance in viva

Authorized user will have the facility in web MIS application where they can add all necessary information of BRAC or non BRAC students who get scholarship for their higher education. Amount of scholarship of each scholar is also recorded in this module.

Please see use case reference **2.23.1** for **Create**, **2.23.2** for **Update** & **2.12.3** for **Delete** information of medhabikash.

**Expected Outcomes from Medhabikash:**

* No. of students receiving financial assistance at HSC level (male, female or both)
* By group (Science, Arts, Commerce etc.)
* By BRAC internal student or non BRAC student
* No. of students receiving financial assistance at under graduate level (male, female or both)
* By subject
* By institution (college/ university/medical etc.)
* Medhabikash student result at HSC Level
* By grading/GPA
* By sex
* Medhabikash student result at undergraduate Level
* By grading/GPA
* By sex

## Teacher Management

One teacher is appointed for one school but there are two teachers in some ethnic schools. Teachers are provided various trainings before & after appointing for a school. Following are some of them:

* **Basic Training:** One week training on child psychology, child development, teaching learning process, competencies, materials, pre-primary content.
* **Orientation:** Three days orientation on classroom management, preparation and uses of materials, practice teaching-learning delivery process, content.
* **Monthly Refreshers:** Organize at the end of month for identifying problems, analyzing delivery of lessons and finding solutions, fix up target & preparation for the next month.

All information related to Teacher will be recorded in this module. User administrator and authorized user will have the facility in web MIS application where they can create, update and delete teachers’ basic, academic & training information.

Please see use case reference **2.19.1** for **Create**, **2.19.2** for **Update** & **2.19.3** for **Delete** teacher.

**Expected Outcomes from Pre-Primary School Teachers:**

* No. of pre-school teachers
* By donor/fund
* By school’s type
* By sex
* No. of teachers received basic training
* By donor/fund
* By school’s type
* By sex
* No. of teachers received monthly refreshers training
* By donor/fund
* By school’s type
* By sex
* Educational qualification wise number of teachers (below SSC, SSC, HSC etc.)
* By donor/fund
* By school’s type
* By sex
* No. of preschool teachers dropped out

**Expected Outcomes from Shisu Kanon Teachers:**

Shisu Kanon Teachers will have the same outcome as **Pre-Primary School**

**Expected Outcomes from Primary School Teachers:**

* No. of BRAC primary school’s teachers by educational qualification (SSC, HSC, above HSC etc.)
* By donor/fund
* By school’s type
* By sex
* No. of BRAC primary school’s teachers by experienced year or cycle completion
* No. of BRAC primary school’s teachers dropped out
* By donor/fund
* By school’s type
* By sex
* No. of BRAC primary school’s teachers trained
* By donor/fund
* By types of training (i.e. basic, refreshers etc.)
* By school’s type
* By sex

**Expected Outcomes from Teacher module of Shisu Niketon:**

Shisu Niketon will have the same outcome as **Primary School**

**Expected Outcomes from Ethnic School Teachers:**

* No. of ethnic teachers
* By donor/fund
* By schools type
* By ethnic community types (i.e. Chakma, marma, garo etc.)
* By sex
* No. of ethnic schools’ teachers by educational qualification
* By donor/fund
* By school’s type
* No. of ethnic school’s teachers dropped out
* By school’s type
* By donor/fund
* No. of ethnic teachers trained
* By types of training (i.e. basic, refreshers etc.)
* By schools type
* By donor/fund
* By sex

**Expected Outcomes from CSN Teachers:**

* No. of teachers who received training to organize inclusive education
* By schools type
* By donor/fund
* By sex
* No. of teachers who received monthly refreshers training to organize inclusive education
* By donor/fund
* By school’s type
* By sex

**Expected Outcomes from Secondary Teachers:**

* No. of Head teachers/ Assistant head teachers and SMC members (male, female or both) attended orientation workshops, management training, training on School Action Plan
* Subject based teachers training:
* No. of English teachers trained
* By classes 6- 8 (Module 1)
* By classes 9- 10 (Module 2)
* No. of Mathematics teachers trained
* By classes 6- 8 (Module 1)
* By classes 9- 10 (Module 2)
* No. of Science teachers trained
* By classes 6- 8 (Module 1)
* By classes 9- 10 (Module 2)
* No. of geography teachers trained
* By classes 6- 8 (Module 1)
* By classes 9- 10 (Module 2) etc.
* No. of teachers attended follow-up training subject wise
* No. of teachers trained on CAL materials

## Chhatrabandhu Management

Individuals who volunteer their time and provide after-school free tuitions to underprivileged students are known as Chhatrabandhu. Responsible PO of a particular area selects chatrabandhu. All capable people can play the role of chatrabandhu. They get public recognition for their work and BRAC certificate. They receive 3 days training from BRAC on English, Math & Science. PO will follow up their activities.

All functions related to chhartrabandhu will be recorded in this module. Authorized user will have the facility in web MIS application where they can create, update and delete chhartrabandhu information.

**Expected Outcomes:**

* No. of chhatrabandhu (volunteer tutor) by sex
* No. of students involved under chhatrabandhu by sex

Please see use case reference **2.26.1** for **Create**, **2.26.2** for **Update** & **2.26.3** for **Delete** chhatrabandhu information.

## Donor Management

All information related to Donor will be recorded in this module.Authorized user will have the facility in web MIS application where they can create, update and delete donor information.

Please see use case reference **2.21.1** for **Create**, **2.21.2** for **Update** & **2.21.3** for **Delete** donor.

## NGO/ Organization Management

All information related to Organization and partner NGOs/ Organization will be recorded in this module. Authorized user will have the facility in web MIS application where they can create, update and delete NGO/ Organization information.

Please see use case reference **2.22.1** for **Create**, **2.22.2** for **Update** & **2.22.3** for **Delete** organization.

## Adolescent Development Program

### 2.16.1 Adolescent Club

The prime focus of the club is adolescent girls who come and pass their time to be sociable, to share experiences, and to be supported through the various challenges in their lives. One Adolescent Leader (AL) selected from the club members and receives a small honorarium, is responsible for club operations and management. After every 3 months the club forms a new batch with new 30 members.

To be a member of a club, adolescent have to register at first. Adolescent leader will fill up the registration hard copy & also take daily attendance information of club members. PO will bring the hard copy to the branch office & branch officer will give entry in the web application. If the adolescent member is ethnic then his/ her community need to be mentioned in the registration form. Authorized user can generate report based on following expected outcomes from Adolescent Club.

Please see use case reference **2.24.1** for **Create**, **2.24.2** for **Update** & **2.24.3** for **Delete** adolescent club.

**Expected Outcomes from Adolescent Club:**

* No. of adolescent club
* By donor/fund
* No. of adolescent members
* By donor/fund
* By sex
* No. of community supported adolescent clubs
* No. of adolescent leaders by sex
* No. of adolescent leaders received leadership training
* No. of adolescent leader received refreshers training

**STAGE (Stimulating Theatre for Adolescent Girls’ Empowerment)**

The objective of the initiative is to empower adolescents (especially girls) and the community by raising awareness of social and health issues. Each group performs theatre shows on different issues, such as HIV/AIDS, dowry practice, child marriage, birth registration, child trafficking, and abuse.

All information related to STAGE will be recorded in this module. Authorized user will enter training list related to STAGE, title of each theatre, theatre location, participants of theatre etc. information into MIS.

**Expected Outcomes from STAGE:**

* No. of adolescent club members received training on STAGE
* No. of STAGE shows organized

**Cultural Activities**

Cultural activities bring out adolescents talent through cultural competitions and provides the required trainings to increase their capacity in cultural performances. This competition was started by the adolescent clubs and then subsequently on the upazilla and district level. The final competition with top contestants takes place in the national level which is broadcasted on satellite TV channels (e.g. Meghe Dhaka Tara).

**Expected Outcomes from Cultural Activities:**

* No. of cultural activities organized
* No. of members involved in cultural activities
* No. of participants selected for TV shows
* By categories (i.e. song, dance etc.)
* By sex

**Life Skill Based Education (LSBE)**

Life Skill based Education offers adolescents education on life skills facilitated by different social and health related issues, such as reproductive health, sexual abuse, children’s rights, gender, HIV/AIDS, sexually transmitted infections (STIs), eve teasing, child trafficking, substance abuse, violence, family planning, child marriage, dowry, and acid attacks.

**Expected Outcomes from LSBE**

* No. of club members received LSBE sessions/ courses
* No. of adolescent leaders APON/LSBE designated to facilitate adolescent club activities
* Number of Adolescent Leaders (girls & boys) who received orientation and refreshers for organizing APON/LSBE courses

**Livelihood Skill Development Training**

Livelihood training was initiated to assist girls in engaging in income-generating activities to empower them financially, carry on their education and delay marriage. The adolescents receive training on tailoring, embroidery, journalism, poultry, livestock, beauty care etc.

**Expected Outcomes**

* No. of adolescent club members received livelihood training
* By training type (i.e. beauty care, basic computer training etc.)
* By sex

**Community Participation**

The purpose of community participation is to arrange parents’ forum, mothers’ forum, Community leaders’ forum, Club support community.

**Expected Outcomes**

* No. of parents mobilized through parents meetings
* No. of mothers mobilized through mothers forum meetings
* No. of mothers meeting held on child rights, family planning, child marriage, dowry, sexual harassment etc.
* No. of sessions were held with adolescent’s fathers
* No. of community leaders participated at workshop

**Other Developments and Initiatives**

ADP started some new initiatives which include - outdoor sports, tutorial initiative for Adolescents (TIA), EITA (English & ICT for Adolescents) project and GOAL project. The outdoor sports initiative involving adolescent girls aims at increasing girls’ participation in outdoor sports. ADP provided formal training by national coaches to form football, cricket and volleyball teams and organizes regular practice sessions for adolescent girls.

**Expected Outcomes**

* No. of team developed
* By category (i.e. football, cricket, volleyball etc.)
* By donor/ fund
* No. of coach under GOAL project
* No. of members under GOAL project
* No. of members/students completed GOAL curriculum

### 2.16.2 Skills Training for Advancing Resources (STAR)

STARs are a new initiative taken by BRAC Education Program in partnership with UNICEF and ILO to provide adolescent girls and boys with Technical and Vocational Education and Training. The aim of this intervention is to improve the chances of vulnerable adolescents for achieving decent employment in the future. STAR targets those learners who dropped from secondary school & age between 14 years to 20 years to provide Technical and Vocational Education and Training. The learners are receiving training from Master Crafts Person (shop/enterprise owners) and Technical Trainers (Instructors from different vocational training institutes) on 9 different trades in formal sector.

Training category will be predefined in the system. Duration of training is 6 months. MCP gets 1200TK & trainee gets 1000TK per month. Trainee may drop out during training period. BEP follow up trained learners next 6 months or more from the time they start a job regarding training. All these information will be recorded in STAR module by the responsible user. He/ she can generate report based on following expected outcomes of STAR.

**Expected Outcomes**

* No. or proportion of trainees
* No. or proportion of trainees completed training
* By training type (i.e. Motorcycle repairing, tailoring, Mobile phone services etc.)
* By sex
* No. of trainees dropout by sex
* Number of MCP (Master Craft Persons)

## Gonokendro/ MCLC (Multipurpose Community Learning Centre)

Gonokendros are established with BRAC and community financing & within a year of establishment, these are registered as trusts. Adults, children and students are the members of Gonokendro. At first they have register themselves to be the member of gonokendro. They can read & borrow books from here. In gonokendro there is a child corner so that the children can play when they want.

Gonokendros also provide IT facilities for both internal & external users. Librarian has to maintain a registration & attendance copy so that he/ she can update the status of gonokendro members daily, twice in a month & monthly to give it to the responsible PO (Program Organizer). PO will take this information to the branch office where branch officer will enter these into web based BEP MIS. Authorized user can generate report based on following expected outcomes of Gonokendro.

There are 3 packages for (IT facilities) Computer Learning for children, students & general people:

* Children Package 🡪 Class (1-6) 🡪12 classes in a month 🡪 50TK
* Student Package 🡪 Class (7-10) 🡪12 classes in a month 🡪 100TK
* General Package 🡪 External users🡪36 classes in 3 months 🡪 900TK

There are also some skill develop training like horticulture, fish culture, poultry etc. which are provided through GoB (Government of Bangladesh) to members.

Mobile library is a large vehicle designed for use as a library. Only registered user of a particular area can use this facility. They can borrow books for a couple of days. Van driver maintain a registration copy of member.

Please see use case reference **2.25.1** for **Create**, **2.25.2** for **Update** & **2.25.3** for **Delete** gonokendro.

**Expected Outcomes**

* Total no. of gonokendro established
* No. of community supported gonokendro
* Total no. of Librarian
* No. of gonokendro members (male, female or both)
* Average no. of members per MCLCs
* Average no. of books issues per MCLCs
* No. of community supported gonokendro established
* No. of members received skill training by categories and sex
* No. of children corner
* No. of mobile library established
* No. of members use mobile library
* No. of gonokendro with computer facility
* No. of members/ trainee received basic computer training

# Function Hierarchy Diagram

Program Organizer

Branch Manager

Area Manager

Regional Manager

Head Office

NGO

Program Organizer

Area Manager

Regional Manager

Head Office

BRAC Education Program Partner NGOs Operated School

**Firstly**, Programme Organiser (**PO**) collects information from schools and brings it to Branch Office **(BO)**. Branch Managers **(BM)** supervise POs, regular monitor & follow-up their activities.

**Secondly**, Area Managers **(AM)** supervise 10-12 branch offices in their areas and areresponsible for planning, overseeing finances, supervise **BM** activities and conductmeeting with **BMs and POs.** They merge information collected by POs & sendit to regional office.

**Thirdly,** Regional Managers **(RM)** supervise 6-7 area offices in their region and responsible for coordinating all activities of AM. They supervise activities at both area and branch level, arrange meetings with AMs & BMs to provide necessary guidance related to school operations. Regional officer will check the report & send it to Head Office (HO).

**Finally,** after collecting all the reports from Area Manager, **RM** sends the final report to Head Office (**HO**). In HO, MIS officer merges all reports and generates reports based on required criteria.

# BEP Data Process Flow

Figure 1: BEP Process Flow

# Scalability for Business Needs

The BEP Management Information System was proposed to provide Education Project ease in their daily workload in managing BEP information. It is designed to cater multiple stations, unlimited users and minimal database growth.

The application was developed, limited to the Project Scope and the Software Requirements Specification (SRS) document; nevertheless, modifications can be applied as long as the change is still covered in the Project Scope.

Each versioned solution released to production has to undergo the following steps before it can be released:

1. All modifications are properly recorded in detail and communicated to the client;
2. All modifications should undergo full testing;
3. All modification should undergo rework should testing find it necessary;
4. Testing has to clear modifications from defects before release;
5. End users must be trained for each modification applied to the system;
6. End users must clear modifications from any defects through a clearance form. This shall prove that the modification has been delivered and released to production and that it is working 100%.

These steps need to be executed prior the release of versioned solutions to production to ensure that it does not impede stability and supportability of the on-site version and that it would not hamper the on-going usage of the application.

# Strong Security

The security of software is threatened at various points throughout its life cycle, both by inadvertent and intentional choices and actions. The software’s security can be threatened during its development, during its deployment, during its production and even during its sustainment. These threats may compromise the software’s dependability and trustworthiness when it is operation, thus, certain measures are considered for the development of the BEP Management Information System to make it tamperproof and protected from any vulnerabilities with which it can be exposed to.

To assure the security of the whole software development life cycle of the BEP Management Information System, the following aspects and practices are applied:

1. **Development Tools.** The programming language(s), libraries, and development tools used to design and implement the software are evaluated and selected for their ability to avoid security vulnerabilities and to support secure development practices and principles.
2. **Testing Practices and Tools**. The software is expressly tested to verify its security.
3. **Third Party Components.** Commercial components are evaluated to determine whether they contain vulnerabilities, and if so whether the vulnerabilities can be remediated through integration to minimize the risk they pose to the software system.
4. **Deployment**. The installation configuration of the software minimizes the exposure of any residual vulnerability it may contain.
5. **Execution Environment**. Protections are provided by the execution environment that can be leveraged to protect the higher level software that operates in that environment.
6. **Practitioner Knowledge**. The software’s analysts, designers, developers, testers, and maintainers should have the necessary information on security awareness and knowledge to understand, appreciate, and effectively adopt the principles and practices that will enable them to produce secure software.
7. **Security Trail**. An audit trail of all actions made in the system by a user account is captured in a security trail built within the system. All actions are recorded by date, time, module affected and records entered and modified.
8. **Access Rights**. User’s access rights are limited to with the implementation of a user management module where a certain user account’s accessibility to modules and reports are controlled.

# Performance Requirements

The Performance Requirements section defines the performance metrics of the BEP Management Information System with which it must meet across all user groups and deployments. The performance of the system is measured in the number of transactions per period of time. Transactions may refer to query responses per second, records encoded and saved per minute, and report pages generated per hour. The number of concurrent users or connections is given great importance also thus query response time is limited and should not exceed 5 seconds.

Nevertheless, the above mentioned software performance metrics are also dependent to the hardware resources available, e.g. Processor, Memory, Network, etc., therefore, the specified hardware requirements for the software must be provided, otherwise, results may differ significantly.

# Accountability and Audit Back to Business Sponsors

The Accountability and Audit Back to Business Sponsors section identifies the metrics that will quantify and qualify that the solution meets its business requirements. This section describes what will be measured and to whom that information will be conveyed within the sponsoring business unit.

Each versioned solution released to production undergoes a full quality testing cycle. In case of defects unearthed during testing, the application is submitted back for rework and then retesting all over again. This serves as the Provider’s guarantee to the users that the released version will not, in any way, impede the software’s performance, quality and dependability, thus, no work may be disrupted.

However, defects occur on the most unexpected scenarios, so defects may still be encountered while software is on site production already. Due this, the Provider is giving a 6-months warranty for the software, thus all defects encountered by end users within this period shall be addressed and provided fixes with through patches by the Provider, free of charge.

In the event that after the 6 months warranty, new requirements are submitted, it shall be contracted in a separate agreement already. The Provider shall not be responsible for the maintenance and support of any third party product or equipment for support and maintenance of any third party product or equipment installed in the same hardware where the BEP Management Information System is deployed.

# Hardware Environment Dependencies

N/A

# Server Specifications

|  |
| --- |
| N/A |

# Work Station Specifications

N/A

# Staffing Requirements

N/A

# Milestones

This section is a detailed schedule of the BEP Management Information System Project Milestones:

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Please include here complete glossary of business terms used in this document.

# Revision Log

| Date | Version | Change Reference | Reviewed by |
| --- | --- | --- | --- |
|  |  |  |  |
| 24-07-2014 | 1.0 | First Initial Draft of BRD | ICT & BEP |
| 08-09-2014 | 2.0 | Second Version of BRD | ICT |
|  |  |  |  |
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# Appendices

N/A

Each Appendix must have:

A separate header, numbered A-Z, with an appropriate descriptive title. Use the Heading 1 Style for each Appendix Header. This style will automatically insert a page break.

A lead in paragraph that states the importance of the data to this report

A closure, centred on a separate line, that repeats the header, such as End of Appendix A – Title.

# Approval

This document has been approved as the official Business Requirements Document for the BEP Education Management System project.

Following approval of this document, changes will be governed by the project’s change management process, including impact analysis, appropriate reviews and approvals, under the general control of the Master Project Plan and according to Project Support Office policy.

|  |  |  |
| --- | --- | --- |
| Prepared by | Signature | Date |
| 1. Shahinur Islam Mithun   Principle Software Eng.  BRAC ICT Department   1. Tanzia Rahman   Software QA-1  BRAC ICT Department | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| Approved by | Signature | Date |
| [Client Acceptor’s Name]  [Title]  [Organization] |  |  |
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