

Report on
Preventing student drop out through supply chain management
process: A focus on Directorate of Primary Education,
Bangladesh

By

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A practicum report submitted to the BRAC Institute of Governance and Development (BIGD) in partial fulfillment of the requirements for the degree of Masters in Procurement and Supply Management (MPSM).

BRAC Institute of Governance and Development (BIGD)

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Declaration

It is hereby declared that, the report submitted is my own original work while completing degree at BRAC University. The report does not contain material previously published or written by a third party, except where this is appropriately cited through full and accurate referencing. The report does not contain material which has been accepted, or submitted, for any other degree or diploma at a university or other institution. I have acknowledged all main sources of help.

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Letter of Transmittal

Mohammad Sirajul Islam
Sr. Academic Coordinator
BIGD, BRAC University

Subject: Submission of practicum report titled “Preventing student dropout through supply chain management process: A focus on Directorate of Primary Education, Bangladesh”

Dear Sir,

I am grateful to submit herewith my report on “Report on Preventing student dropout through supply chain management process: A focus on Directorate of Primary Education, Bangladesh”, as a partial requirement to achieve the degree of Masters in Procurement and Supply Chain Management. It is my proud privilege to work under your active supervision and guidance.

I have attempted my best to finish the report with the essential data from senior officers of directorate of Primary Education, student and teacher in prevent dropout.

I hope that the report will meet the desires.

Sincerely yours,

Md. Jahangir Hossain Talukder

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30 October 2023

Non-Disclosure Agreement

This agreement is made and entered into by and between the Directorate of Primary Education and the undersigned student Md. Jahangir Hossain Talukder at BRAC University. As I am currently working at the organization, I have access to the Organization's information. I agree that I will keep all the information strictly confidential and will not share it with anyone outside of the organization.

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Executive Summary

The supply chain management process of the Directorate of Primary Education (DPE) to prevent student dropout from the primary education level helps to maintain peace and order in the society. Preventing student dropout from the primary education level is essential for the economic prosperity, social order, and sustainable development in the country. It is the constitutional responsibility of the directorate of primary education to ensure primary education for all. This report exhibits the role of the supply chain process in addressing dropouts in primary education with a particular focus on the DPE and its entire operations, planning and sustainability while maintaining competitiveness and special edges over primary education. Besides that, this report demonstrates the facilities provided to dropout students after the deprivation of primary education and the role played by the government of Bangladesh to improve supply chain management practice in Bangladesh's educational system. This report also reasoned the complexity of the dropout process and the numerous factors that influence the chance of dropping out.

It concluded with the best possible recommendations and effective measures taken under kind consideration in order to enhance its existing performance, effectiveness, and efficiency.

Keywords: Dropout; Supply Chain Management; Primary Education System.

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List of Acronyms

DPE	Directorate of Primary Education
GoB	Government of Bangladesh
IMD	Information Management Division
MDG	Millennium Development Goal
MHRD	Ministry of Human Resource Development
PESP	Primary Education Stipend Programme
SPSS	Statistical package for social science
SDG	Sustainable Development Goal
UNESD	United Nations' decade of "Education for Sustainable Development"

CHAPTER 1

Overview of DPE and Scope of Practicum

1.1 Directorate of Primary Education (DPE)

Directorate of Primary Education is an autonomous government department under the Ministry of Primary and Mass Education. In 1981, the Directorate of Primary Education was established to manage the nationalized primary school. There are 20.1 million primary school children in Bangladesh with 129,258 primary schools and 721 thousand Teachers (Gov.Bd. Retrieved August 11, 2023 Annual report 2019-20). There are 67 PTIs (Primary Teachers Training Institutes), 505 Upazila/Thana Education Officers, 2161 Assistant Upazila/Thana Education Officers and 482 Upazila/Thana Resource Center for short-term training of teachers under the Directorate of Primary Education.

Here it takes 6 years to complete the Primary education cycle including pre-primary. Each level of primary education with a set of compulsory, publicly administered examinations.

Teachers in primary schools often work in teams organized by subject area. This allows administrators to focus on the overall functioning and monitoring of the school. There are additional administrative and support staff members who help the school run smoothly.

The Department has the following functions:

- Formulation and implementation of policies related to primary education
- Curriculum development/revision at primary education level
- Preparation, printing and distribution of curriculum of primary education level textbooks
- Research and training activities related to primary education

Various divisions of the Directorate work to take the joint decisions of the Ministry and the Directorate and to implement them at the field level. These divisions include admin division, training division, information management division (IMD), planning and development division, monitoring and evaluation division, finance division, policy and operation division, procurement division, stipend division, internal audit cell.

These departments are working towards improving the quality of primary school education by fulfilling the responsibilities assigned to them. After verifying all the data, take various decisions and implement them through the officers and staffs working at the field level so that the primary education objectives are achieved.

1.2 Dropouts in Primary Education and the role of DPE in addressing dropouts

Primary education for children aged 6 to 10 years is formally provided through primary schools under the Directorate of Primary Education under the Ministry of Primary and Mass Education, Government of the Peoples Republic of Bangladesh. Most of the children eligible for formal primary education in Bangladesh cannot go to school mainly due to poverty or drop out before completing the primary education cycle even if they go to school. Bangladesh is unable to provide primary education to all of its citizens because of two issues: high repetition rates and high dropout rates. But it is the constitutional responsibility of the country to provide primary education to every child in Bangladesh.

‘Education House Hold Survey’ report published by Bangladesh Bureau of Statistics shows that children aged 6-10 years who are not enrolled in school and who drop out before completing primary education cycle are termed as out of school children. The percentage of out-of-school children at village level is 17.63%, while the percentage of out-of-school children at urban level is 16.50%. The Percentage of out-of-school children at the national level is 17.34%.

According to the Annual Primary School Census-2019-20, a report published by the Directorate of Primary Education, the dropout rate from the primary education cycle in 2019 was 17.90. So, there is a sizable primary school dropout rate in Bangladesh, at around 18%. This is roughly 4% lower than the dropout rate in upper secondary school, and is somewhere in the middle of the dropout rates in lower secondary school and upper secondary school. There are no notable differences in the dropout rate amongst demographic subgroups, as it stands at 4.9% across all educational levels. At 11.4%, the rate of repeating a grade in school is the same for students of all educational levels. (Theindependentbd.com. Retrieved August 11, 2023)

Making compulsory primary education appealing, adaptable, and effective in the pursuit of zero exclusion should be the fundamental goals of policymakers. (Rsisinternational.org. Retrieved August 11, 2023.)

To create a second chance of primary education for those who have dropped out of primary school so that all these children can complete the primary education cycle.

One key factor that contributes to students dropping out of school is family and parental poverty and that poverty is worse in the country. According to a study conducted by UNESCO, the dropout rate is about 90% higher in rural areas compared to metropolitan ones. The rate is 84% higher in rural areas of Bangladesh.

Primary education has received significant attention in Bangladesh. Some kids struggle with settling into primary school or to finish their education because they lack certain essentials. The majority of the dropouts are between the ages of 8 and 14. The Directorate primary education in Bangladesh focuses on ensuring primary education for dropout children and undertakes multiple initiatives in this field. These initiatives are- expansion of the scope of stipend, improvement of school environment, arrangement of mid-day meals, arrangement of 19 hostels for boys and girls in hilly areas, toilets in every school for children with special

needs and ramps in the school building and provision for their movement have been kept. This research made an effort to concentrate on the initiatives that the Bangladeshi Directorate of Primary Education is working on. This study's main focus is on Bangladesh's sustainable management system for primary education and its supply chain management system for primary education to prevent dropout.

1.3 Scope of Practicum

The scope of my practicum work is to examine the role of the supply chain process in addressing dropouts in primary education with a particular focus on the DPE. To achieve this goal, I have done my practicum work from May to July 2023. Some other specific objectives are as follows:

- i. To find out the reason behind dropout students from primary education
- ii. To find out the facilities of drop out students after being deprived of primary education
- iii. To identify the necessity of primary education and serve the facilities from the Directorate of Primary Education between dropout students.
- iv. To determine if the students get further educational facilities

CHAPTER 2

Supply Chain Process in DPE

The field of supply chain management encompasses the processes involved in the acquisition, maintenance, and transportation of materials, personnel, and facilities. Supply chain management (SCM) encompasses the integration of several components such as data management, transportation, inventory management, storage, material handling, packaging, and security measures. Supply chain management (SCM) refers to the component of the overall supply chain that encompasses the strategic planning, execution, and monitoring of the efficient and effective movement and storage of goods, services, and associated information between the point of origin and the point of consumption. The primary objective of SCM is to fulfill customer demands and comply with legal requirements (Md. Rokebul Islam Shojib, 2020).

The supply chain plays a crucial role in enhancing the efficient flow, delivery, and transformation of raw materials into final products for the end consumer. Supply chain control encompasses the management of all activities related to the transportation and storage of raw materials, work in progress, and finished items, spanning from the point of origin (POO) to the point of consumption (POC). The basic supply chain cycle is illustrated in Figure 1.

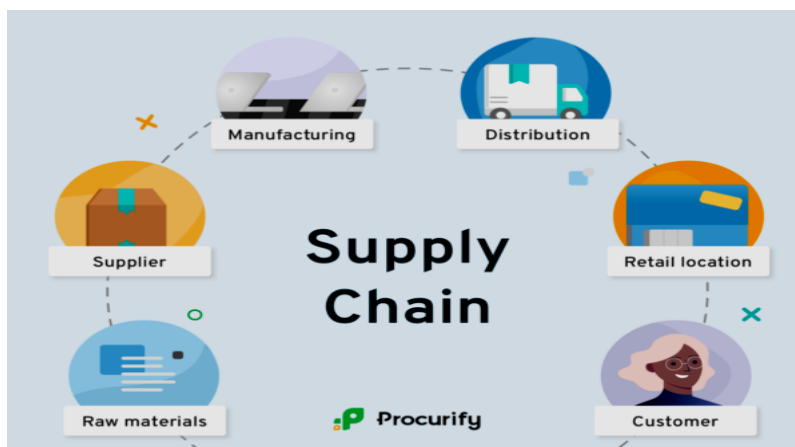


Figure 1: Basic Supply Chain Cycle

2.2. Supply Chain Process in DPE

The notion of educational supply chain management bears resemblance to the existing practices of industrial supply chain management. The supply chain can be divided into two distinct components: the upstream and downstream. The concept of the upstream educational supply chain pertains to the sequential movement of students, knowledge, and financial resources commencing from the initial phases of education, specifically encompassing kindergarten, preschool, and extending up to primary school (Khai Loon Lee,2018).

Bangladesh is unable to provide primary education to all of its citizens because of two issues: high repetition rates and high dropout rates. 'Education House Hold Survey' report published by Bangladesh Bureau of Statistics shows that children aged 6-10 years who are not enrolled in school and who drop out before completing primary education cycle are termed as out of school children. The percentage of out-of-school children at village level is 17.63%, while the percentage of out-of-school children at urban level is 16.50%. The Percentage of out-of-school children at the national level is 17.34%. According to the Annual Primary School Census-2019-20, a report published by the Directorate of Primary Education, the dropout rate from the primary education cycle in 2019 was 17.90. So, there is a sizable primary school dropout rate in Bangladesh, at around 18%.

Every organization's supply chain performance (SCP) has an impact [Hamid et al 2019]. Better SCP improves a company's overall performance [Chang et al 2016]. It has the potential to raise organizational success rates [Kumar et al 2015]. SCP is essential to improving business performance and success rates. Supply chain operations are essential for all types of organizations. The supply chain is impacted by a number of variables. This element is the primary school student dropout rate. First of all, when the percentage of dropout students rises, fewer successful students graduate from school, which results in a shortage of supply chain workers with the necessary skills. Second, failing at the school level

discourages dropout pupils, which limits their ability to perform with assurance in supply chain operations. Numerous research [Hye et al 2012] addressed the problem of student dropout and offered different remedies. Figure 2 shows four factors, which have the power to lower primary school dropout rates, which will have a favorable impact on SCP. The percentage of dropouts among students is rising. Therefore, solving this issue has to be done immediately. Osgood et al offered a four-step entrepreneurial system strategy to reduce the student dropout rate as a solution to this issue. The first phase is self-evaluation, the second is goal identification, the third is planning, and the fourth is networking.

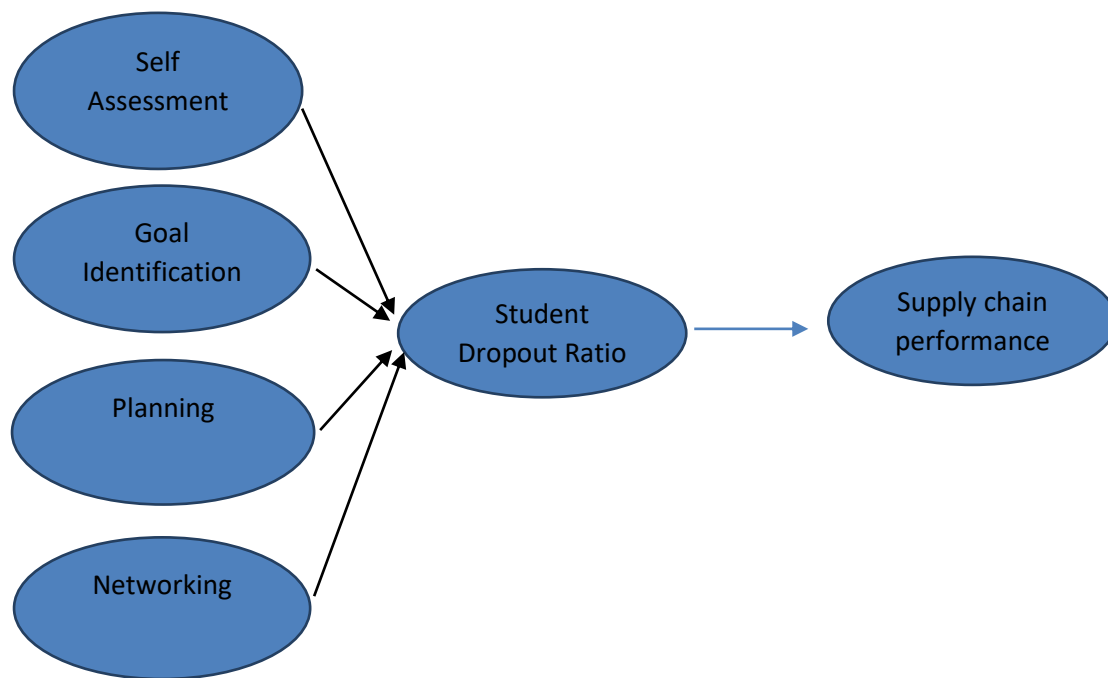


Figure 2: Four step entrepreneurial system approach

2.3. Operation process in DPE (input-transformation-output)

All operations create and deliver services and products by changing inputs into outputs using an `input-transformation-output` process.

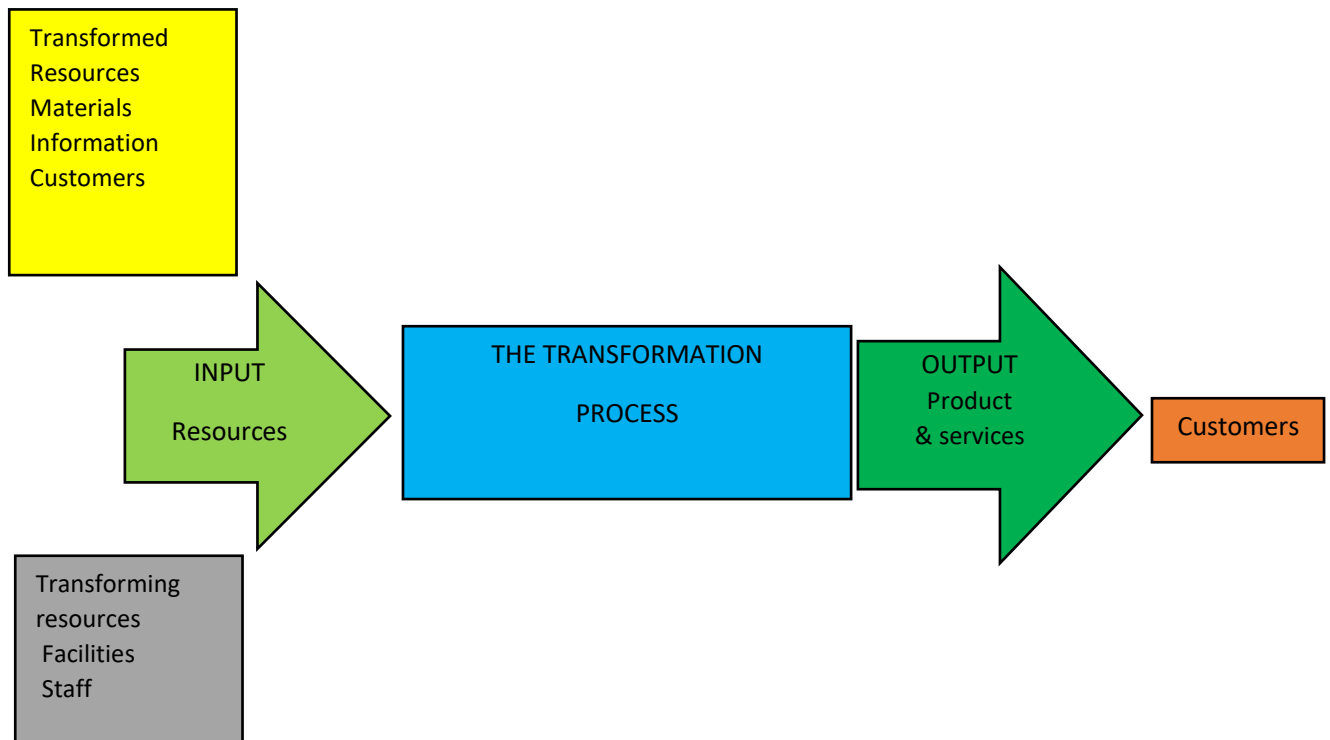


Figure 3: “input-transformation-output” process

This organization is a service-oriented organization of government. This organization takes decisions for improving the quality of primary education to prevent dropout based on various types of information. For that purpose, student’s education allowance and education grants are provided in the proper way to retain the students in class learning.

Officers, staff and the directorate’s own buildings, schools serve as transforming resources. Various divisions of the Directorate work to take the joint decisions of the Ministry and the Directorate and to implement them at the field level.

The departments of the directorate are preventing the dropout rate of primary school students by fulfilling the responsibilities assigned to them. Scrutinize all the data received and implement it through the officials working at the field level so that the target of primary education is achieved. It also ensures financial benefits in creating a second chance education for students who dropout at primary level.

CHAPTER 3

Role of Supply Chain Processes in Addressing Dropouts in Primary Education: practicum Work, Findings, and Observations

3.1 Practicum work on dropout students in DPE

Education is an ongoing process that is deeply involved in the development of human civilization. It can be said that there was never a time in the history of human civilization when there was no education. However, the mode, nature and extent of this education may vary. Education is a social process that can never be separated from human life and society. It is the constitutional responsibility of the country to provide primary education to every child in Bangladesh. Primary education for children aged 6 to 10 years is formally provided through primary schools under the Directorate of Primary Education under the Ministry of Primary and Mass Education, Government of the Peoples Republic of Bangladesh.

The Government of Bangladesh has a constitutional obligation to ensure primary education for all. Again, according to the Sustainable Development Goals 4 (SDG4) concurred by the government, the goal of primary education is to bring down the dropout rate in primary education to a reasonable level by 2030.

Most of the children eligible for formal primary education in Bangladesh attend primary schools but some of them cannot go to school or drop out before completing the primary education cycle even if they go to school mainly due to poverty. After liberation, primary education has received significant attention in Bangladesh. Yet, some of the kids succumb to poverty and cannot finish their education because they lack certain essentials. Cycle dropout rate trends 2015-2021 are given below:

Years	Cycle dropout rate (%)
2015	20.4
2016	19.2
2017	18.8
2018	18.6
2019	17.9
2020	17.2
2021	14.5

Table 1: Trend of cycle dropout rate 2015-2021

(Source: Annual Primary School Census-2021)

Every year the government allocates a significant amount of funds to the primary education sector to reduce dropout at the primary education level. Supply chain management process plays an important role in achieving this goal more effectively. As a result, the social and economic system of the country is adding value.

In this circumstance, the directorate of Primary Education continues to provide a second chance for education to children from poor illiterate communities and children with various disabilities so that those dropouts can get primary education as a second chance of education.

The majority of the dropouts are between the ages of 8 and 14.



Figure 4: Students in Govt. primary school (formal)



Figure 5: Dropout children (figurative).

The Directorate of Primary Education in Bangladesh places a strong emphasis on educating dropout children and undertakes multiple initiatives in this field which made an effort to concentrate on the initiatives that the Bangladesh Directorate of Primary Education is working on. Here we shall endeavor to focus on the role of the supply chain management system of the Directorate of Primary Education in preventing students from dropping out of primary education in Bangladesh.

During my three-month-long internship at the Directorate of Primary Education with my workplace supervisor, I have come to know about various internal and external mechanisms for preventing student dropout through the supply chain management process. Moreover, my workplace supervisor had identified various elements and their integrated mechanism influencing the entire SCM process during the dropout prevention initiatives.

3.2 Data appending, checking, processing and analysis

IMD (Information Management Division) initially examines and collates all data sets obtained from all upazilas/thanas from all administrative divisions of 64 districts as a master data set to prepare a national-level dropout database. We have provided the necessary logistic support in collecting these data from the field level and collating them.

3.3 Planning Process of DPE to Prevent Dropout

The directorate of primary education devises an effective plan to address the dropout issue through its planning and development division. In the planning process, we gather and analyze the country-wide dropout data, communication with different stakeholders, determine action areas, field level need assessment, take preventive measures for dropout, and establish post-program follow-up. The process usually starts after the final examination in December and continues till June next year.

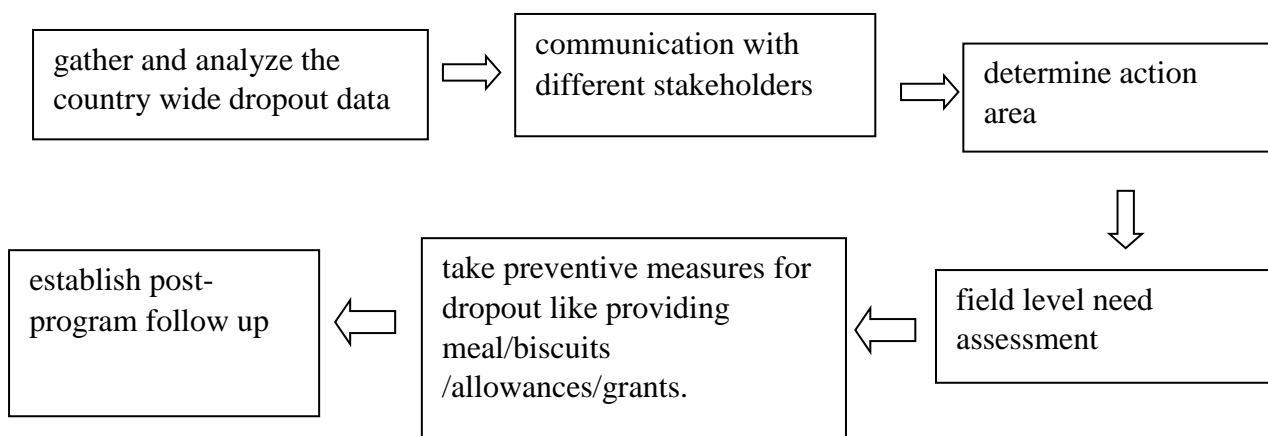


Figure 6: Preventing dropout flowchart.

The Planning Division collects data from various sources. By analyzing this data, the number of dropouts is determined. It creates communication to engage various stakeholders in dropout prevention. The action area is selected based on the number of dropouts. Various preventive measures are taken based on need assessment in these action areas. Providing opportunities for students to participate in the next level of education after primary cycle completion or organizing pre-vocational skills training programs for those who do not have the opportunities to participate in the next level.

The Directorate of Primary Education identifies the reasons for the dropouts and undertakes monitoring activities involving the local people including giving stipends to the students of

needy families under the social security program, creating second chance education, and providing good quality biscuits as midday meals.

According to Porter’s value chain model, support activities facilitate the primary activities in any organization (fig.7)

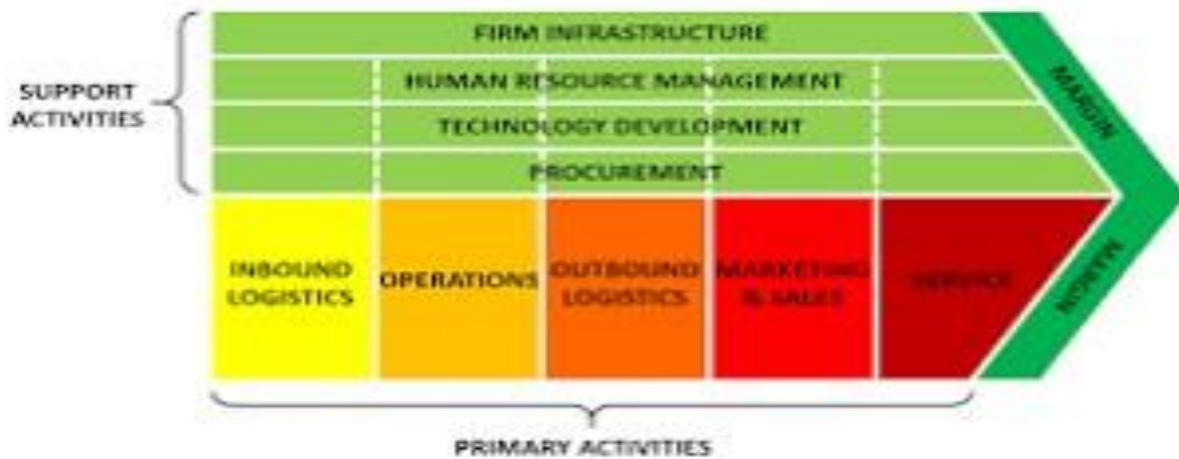


Figure 7: Porter’s value chain model

Likewise, the procurement division acts as a team to support the activities of the directorate to prevent dropout of students. During my practicum period we, the procurement team, have done various support activities like providing logistics support, resources management and procurement service in due time.

3.4 Students retention strategies in the classroom

A variety of strategies are used to bring these students into education, including providing them with educational support i.e. free books, school uniforms, school bags, meals/biscuits and stipends for dropout students to keep them in school.

Among the various strategies implemented to prevent dropouts. We actively ensure the smooth supply of the logistics to different learning centers and primary schools as per the action plan adopted by the organization and based on the demand of the field level. Thus, push and pull model is simultaneously used in this context. Supply chain management is crucial here as the success of the program depends largely on the timely supply of the

facilities required for preventing dropout. We made necessary preparations beforehand during the practicum period to supply the required logistics to run the dropout prevention program effectively.

3.4.1 Determine action area to prevent dropout

Area-wise dropout rates are determined at the beginning of the year. In those upazilas where the dropout rate is high, the reasons for student dropout are identified. Accordingly, dropout prevention is planned. Consequently, it becomes possible to take appropriate measures on area-based problem. Due to the geographical location, the reasons for the dropout in different upazilas are different. For example, the reasons for dropout from primary education are different in hill tract areas, haor areas, coastal areas, urban slum areas, riverside areas, plain land areas, border areas, island areas, char areas and remote areas. By identifying the reasons for dropout in specific upazilas, varied actions are taken to address the problem of dropout like mobile schooling, floating schools, pre-vocational training, schools with raised floors in coastal areas, accelerated model of the primary education cycle.



Figure 8: Floating school in Haor area.

The demand for special type schooling is conducted through the collaboration between government organizations (GO) and non-government organizations (NGO). Procurement division ensures GO&NGO collaboration and also other different types of requirements for different geographical locations. During the practicum period, I have worked on different needs for different geographical location and dealt with GO & NGO collaboration. Here, we were to do things quickly, saving costs and being responsive to market demands i.e. geographical requirements. We also maintained flexibility and tried to keep the productivity high which can be regarded as an instance of agile supply.

3.4.2 Stipend program to prevent dropout

Stipends are given to the guardians of the poor dropout students in order to alleviate the poverty of the families. This prevents dropout effectively. This year Tk. 2000 crore (approximate) is being disbursed by EFT through G2P method to the mobile accounts of about 1 crore 30 lakh beneficiary students. We have collaborated with Nagad Ltd. for the disbursement of scholarship money among the students in G2P mode during the financial year 2022-2023. Timely execution of these activities has enabled the disbursement of money to all the beneficiary students. The dropout rate of students receiving primary education grants program was 39.80% in 2010 which has reduced to 13.95% at present. If not the arrangement for stipends was in place timely, poor dropout students would hardly come back to school and the dropout would decrease less. In this regard, the procurement division added value to the dropout prevention program.



Figure 9: Primary students' stipends payout.

3.4.3 School feeding program

The World Food Program launched a very small-scale school feeding program in Jessore district in 2001 under its emergency program. Later, as the experience of Jessore district was positive, this program was expanded by giving priority to the poor and afflicted upazilas. As a result, it can be seen that the dropout rate in feeding upazila was lower than in non-feeding upazila. In addition to various government agencies, various NGOs are involved in the implementation of this program under DPE. During the practicum, I have ensured proper cooperation among these organizations to conduct school feeding activities in certain poverty-stricken upazilas.



Figure 10: School feeding program.

3.4.4 Free book distribution

On the first day of the beginning of the year, the DPE distributes books among the children. Hence every year 1st of January is known as the Book Festival. All students are encouraged to study by receiving free books that help retain students in the classroom. All the previous activities have to be successfully completed in order to distribute the books among the students on time. Various organizations are involved in the process from raw material to final product. Again, the books have to be delivered to the upazilas on time. We have taken several initiatives to ensure the timely distribution of books like tendering for book printing, binding, and delivery at the distribution place. In all these activities we, the procurement unit help the tendering and distribution process during the practicum period.



Figure 11: Text Book Festival

3.5 Initiatives for underprivileged students after completion of primary education cycle

The success of the program depends on the fulfillment of the education cycle of the dropouts. In this regard, DPE is very concerned and follows the status of the graduates closely. After completion of the primary education cycle, provision is made for underprivileged children to participate in the next stage of education. Unwilling students are given pre-vocational skills training. A monitoring system has been put in place for these students along with financial grants at various stages. We have provided logistic support for the successful implementation of various levels of monitoring systems and for selecting training providers in practicum period.

The above description shows that the supply chain has played a critical role in the successful implementation of dropout prevention activities.

CHAPTER 4

Conclusion and Recommendations

4.1 Conclusion

It is the responsibility of the Government of Bangladesh to ensure financial support for the increasing demand of the primary school supply and its quality improvement. Primary Education Stipend Program is a good initiative but it should not replace the funding of school supplies. Rather it should be in addition to the funding of school supply and quality improvement. The government should spare PESP as it is a social welfare/poverty reduction program. GoB may reevaluate other budgetary allocations to free up more funds for primary education. The PESP is only a temporary measure to address the educational objectives but it does not have long-term effect on education objectives. According to a high official of MOPME, PESP is the most significant initiative of the government because it ensures children register, attend and complete primary education and it has a huge budget. However, all the initiatives to improve the quality of primary education may not be effective equally in all circumstances. The foregoing discussion serves as a useful beginning for discussion that will help people take ownership of the actions required to lower dropout rates. The discussion also helps to find out the way to raise the proportion of Bangladeshi poorest students who may successfully complete primary education and upgrade to secondary education. If not, the outcome would not be improved.

4.2 Recommendations

More effective measures are needed to address the complexity of the dropout process and the numerous factors that influence the probability of dropout. Potential policies need to be

determined based on the relative importance of age, gender and financial barriers to education. These policies must be developed and refined with communities to determine their suitability for use in different situations. Strategies to reduce drop out include:

- Supply chain management significantly impacts cost optimization. It is recommended to create strategies to ensure that the direct and indirect expenses of education for low-income households are zero, as well as keeping an eye on unreported donations and fees.
- Continue scheduling campaigns to capture all 6-year-olds every year and develop mechanisms to reduce and eliminate dropouts associated with late entry ages such as second-chance education.
- Provide a system for automatic grade promotion and ongoing performance monitoring with extra help and enrichment so that no child drops so far behind their classmates that they need to repeat a grade.
- Develop strategy that attendance, age in grade advancement and achievement are tracked by all schools.
- Create early warning signs of impending dropout that are connected to accountable parties (such as teachers and community members) who are in-charge of stepping in when dropout becomes likely.
- Creating strategies to support community-level activities that assist households in promoting learning at home.
- Inspiring systematic development of relationships between schools, teachers and parents and families that will support student retention in the classroom.
- Providing training on SCM to various levels of officers and personnel involved in the process of preventing student dropout.

Every organization should have proper SCM to make the whole of the activities more effective and efficient. Supply Chain Management is part of DPE's initiative that ensures services deliver to students easily. A well-designed process and supply cost chain minimizes costs and time by optimizing inventory levels, reducing transportation expenses and streamlining operational processes.

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