Foreword

দেশের শিক্ষা পরিকল্পনা ও উন্নয়নের জন্য শিক্ষা ক্ষেত্রে ব্যাপক গবেষণা প্রয়োজন। শিক্ষা গবেষণা সূত্র ধরে সেই মোতাবেক শিক্ষাক্ষেত্রে আমাদের দুর্বলতাগুলো চিহ্নিত করে সেই মোতাবেক পরিকল্পিত ভাবে সমস্যা সমাধান করার কর্ম পরিকল্পনা ও তার বাস্তবায়ন অপরিহার্য।

ফ্রেপড শিক্ষা ক্ষেত্রে গবেষণার মাধ্যমে সমস্যা সমূহ চিহ্নিত করে তার সমাধানকল্পে সুপারিশ প্রনয়ন পূর্বক কাজ করে যাচ্ছে। গত প্রায় ৫০ বছর ধরে তারই ধারাবাহিকতায় ফ্রেপড শিক্ষামন্ত্রণালয়ের মাধ্যমিক ও উচ্চ শিক্ষা বিভাগ থেকে প্রাপ্ত অনুদান এবং ফ্রেপড এর নিজস্ব তহবিলের স্বল্প অর্থায়নে ২০১৯-২০২০ অর্থবছরে ছয়টি গবেষণার উদ্যোগ নেওয়া হয়।

বিষয়গুলো হলোঃ

1. Determining Entrepreneurial Potentiality of University Graduates
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   Reviewer: Dr. Shaikh Shamsuddin Ahmed, Professor, Dept. of Finance, University of Dhaka.

2. Assessing E- Learning Initiatives in Secondary Schools: a case study of Keraniganj upazila in Dhaka.
   Researcher: Professor Dr.Muhammad Mezbah-ul-Islam
   Department of Information Science and Library Management, University of Dhaka.
   Reviewer: Dr. Uttam Kumar Das, Deputy Secretary, SSRC, Planning Division, Ministry of Planning.

3. Exploring Effective Teaching Learning Practices in ICT in Secondary School: A Case Study
   Researcher: Sabbir Ahmed Chowdhury, Assistant Professor, Institute of Education & Research (IER), University of Dhaka.
   Reviewer: Dr. Mahabub Ahasan Khan, Professor, Institute of Education & Research (IER), University of Dhaka.

4. Assessing the impact of ICT integration in the classroom of secondary school in Bangladesh
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   Reviewer. Dr. Md. Abdus Salam, Professor, Institute of Education & Research (IER), University of Dhaka.

5. Understanding Teachers' Professional Development for Quality Primary Education
   Research Team: Shilpi Rani Saha, Assistant Professor, Institute of Education & Research (IER), Jagannath University and Dr. Md. Ahsan Habib, Professor, Institute of Education & Research (IER), University of Dhaka
   Reviewer: Prof. Nusrat Sultana, Former Principal, TTC, Dhaka, Member, Research Board, FREPD.

6. এসএসসি পরীক্ষায় পরীক্ষার্থীদের তুলনামূলক ফল খারাপ করার কারণ :
ঢাকা মহানগরীর বিদ্যালয় গুলোর মধ্যে এসএসসি পরীক্ষায় খারাপ করেছে এমন ১০ টি বিদ্যালয়ের উপর কেইস স্টাডি ।

গবেষণা দলের সদস্য :
গবেষক, মোঃ নজরুরল ইসলাম খান, পরিচালক, ফ্রেপড
সহযোগী গবেষক, কোহেলী পারভীন, গবেষণা সহকারী, ফ্রেপড
সহকারী গবেষক, মোঃ শহিদুল্লাহ
রিভিউয়ার: ড. এস.এম. হাফিজুর রহমান, অধ্যাপক, আই.ই.আর, ঢাকা বিশ্ববিদ্যালয় ।

উপদেষ্টা :
অধ্যাপক কাজী সালেহ আহমেদ, প্রেসিডেন্ট ফ্রেপড
প্রাক্তন উপাচার্য জাহাঙ্গীরনগর বিশ্ববিদ্যালয়

সম্পাদক :
অধ্যাপক মুহম্মদ এলতাসউদ্দিন
সহ-সভাপতি, ফ্রেপড
প্রাক্তন চেয়ারম্যান, জাতীয় শিক্ষাক্রম ও পাঠ্যপুস্তক বোর্ড (এনসিটিবি)

বাংলাদেশের শিক্ষার বিভিন্ন ক্ষেত্রে বিরাজমান সমস্যা চিহ্নিত করে ৬টি গবেষণার ফলাফল ও সুপারিশমালা জাতীয় পর্যায়ে এক সেমিনারে উপস্থাপন করা হয় । সেমিনারে প্রধান অতিথি ছিলেন ফ্রেপড এর ট্রাস্টি বোর্ডের চেয়ারম্যান ও ঢাকা বিশ্ববিদ্যালয়ের মাননীয় উপাচার্য অধ্যাপক ড. মো. আখতারুজ্জামান । সেমিনারে গবেষণার বিভিন্ন দিক আলোচনা করা হয় এবং গবেষণা সমূহের মানোন্নয়নের জন্য সুপারিশমালা উপস্থাপন করা হয় । রিভিউয়ারগণ রিপোর্টগুলি মূল্যায়ন পূর্বক তাঁদের মতামত প্রদান করেছেন । গবেষকগণ, রিভিউয়ার এবং সেমিনারের সুপারিশমালা অনুসরণ করে গবেষণা রিপোর্ট চূড়ান্ত করা হয় ।

ফ্রেপড এর গবেষণা বোর্ডের সভাপতি অধ্যাপক এ.এইচ.এম.হাবিবুর রহমান গবেষণা সমূহ পরিচালনা এবং সার্বিক তত্ত্বাবধান করে যথেষ্ট সময় দিয়েছেন । ড. জিয়াউস সবুর সার্বিকভাবে রিপোর্টগুলি সম্পাদনার কাজ করেছেন । গবেষণার শুরু থেকে শেষ পর্যন্ত ফ্রেপড এর পরিচালক মোঃ নজরুল ইসলাম খান ও গবেষণা সহকারী কোহেলী পারভীন গবেষণার কাজে সহায়তা করেছেন । ফ্রেপড এর অন্যান্য সকল সদস্য এই কাজে সহায়তা করেছেন । সকলকে আমার পক্ষ থেকে আন্তরিক ধন্যবাদ । ফ্রেপড এর সহ সভাপতি অধ্যাপক মুহম্মদ এলতাসউদ্দিন নব্বই ঊর্ধ্ব বয়সেও রিপোর্টগুলো রিভিউ ও সম্পাদনা করেছেন । তাঁর সুস্বাস্থ্য কামনা করছি ।

গবেষণার ফলাফল শিক্ষা ক্ষেত্রে সমস্যা সমাধানে এবং শিক্ষার মানোন্নয়নে গুরুত্বপূর্ণ ভূমিকা রাখবে বলে ফ্রেপড এর গবেষণা বোর্ড আশা রাখে এবং গবেষণা রিপোর্টগুলি প্রকাশ করার সিদ্ধান্ত গ্রহণ করে । আমরা গবেষণা রিপোর্ট প্রকাশ করতে পেরে আনন্দিত । বর্তমান প্রকাশনা জাতীয় পর্যায়ে গুরুত্বপূর্ণ অবদান রাখবে বলে আমার দৃঢ় বিশ্বাস ।

অধ্যাপক কাজী সালেহ আহমেদ
সভাপতি, ফ্রেপড

Contents

Determining Entrepreneurial Potentiality of University Graduates

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Contents

Tables

Figures

Chapter 1
Introduction

1.1 Background

Entrepreneurship is now universally recognized as the most critical for fostering the economic development of a country. Historically the entrepreneurs played a dominant role in the economic development process of the developed countries by bringing about economic change including technological development. It is not enough for a country to have land, labor, capital and other resources for development. There should be someone who by virtue of his or her talent, creativity, ability and drive to turn these resources into valued entities. The individual who turns these resources into value creation or add value to existing assets is termed as entrepreneur and his capability as entrepreneurship. Entrepreneurs constitute the potent agents of change and are contributors towards accelerated pace of development throughout the world. Developing countries, like Bangladesh, in their efforts to accelerate economic growth are increasingly emphasizing on the role of entrepreneurship and initiating programs to promote and develop entrepreneurs in numbers and quality (Rahman, 1979).

1.2 Statement of the Problem

Unemployment and underemployment of educated youth particularity university graduates is wide-spread in Bangladesh. According to Bangladesh Bureau of Statistics (BBS) the number of working populations aged 15 and above was 10.91 crore in 2016-17, of which the number of unemployed populations was 26.80 lac. Of the total unemployed population, about 11.2 % are youth who completed their higher education, suggesting that a large number of unemployed graduates are competing for a much fewer vacant posts in the employment sector. The magnitude of this problem may be visualized from the facts that recently as many as 3,47,000 candidates applied for 2024 positions advertised by Bangladesh Public Service Commission (The Daily Ittefaq: 13/06/18). This means that 171 candidates competed for one position. In the banking sector, it has been observed, about 2 to 3 lac candidates applied for only 500 posts (The Daily Ittefaq: 13/06/18). The existing imbalance between the supply of graduates in the job market and the demand for jobs is getting worse as most graduates would prefer to enter job market rather than venturing into business opportunities. Every year a large number of new graduates are entering into the employment market, to make the situation further worse. This national crisis of educated unemployed should be addressed by taking

appropriate strategies and immediate action programs and potential opportunities of developing the fresh graduates as entrepreneur should not be missed.

The potentiality of creating employment opportunities for graduates through entrepreneurship development is enormous. There can be a question "Can graduates be developed as entrepreneurs?" There are two views on the growth and development of entrepreneurship, firstly, when society has enough individuals with some psychological characteristics; secondly- entrepreneurship is most likely to occur in a situation where environmental conditions are most favorable. In these two views, psychological characteristics are internal and the environmental conditions are external for an individual (Ricketts, 2006).

What is most needed now is to identify the graduates having entrepreneurial potentiality or not. To the best of our knowledge, there has not been any study regarding this problem in Bangladesh. An attempt is made to undertake the study to assess the entrepreneurial potentiality of the university graduates. The information generated from this study, is expected to help the policy makers to formulate entrepreneurship development strategy, policy and program as well as mitigate the acute unemployment problem of the educated youth and eventually contribute towards the rapid and sustainable economic growth in the country.

1.3 Objectives of the Study

The main objectives of the study are to assess the entrepreneurial potentiality among university graduates who may be subsequently motivated towards entrepreneurship profession (Starting a Business) as an alternative source of employment. The specific objectives of the study are:

i. To assess the entrepreneurial potentiality of graduates in different disciplines by identifying their psychological and other characteristics
ii. To identify the problems that discourage them to take entrepreneurship as their career plan
iii. To know the extent of awareness of the graduate student about the various support services provided by the different government and non-government agencies
iv. To recommend some means to motivate the graduates having entrepreneurial potentiality to take entrepreneurship as a profession after completion of their studies

To provide insight and its implications on employment generation of university graduates and its impact on the economic development of Bangladesh.

1.4 Psychological Characteristics as a Measure of Entrepreneurial Potentiality

In view of the facts, entrepreneurs play crucial role in the economic development of a country. By selecting a small sample of scholars and researcher of different disciplines, like-psychology, sociology, economics and management, the study attempted to identify the essential traits or characteristics of successful entrepreneurs. Table 1 shows these essential characteristics include i.e. need for high achievement, risk taking propensity, passion for business, seeking help from experts in case of necessity, independence and autonomy, locus of control, demonstrate imaginative and creative ideas, innovativeness, execution intelligence, response to change, ambiguity tolerance, problem solving ability, willingness to assert oneself, team work ability, feedback of work result, recognized business opportunities, prompt decision making ability, accept full responsibility for success or failure, demonstrate self-confidents, become future oriented, customer oriented and taking lesson from failure. The prominent scholars, like- McClelland and Winter (1969), Sexton and Bowman (1983), Raab, Stedham & Neuner (2005); Uzezi (2014); Yaduma & Hammad (2013) used these attributes to determine the entrepreneurial potentiality of the students in USA, Germany, Nigeria and Malaysia.

Table 1: Description of Entrepreneurial Characteristics

Characteristics	Explanations
Need for high achievement	A strong desire to perform any work with excellence
Risk taking propensity	The ability to deal with risk and uncertainty
Passion for Business	Passion to continue work for uncertain long period
Seeking help from experts in case of necessity	Seeking information and technical support beyond the knowledge and skills of the entrepreneurs.
Independence and Autonomy	Desire to be independent and has the ability to operate on won
Locus of control	Believes in result is the outcome of own efforts
Demonstrate imaginative and creative ideas	Ability to demonstrate imaginative and creative ideas

Innovativeness	Ability to do things in new ways
Execution Intelligence	Ability to execute an idea into reality
Response to Change	Response to change in the political, legal, economic, natural and socio-cultural environment
Ambiguity Tolerance	The ability to work tirelessly in complex situations and contradiction where situations are rather unclear and uncertain.
Problem Solving Ability	The ability to deal effectively with difficult, unfamiliar, and poorly-structured tasks.
Willingness to assert oneself	Standings on one's own point confidently but at the same time rationally and with fairness.
Team work ability	Ability to work with a group or groups of people to achieve predetermined objectives effectively by taking the needs and wants as well as group dynamics among team members into account.
Feedback of work result	Strong desire to give and receive feedback on work for continuous improvement of performance.
Recognizing business opportunities	Having the ability to identify business opportunity by continuously keeping informed and through exploring.
Prompt decision making ability	The ability to take quick and right decisions
Accept full responsibility for success or failure	Gives the team credit for success and takes personal responsibility for failure
Demonstrate self-confidents	Possesses confidence on own abilities
Become future oriented	Open to future possibilities and the ability to utilize the idea for future business gains.
Customer oriented	Focuses action based on the needs of the target customers
Taking lesson from failure	Has the positive attitude to learn from mistake, not repeating it and do things better in the future

1.5 Methodology of the Study

Both quantitative and qualitative methods were used for this study. Data and information have been collected from primary and secondary sources. To address the first three objectives, the study conducted a survey of final year graduate students to investigate on their entrepreneurial traits. Information on some socio-economic characteristics, motivating factor to go for business, problems perceived by the graduates with some others related information regarding entrepreneurship development were also collected during the survey. To address the last two objectives, the study conducted a focus group discussion with group of experts that included researchers, and entrepreneurs and other professionals from financial institutions.

1.5.1 Study Population, Sampling and Study Design

For the purpose of the study, the population was defined as the final year students of the bachelor degree programs of universities. These graduates are expected to enter into employment market after completion of their studies. The size of the population was 11040 students from the four major universities in Bangladesh- two in public sector and two in private sector.

Table 2: Distribution of the Proposed Population

Discipline	Dhaka University	Rajshahi University	North South University	Primeasia University	Total Population
Business	1000	440	1100	100	2640
Science	1000	900	700	250	2850
Engineering	300	200	500	250	1250
Social Science	2000	1700	500	100	4300
Total:	4300	3240	2800	700	11040

The population was divided into four disciplines, namely business, engineering, social science and science. Out of the total population, ten percent i.e. 1104 students were randomly selected for the study. The questionnaire was designed and pre-tested at Primeasia University on 40 final year business and engineering graduates. The questionnaire was modified and finalized based on the pretesting experience. Data were collected during the period September to November, 2019. The data collection sessions were held in each university for every discipline. In total, 50 sessions were held for collecting the data which covered 930 responses. After careful examinations of all the questionnaire returned, and checking them for completeness and consistency, only 712 filled-in

questionnaire could be used for the study analysis. The distribution (by disciplines, and by university) of these field-in questionnaires are given in Table 3.

Table 3: Distribution of the Sample

Discipline	Dhaka University	Rajshahi University	North South University	Primeasia University	Sample size
Business	64	102	97	23	286
Engineering	04	40	00	83	127
Social Science	60	88	07	03	158
Science	24	71	00	46	141
Total:	152	301	104	155	712

Out of the total 712 respondents, 286, 127, 158 and 141 were business, engineering, social science and science graduates respectively.

1.5.2 Data Collection Tools

For data collection, necessary tools and questionnaire were designed. A Five Point Likert Scale data collection instrument was used to assess the entrepreneurial psychological characteristics of the graduates. The data collection instruments were adopted from the questionnaires used in similar studies (Galloway & Kelly (2009); Gerry, Marques & Nogueira (2018) for such kinds research. The study had adapted these instruments (Galloway & Kelly (2009); Gerry, Marques & Nogueira (2018) and developed a survey instrument where it used certain key characteristics that has been recognized as most essential characteristics for assessing entrepreneurial potentiality. Besides this instrument, this study used some structured and unstructured questions to know socio economic characteristics, motivating factor to go for business, problems perceived by the graduates.

In order to address our objectives four and five, the study conducted a qualitative study. In which the study conducted a Focused Group Discussion (FGD) with a group expert consisting of 2 entrepreneurs, specialized entrepreneur development organizations, 2 bankers, policy makers and experts on entrepreneurship development. A guideline was developed for conducting such discussion. This qualitative part of the study was designed to obtain information to supplement the survey materials collected through structured questionnaires and instruments.

The graduate students self-administered the survey questionnaire used for assessing the entrepreneurial psychological characteristics. However, before they did that, an investigator explained the questionnaire to them. The investigators were trained and briefed to collect the desired data based on questionnaires and instruments. The respondents took about 30 minutes to complete the questionnaire, and in all cases the respondents in each university completed the questionnaire in one session in a classroom environment and handed these backs to the investigator engaged in data collection in each of the university.

1.5.3 Data Analysis and Interpretation

Data were checked and edited, corrected before they were entered and analyzed. Data were entered using Microsoft Excel, and later were converted into Stata data file for analysis. Collated data were processed and analyzed by using different statistical tools and techniques and the results were tabulated and interpreted keeping in the view of the objectives.

1.5.4 Scope of the Study

The scope of the study was limited to four major universities and covering the four major discipline i.e. business, engineering, social science and science. Primary focus of the study was to assess the entrepreneurial potentiality of the graduates and some other issues concerning the development of the entrepreneurial career.

1.5.5 Limitations of the study

The study was conducted within a limited budget and time, and hence studying a wide range of graduates could not be included in the study. Despite the limited coverage of the study, the findings represent the real situation.

Chapter 2
Assessment of
Entrepreneurial Potentiality of the Graduates

This chapter consists the findings of the survey under study. The results are analyzed, interpreted and presented under three sections namely, socio-economic profile of the graduates, entrepreneurial potentiality of graduates, entrepreneurial potentiality of graduates by discipline.

2.1: Socio-economic Profile of the Graduates

Table 4 shows the socio demographic and economic characteristics of the sample by their age, gender, family background, migratory status, monthly family income and involvement of economic activities. It also shows that 88.6 percent of the graduates fall within the age group 21-24 years and the remaining 11.4 percent within the age group 25- 28 years. Of the total respondent's 67.8 percent were male and 32.2 percent were female. As regards' family background, the study revealed 28.9 percent came from farming and 36.4 percent came from the services background. Out of the remaining respondents 19.8%, 9.83%, 4.78% came from trading, professional and industry background respectively. It was found that university students came from multi-professional family background. It is found from the study that 8.71 percent of the respondents migrated into this country.

Table 4: Socio economic Characteristics of the Respondents

Criteria	Sub-Criteria	Business Graduates		Engineering Graduate		Social Science Graduates		Science Graduates		Total	
		N	%	N	%	N	%	N	%	N	%
Age:	21-24 years	250	35.1	111	15.6	152	21.3	118	16.6	631	88.6
	25-28 years	36	5.06	16	2.25	6	0.84	23	3.23	81	11.4
Gender:	Male	189	26.5	108	15.2	101	14.2	85	11.9	483	67.8
	Female	97	13.6	19	2.67	57	8.01	56	7.87	229	32.2
Family Background:	Farming	51	7.16	30	4.21	80	11.2	45	6.32	206	28.9
	Trade	65	9.13	28	3.93	24	3.37	24	3.37	141	19.8
	Artisan	1	0.14	0	0	1	0.14	0	0	2	0.28
	Industry	21	2.95	4	0.56	4	0.56	5	0.7	34	4.78
	Services	117	16.4	53	7.44	37	5.2	52	7.3	259	36.4
	Professional	31	4.35	12	1.69	12	1.69	15	2.11	70	9.83
Migratory Status:	Yes	22	3.09	12	1.69	13	1.83	15	2.11	62	8.71
	No	264	37.1	115	16.2	145	20.4	126	17.7	650	91.3
Monthly Family	Below Tk. 20000	57	8.01	32	4.49	67	9.41	43	6.04	199	27.9

Criteria	Sub-Criteria	Business Graduates		Engineering Graduate		Social Science Graduates		Science Graduates		Total	
		N	%	N	%	N	%	N	%	N	%
Income (In Taka):	Tk. 20000-50000	102	14.3	44	6.18	48	6.74	57	8.01	251	35.3
	Tk. 51000-100000	40	5.62	16	2.25	11	1.54	10	1.4	77	10.8
	Tk. 100000 or more	54	7.58	6	0.84	7	0.98	8	1.12	75	10.5
	Avoid to Answering	33	4.63	29	4.07	25	3.51	23	3.23	110	15.4
Engaged in Economic Activities:	Job	45	6.32	15	2.11	23	3.23	21	2.95	104	14.6
	Business	49	6.88	13	1.83	8	1.12	13	1.83	83	11.7
	Not Involving n any Business or Jobs	192	27	99	13.9	127	17.8	107	15	525	73.7
	Total:	286	40.2	127	17.8	158	22.2	141	19.8	712	100

The study was revealed that the highest number of students (35.3 percent) belong to the monthly family income group Tk. 20,000 to 50,000. It was very interesting to note that a good percentage of the students (27.9%) pursue higher studies in universities from low income (monthly family income was less than Tk. 20,000) group. It also found that 14.6 percent respondents were doing jobs and 11.7 percent were doing business beside their study.

2.2: Entrepreneurial Potentiality of Graduates

This section discusses the results of entrepreneurial potentiality of graduates. It contains two sub-section i.e. descriptive statistics and level of entrepreneurial potentiality of the graduates.

2.2.1 Descriptive Statistics

The main purpose the study was to assess the entrepreneurial potentiality of the graduates. Five-point Likert scale was used to measure the potentiality of the graduates. The combine mean value of twenty-two entrepreneurial characteristics was 3.84 with a std. deviation 0.6029 that means the graduates have entrepreneurial potentiality. Taking lesson from failure was shown the height mean value (4.24) and passion for business shown the lowest mean value (3.22). Study found a prominent mean value of the entrepreneurial characteristics i.e. taking lesson from failure, independence and autonomy, feedback of work result, achievement motivation, accept full responsibility for success or failure, achievement motivation, locus of control and team work ability were in between 4.24 to 4.06 in the five-scale measurement.

Table 5: Descriptive Statistics

Entrepreneurial Potentiality Traits	Mean	Std. Deviation
Achievement Motivation	4.21	1.060
Risk taking propensity	3.69	1.037
Passion for Business	3.22	1.236
Seeking help from experts in case of necessity	3.89	1.103
Independence and Autonomy	4.22	1.055
Locus of control	4.14	1.126
Demonstrate imaginative and creative ideas	3.67	1.010
Innovativeness	3.61	1.064
Execution Intelligence	3.65	0.964
Response to Change	3.86	1.017
Ambiguity Tolerance	3.71	1.083
Problem Solving Ability	3.63	0.987
Willingness to assert oneself	3.46	1.055
Team work ability	4.06	1.070
Feedback of work result	4.22	1.032
Recognized business opportunities	3.52	1.140
Prompt decision making ability	3.68	0.976
Accept full responsibility for success or failure	4.21	1.011
Demonstrate self-confidents	3.95	1.006
Become future oriented	3.95	0.985
Customer oriented	3.76	1.110
Taking lesson from failure	4.24	1.040
Total	3.84	0.602

Table 5 also shows that the mean value of the entrepreneurial characteristics i.e. demonstrate self-confident, become future oriented, seeking help from experts in case of necessity, response to change, customer oriented, ambiguity tolerance, risk taking propensity, prompt decision making ability, demonstrate imaginative and creative ideas, execution intelligence, problem solving ability, innovativeness, recognized business opportunities, willingness to assert oneself and passion for business existed in between 3.95 to 3.22.

2.2.2 Level of Entrepreneurial Potentiality of the Graduates

This study used twenty-two traits to measure entrepreneurial potentiality of the graduates where each of the traits having lowest value one and the highest value five. So, the total value of each trait should be observed in between 22 to 110. Here, low, mid and high level of entrepreneurial

potentiality of the graduates defined as below 80, 80 to 95 and 95 to 110 by their total gained score from the twenty-two traits of entrepreneurial potentiality. This given classification was designed based on the experienced gained from the case stay, observation and the overall judgment of the research team.

Table 6: Level of Entrepreneurial Potentiality

Level of Entrepreneurial Potentiality	Frequency	Percent
Low	143	20.08
Mid	438	61.52
High	131	18.40

Table 6 shows that 18.40 percent of the students possessed high level of entrepreneurial potentiality whereas 61.52 and 20.08 percent of the students possessed mid and low level of entrepreneurial potentiality respectively. The possibility of attracting graduates with high potentiality into business is very bright. Graduates with mid-level potentiality may improve their potentiality by receiving training, education and gaining experience in business.

2.3: Entrepreneurial Potentiality of Graduates by Discipline

This section describes the results and analysis of the of the entrepreneurial potentiality of graduates by discipline. It contains five sub-section i.e. discipline wise descriptive statistics, entrepreneurial potentiality of graduates by discipline, entrepreneurial potentiality of business and non-business graduates, entrepreneurial potentiality of graduates by socio-economic status and distribution of entrepreneurial potentiality by gender.

2.3.1 Discipline wise Descriptive Statistics

Table 7 provides discipline wise (business, engineering, social-science and science graduates) descriptive statistics and the F-statistics for mean comparison. The total mean value of business graduates (4.05) is higher than the engineering, science and social science graduates having the mean value 3.79, 3.77 and 3.59 respectively at 0.01 level of significant with the std. value 0.00. There can be several reasons for discipline wise variation of entrepreneurial potentiality. Firstly, curriculum of the business discipline was business activity oriented; secondly, a course of entrepreneurship is taught in different level of business education including BBA program. This course possibly influenced to change their mindset towards entrepreneurship profession. However, the graduates from non-business discipline also have entrepreneurial potentiality. The results showed that

the business graduates possess significantly higher values in nineteen entrepreneurial potentiality determinant attributes i.e. achievement motivation, risk taking propensity, seeking help from experts in case of necessity, locus of control, demonstrate imaginative and creative ideas, innovativeness, execution intelligence, response to change, ambiguity tolerance, problem solving ability, willingness to assert oneself, team work ability, feedback of work result, recognized business opportunities, prompt decision making ability, accept full responsibility for success or failure, demonstrate self-confident, become future oriented, customer oriented and taking lesson from failure at the P=0.01 level.

Table 7: Discipline Wise Descriptive Statistics and F-Statistics

Characteristics	Business Graduates			Engineering Graduate			Social Science Graduates			Science Graduates			F-Statistics	
	N	Mean	Std. Dev	N	Mean	Std. Dev	N	Mean	Std. Dev	N	Mean	Std. Dev	-value	Sig
Achievement Motivation	286	4.57	0.76	127	4.02	0.95	158	3.92	1.3	141	3.96	1.17	20.12	0.00
Risk taking propensity	286	3.89	0.89	127	3.54	1.01	158	3.44	1.13	141	3.7	1.16	7.91	.00
Passion for Business	286	3.29	1.21	127	3.12	1.16	158	3.13	1.23	141	3.28	1.36	1.01	0.38
Seeking help from experts in case of necessity	286	4.12	0.91	127	3.98	0.93	158	3.61	1.32	141	3.63	1.23	11.01	0.00
Independence and Autonomy	286	4.32	0.9	127	4.24	0.93	158	4.05	1.32	141	4.21	1.1	2.22	0.08
Locus of control	286	4.31	0.94	127	4.07	1.02	158	3.97	1.35	141	4.05	1.25	3.94	0.00
Demonstrate imaginative and creative ideas	286	3.9	0.87	127	3.58	1	158	3.39	1.13	141	3.6	1.03	9.78	0.00
Innovativeness	286	3.85	0.89	127	3.48	0.96	158	3.32	1.28	141	3.57	1.12	9.54	0.00
Execution Intelligence	286	3.75	0.83	127	3.64	0.97	158	3.41	1.13	141	3.75	0.96	5	0.00
Response to Change	286	4	0.88	127	3.97	0.89	158	3.59	1.18	141	3.79	1.12	6.28	0.00
Ambiguity Tolerance	286	3.88	0.99	127	3.57	1.04	158	3.59	1.18	141	3.62	1.16	4.02	0.00
Problem Solving Ability	286	3.75	0.89	127	3.75	0.87	158	3.36	1.11	141	3.57	1.07	6.21	0.00
Willingness to assert oneself	286	3.62	0.98	127	3.28	1.01	158	3.32	1.12	141	3.45	1.13	4.32	0.00
Team work ability	286	4.24	0.89	127	4.03	1.11	158	3.77	1.22	141	4.05	1.14	6.63	0.00
Feedback of work result	286	4.48	0.75	127	4.17	1	158	3.89	1.37	141	4.12	1	12.85	0.00
Recognized business opportunities	286	3.88	0.91	127	3.47	1.07	158	2.99	1.24	141	3.43	1.25	23.73	0.00
Prompt decision making ability	286	3.86	0.84	127	3.58	0.98	158	3.48	1.13	141	3.62	0.98	6.15	0.00

Characteristics	Business Graduates			Engineering Graduate			Social Science Graduates			Science Graduates			F-Statistics	
	N	Mean	Std. Dev	N	Mean	Std. Dev	N	Mean	Std. Dev	N	Mean	Std. Dev	-value	Sig
Accept full responsibility for success or failure	286	4.45	0.8	127	4.04	1	158	4.03	1.19	141	4.08	1.1	9.39	0.00
Demonstrate self-confidents	286	4.13	0.8	127	3.84	1.05	158	3.7	1.21	141	3.95	1.02	7.17	0.00
Become future oriented	286	4.12	0.88	127	3.95	0.87	158	3.76	1.18	141	3.83	1	5.7	0.00
Customer oriented	286	4.14	0.86	127	3.79	1.07	158	3.3	1.21	141	3.5	1.22	25.03	0.00
Taking lesson from failure	286	4.45	0.85	127	4.28	0.94	158	3.92	1.27	141	4.12	1.1	9.81	0.00
Expected level of Success as an Entrepreneur	286	4.08	0.85	127	3.92	0.99	158	3.56	1.28	141	3.87	1.08	8.64	0.00
Total	286	4.05	0.41	127	3.79	0.56	158	3.59	0.77	141	3.77	0.62	23.19	0.00

No significant difference was identified between the business graduates and non-business graduates at P = 0.01 regarding the attribute's passion for business, independence and autonomy.

2.3.2 Entrepreneurial Potentiality of Graduates by Discipline

The study found that 18.40 percent of graduates have high entrepreneurial potentiality. In case of business graduates, it was found that 24.13 percent of graduates have high entrepreneurial potentiality whereas the science, engineering and social science graduates have 16.31, 14.17 and 13.29 percent respectively. [The criteria of grouping the entrepreneurial potentiality level is discussed in the sub-section 2.2.2]

Table 8: Level of Entrepreneurial Potentiality of Graduates by Discipline

			Educational Discipline of the Graduates				
			Business	Engineering	Social-Science	Science	Total
Level of Entrepreneurial	Low	N	24	33	52	34	143
		%	8.39	25.98	32.91	24.11	20.08
	Mid	N	193	76	85	84	438
		%	67.48	59.84	53.80	59.57	61.52
	High	N	69	18	21	23	131
		%	24.13	14.17	13.29	16.31	18.40

2.3.3 Entrepreneurial Potentiality of Graduates by Socio-economic Status

This section shows the entrepreneurial potentiality of the students at various socio-economic distributions in the sample by their age, gender, family background, migratory status, monthly family income and engaged in economic activities and the sub-groups. A significant difference was found in the entrepreneurial potentiality of students in variation of their gender (male and female), engaged in economic activities (job, business and not involving in any business or jobs) and any training receiving status at the 99 percent level of confidence. Where the mean value of male students entrepreneurial potentiality (86.1) is greater than the mean value of female students (81.28); the mean value of the students who engaged in business (90.75) is higher than who engaged in job (85.74) or who had no involvement in any business or jobs(83.34) activities and the mean value of the students who received any training (86.38) in their life is higher than the students who had not received any training (83.82) in their life.

Table 9: Entrepreneurial potentiality at various socio-economic distributions

Criteria	Sub-Criteria	N	Mean	Std. Deviation	P-value
Age	21-24 years	631	84.63	0.526	0.32
	25-28 years	81	83.91	1.531	
Place of Birth (Division)	Dhaka	222	84.98	12.88	0.53
	Chittagong	92	81.89	15.31	
	Rajshahi	173	85.2	12.14	
	Sylhet	4	92.75	3.304	
	Barisal	19	83.26	13.96	
	Khulna	75	84.89	14.78	
	Rangpur	79	84.48	13.18	
	Mymensingh	48	84.75	12.57	
Gender	Male	483	86.1	0.524	0.00
	Female	229	81.28	1.051	
Family Background	Farming	206	84.2	13.26	0.99
	Trade	141	85.26	12.22	
	Artisan	2	87	2.828	
	Industry	34	84.79	13.49	
	Services	259	84.46	13.57	
	Professional	70	84.34	14.52	

Criteria	Sub-Criteria	N	Mean	Std. Deviation	P-value
Migratory Status	Yes	62	84.98	2.211	0.39
	No	650	84.51	0.503	
Monthly Family Income (In Taka)	Below Tk. 20000	199	84.36	13.07	0.60
	Tk. 20000-50000	251	84.45	12.31	
	Tk. 51000-100000	77	85.74	12.57	
	Tk. 100000 or more	75	86.11	15.44	
	Avoid to Answering	110	83.25	14.6	
Engaged in Economic Activities	Job	104	85.74	14.53	0.00
	Business	83	90.75	9.831	
	Not Involving in any Business or Jobs	525	83.34	13.2	
Training Status	Yes	204	86.38	1.038	0.01
	No	508	83.82	0.556	

There is no significant difference in entrepreneurial potentiality among students in relations to their birth place (division, like-Dhaka, Chittagong, Rajshahi, Sylhet, Barisal, Khulna, Rangpur and Mymensingh), family background (farming, trade, artisan, industry, services and professional), migratory status (migrated or not), monthly family income (below tk. 20000, tk. 20000-50000, tk. 51000-100000, tk. 100000 or more, avoid to answering) at the 5 percent level of significance.

2.3.4 Distribution of Entrepreneurial Potentiality by Gender

By referencing the Appendix-1, This study revealed that male students possessed significantly higher values of the thirteen attributes of entrepreneurial potentiality at the P=0.01 level i.e. achievement motivation, risk taking propensity, seeking help from experts in case of necessity, independence and autonomy, response to change, problem solving ability, recognized business opportunities, prompt decision making ability, accept full responsibility for success or failure, demonstrate self-confidents customer oriented and taking lesson from failure. No significant difference was identified between the male and female students regarding the attributes passion for business, locus of control, demonstrate imaginative and creative ideas, innovativeness, execution intelligence, ambiguity tolerance, willingness to assert oneself, feedback of work result, become future oriented and expected level of success as an entrepreneur. The study also revealed a significant difference in the combine mean of the male and female students where the male students possessed higher entrepreneurial potentiality than the female students.

Chapter 3
Other Issues Relating to Entrepreneurship Development

This section covers some additional related issues regarding entrepreneurial development. Those related issues are awareness about motivating factor for choosing business as Profession, Perceived problems in starting a business, Awareness about the various support services, interest to know about startup information, ready to bear the cost of training and need for any institutional support.

3.1 Motivating Factors for Choosing Business as Profession

An attempt was made to identify the motivating factors that inspire the graduates to take entrepreneurship as career after completion of their studies. Study shows that the highest number of students (19%) mentioned independence as the most influencing factors to take entrepreneurship as their career. Prospect of high income (15%), service to society (14%), opportunity for showing creativity (13%), business opportunity (12%), challenging job (11%), personal skill (8%), looking after family business (5%) and circumstantial (4%) are other important motivating factors for choosing business as profession as shown in the figure 1.

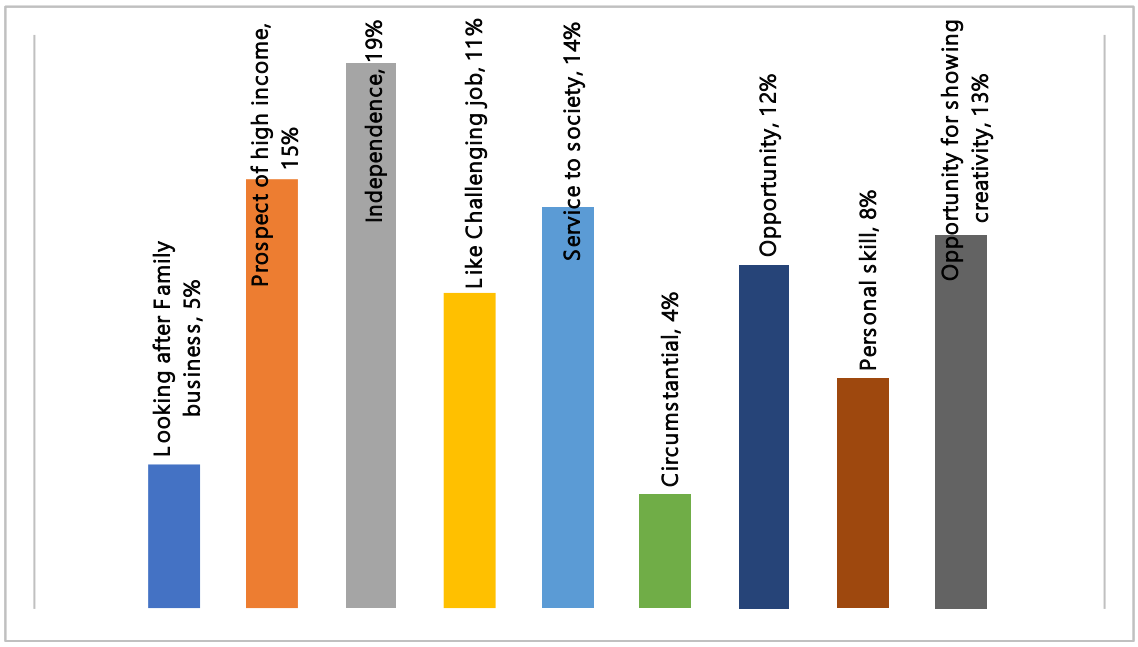

Figure 1: Motivating factor for choosing business as profession

3.2 Perceived Problems in Starting a Business

It was found that lack of capital is one of the most critical problem (48% of the total respondents) for the educated youth to start business. Besides this, the next important problem for the graduates to start business is identification of the right business idea and the selection of project (17%). The other problems as revealed from the study are lack of management knowledge (13%), lack of knowledge to prepare a business plan (10%), procedural difficulties (7%) and do not know how to get loan from bank (5%). These are the problems may be address by taking appropriate measures and programs.

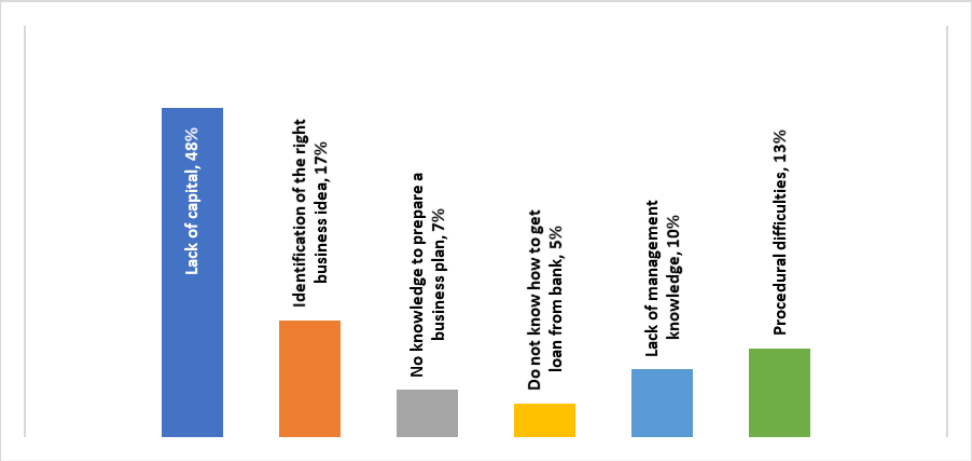

Figure 2: Perceived problems in starting a business

3.3 Awareness about Support Services

It appears from the study the graduates are not aware about the various types of assistance provided by the government and non-government agencies. The study shows that only 17% of the respondents were fully aware about the support services for entrepreneurship development.

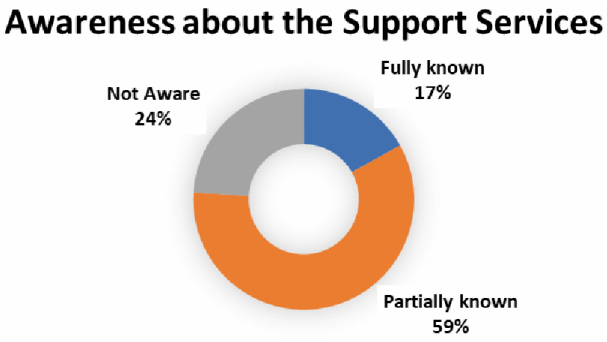

Figure 3: Awareness about the various support services

It also found that 59% of the respondents were partially aware and the rest are not aware about the support services.

Section 3.4: Training Status of the Graduates

For acquiring skill on any traits, the importance of training cannot be over emphasized. Experience and evidences from both developed and developing countries suggest that entrepreneurial skills can be developed through relevant training program and planned efforts (Rahman, 1979). It was found, 28.7 percent of the graduates had received some kind of training in the course of their studies; that means graduates have a positive attitudes towards training. Another important finding of the study is that 32.2% of the graduates had shown their interest to receive entrepreneurship training. Besides this, 26.8 % of students felt the necessity of specialized institutions to get different types of assistance and support services. Moreover, 18.4% students would be ready to bear the cost of the training. In reference to the Appendix-4, the study revealed that students who received training, possessed significantly higher entrepreneurial potentiality in eleven attributes of entrepreneurial potentiality (achievement motivation, passion for business, seeking help from experts in case of necessity, innovativeness, execution intelligence, team work ability, recognized business opportunities, prompt decision making ability, demonstrate self-confident, become future oriented and customer oriented from non-trained students) than the students were not receiving any training in the life. At present several institutions provide entrepreneurship development training. Most of the training programs are not need based and target oriented. There is no specific training program for university graduates. In this circumstance a well-designed and need based training is of great importance for the new generation of entrepreneurs.

Chapter 4
Summary, Conclusion and Recommendations

This chapter deals with major findings, conclusions and provides a few general and specific recommendations**.**

4.1 Major Findings and Conclusion

The main objective of the study was to assess the entrepreneurial potentiality of university graduates who enter into employment market after completion of their study. Specific objectives of the study were to determine the level potentiality by their discipline, identify the expected problems and challenges in taking entrepreneurship profession, understand the extent of awareness about support services provided by government and non-government agencies. Other important objectives were to find out some means to motivate the graduates having entrepreneurial potentiality to take entrepreneurship as career. Finally, based on the findings of the study some recommendation and action program are suggested to attract the educated youth to become an entrepreneur.

The research study reveals that the graduates have potentiality to become an entrepreneur. However, the level of entrepreneurial potentiality of the graduates varies from individual to individual, educational discipline to discipline and male and female. The graduates having potentiality are grouped into three categories as low-level, middle level and high-level potentiality. Here, low, mid and high level of entrepreneurial potentiality of the graduates defined as below 80, 80 to 95 and 95 to 110 by their total gained score from the twenty-two traits of entrepreneurial potentiality. According to findings of the study 18.40% of the graduates possessed high level potentiality, while 61.52% possess mid-level potentiality. The remaining individuals possess low potentiality.

Entrepreneurs are rare breed of the society and 18.40% of graduates are close to the expected potential level. Graduates with high potential may be attracted to entrepreneurship profession. A large number of graduates (61.52%) fall under the category of mid-level potentiality group. It is known that some of the essential attributes of entrepreneur can be improved, developed by education, training and gaining experiences. As a

result, some of the mid-level potential graduates may also be attracted towards business profession in the long run. The low potential group need not be encouraged to business as profession.

One of the objectives of the study was to see whether entrepreneurial potentiality of the graduates differs from discipline to discipline of education. Findings of the study shows that among the graduates under study, the business graduates possess highest level of entrepreneurial potentiality (mean value = 4.05) followed by engineering (mean value = 3.79), science (mean value = 3.77) and social science (mean value = 3.59). The research team tried to find out the causes of variation in the potentiality level of business graduates through in-depth analysis. It is revealed that the curriculum of the business discipline is business activity-oriented. In addition to this, they study a specialized course, entrepreneurship which consists motivational inputs, identification of right business product, and preparation of business plan and business management skills.

Another important objective of the study was to know what problems the graduates foresee in starting business successfully. The graduates expressed several problems such as lack of capital (48%), identification of right type of project (17%), lack of management skill (10%), complex procedures in getting loan from bank and financial institutions (13%).

Currently there are different promotional organization (Government and Non-government) providing various types of assistance to the entrepreneurs. In reply to a question, to what extent the graduates were aware about the assistance and their sources of supply. The study reveals that the 17 percent of the graduates were fully aware, the 59 percent of the graduates were partially aware. The remaining 24 percent were completely unaware about the assistance and their sources of supply. Study shows that the highest number of students (19%) mentioned independence as the most influencing factors to take entrepreneurship as their career. Prospect of high income (15%), service to society (14%), opportunity for showing creativity (13%), business opportunity (12%), challenging job (11%), personal skill (8%), looking after family business (5%) and circumstantial reasons (4%) are other important motivating factors for choosing business as profession.

The study, on the whole, has been able to assess the presence the entrepreneurial potentiality of the graduates although the level differs from individual to individual and discipline to discipline. Given the necessary policy guideline, support assistance including need-based training to the graduates having entrepreneurial potentiality, called New Generation Entrepreneurs, may be attracted towards the challenging profession of entrepreneurship. This entrepreneurship development strategy not only creates jobs for self but also others. The overall impact of the entrepreneurship development process will help to mitigate the acute unemployment problem of the educated youth as well as the rapid and sustainable economic growth in the country.

4.2 Recommendations

Based on the findings of the study and conclusion of opinion survey of experts (related studies, academician and practitioners) some recommendations are suggested below:

General Recommendations

There should be a distinctive policy for promotion and development of entrepreneurship among educated youth, particularly the university graduates. In that policy the objectives and strategies should be clearly defined. The policy statements should clearly spell out, in specific terms, the fiscal concessions, priorities, incentives etc. Design programs for creating awareness among the educated youth about entrepreneurship profession through creative advertising, series of public lecture, seminar and workshop.

Introduction of entrepreneurship course at all levels of educations systems

In order to motivate the students towards the entrepreneurship profession, entrepreneurship course should be introduced at all levels of educations system. At present, this course is taught at all levels of business education. It should be noted, according to the study, entrepreneurial potentiality exists among the non-business (Science, Engineering and Social-science) background graduates. By introducing an entrepreneurship course in the curriculum of non-business education will be a positive step towards the

promotion of entrepreneurship in the country. The course should be taught by well trained teachers and instructors. Besides this thing, appropriate text book should be written by entrepreneurial education specialists by including the practitioners' knowledge and experience (Rahman, 1995).

Establishment of Entrepreneurship Development Cell (EDcell) in University and Colleges

Entrepreneurship education and training is a specialized course of study. There is a great need to setup an EDcell in every college and university for managing, teaching and training of entrepreneurship development programs. The EDcell will counsel the students intending to become entrepreneur continuously.

Specific Recommendations

Entrepreneurship Development Training (EDT)Program

There is a special need for stand-alone comprehensive EDT program for emerging entrepreneurs of the university graduates. As most of the entrepreneurs likely to be the first-generation entrepreneurs and come from non-industrial background they need comprehensive entrepreneurship development training before starting a business. The comprehensive training program should be designed in modular form consisting of awareness creation and motivation, induction training, preparation of business plan, financing and startup enterprise, monitoring and supervision among others. In order to make EDT program even more effective it should be followed up by appropriate support and technical assistance.

Training of the Trainers and Teachers

Entrepreneurship is specialized course involving elements like-achievement motivation and skill development for preparing business plan, implement the plan and run the enterprise successfully. So, teaching and training of entrepreneurship development should be offered by well qualified, trained, experienced and committed faculty and trainers to make the program effective. Therefore, it is recommended that an arrangement should be made to provide training for faculties and trainers (Rahman, 1995).

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Appendices

Appendix 1: Gender wise descriptive statistics and t-statistics

Characteristics	Male			Female			t-statistics	
	N	Mean	Std. Dev	N	Mean	Std. Dev	t-value	Sig
Achievement Motivation	483	4.32	0.93	229	3.974	1.26	4.08	0.00
Risk taking propensity	483	3.79	1.01	229	3.467	1.06	3.95	0.00
Passion for Business	483	3.23	1.24	229	3.205	1.23	0.29	0.39
Seeking help from experts in case of necessity	483	3.96	1.045	229	3.729	1.21	2.62	0.00

Characteristics	Male			Female			t-statistics	
	N	Mean	Std. Dev	N	Mean	Std. Dev	t-value	Sig
Independence and Autonomy	483	4.33	0.947	229	4	1.22	3.93	0.00
Locus of control	483	4.16	1.081	229	4.109	1.22	0.51	0.31
Demonstrate imaginative and creative ideas	483	3.7	0.969	229	3.598	1.09	1.3	0.10
Innovativeness	483	3.66	1.012	229	3.502	1.16	1.88	0.03
Execution Intelligence	483	3.7	0.921	229	3.55	1.04	1.96	0.03
Response to Change	483	3.93	0.977	229	3.707	1.08	0.79	0.00
Ambiguity Tolerance	483	3.77	1.059	229	3.585	1.12	2.09	0.02
Problem Solving Ability	483	3.73	0.95	229	3.406	1.03	4.15	0.00
Willingness to assert oneself	483	3.46	1.027	229	3.445	1.11	0.19	0.42
Team work ability	483	4.17	0.994	229	3.83	1.19	4	0.00
Feedback of work result	483	4.27	0.939	229	4.122	1.2	1.78	0.04
Recognized business opportunities	483	3.6	1.126	229	3.345	1.15	2.85	0.00
Prompt decision making ability	483	3.78	0.942	229	3.472	1.02	3.96	0.00
Accept full responsibility for success or failure	483	4.28	0.95	229	4.07	1.12	2.57	0.01
Demonstrate self-	483	4.08	0.932	229	3.664	1.09	5.29	0.00

Characteristics	Male			Female			t-statistics	
	N	Mean	Std. Dev	N	Mean	Std. Dev	t-value	Sig
confidents								
Become future oriented	483	3.99	0.942	229	3.882	1.07	1.34	0.09
Customer oriented	483	3.88	1.043	229	3.515	1.21	4.16	0.00
Taking lesson from failure	483	4.3	0.987	229	4.105	1.13	2.35	0.01
Expected level of Success as an Entrepreneur	483	3.95	1.012	229	3.782	1.11	1.99	0.02
Total	483	3.91	0.523	229	3.695	0.72	4.59	0.00

Appendix 2: Level of Entrepreneurial Potentiality

		Educational Discipline of the Graduates				
		Business	Engineering	Social-Science	Science	Total
Level of Entrepreneurial Potentiality	Low	24	33	52	34	143
		8.39	25.98	32.91	24.11	20.08
	Mid	193	76	85	84	438
		67.48	59.84	53.80	59.57	61.52
	High	69	18	21	23	131
		24.13	14.17	13.29	16.31	18.40

Appendix 3: Impact of Training on Entrepreneurial Potentiality Traits

Characteristics	Received Training (Any Types)			Do not Received Training			t-Statistics	
	N	Mean	Std. Dev	N	Mean	Std. Dev	t-value	Sig
Achievement Motivation	204	4.392	0.98	508	4.132	1.08	2.979	0.00
Risk taking propensity	204	3.779	0.99	508	3.652	1.05	1.488	0.06
Passion for Business	204	3.407	1.25	508	3.152	1.22	2.501	0.00
Seeking help from experts in case of necessity	204	4.049	1.04	508	3.821	1.12	2.504	0.00
Independence and Autonomy	204	4.196	1.14	508	4.234	1.02	-0.44	0.66
Locus of control	204	4.069	1.22	508	4.169	1.08	-1.08	0.85
Demonstrate imaginative and creative ideas	204	3.74	0.99	508	3.642	1.01	1.176	0.12
Innovativeness	204	3.735	1.06	508	3.561	1.06	1.98	0.02
Execution Intelligence	204	3.76	0.96	508	3.61	0.96	1.874	0.03
Response to Change	204	3.877	1.1	508	3.854	0.98	0.274	0.39
Ambiguity Tolerance	204	3.779	1.1	508	3.679	1.07	1.118	0.13
Problem Solving Ability	204	3.681	1.01	508	3.604	0.97	0.942	0.17
Willingness to assert oneself	204	3.525	1.1	508	3.429	1.03	1.091	0.13
Team work ability	204	4.201	1.07	508	4.004	1.06	2.227	0.01
Feedback of work result	204	4.142	1.12	508	4.254	0.99	-1.31	0.90
Recognized business opportunities	204	3.716	1.1	508	3.443	1.14	2.902	0.00

Characteristics	Received Training (Any Types)			Do not Received Training			t-Statistics	
	N	Mean	Std. Dev	N	Mean	Std. Dev	t-value	Sig
Prompt decision making ability	204	3.789	1.05	508	3.636	0.94	1.9	0.02
Accept full responsibility for success or failure	204	4.201	1.12	508	4.215	0.96	-0.16	0.56
Demonstrate self-confidents	204	4.054	1.02	508	3.906	0.99	1.783	0.03
Become future oriented	204	4.059	1.03	508	3.911	0.96	1.809	0.03
Customer oriented	204	3.98	1.04	508	3.677	1.12	3.318	0.00
Taking lesson from failure	204	4.25	1.05	508	4.232	1.03	0.205	0.41

Assessing E-Learning Initiatives in Secondary Schools: a case study of Keraniganj upazila in Dhaka

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Contents

Assessing E-Learning Initiatives in Secondary Schools: a case study of Keraniganjupazila in Dhaka.

1. Introduction

"Vision 2021: Digital Bangladesh" is currently the most commonly used buzz words in education, politics, media, information systems and services among the educationists, intellectuals, information scientists, as well as the civil societies. The words were first conceived while Bangladesh Awami League party's election manifesto pledged to develop a digital Bangladesh by 2021.(Election Menifesto of Awami League, 2008).It has given a great hope to the citizens of Bangladesh.

Today, Information and Communication Technology (ICT) is treated as a powerful tool for socio-economic development of country. With appropriate state policies, supplemented by realistic strategic plan, ICT is known as have bought tremendous well-being to people in terms of better access to information, job creation, and enhanced public service thought efficient governance and diversification of economic opportunities. Today, the adaption and usage of ICT is increasingly being linked to the nation development as well as education for human resource development for the countries of the world.

Education has always lived in tension between two functions: education as a matter of assuring continuity and as a matter of fostering change and creativity (Haddad & Draxler 2002). Within these developments, information and communications technology (ICT) bring a new set of challenges and pressures. Research on ICT education reveals that although teachers are gradually starting to integrate ICT into their teaching strategies , significant differences are observed in the way ICT is integrated in the classroom (e.g. Tondeour etal.2004) and their personal 'beliefs about education'(Ertmer 2005).

The use of Information and Communication Technology (ICT) in schools is taken very seriously by governments and education systems around the world. Bangladesh, like many other countries, is investing heavily (estimate BDT 17,959 chore annually) in the education system considering as one of the core strategies to alleviate poverty and facilitate development including to raise the ICT skills of Bangladesh and move towards the information society (Rahman, 2010). This is testament to the importance being placed on education and training in the use of ICTs and the setting of high priorities to improve learning outcomes to prepare young people for the

contemporary information economy. Moreover, Bangladesh has Information and Communication Technology (ICT) policy formulated for human resources development that sate that the country must prepare itself to complete effectively in the global ICT wave. With the development of ICT its use in education the developed countries of the world change its teaching learning to make it more effective. To complete with this new situation we must introduce proper use of secondary education in Bangladesh. No doubt, in recent years ICT applications appear in pedagogy have become prominent to the extent that it can potentially have substantive effect on the quality of education.

Currently, as E-learning is the trend of education in the world over, therefore, Bangladesh should lay stress on computer based education, especially ICT and E-learning. Top priority should be given to development of human resources through proper education. Initiatives should be taken to computerize government offices, and local education institutions; IT professions should be given priority for those jobs (Babul, 2005). The Vision 2021 for Bangladesh is to build Bangladesh into a resilient, productive, innovative and prosperous nation with a caring society consisting of healthy, happy, and well-educated people. A society based on self-reliance, respect, tolerance, equity and integrity.

Digital information systems are a set of electronic resources and associated with technical capabilities for creating, searching and using information. In this sense, they are an extension and enhancement of information storage and retrieval systems that manipulate digital data in any medium *(full-text, images, and sounds, static or dynamic images)* and exist in distributed networks. The content of the digital information systems includes data, metadata that describes various aspects of the data and metadata that consists of links or relationships to other data or metadata, whether internal or external to the digital information systems.

E-Learning is the use of technology to enable people to learn anytime and anywhere. More directly e-learning refers to the use of electronic media and information & communication technologies (ICT) in education. E-learning is broadly inclusive of all forms of educational technology in learning and teaching.

The above mentioned learning and teaching processes depend upon the use of Information and Communication Technology (ICT). The use of ICT in today's classrooms is very much important to make the students available to learn of operating in an information age. The term ICT resonates very favorably with the youth of today. . Access to Information-A2I project

(A2I, 2010) of the Bangladesh Government includes it in the field of education in Bangladesh and they are providing training on 'Making Digital Contents' for the teachers of mathematics, English and general science. Many secondary school teachers have received training from Total Quality Improvement -TQI (DSHE, 2012**)** Project under ICT of Ministry of Education.

2. Statement of the Problem

Bangladesh is endowed with a large pool of intelligent young citizens who, with proper education, can be turned into valuable human resources befitting the needs of the 21st century. Refashioning classroom environment and redesigning the tool of teaching-learning is an important part of the envisioned education reform. Simple ICTs facilitated reforms has been given the utmost importance, owing to its versatility and cost …Effectiveness. a2i, being GoB's flagship ICT for development program, has thus been chose to lead the reform thought ICT based educations initiatives. Implemented through pilots in partnership with government and private organizations, these initiatives have largely been successful and now being scaled up through various GoB projects and partnerships.

Education is the key to success in all the sphere of life. The SSC level education is the main stream to enter in the higher educations and in the job market as well. However, the learners at secondary level failed to achieve national goals, for example, passing out rate, quality of learners, etc. In one study, based on cohort analysis, revealed that only 35% student of grade Ten (X) are able to complete the study up to HSC level (BANBEIS, 2006), which is huge wastage of resources. Therefore, the present study is very timely and appropriate to look into a very timely and appropriate to look into a very crucial problem.

The investment in secondary level education is remarkably high, however compared to output and outcome, the performance of the system has, for a long time, being dismal. Apparently the passing rate in the secondary level is dissatisfactory, which is a colossal wastage of national exchequer. It is, therefore, the need of the time to investigate the appropriateness of contents selection by the students at SSC to relate it to minimize the need of the society. The rational of the study is thus justified.

Bangladesh banking sector has adapted ICT to digitize all spheres of their functions including monetary policy, banking supervision and internal management. Banks both in public and public sector already introduce e-commerce-banking, automated clearing house etc. Besides, other sectors and sub-sectors have also begun digitization of their activities through

using ICT. The universal role of ICT is vital for socio-economic development of a developing country like Bangladesh. Availability of information helps increase productivity of all organizations. Hence digital society is called a knowledge based society.

There is a pressing need for the qualitative changes of age-old system of educations in Bangladesh. It requires the priority attention of the citizen in general and government in particular. Mention here that for the increasing demand of human resources Bangladesh do not appeared to have skilled manpower lack of technological as well as value oriented education system. The 9^{th} and 10^{th} years of a school-going student and the next two years of a college-going student constitute the secondary and higher secondary levels respectively. Computer science was introduced as an optional subject for secondary level students from the beginning of 1994. The government of Bangladesh has prepared a national ICT policy (MoSICT, 2009) for use of ICT in all sectors including education. The national Education policy (MoE, 2010) has recommended compulsory computer science courses from the secondary level of education. For digitization of education sector of the country Bangladesh government has taken a number of development projects for use of ICT as well as ICT education.

In Bangladesh for the last 15 years more universities opened computer education departments. There were directives from the government to double intake in relevant disciplines without really giving any commitment to improving laboratory facilities and development of faculty resources. India and others Asian countries already have developed E-learning systems in nationwide to enhance the quality of learners and teachers. It is better not to compare our strength in this regard .we are late in this field. Moreover, we have a serious problem with our image in science and technology, in which case India is having much better an image although living in the same level of economic development. In addition to this, we are left with inadequately trained faculty members to teach so many bright students. We should have given a lot of more attention to developing faculty members instead of increasing our intake. When we are a late starter we can enter into the field only through our superior quality.

For the last 10/15 years we have been demanding to change the lot of country through reaping the benefit of information Technology. Different Governments have attached significant importance to IT calling it thrust sector and so on. Efforts have been made to formulate IT policies in order to expedite and accelerate its progress. Meeting, Seminars, festivals, exhibitions, on IT have become a part of our life. Initiatives have been taken so that Bangladesh is representing in the world-wide software

exhibition and shows. Government has allocated funds thought EPB and Bangladesh bank to encourage export of software by our IT professionals. The government has already set up an incubator to facilitate software developing activities, have giving tax holiday to our entrepreneurs. But unfortunately none of these initiatives have been rewarded with any mentionable success.

3. Definition of Terminology

E-Learning-The term 'e-learning' means 'electronic learning' that encompasses all forms of technology enhance learning, it is the use of technology to enable people to learn anytime and anywhere. It is a great blessing of a digital era. It is suited for distance education. E-learning can include training, education, and the delivery of just-in-time information and guidance from experts. These services are delivered, enabled or mediated by ICT (information and communication technology) for the purpose of delivering education. It is an instruction delivered through purely digital technology such as CD-ROMs, the internet or private networks.

E-learning is essentially the network-enabled transfer of skills knowledge. E-learning refers to using electronic applications and processes to learn. E-learning applications and processes include web-based learning, computer-based learning, virtual classrooms and digital collaborations. For the purpose of the study, 'Secondary' means grades IX of general secondary schools.

4. Objectives of the Study

The main objective of the study is assessing the use of ICT in secondary schools of Keraniganj upazila, Dhaka.

The specific objectives are:

a. Identify the existing capacity of ICT facilities e. g. computer lab, quality teachers and instructors, multimedia as well as physical and learning facilities in secondary schools.
b. Actual utilization and implementation of ICT facilities in the class room for the students.
c. Find out the problems of E-Learning practices at secondary schools.
d. Find the strength and weakness of E-Learning initiatives as well as administrative and management problems.
e. Examine the basic requirements of E-Learning initiatives in secondary schools.

The following Table-1 illustrates specific objective- wise methods proposed for the survey:

Table 1: Specific Objectives and Methods

Specific Objectives	Methods
1. Identify the existing capacity of ICT facilities e. g. computer lab, quality teachers and instructors, multimedia as well as physical and learning facilities in secondary schools.	1. Review of literature 2. Survey
2. Actual utilization and implementation of ICT facilities in the class room for the students.	1. Survey of School 2. Secondary data
3. Find out the problems of E-Learning practices at secondary schools.	1. Secondary data 2. Survey of school including ICT Service
4. Find the strength and weakness of E-Learning initiatives as well as administrative and management problems.	1. Analysis of initiatives 2. Secondary data
5. Examine the basic requirements of E-Learning initiatives in secondary schools.	1. Based on analysis of data as obtained through above methods.

Research Questions

Based on the aim and objectives of the study, one major research question (MRQ) and four subsidiary research questions (SRQs) have been formulated that will guide the study.

MRQ: How do Secondary Schools of Keraniganj Upazila use the ICTs for providing education?

SRQ1: What are the existing infrastructural facilities of ICTs and their actual implementation in the class room?

SRQ2: What are the basic requirements of EL initiatives in secondary schools and the demand of ICT skills in the job market of Bangladesh?

SRQ3: What are likely to be the problems, strengths, weakness, opportunists and threads of EL in secondary school level in Keraniganj Upazilla?

5. Rationale of the Study

E-learning is a new education concept by using the Internet technology, it deliveries the digital content, provides a learner-orient environment for the teachers and students. Moreover, E-Learning is the use of technology to enable people to learn anytime and anywhere. The use of ICT in today's class rooms is very much important to make the students available to learn of operating in an information age.

National Education Policy 2010, Bangladesh (Bangladesh, 2010) adopted the secondary education level of all students will be computer-literate before they reach the secondary level and secondary education level students are supposed to study computer science. Besides, the Bangladesh Government declared the first national policy on ICT known as the 'National ICT Policy 2002' with a vision for "a knowledge-based society" in the country by 2006 as a terminal goal.

For the integration of ICT in education, many researchers did and still are doing a lot of research works on it and they have found out many barriers lying behind this movement. Teachers are the single most important element of the school system and the country is already facing a severe shortage of qualified and ICT motivated teachers and instructors at different levels. National Education Policy 2010 targets teacher-student ratio 1:30 for secondary education by 2018 (Bangladesh, 2010).This ratio specially for some technical and practical courses which are related with e-learning as well as ICTs.

There is a great disciplinary in facilities of e-learning classrooms, learning aids, and laboratory between urban areas and rural and remote areas like chars, haors, and coastal areas. It is also necessary that standard be set up for minimum physical and learning facilities such as computer laboratories, libraries, uninterrupted electricity supply etc. are the requirement for a school.

ICT should be made more accessible to teachers, students, and administration for learning, training, research, administration, management, monitoring, etc. This requires provision for more computers as well as connectivity and broadband facilities. Computer aided learning also requires training of teachers and other staff in order to make the best use of the technology.

Curriculum reform is a critically important issue in all schools. School education must be made more relevant to the lives of children. There is need to move away from rote-learning to understanding concepts, developing good comprehension and communication skills and learning

how to access knowledge independently. This may require substantial changes in e-learning teaching system.

Moreover, lack of clear understanding of e-learning and other internal and external hindrance in the administrative and management level hampered the proper implementation E-Learning Initiatives in secondary schools of Bangladesh.

The Vision 2021 to be materialized will require an educated nation which is only possible through application of a very effective and pragmatic education system. Education system thus reflects our hope and aspiration for a just and knowledge-based society (Election Menifesto of Awami League, 2008).

Moreover, the discipline of E-learning is fairly new in our country. Relevant literature reveals that advanced countries of the world have achieved considerable success in disseminating higher education by offering different degrees through E-learning. GoB has prioritized ICT related education as a thrust area of expediting the overall development of the country. Some of our neighboring countries are even entered in the area of e-governance. Bangladesh government has also expressed keen interest, as reflected in the ICT policy, to adapted e-governance, also. E-learning is the precursor of all ICT related development. In the education sector of Bangladesh, especially in the college education, courses could be given through internet in the form of e-learning, which will enable the stakeholder, such as, students, teachers, etc. to get the best possible expertise available in the country. As through this system, courses could be offered from any part of the country.

On the basis of available literature and observation, so far no single empirical study has been conducted in Bangladesh to assess E-Learning Initiatives in secondary schools of Keraniganj upazila, Dhaka. Finally, considering the above mentioned scenario, opportunities and challenges in mind the proposed research work titled- assessing E-Learning initiatives in secondary schools of Karaniganj upazila, Dhaka has been undertaken for the study.

6. Review of Relevant Literature

As part of the process of understanding the general problem and its context review of relevant literature is a process of scientific investigation for selecting conceptual and relevant thoughts on the given aspects of study and other related area. Again, it can be of value to researchers by helping them to regard their studies as contributions to a larger topic of which the inquiry at hand is only a part. There is quite a good collection of literature

on the subject under study. Literature review helps researchers to avoid duplication of research effort.

Bangladesh entered into the computer era in 1964 with the installation of an IBM 1620 machine at the Atomic Energy Center at Dhaka. Institute of Statistical Research and Training (ISRT) installed IBM 101 Statistical machine in 1964. Commercial application of computer was initiated by Janata Bank with an IBM 1401 in 1967 followed by Adamjee Jute Mills, Ltd. in 1970 (Munshi, Siddike & Sayeed, 2011).

This paper is an attempt to analyze the potentialities of e-learning in Bangladesh. In this digital era, Internet is updating day by day. People also want to get the proper blessing of Internet or Information and Communication Technology (ICT). For this, the best use of internet is using it for education or learning purpose. Simply, we can call it e-learning. It can also be called Web-Based Learning (WBL), Web-Based Instruction (WBI), Web-Based Training (WBT) Internet-Based Training(IBT), Distributed Learning (DL), Advance Distributed Learning (ADL), Distance Learning, Online Learning (OL),Virtual Learning, Mobile Learning, (or m-learning) or Nomadic Learning, Remote Learning, Off-site Learning, a Learning (anytime, anyplace, anywhere learning), etc. Like a developing country like Bangladesh has also initiated several projects of e-learning. In this paper, we have tried to show the initiatives, problems, and recommendations for Bangladesh towards e-learning so that our country can survive in the competitive modern age (Farah and Ahmed, 2014).

National Education Policy 2010recognized that all students will be computer-literate before they reach the secondary level and secondary education level students are supposed to study computer science (Bangladesh, 2010).

Daniel (1996) noted that education institutions need to consider co-effective and efficient methods of operation if they are to survive. While technology alone might not be the answer to the education ministries entire problem. The benefits of utilizing technology, particularly for developing online collaborative activities are well documented.

Knight (1996) proposes that multimedia based teaching-learning will benefited students who are used to being ‘spoon feed’ on the basis that student can no longer be passive about their learning.

Davies (1996) mentioned that e-learning is a phenomenon of ‘lifelong learning’ has begun and according to this new concept is quickly gaining social and political recognition as Governments recognize the positive

impact of education on the health and growth of modern economies. Consequently, higher education institution will be required to provide for a more diverse student body. In particular, e-learning will provide for the significant growth in the mature student market.

Cooper (1999) pointed out that independent learners have the potential to be successful in distance education, however those lacking in the skill to the study independently will not react well in a virtual environment. Under such circumstances, institutions implementing e-learning must be aware that students will react differently to the changing paradigm of learning and rather than implement changes across the board, should aim to offer courses tailored specifically towards the different learning style. In facing to take such action, universities run the risk of low success rates and at worst, failure.

Volery and Lord (2000) reported that the success of the technological infrastructure also has implication for the success of virtual learning, as malfunctioning hardware, software configuration, slow or down servers, busy signals and lack of access are all barriers which can cause frustration for students and ultimately affect the learning process. This issue is difficult to overcome as problem with technology can arise at any time. This challenge is best meet by ensuring the functionality of the technological infrastructure before e-learning is implemented. They also claim that universities do not embrace the opportunities presented by technological development will be left behind in the race for globalization.

Donoghue and Singh (2001) pointed out that technology is a powerful medium particularly for part time work based students who find erratic attendance requirements and study difficult, the implication are clearly multi-faceted. The institution will itself necessitate change physical, cultural and managerial. Students will require support in adapting to a potentially unfamiliar learning context. Finally the implications are immense for staff who are under pressure to the rapid growth in e-learning, experienced particularly during the 1990s, has overcome many of the barriers to higher education, providing traditional universities with an opportunity to meet the changing worldwide demand for education.

Moore (2001) extends this basic outline by proposing tactics to get learners to successfully take control. This theory involves splitting distance teaching into three phases of activities: preparation, presentation and participation, and cites examples such as, “attend to student motivation and the affective dimension of being a student, but don’t intervene too much. Establish the culture of independent learning and peer participation”.

Peaks (2001) affirmed that an online environment the role of a lecturer focuses more on administration than teaching. The implications of e-learning for lecturer are significant and should not be overlooked by institutions implementing such programmes. Lecturer must be provided with sufficient time and resources to ensure that online courses are suitably developed implemented to meet the needs of students. Alongside this, the transition into new teaching styles must be managed effectively to ensure that lecturer are supported through and beyond the evolutionary period.

Wilson (2001) mentioned that training and support is required to ensure that technology can be integrated into daily routines and that its use will be efficient and effective. However, this too will add workload pressure particularly for those requiring significant training due to a lack of experience. This pressure is augmented by the continual need for retraining as lecturers struggle to keep up to date with technological Progress and since familiarity with technology has a direct impact on the success of online courses, the importance of cannot be overstressed.

Kabir (2002) affirmed that for introduction of computer based learning an adequate infrastructure facility, including physical facilities be ensured. Azaher (2003) described that we have limited financial resources whereas, we have very prolific and skilled resources, we should make qualified computer teachers available before sending computers and other accessories to schools, colleges and universities all over the country. ICT should be used to create a healthy atmosphere of competition among educational institutions.

Keykobad (2003) reported that the development of faculty members for universities, colleges and schools should be given priority and all tires of educational institutions to be taken under networking and renowned faculty members from advanced countries may be hired with the mission of generating graduates at home and giving these programs a firm footing.

Asabur (2004) stated that performance of each institution should be evaluated and excelling institutions should be rewarded, their name should be made publicly. In order to develop excellence in programming skill, programming contests should be held in different levels. This can follow the formats of sports competition among schools, colleges and universities. Introduction of electronics and other media can also be made very popular. To improve transparency in the achievements to different educational institutions, every institution should develop its homepage highlighting its achievements and achievements of its faculty members.

Rahman (2004) mentioned that massive awareness campaign be conducted to create an atmosphere for introduction of computer-based learning. He, also, underscored about high-speed Internet backbone for implementation of ICT based teaching-learning. Alam (2005) express that it is possible to offer demanded courses under e-learning related to electronic resources. He added that new horizons for e-learning graduates would be opened in world job market.

Babul (2005) mentioned that ICT based teaching-learning method does not need elaborate infrastructural facilities and with the minimal facilities maximum people could be brought in the umbrella on conventional and ongoing learning. In this regard, initiatives should be taken to computerize government offices and education institutions. Zabed (2005) noted that regular computer training programs for school and college teachers should be organized to refresh their knowledge and ever-changing scenario of ICT learning.

Iqbal et al. (2006) mentioned that multimedia based machine-learning is very essential for quality education and in ensuring better facilities to exchange update information to each other easiest way. He pointed out that for implementation of e-learning, computers, internet connections, Local Area Network (LAN), customized software, curriculum and syllabus, etc. are needed.

Manju (2006) reported in Thailand established Sukhothai Thammthirat Open University completely dependent on web supported courses. In South Korea, multimedia based teaching-learning are extensively used for dispensing courses. Likewise, Indonesia and Philippine have, also, attached much importance on e-learning. One of the splendid examples of e-learning based higher studies in Singapore. Full online courses on demanded subjects are offered through e-learning mode in virtual classroom environment.

Sarker (2006) stated the need of widespread training on computer and digital content based teaching-learning related matters for successful implementation of the new technological dependent teaching-learning system.

It is un-univocally agreed by the above author in their literature, introduction of multimedia based teaching-learning in educational

institutions in a country could be made the education easy and internationally standard. The method will prove quality education to the learners and would be a significant learning tool for an enhanced secondary education in Bangladesh which in turn would contribute to upgraded socio-economic situation. In fine the researcher would like to lay stress on the introduction of the new-technology as priority basis.

Becta's study (2004) found that the problem of lack of time exists for teachers in many aspects of their work as it affects their ability to complete tasks, with some of the participants' teachers specifically stating which aspects of ICT require more time. These include the time needed to locate internet advice, prepare lessons, explore and practice using the technology, deal with technical problems, and receive adequate training. Contents, attempts and taste for an effective multimedia classroom require much more training on ICT based education. Only a 15-day course cannot support me to swim in a vast ocean of ICT. Some studies have investigated the reasons for teachers' lack of confidence with the use of ICT. For example, Beggs (2000) asserted that teachers' "fear of failure" caused a lack of confidence to use it in their teaching.

On the other hand, Balanskat, Blamire, and Kefala (2006) found that limitations in teachers' ICT knowledge makes them feel anxious about using ICT in the classroom and thus not confident to use it in their teaching.

In case of making a multimedia classroom, a classroom is needed because perspectives our country specially in a government run school every classroom's imagination as a multimedia classroom is just seeing a day dream. In schools, there is particular classroom for setting up multimedia projector permanently. It is quite impossible to move with the apparent from one classroom to another classroom.

In her paper "Obstacles to effective introduction of ICT in Classroom" Momataj (2012) identified different obstacles that become bars to introduce E-learning initiatives in secondary schools of Bangladesh. The obstacles are integration of ICT in education, lacking of teachers confidence, competences, proper training, sufficient equipment, lack of sufficient net connection availability, insufficient number of computers, etc.

For the integration of ICT in education, many researchers did and still are doing a lot of research works on it and they have found out many barriers lying behind this movement.

They have found lacking of teacher's confidence, competence, proper training, sufficient equipment, time table etc. they divided the barriers into various categories mainly into two-extrinsic and intrinsic barriers. According to them, extrinsic barriers include time, support, resources and training as first-order and cited access. On the other hand, intrinsic barriers include beliefs, practices and resistance as second-order and cited access (Ertmer 1999). Teachers-level barriers versus school level barriers are another classification of barriers (Becta 2004).

7. Technical Approach and Methodology

The proposed research is an empirical study. So, the following methodologies were employed for carrying out the research work:

7.1 Research Site

There are twenty seven secondary schools (Govt. & MPO) in Keraniganj Upazilla. Among them ten schools (five from south and five from north keraniganj) have been selected for this study those have ICT facilities through purposive sampling.

7.2 Population and Sampling

The population of the study included class nine students of twenty seven secondary schools in Keraniganj. Ten schools have been included for the study as sample. However, a random sample of 100 students (for students from each school comprised five boys and five girls, total one hundred students) from ten schools drawn for students' sample. Data had collected from 10 secondary schools covering Keraniganj Upazila through in-depth interview and FGD. Due to time constraint sample were selected purposively. The sample of the study is presented below:

Table-2

Name of School	Govt./ Non Govt.	Sample Size
Shakta Govt. High school	Government	5 boys &5 girls(10)
Keraniganj Girls school and college.	Non-Government	5 boys &5 girls(10)
Nayabazar High School	Non-Government	5 boys& 5 girls(10)
Aymonakhatun Girls High school	Non-Government	5 boys &5 girls(10)

Kolatia High School	Non-Government	5 boys &5 girls(10)
Zinzirapirmohammad pilot Girls School	Non-Government	5 boys &5 girls(10)
Zinzirapir,M pilot school and college	Non-Government	5 boys & 5 girls(10)
Chunkutia girls High school	Non-Government	5 boys & 5 girls(10)
Suvatta High School	Non-Government	5 boys & 5 girls(10)
Atipasdona High School	Non-Government	5 boys & 5 girls(10)
10 Schools	**-**	**100 Students**

7.3 Data Assessment Methods

Data were collected from primary and secondary sources. A number of steps were followed to design the questionnaire for collecting data. Questions were posed for each of the constructs that has to be assessed in the study. Simple, straight forward language used in the preparation of the questionnaire, consistent with the level of participants. The research tools, questionnaire, etc., were distributed to the respondent's under the supervision of the research team. The research team members were made the questionnaire understandable to the respondents.

7.3 Data Collection Tools

Survey method based on both close and open-ended questionnaires used for the study. Quantitative (survey) and qualitative approach used. The pre-test of the questionnaires observed through a small group of proposed respondents. It is expected that, this methodology was took less time in collecting data from a large number of participants. The questionnaire administered on a section-to-section basis. Since the respondents were secondary school those could possibly face difficulties in understanding certain questions, the questionnaire personally administered among the schools. The following data collected from School level information from school (10schools), ICT teachers, Computer Instructors and Students (Ten students from each school, comprising 5 boys &5 girls, total100

students).Moreover, FGD made with teachers & students separately. One FGD with teachers and one FGD with students organized in the study area.

7.4 Data Analysis Process

Data had been processed manually as well as with the help of computer software, Excel. Statistical tools and techniques were used for analyzing and interpreting the data. Computer software, especially SPSS, was employed for analysis of the date.

8. Data Analysis, Interpretation and Presentation

This chapter is organized with the data analysis, interpretation and presentation in the form of tables, graphs and description. Opinions of three respondent groups, Viz., heads of the institutions, class teachers (ICT) and learners of class IX secondary education institutions are presented in separate sections.

In order to assess the e-learning initiatives of (multimedia classroom teaching-learning using digital contents etc.) at secondary schools in Keraniganj upazila in Dhaka, a total of 10 head teachers, 15 class teachers and 100 students of secondary level educational institutions were consulted. Opinion on the overall strengths and weaknesses of teachers, physical facilities of the institutions, and teachers' preparedness on the e-learning initiatives where multimedia teaching-leaning method and their performances, teachers and learners' enthusiasm, and trends to implementing digital based e-learning at secondary education level were studied.

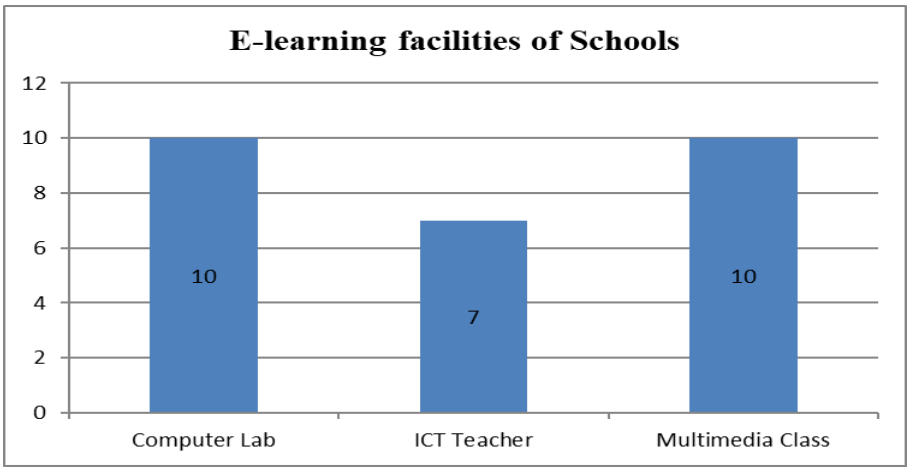
8.1 Profile of educational institutions visited

The total 10 institutions visited, 1 was Government and 9MPO secondary schools.

Table-3

Name of School	Year of Est.	Govt./ Non Govt.	Computer Lab.	ICT Teacher	Multimedia based teaching-learning
Shakta Govt. High school	1972	Government	yes	yes	Yes
Keraniganj Girls school and college.	1972	Non-Govt.	yes	yes	Yes
Nayabazar High School	1962	Non-Govt.	yes	no	Yes
Aymona khatun Girls High school	1988	Non-Govt.	yes	yes	Yes
Kolatia High School	1914	Non-Govt.	yes	no	Yes
Zinzira pir mohammad pilot Girls School	1968	Non-Govt.	yes	yes	Yes
Zinzirapir,M pilot school and college	1922	Non-Govt.	yes	yes	Yes
Chunkutia girls High school	1972	Non-Govt.	yes	yes	Yes
Suvatta High School	1947	Non-Govt.	yes	no	Yes
Atipasdona High School	1957	Non-Govt.	yes	yes	Yes

Figure-1 E-learning facilities of Schools



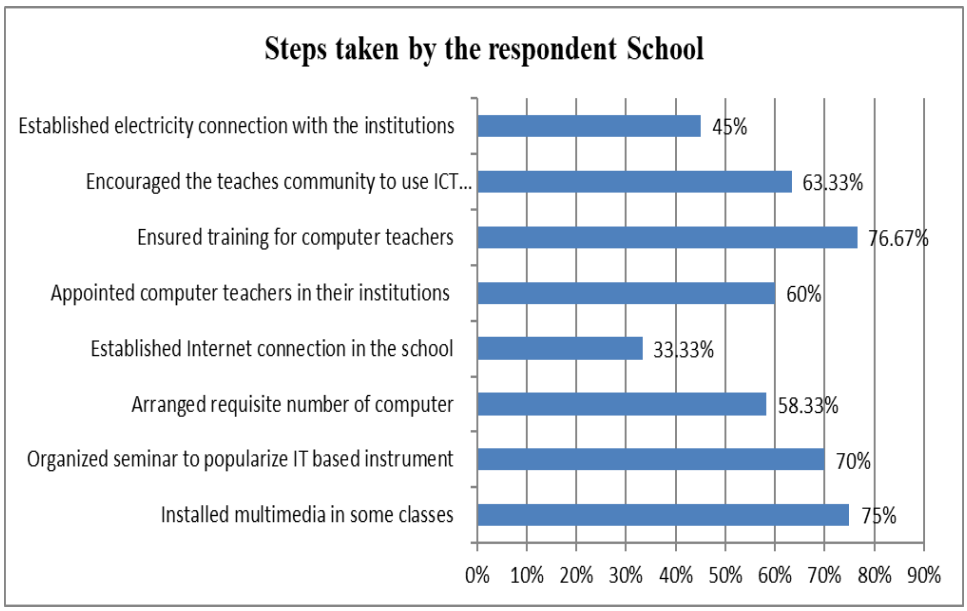
It is found that out of 10 schools, all of them have computer lab and multimedia class. But only 7 schools have ICT teacher i.e. 30% of the institutions still need ICT teacher.

8.2 Initiatives have taken to create multimedia based classroom environment

In response to the question, whether the teachers have taken initiatives to use IT based materials 70% respondent Head teachers stated that they have already taken some steps to introduce ICT facilities for conducting the sessions effectively in the classrooms. The initiatives taken by them are depicted in a tabular form (Figure-2). Highest number of respondents mentioned that they have arranged requisite number of computers (58.33%) that followed organized seminar to popularize multimedia classroom using digital contents (70%) ensured training for computer teachers (76.67%), installed multimedia in some classes (75%) and encouraged the teachers' community to use ICT materials (63.33%). But only (33.33%) respondent mentioned that they have established the internet connection (Table 2)

Figur-2

Steps taken by the respondent head masters to create the opportunity for effective teaching-learning through digital device (n=100)



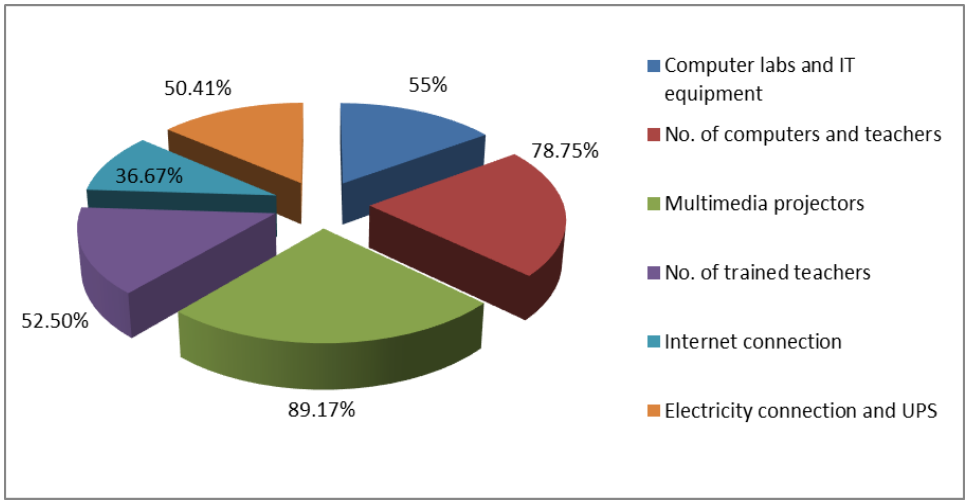
8.3 Opinion on the availability of skilled teaches and multimedia compatible classrooms at secondary schools for conducting sessions

With the response of class teachers to the question on the availability of requisite number of skilled teachers and multimedia compatible physical facilities for conducting sessions by using digital contents as teaching-learning aids.

A total 89.17 respondents mentioned that good teachers and multimedia compatible physical facilities are satisfactory and 36.67% replied that they have high level frequency internet connection. In addition, the respondents have given their view in line with the human resources and materials in their institutions i. e. existence to computer lab and IT equipment's (55%), Internet connection (36.67%), electricity connection (50.41%) and a reasonable number of computers already supplied by the government (78.75%) which is the below table.

Figure-3

Availability of skilled teachers and multimedia compatible teaching-learning materials in the selected institutions



8.4 Opinion on the important of teachers training on multimedia maintenance and the opinions on the development of physical facilities

All the respondent class teachers (100%) have given their consent in favor to the training on multimedia using digital contents to make the sessions effective. They also viewed on the necessity of development of physical facilities for smooth implementation of IT dependent materials for better education and communication among the stakeholders.

The respondent class teachers of the study areas expressed that physical facilities is essential in implementing multimedia classroom. They also

identified some areas that need to modernize for ensuring IT based education management and administration. They highlighted that IT compatible classroom should be developed for effective teaching-learning (77.50%) followed by installation of computer and related materials in the proper places (70.42%), uninterrupted power supply needs to be established (82.50%), essential instrument and furniture should be installed (39.58%), high speed Internet connection need to be established for better communication (34.58%), essential to establish a standard computer lab. in each institution (45%), etc.

Table 4: Opinion on the importance of teachers training on multimedia teaching –learning using digital contents and the areas to be developed for ensuring physical facilities

Comments	%
Need to establish a computer lab. in each institution	45.00
Multimedia compatible physical facilities should be developed	77.50
Required numbers of related components and skilled manpower should be ensured	39.85
Uninterrupted power supply needs to be established	82.5
Installation of computer and related materials in proper place	70.42
High speed internet connection need to be established for better communication	34.58

8.5 Strategies taken by the government for multimedia based classroom

In response to an open ended question which measures have been taken by the government for implementing IT dependent teaching-learning in secondary education, a total of 76.67% respondent head teachers offered their view that ensured computer and other related electronic appliances in schools (78.33%) that followed by ensured comprehensive training across the country (76.67%), computer teachers recruitment all most all the schools (68.33%), computer laboratory established in each and every secondary schools (61.67%), Teaching-learning friendly classroom installed all most all the secondary schools (46.67%), etc.

Table 5: Initiatives taken by the government for ensuring multimedia classroom teaching be opinion of respondent groups

Comments	%
Computer teacher recruitment all most al the education institutions	68.33
Skilled teachers ensured through comprehensive training cross the country	76.77
Initiatives taken to supply Power systems for using digital device	48.33
Computer laboratory Labs established in each and every secondary School	61.67
Ensured computer and other related electronic appliances in schools	78.33
Internet facilities enhanced across the country	46.67
Teaching-learning friendly classroom installed all most all the secondary schools	58.33
Initiatives taken to monitor and supervise the new teaching-learning method	40.00
Comprehensive awareness program organized at regular basis	46.67
Comments of the respondent (n=100)	
Government has supplied computers in secondary level schools across the country	88.33
Established computer labs in some secondary schools	60.00
Imparted training all most all the computer teachers across the country	82.50
Facilitated internet connection	38.33
Decision has been made to establish satellite town cross the country	30.42
Supplied multimedia projectors and related supports	96.65
Initiatives taken to make internet connection in all the ministries and its directorates and other linked educational institutions all over the country	87.50
Recruited computer teachers at the secondary level institutions	47.08
Established power supply facilities in different ways	32.08

A total of 88.33% class teachers offered their views to the same questions that the government supplied computer in secondary schools of Bangladesh that followed imparted training all most al the computer teachers across the country 82.50% initiatives taken to make internet connection in all the ministries and its directorates, regional education offices, boards and educational institutional

9. Focus Group Discussion

9.1 Actual utilization and implementation of ICT facilities in the class room towards multimedia based Teaching-Learning at Secondary Schools of Bangladesh

The following results have been prepared based on two Focus Group Discussions (FGD) with the students of class nine of different steams. The student argued that the government has undertaken some initiatives to ensure quality education through implementing some strategies mentioned in the Education policy-2010. Of the initiatives a new method of teaching-learning multimedia based teaching using digital contents has introduced at secondary level schools. This method has some positive reflections and also some negative sides in the implementing stage.

The positive reflections are creativity of teachers and learners are being unleashed, confidence and coordination is increasing among the teachers for empowerment on IT based teaching-learning method. This method has opened the new vista in the horizon of knowledge and useful to create skilled human resources that will suitable for future job market. Modern and world class standard education would be ensured through this teaching-learning process. IT dependent teaching-learning materials facilitate to maintain good and transparent education administration for the satisfaction of stakeholders. Multimedia projector dependent teaching-learning by using digital contents is more effective, attractive and scientific for all level students. Communication and coordinating relationship has been developed among the teachers within the institutions and other institutions, Employment scope has increased for better teachers and IT based industries and training scope has been increased. Teacher-students interactions have increased and make the learning enjoyable and effective through integration of pedagogy and multimedia classroom. Teacher-led digital content has developed for multimedia classroom and empowered teachers' community.

Enhanced learning opportunities by reducing urban and rural geographical distances Student-centered learning environment has been created and ensured enjoyable and effective learning. Collaborative platform has been developed by expert monitoring and mentoring. Content development and ensured teacher's ownership and professionalism. Better teaching-learning materials have made by the teachers for conducting sessions in the classroom. Learners are attractive to multimedia teaching-learning and

quality leaning are achieving gradually. Professionals got the opportunity to enrich their knowledge as per their own pace and time. Time and labor has reduced to have the required learning resources. Information is exchanged electronically among the stakeholders for increasing team efficiency. Distance learning has made effective though e-learning device. Customized courses have crated to fulfill the need of skilled manpower in study areas. Opportunities have made to share information through video conferencing and accelerate distance learning practice. Academic and administrative network has enhanced for creating a good environment among the institutions for using IT materials. Learning materials sharing atmosphere has create for enhancing quality academic activities among the institutes. Learning resources i.e. research findings, up-date information, teaching methods, classroom lectures discussions, etc., has made available for the learners and managers. Communication among the education institutes has been made easy to establish in order to resolve the prevailing problems.

The negative aspects have been identified in implementing the e-learning systems in schools towards teaching-learning method are as follows:

a) Extensive training is essential for all the teachers in order to smooth implementation of the methods essentials skilled teachers in implementing multimedia teaching-learning method.
b) Required high cost of installation of IT equipment's to run the multimedia based teaching method.
c) Absence of physical structures for maintenance IT materials. Internet facilities, fast computers, reliable electric supply, etc. aren't up to the mark.
d) Lack of trained and skilled officers and employees in secondary education institutions.
e) Unavailability of skilled manpower for multimedia dependent teaching-learning contents development.
f) Unwillingness and less enthusiastic manpower. Scarcity of skilled manpower to ensure security of central digital repository.

9.2 Relationship among Research Objectives, Questions and Findings:

Research Objectives	Research Questions (RQ)	Findings
Objective 1	SRQ1	Basic ICT facilities are available at most of the schools. But the facilities should be upgraded to make them e-learning compatible
Objective 2	SRQ1	The actual utilization is very limited
Objective 3	SRQ3	Due to unavailability of sufficient e-learning equipment, software, contents, syllabus and trained teacher, e-learning practices is being hampered.
Objective 4	SRQ3	Most of the schools have basic setup. But the quantity of the equipment is very limited to the number of students. Most of the classrooms are still out of multimedia projector.
Objective 5	SRQ2	Computers/laptops, multimedia projector, e-learning software, multimedia contents, high-speed internet connection, and trained teachers are the basic requirements of e-learning initiatives in secondary level.

9.3 Strength Weakness Opportunity and Threat SWOT Analysis

SWOT	Current Scenario	Areas need to be improved
Strength	Most of the schools have ICT Facility	The number of ICT equipment should be increased to sufficient amount to ensure access to all students
	Some classrooms have multimedia facility	All the classrooms should be under multimedia facility
	Internet connection exists in some schools	Every school should be connected with high-speed internet
Weakness	Lack of e-learning software	E-learning software needs to be developed/implemented on priority basis
	There is lack of	All the teachers should have proper

SWOT	Current Scenario	Areas need to be improved
	proper training	training to handle ICT equipment and multimedia contents
Opportunity	Some schools have the facility to start practicing e-learning	All the schools should start using e-learning platform
Threat	There is no UPS at any institutions	Every computer should have UPS to protect the devices.

9.4 Reflections of FGD in the implementing stage

a) Confidence and coordination of teachers and learners is increasing for empowerment on IT based teaching-learning method.
b) Modern and world class standard education would be ensured through this teaching-learning process.
c) Good and transparent education administration ensured for the satisfaction of stakeholders.
d) Multimedia projector dependent teaching-learning by using digital contents is more effective, attractive and scientific for all categories students.
e) Communicating and coordinating relationship has been developed among the teachers within and among the institutions.
f) Teacher-Students interactions have increased and make the learning enjoyable and effective through integration of pedagogy and multimedia classroom.
g) Teacher-led digital content has developed for multimedia classroom and empowered teachers' community
h) Enhanced learning opportunities by reducing urban and rural geographical distances. Student-centered learning environment has been created and ensured enjoyable and effective learning
i) Collaborative platform has been developed by expert monitoring and mentoring
j) Content developed and ensured teachers ownership and professionalism.
k) Learners are attractive to multimedia teaching-learning and quality learning are achieving gradually.
l) Professionals got the opportunity to enrich their knowledge as per their own pace and time.

10. The special findings of the research work

The findings of the study on three respondent groups viz, head of institutions, classroom teachers and learners on feasibility of initiatives of e-learning in the secondary schools of Bangladesh have been summarized as follows:

- Extensive awareness programme about e-learning should be conducted through print and electronic media
- Sufficient financial support be made available from government and private sources
- Teacher should be trained on e-learning through though in service training
- computer laboratories and associated physical facilitates be upgraded to make them e-learning compatible
- Sufficient computer should be provided in all higher education institutions of the country.
- E-learning related material such as multimedia projector , cassette player, audio-visual equipment be provided to the institutions
- E-learning related customized education software is developed.
- Local area Network (LAN) should be made available in the schools.
- Broadband internet connection as well as telephone should be in place
- Uninterrupted power supply be ensured across the country
- curriculum and syllabus on e-learning should be prepared
- Central repository for e-learning based teaching materials be available

11. Recommendations:

- Extensive awareness programme about e-learning should be conducted through print and electronic media
- Sufficient financial support be made available from government and private sources
- Teacher should be trained on e-learning through though in service training
- computer laboratories and associated physical facilitates be upgraded to make them e-learning compatible
- Sufficient computer should be provided in all higher education institutions across the country.

- E-learning related material such as multimedia projector, cassette player, audio-visual equipment be provided to the institutions
- E-learning related customized education software be developed.
- Local area Network (LAN) should be made available in the institutions.
- Broadband internet connection as well as telephone line should be in place.
- Uninterrupted power supply is ensured across the country.
- Curriculum and syllabus on e-learning should be prepared.
- Central repository for e-learning based teaching materials available.
- To improve transparency in the achievements of different educational institutions, every institution should develop its homepage highlighting its achievements and achievements of its faculty members.

The researcher conducted this study after discharging their daily and special job responsibilities of the office. So, time posed was a great constraint. The constraint compelled the researchers to take one division a sample among 6 divisions of the country. That is why, this constraint had a bearing upon the representativeness of the sample. But the sample for policy makers and administrative very well represent the whole secondary education administration. Although, study area is one division, the representations of urban and rural, govt. schools were ensured in the sample.

12.Conclusion

Under current ICT driven global trend a paradigm shift is occurring in educational arena the world over. The current global trend in higher education is e-learning. Considering the future technological need in the secondary education system, the present study on feasibility initiatives of e-learning. Considering the future technological need in the higher education system, the present study on e-learning initiatives in secondary school was conducted.

The finding of the study showed that all the respondents, viz which makes heads of the institutions, classroom teachers, curriculum experts, policy makers and the students agreed that the initiatives of e-learning in the secondary education system of Bangladesh. The respondents expressed their views on a set of suggestion on introduction of e-learning will closed the geographical distance, teachers could be made available in virtual

environment, teaching material could be controlled easily, unbiased and transparent evaluation could be possible, collection of most recent research findings from home and abroad would be possible.

Respondents were asked to mark their responses to problems they face under the present administrative structure. 5 problem areas were set in the questionnaire: teacher appointment, curriculum implementation, textbook preparation and distribution, availability of fund and taking decision. Judge on the basis of ranks assigned to the problems (ranks determined on the basis of percentages of ranks assigned to the problems), textbook preparation and distribution has been found to be the least intense problems as the respondents rank it a either 3 or 4 . On the other hand, curriculum implementation has emerged as the most serious problem as the respondents rank it as either 1 or 2.

However the respond identified some drawbacks in the way of implementation of e-learning viz. in adequate awareness about e-learning among the students, shortage of trained teachers, and height cost of e-learning equipment installation, physical facilities are not e-learning compatible. Internet facilities fast computer uninterrupted electrify supply in not up to the mark, syllabus and curriculum of e-learning are yet to be developed, No updated networking facilities have been established, insufficient financial allocation.

The respondent put forwarded a set of suggestion for introduce of e-learning in the secondary education of Bangladesh. These are continuous in-service e-learning related teacher training is quintessential, adequate physical facilities should be ensure, regular power supply, computer networking (LAN), e-learning tools be made available the market place of fur flung areas as well, government and non-government support for e-learning is needed adequate awareness be generated among the students.

All the respondent groups opined that a bright future awaits for e-learning trained skilled human resource of Bangladesh. Through implementing e-learning based secondary school education. Bangladesh will enter in the global information higher way and can be develop her human resources to world class standard. E-learning citizen would be able to represent Bangladesh in competitive global environment.

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Exploring Effective Teaching Learning Practices in ICT in Secondary School: A Case Study

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Contents

Tables

Figures

Abstract

In Bangladesh, secondary school curricula have made ICT education compulsory considering the importance of ICT. Students' performance varies high across schools compared to within schools. The study is conducted in an effort to know what successful teachers (successful schools) accomplish to the students to obtain very high marks in ICT courses in SSC examination. In view of this the study team conduct case study of five exceptional schools. An observation schedule for classroom practices, questionnaire from students and semi-structured interview guides for teachers were used as research instruments. The study explored that the top most 5 secondary level schools of Dhaka city practice mostly lecture and demonstration method for teaching-learning activities in ICT class. Surprisingly it was found that, in most cases teacher uses only book reading technique to engage the students in teaching-learning process. Classes take places regularly by ICT teachers and students are assessed individually and feedback are subsequently provided. Most of the schools have sufficient infrastructure to conduct ICT lab and sometimes practical classes are taken in ICT lab. Teachers are punctual to prepare lesson plan and use text book as well as e-learning resources for preparation. However, further study is suggested to explore the overall scenario of ICT teaching learning practices in secondary level education of Bangladesh by comparing rural and urban/ city secondary schools in large scale. Chapter 1: Introduction

1.1 Introduction

"Technology will never replace great teachers,

But technology in the hands of great teachers is transformational"

- George Couros

Information and Communications Technology (ICT) can impact student learning when teachers are digitally literate and understand how to integrate it into curriculum. Schools use a diverse set of ICT tools to communicate, create, disseminate, store, and manage information. In some contexts, ICT has also become integral to the teaching-learning interaction, through such approaches as replacing chalkboards with interactive digital whiteboards, Using students' own smart phones or other devices for learning during class time, and the "flipped classroom" model where students watch lectures at home on the computer and use classroom time for more interactive exercises are a few more examples of use of ICT in facilitating teaching learning process.

The United Nations Educational, Scientific and Cultural Organization (UNESCO), created and used the "One Laptop Per Child" (OLPC) initiative as a means of closing the digital divide gap between developed and developing nations on the use of ICT. The actual implementation and practice of this "One laptop per child" initiative have not yielded significant results especially in less developed countries (Warschauer & Ames, 2010).

Bangladesh, like many other countries, is investing heavily in the education system considering as one of the core strategies to alleviate poverty and facilitate development including raise the ICT skills of Bangladeshis and move towards the information society (Rahman, 2010). This is testament to the importance being placed on education and training in the use of ICTs and the setting of high priorities to improve learning outcomes to prepare young people for the contemporary information economy. Moreover, with the development of ICT and its' use in education, the developed countries of the world have changed its' university teaching learning and administrative activities to make it more effective. To compete with this new situation we must introduce and properly use ICT in the existing teaching learning process especially in the field of secondary education in Bangladesh. There is no shadow of doubt that, in recent years ICT application have emerged in administration and pedagogy with such urgency that it has created a real time possibility of facilitating the process towards quality of secondary education in Bangladesh.

In Bangladesh, Secondary school curricula have made ICT education compulsory considering its' the importance and demands. Lack of basic infrastructure needed for ICT as well as shortage of quality and dedicated teacher in ICT teaching leaning in secondary schools are major challenges to achieve the expected benchmark. The performance of the students in ICT, measured by the marks obtained in SSC examinations, varies over a wide range from very poor to satisfactory level. The national failure rate on ICT courses is very high compared to failure rate on other science subjects. Students' performance across schools shows that variations among schools are higher as compared to within variations. In an effort to improve the practices in ICT teaching and learning, the research team wanted to study what successful teachers (Successful schools) do to help students obtain very high marks in ICT courses in SSC examinations. In view of this the study team conducted case studies on five exceptional ICT teachers (teaching) to answer the question; how do the exceptional teachers help the students' learn. The goal is to identify the teaching practices and behaviors which help students to learn and obtain good marks in SSC examination, which can then be taught in ICT teacher development workshop to train up teachers to improve their teaching and hence better assist student learning.

1.2 Purpose of the Research

The study team wants to explore what exceptional ICT teachers do to help students to learn ICT. The practices that will be identified in this study will help the students to learn efficiently as well as will be beneficial for all other teachers to improve their teaching.

1.3 Statement of the problem

It is supported by a good number of researches that use of ICT facilitates quality education. Before ensuring the use of ICT at all the level of secondary education, it is important to explore the existing facilities and practices of teachers in teaching ICT in secondary education level. This includes exploring the existing infrastructure of ICT, capacity of teachers on using ICT in classroom teaching-learning and availability of ICT facilities in the institutions. Therefore, the study entitled "Exploring Effective Teaching Learning Practices in ICT in secondary School: A case study" attempts to explore the situation.

1.4 Scope of the study

The outcomes of utilizing ICT for secondary education have been very promising by all accounts. Different types of upgraded and innovative tools and technology, animated, interactive contents and activities have amplified

high school students' attention and interests. ICTs need to be seen as an essential aspect of teachers' cultural toolkit in the twenty-first century, there is a large body of research on factors determining the integration of ICT in education, mainly emerging from research in developed countries. Emerging developing countries can draw on this research. Hawkridge (1990) already advised that nations need to pause for reflection and that policies on integration of ICT in education need to be tested.

However, many secondary schools of Dhaka city need guidance and assistance in their change process to minimize their teaching problems, reduce costs and utilize appropriate technology and tools with proper knowledge and skills. Whatever, the results of some studies reveals that the unavailability of modern ICT tools, lack of motivation and training, and attitude towards the use of ICT tools in teaching learning activities are the main constraints in secondary education. So, this study will attempt to explore the effective teaching-learning practices of ICT teachers in secondary level in Dhaka city. The scope of this study will also endeavor to identify present practice, approaches and strategies teachers use in secondary level ICT classroom which can help the students improve their quality of learning.

1.5 Research Questions

This research will answer to the following 4 questions mainly:

1. How do teachers teaching students to learn ICT at secondary level?

2. What are similarities and dissimilarities among the teachers teaching practice of ICT at secondary level?

3. Why do teachers teaching practice enhance students ICT learning at secondary level?

Chapter 2: Literature Review

2.1 Information and Communication Technology (ICT)

ICTs stand for information and communication technologies and are defined, for the purpose of this primer, as a "diverse set of technological tools and resources used to communicate, and to create, disseminate, store, and manage information" (Blurton, 2002). These technologies include computers, the Internet, broadcasting technologies (radio and television), and telephony. Collins Cobuild (2018) stated that ICT refers to activities or studies involving computers and other electronic technology. ICT is the infrastructure and components that enable modern computing.

Although there is no single, universal definition of ICT, the term is generally accepted to mean all devices, networking components, applications and systems that together allow people and organizations (i.e., education, businesses, nonprofit agencies, governments and criminal enterprises) to interact in the digital world. ICT encompasses both the internet-enabled sphere as well as the mobile powered by wireless networks. It also includes antiquated technologies, such as landline telephones, radio and television broadcast -- all of which are still widely used today alongside cutting-edge ICT technologies such as artificial intelligence and robotics. It is sometimes used synonymously with IT (for information technology); however, ICT is generally used to represent a broader, more comprehensive list of all components related to computer and digital technologies than IT.

The list of ICT components is exhaustive, and it continues to grow. Some components, such as computers and telephones, have existed for decades. Others, such as smartphones, digital TVs and robots, are more recent entries. It commonly means more than its list of components, though. It also encompasses the application of all those various components. It's here that the real potential, power and danger of ICT can be found.

2.2 ICT in Education: Bangladesh

Worldwide research has shown that ICT can lead to improved students' learning and better teaching methods. A report made by the National Institute of Multimedia Education in Japan, proved that an increase in student exposure to educational ICT through curriculum integration has a significant and positive impact on student achievement, especially in terms of "Knowledge" and "Comprehension"·

Bangladesh, as a developing country has brought a substantial change in socio-economic sectors during last decade. The desire of being a middle-income country has driven Bangladesh to come up with a modern education policy which will help them to produce the required skilled workforce. ICT integration in education was the most significant inclusion of this latest education policy, and Government of Bangladesh has stepped up to make a successful implementation of ICT in education. This study investigated the strategy of technology- inclusion in secondary education according to new education policy of Bangladesh. It examines the extent of ICT usage in the classroom, the perceived impact of technologies in teaching and learning and the possible factors that seem to hamper enhanced ICT use in secondary education.

National ICT policy of Bangladesh, which was revised in 2015 (framed in 2009), perceived ICT as a means towards holistic development of the nation. The policy intended to bring necessary reforms in curriculum, pedagogy and teachers' capacity building where ICT would be an effective tool. This includes provision of ICT literacy to the teachers and learners of primary, secondary, and tertiary levels. ICT in education was further emphasized in National Education Policy, 2010. According to the policy, the government intends "to extend the use of information and communication technology (ICT) instrumental in education process at every level". The policy reminded the curriculum and material developers to accommodate ICT in the teaching-learning process which has resulted in inclusion of ICT courses in the curriculum at different education level sand teacher training programs. As a consequence of the above, with financial support from UNDP and USAID, the government initiated Access to Information (a2i) project with an ambition of making teaching-learning more effective and enjoyable to the learners and teachers using ICT. This project followed a three-dimensional approach in its effort to enhance pedagogic improvement process: establishing Multimedia Classrooms (MMCs) at secondary schools, training of teachers on making ICT aided educational contents on hard-to-grasp topics, and making electronic versions of the textbooks. In order to establish MMCs in schools, the government has provided ICT devices such as laptops and internet connections from early 2010. As of 2015, nearly 72% of the secondary schools got multimedia facilities and about 82% got computer facilities. Computer teachers were available in 61% of all secondary schools. Up to 2013, 18,500 secondary teachers received training on preparing digital multimedia contents independently. (Babu&Nath, 2017)

2.3 Technological Pedagogical Content Knowledge (TPACK)

Technological Pedagogical Content Knowledge (TPACK) is a framework that identifies the knowledge teachers need to teach effectively with technology. The TPACK (Mishra& Koehler, 2006*)* framework extends *Shulman's idea of Pedagogical Content Knowledge has shown in Figure 1.* It may have some limitations for more focus on cognitive domain (Knowledge) but it also refers psychomotor domain (Skill) as well.

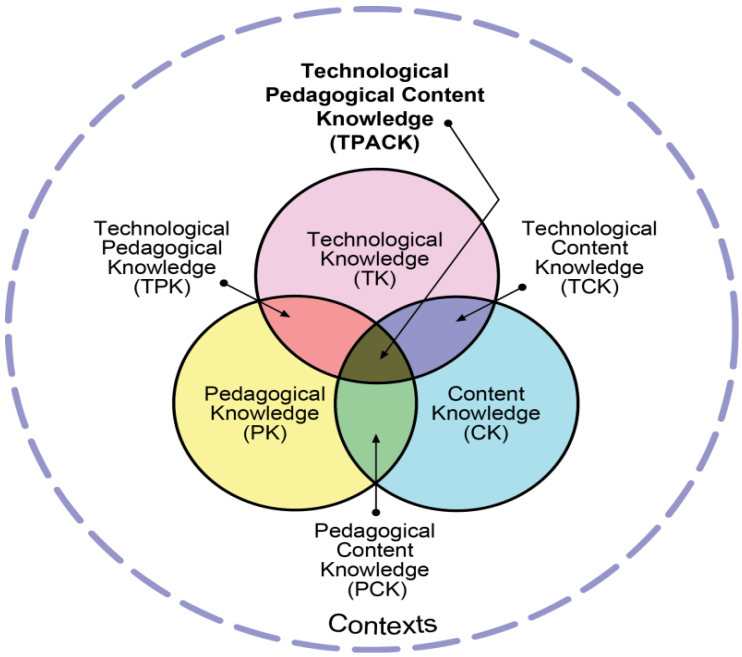

Figure 2.1: TPACK image (rights free)

At the heart of the TPACK, is the complex interplay of three primary forms of knowledge as Content (CK), Pedagogy (PK), and Technology (TK). The TPACK approach goes beyond seeing these three knowledge bases in isolation. TPACK also emphasizes the new kinds of knowledge that lie at the intersections between them, representing four more knowledge bases teachers applicable to teaching with technology with Pedagogical Content Knowledge (PCK), Technological Content Knowledge (TCK), Technological Pedagogical Knowledge (TPK), and the intersection of all three circles as Technological Pedagogical Content Knowledge (TPACK). Effective technology integration for pedagogy around specific subject matter requires developing sensitivity to the dynamic, transactional relationship between these components of knowledge situated in unique contexts. Individual teachers, grade-level, university-specific factors,

demographics, culture, and other factors ensure that every situation is unique, and no single combination of content, technology, and pedagogy will apply for every teacher, every course, or every view of teaching. The each intersection of the framework are defined as follows:

- **Content Knowledge (CK)**: Koehler & Mishra, (2009) have identified CK as the teachers' knowledge about the subject matter to be learned or taught. As Shulman (1987) noted, this knowledge would comprise of knowledge of concepts, theories, ideas, frameworks, knowledge of evidence and proof, as well as established practices and approaches toward developing such knowledge.
- ***Pedagogical Knowledge (PK)****:* The PK refers to teachers' profound knowledge about the processes and practices or methods of teaching and learning. They incorporate overall educational purposes, values, and aims. According to Koehler & Mishra (2009), this generic form of knowledge applies to understanding how students learn, general classroom management skills, lesson planning, and student assessment.
- ***Technology Knowledge (TK)****:* Koehler & Mishra (2009) have outlined the TK as the knowledge about thinking about, and working with technological tools and resources. This includes understanding information technology broadly enough to apply it productively at work and in everyday life. This knowledge also able to recognize when information technology can assist or impede the achievement of a goal, and being able continually adapt to changes in information technology.
- ***Pedagogical Content Knowledge (PCK)****:* Koehler & Mishra (2009) have defined the PCK as consistent with and similar to Shulman's idea of knowledge of pedagogy that is applicable to the teaching of specific content. According to Shulman (1987), this transformation occurs as the teacher interprets the subject matter, finds multiple ways to represent it, and adapts and tailors the instructional materials to alternative conceptions and students' prior knowledge. PCK covers the core business of teaching, learning, curriculum, assessment and reporting, such as the conditions that promote learning and the links among curriculum, assessment, and pedagogy.

- ***Technological Content Knowledge (TCK)****:* Koehler & Mishra (2009) have identified the TCK by an understanding of the manner in which technology and content influence and constrain one another. Teachers need to master more than the subject matter they teach; they must also have a deep understanding of the manner in which the kinds of representations of the subject matter can be changed by the application of particular technologies. Teachers need to understand which specific technologies are best suited for addressing subject-matter learning in their domains and how the content dictates or perhaps even changes the technology—or vice versa.
- ***Technological Pedagogical Knowledge (TPK)****:* TPK is an understanding of how teaching and learning can change when particular technologies are used in particular ways. This includes knowing the pedagogical affordances and constraints of a range of technological tools as they relate to disciplinarily and developmentally appropriate pedagogical designs and strategies (Koehler & Mishra, 2009).
- ***Technological Pedagogical Content Knowledge (TPACK)****:* TPACK is underlying truly meaningful and deeply skilled teaching with technology; it is different from knowledge of all three concepts individually. Instead, TPACK is the basis of effective teaching with technology, requiring an understanding of the representation of concepts using technologies; pedagogical techniques that use technologies in constructive ways to teach content; knowledge of what makes concepts difficult or easy to learn and how technology can help redress some of the problems that students face; knowledge of students' prior knowledge and theories of epistemology; and knowledge of how technologies can be used to build on existing knowledge to develop new epistemologies or strengthen old ones (Koehler & Mishra, 2009).

The Organization for Economic Co-operation and Development suggests that we live in a "Knowledge Economy", but that we need to think carefully about what constitutes knowledge. It proposes four distinct types; "know what", "know why", "know how" and "know who", and suggests there is growing demand for the latter three compared with the traditional curriculum of the "know what" category. Schools that are confident with technology are moving away from knowledge based curricula. Some Secondary schools have adopted programs which focus on "Learning to learn" and "Enquiry based learning" which move learning away from

simple subject knowledge to higher level thinking skills in all subjects. This is key to delivering what society and business want to see from our education system in the 21st century. It is not about excessive concentration on ICT skills, but allowing those skills to support the delivery of a much wider and more relevant curriculum. (Allen, 2018)

2.4 Teacher Training and attitudes to increase the extent of ICT

It is widely acknowledged that teachers' educational beliefs are reliable indicators of their planning, instructional designs and classroom practices (Bandura, 1989; Pajares, 1992). In other words, training for teachers is one of the essential elements to implementing ICT in the teaching-learning process. It also solves the pedagogical issues for the teachers. Changing attitude to using ICT in classroom activities can be influenced by some other factors like ICT competence, computer self-efficacy, government policy on ICT literacy and infrastructure facilities. Besides these, teaching experience, educational level, professional development, accessibility, technical support, the leadership of the head teacher, the pressure to use ICT also can play a vital role in implementation. (Ali, Haolader, & Muhammad, 2013).

In developed countries teachers and experts are giving more importance on using ICT in classroom practices than the developing nations. Their adoption and usage policy are much broader than developing nations. Thus, students are getting better at technology-based learning opportunities in developed nations and performing well in the job sector (Hamidi, Meshkat, Rezaee, &Jafari, 2011). Besides, most of the teachers use the internet to get the access to information to upgrade their knowledge which they can use in their lessons or prepare handouts and materials for class. More than 50% teachers in EU believe that mobiles, digital games, and social technologies are important for teaching and learning (Cachia et al., 2010).

Almost two-thirds of teachers agreed that they found appropriate support for combining ICT and innovative teaching. While teachers are not using the computer as standard tools of teaching, some teachers gave an example of using Google map to teach geography which shows that the scenario is changing rapidly towards ICT integration. Still, the sharing of ideas between teachers and students regarding using technology in the same flow is rare in some places in Europe. (Cachia et al., 2010; Csikszentmihalyi, 1996). In Ireland teachers often use ICT to develop students' writing and presentation skills; sometimes they even use ICT in problem-solving and evaluative skills related activities. But it is hardly used to build teamwork and collaborative skills of the students. Some schools have the facilities to

handle ICT for every subject in the classroom, and some schools use the common room like computer lab to conduct a class with ICT facilities (Flanagan, 2008).

In search of teacher's proficiency and motivation towards using ICT in the classroom, it has been seen that most of the teachers can use word-processing and internet in post-primary schools in Ireland. On the other hand, relatively low level of use of e-mail, spreadsheets, database, and graphics does not reflect the teacher's high proficiency in using applications. So, the teacher's motivation to use ICT in the classroom highly depends on their competence on the particular application (Flanagan, 2008). Jimoyiannis and Komis (2006) found that although most of the teachers in Greece have lack of confidence in their skills and abilities to use ICT, they have positive attitudes towards the importance of their training on ICT, the role of ICT in education and also the application of ICT tools in instruction process.

Though many of the countries in Asia and Pacific region have developed policies on teacher training on ICT, they need to be looked more carefully to link them with the broader perspective of ICT for development and education goals (UNESCO, 2004). Malaysia ministry of education use cascade model to solve this kind of problem, they train teachers who are genuinely interested in using ICT in classroom practice. These teachers share their idea and learning with the other teachers of the school and motivate them continuously to integrate ICT in the teaching-learning process. Sometimes, one school trains another school's teachers, which is more convenient in the same area (Gutterman et al., 2009).

Some case studies have especially examined the impact of using ICT on the changes in pedagogical practices. ICT skills were taught in a context integrated into the curriculum and as part of complex skills such as information handling, collaboration and communication, and were embedded in an authentic context (Kozma, 2003b; Voogt&Pelgrum, 2005). Learning projects became student-centered; they were longer, more time-consuming processes, and many of the ICT-based innovations involved multidisciplinary and collaborative projects, such as project-based learning and independent inquiry (Kozma, 2003b; Lowther, Ross, & Morrison, 2003; Ruthven, Hennessy, & Deaney, 2005; Yuen, Fox, & Law, 2004). The proportion of authentic activities increased, and students worked on topics meaningful to them because of the connection to real life and the student's own experiences (Voogt & Pelgrum, 2005; Yuen et al., 2004). The teacher's role changed from that of primary source of information to one who creates structure and provides advice to students, monitors their

progress, assesses their accomplishments, and works as a coach (Condie et al., 2007; Kozma, 2003a, 2003b; Lowther et al., 2003; Yuen et al., 2004). Consequently the students' role changed, they were engaged in general and/or online inquiry, and in productive learning (Yuen et al., 2004), which developed their sense of capability and agency (Ruthven et al., 2005), and collective cognitive responsibility (Lakkala et al., 2007). The nature of the teacher's role has the strongest impact on the student's role, and thus for the learning outcomes (Yuen et al., 2004). In this regards, teachers need to equip and acquaint themselves to make changes brought about by technology.The introduction of ICT into schools and in the learning process was driven by global forces which are beyond the school-based decision making (Voogt, 2010; Philip, Oluwagbemi, & Oluwaranti, 2010; Cuban, 2001).

The absence of efficient and right ICT development policies may widen the information gap between the developed and the less developed countries. Voogt & Pelgrum (2005) supported the idea that curriculum needs to be reformed for students to develop competencies that will help them survive in this 21st century. Constructivist view the learner as an active participant involved in structuring their learning experience as opposed to the behaviorist view. Bullard (2003) believes that applying constructivist principles in the teaching and learning process will generate a new way of teaching with computers, constituting a shift from a teacher-centered to learner-centered pedagogy. In support to this, Angeli & Valanides (2013) added that TPACK stands for the idea that what teachers knows about effective teaching, their subject matter and educational technology must be used together for them to be successful in their classrooms supporting students learning. Mishra and Koehler (2006) added that this call for an open-ended learning environment where teachers are equipped with a combination Shulman´s PCK and TPACK. This is rather contrary to learning environments which focus on the mere transmission of knowledge.

The U.S. Department of Education (2010) argues the content and structure of education must effectively integrate technology in order to adequately prepare students to live and act in the world in which they are growing up. While there is much written in the popular press about the transformative impact of digital learning on society and educations, many of these publications are supported more by enthusiasm than evidence. There is a need for rigorous academic research that identifies how digital education can be deliberately and effectively used to positively transform teaching and learning across subject matter areas.

Chapter 3: Methodology

3.1 Sample and Sampling

Dhaka is the capital of the country and most of the good schools are located in the capital. Our purpose was to locate the good practicing ICT schools. For that point of view we propose to study five exceptional ICT teachers in this study. We decided to select teachers whose students have secured high average score with minimum standard deviation. This implies to select 5 teachers from Dhaka city schools for which coefficient of variation is smallest (1^{st} Lowest 1, 2^{nd} lowest 2, 3^{rd} lowest 3, 4^{th} lowest 4 and 5^{th} lowest 5). The team planned to analyze each teacher teaching individually and then comparatively analyze the data of 5 teachers. The theory generated about basic ICT teaching will be compared to existing effective teaching theory.

Since this study is a collective case study and is considered to be conducted by qualitative research design, so that a total of five Schools from Dhaka city namely Motijheel Ideal School & College, Motijheel Model School and College, Viqarunnisa noon School and College, Monipuri School & College and Milestone School and College were chosen by purposeful sampling technique. Then One ICT teacher was chosen purposefully from each school. So, total 5 teachers were chosen from the selected 5 schools for understanding teachers' teaching practice of ICT and how it is helpful for students to learn ICT at secondary Level. Every school of total 5 schools is was taken as an individual case for the study.

Table 3.1: Sampling Matrix

Type	Schools	Teachers	Students	Classrooms
Size	5 schools	5×1= 5 teachers	5×50= 250 students	5×2=10 classrooms
Specification	5 schools from Dhaka city	1 teacher from each school	50 students from each school	2 classes for each teachers of each school
Sampling Strategy	Purposive	Purposive	Purposive	Purposive

Table 3.2: Demographic Information of Students

School	Observed Class	Class Duration
School A	Eight, Ten	40 minutes
School B	Six, Nine	35 minutes
School C	Nine	40 minutes
School D	Nine	40 minutes
School E	Ten	40 minutes

		School B	School A	School C	School D	School E	Total
Gender	Male	58	40	0	20	42	160
	Female	0	0	45	21	0	66
Total		58	40	45	41	42	226

Table 3.3: Demographic Information of Teachers

Categories		Percentage
Academic Background	Graduation/Post Graduation in CSE	40%
	Professional ICT Diploma	60%
Teaching Experience	10-15 years	40%
	15-20 years	60%

3.2 Data Requirements and Methods of Data Collection

The secondary data of SSC result published by the Board of Intermediate and Secondary Education, Dhaka (BISE, Dhaka) was used to work out school wise average mark $\bar{x}$ and σ for each school as shown in the following Table:

Table 3.4: The mean x of the marks and standard deviation σ for all students of school by school

Sl. No.	**School name**	**Mean score** $\bar{x}$	**Standard deviation (σ)**	**CV = σ / $\bar{x}$**	**Ranking of schools.**
1	S_1	$\bar{x}_1$	σ_1	CV_1	Select five schools having lowest ranks. The selected schools have grater mean $\bar{x}$ >70%
2	S_2	$\bar{x}_2$	σ_2	CV_2	
N	Sn	$\bar{x}_n$	σ_n	CV_n	

As mentioned before collective case study design of qualitative research methods was conducted to select for this study. The important methods planned are:

a. <u>Observation schedule</u>:

An observation schedule for teaching learning procedure was used in selected teachers' classrooms. The classroom observation schedule was a combination of checklist and field note approach for detailed description of the teaching learning tasks as well as any other significant evidence which was needed to explore the real scenarios. Researcher observed every classroom procedures for two times and took necessary notes where is needed.

b. <u>Questionnaire</u>:

A questionnaire with mostly close ended and some open ended questions was developed which was used to collect data from sample (250 students of 5 best school of Dhaka City as mentioned before). This questionnaire was served to the students as the tool for further data of student's perception on effective teaching-learning of their ICT class.

c. Interview guide:

For in depth data semi-structured interview guides were used as a tool for interviewing the teacher of the selected class. Getting the appointment of the total 5 teachers of those best 5 selected school of Dhaka city researcher conducted the interview session with necessary note taking.

In addition course outlines syllabi quizzes, examination process and examination results, paper cases, slides and other handouts was served as data. Attempt was made to use if available student evaluations of the course and of the teachers teaching was made.

Most of the teacher's teaching was rigorously observed. Students' participation was received. The main thrust was interview of teachers. Data requirement for research question 1 to 4 were first workout using the following guide lines.

Table 3.5: Methodologies Matrix

Research Question	**Sources of Data**	**Methods of Data Collection**
1. How do the teachers teach ICT to their students' in secondary school classrooms?	Teacher, Classroom	Interview, Observation Schedule
2. What are similarities and dissimilarities among the teachers teaching practice of ICT at secondary level?	Teacher, Classroom	Interview, Observation Schedule
3. Why do teachers teaching practice enhance students ICT learning at secondary level?	Teacher, Student	Interview, Questionnaire
4. How do teachers teaching practice help students to learn ICT at secondary level?	Teacher, Student	Interview, Questionnaire

3.3 Data Analyses Techniques

The data and evidence of this study is analyzed basically through thematic analysis of every individual case and cross case analysis between 5 case studies is conducted to discover the common pattern of data as well as the

similarities and dissimilarities of patterns of teaching-learning of those selected schools. Data from classroom observation through field note and interview of teacher and questionnaire from the students is analyzed in narrative form. The qualitative data will be presented based on the emerged as well as significant themes and concepts. If need be a little quantitative approach will be conducted to specify and draw attention to some qualitative data. The quantitative data through checklists and questionnaire is analyzed with the help of both descriptive and inferential statistics.

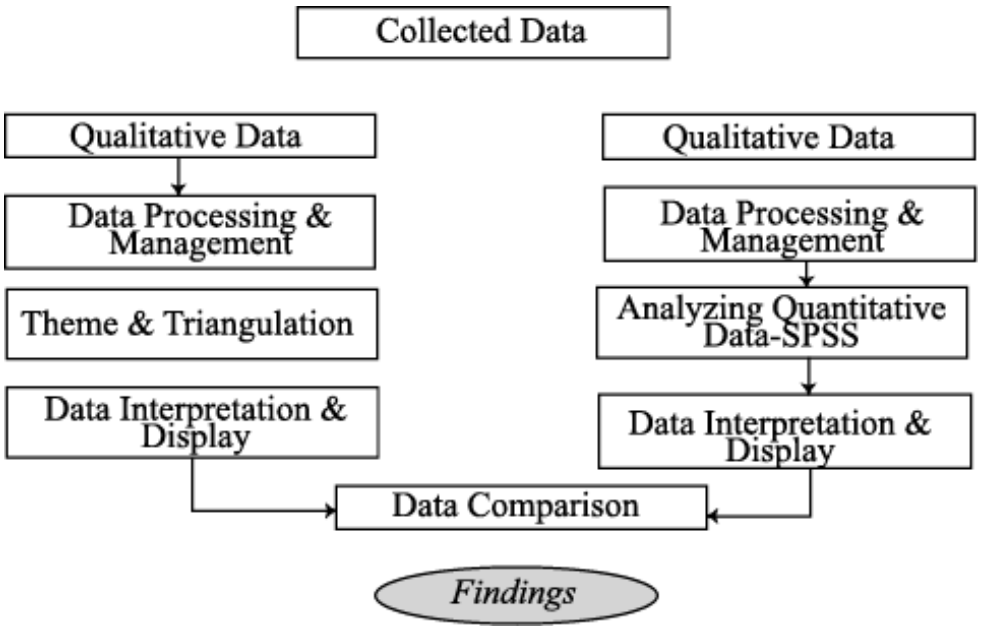

Figure 3.1: Data Analysis Strategy

3.3.1 Single Case Approach

As mentioned earlier, single case analysis of individual teacher is made. Matrices are constructed to identify patterns, comparisons, trends and paradoxes. The disadvantage between individuals will be explained. Validation of data will be examined by triangulation of methods by comparing student perception, teacher perspective and observer perspective of events in the class-room tutorial room.

3.3.2 Cross Case Analysis

Cross case analysis is presented in a matrix form to identify similar and dissimilar practices with plausible explanations. The goal is to build a logical chain of evidence and to construct a coherent process by checking threats and opportunities of the teacher practiced process.

3.3.3 Validity Issue

1. Selection of five teachers

Objective approach using coefficient of variation with condition of $\bar{x}$> 70 eliminated bias in selection. So there is no validity threat to selection of teachers.

2. Students' Selection:

Students, who are regular, attending 90% of classes, were initially selected. If number was large we developed an unbiased method to avoid validity threat.

3. Student given information's are true or not:

Validation of data was examined by triangulation of methods by comparing student's perception; teacher perspective and observer perspective of events in the class-room tutorial room.

4. Teachers' reporting are true or not:

Cross case analysis of 5 case studies are presented in a matrix form to identify like-wise and dissimilar practices with plausible explanations.

Chapter 4 : Findings

The analysis of the data is divided into two sections. The first section (case A, B, C, D, E) consists of exploratory data of teaching-learning practices in ICT classes along with ICT feasibility of the mentioned school. In the second section cross sectional analysis among the teaching-learning practices among the schools are described.

4.1 Case A: School A

The following section consists of teaching-learning practices in ICT classes along with ICT feasibility of School A.

Table 4.1: Teaching-learning practices of School A

	Yes	No	No Comment
Motivation in teaching learning process	97.40%	2.60%	0.00%
Engagement in Teaching learning process	70.0%	30.0%	0.00%
Teacher's steps in holding students attention	92.3%	2.60%	5.1%
Use of teaching aid in teaching-learning process	30.0%	62.5%	7.5%
Participation of all students in assessment	80.0%	17.5%	2.5%
Feedback is provided by their teacher after assessment in classroom	94.9%	2.6%	2.6%
feedback is useful for the students	97.4%	0%	2.6%%
If homework is given	97.5%	0%	2.5%
Evaluation of homework	100.0%	0%	0%
Group work	46.2%	48.7%	5.1%
Assessment pattern			
Open	Closed	Total	
100.0%	0%	100.00%	

Ways of Assessment			
By group	By individual	By peer	Total
25.6%	74.4%	0.0%	100.00%
Assessment by whom			
Teacher	Classmates		Total
100.0%	0%		100.00%

According to the Table 4.1, almost all (97.4%) the students of School A have expressed that they get motivation from the teacher in teaching learning process along with majority (70.0%) of the students have comply with that teaching-learning process is participatory where a considerable number (30.0%) of students disagree with this. As well most (92.3%) of the students of School A have perceived that their teacher takes steps in holding their attention, however, maximum (62.5%) students have agreed that their teacher don't use any teaching aid in teaching-learning process. In addition, most (80.0%) of the students of School A have expressed that participation of all students in assessment in the teaching-learning process are assured whereas almost all (94.9%) the students have said that their teacher gives them feedback. Accordingly, almost all (97.4%) students have addressed that feedback is useful for them. Besides, almost all (97.5%) the students of School A have claimed that their teacher gives them homework and all (100.0%) the students have said that their homework is evaluated by their teacher. Moreover, around half (46.2%) of the students have claimed that they are given group work where almost same number (48.7%) of students disagree with it. Furthermore, all (100.0%) the students of School A have expressed that assessment pattern in their classroom is open and maximum (74.4%) students of School A have agreed that they are assessed individually where considerable number of students (25.6%) have said that they are assessed in group. Finally, all (100.0%) the students of School A have said that they are assessed by their Teacher.

Table 4.2: Use of ICT at School A

	Yes	No	No Comment
Student's fear in ICT subject	12.8%	76.9%	10.3%
Having computer in students home	86.8%	10.5%	2.6%

	Yes	No	No Comment
Having sufficient opportunity in ICT lab	66.7%	12.8%	20.5%
Regular ICT class	77.5%	20.0%	2.5%
If ICT class is taken by assigned subject teacher regularly	92.5%	7.5%	0%
If ICT lab class is taken regularly	15.4%	76.9%	7.7%
Availability of internet in the ICT lab	85.0%	5.0%	10.0%
Opportunity to use internet	56.4%	30.8%	12.8%

The preceding table shows that maximum (76.9%) students of School A have no fear in ICT subject along with most (86.8%) of the students have computer in their home. Besides, maximum (66.7%) students of School A have expressed that their ICT lab is well-equipped and have sufficient opportunity to use it and maximum (77.5%) students of School A have expressed that their class is taken regularly. Almost all (92.5%) the students of School A have said that their ICT class is taken by their assigned ICT teacher, in contrary, maximum (76.9%) students have said that their ICT lab class isn't taken regularly where few (15.4%) disagree with it. Furthermore, most (85.0%) of the students of have said that there is internet connection in their computer lab whereas considerable number (30.8%) of students differ with that they have opportunity to use internet.

Table 4.3: Classroom Observation of School A

Category	**Yes**	**No**	**No Comment**
Examine Prior Knowledge	0%	100%	0%
Removal of misconception	50%	50%	0%
Motivate alternative thinking	50%	50%	0%
Determination of Learning objectives	100%	0%	0%
Participatory Teaching-learning	100%	0%	0%
Motivation in classroom	50%	0%	50%

Category	Yes	No	No Comment
Chances of Debate	0%	0%	100%
Any alternative strategy	0%	0%	100%
Adopted strategy ineffective	0%	100%	
Conducting practical work	0%	0%	100%
Competitive attitude among students	100%	0%	0%
Any feedback	100%	0%	0%
Attaining learning outcome	50%	0%	50%
Attaining practical skills	0%	0%	100%
Assessment Pattern	Closed	Open	
	100%	0%	
Assessment by whom	Group Work	Pair Work	Individual
	0%	0%	100%

The above table shows that, learning objectives have been determined and feedback is given in all (100%) observed class of School A. In all (100%) observed class, Teaching-learning process is participatory and students have competitive attitude. But prior knowledge isn't examined in all (100%) observed class.

In the support of quantitative data some qualitative data are collected which disclosed that, Teaching-learning methods and techniques are selected on the basis of topic though lecture and teacher-students participatory methods are mostly used in ICT classroom. Teachers prepare lesson plan regularly before the class and they take preparation about content knowledge from text book.

It is found that teachers conduct ICT class based on lesson plan. As teaching aids in ICT class is mostly used text book, picture in text book, multimedia materials like projector. Teachers reflect on their performance by getting question-answers from the students and try to do for further improvement. ICT teachers try to facilitate the teaching-learning activities by student-centered in student-friendly environment.

Teacher expresses that,

> *I believe in student-centered teaching-learning activities. Because student's learning outcome can be higher if the teaching-learning is conducted in student-friendly environment. Though ICT is a technical subject I always try to teach the student in joyful manner and make students active in the classroom applying question-answer method. (ITMIST1).*

In that school teacher plays the role of advocate on importance of learning ICT in present era to motivate the students to be attentive. Teachers always try their level best to retain concentration and participation of the students by relating the topic with real objects and storytelling from real life experience. Oral & Written test is used to assess the student's learning outcome in this school; sometimes class works are also considered for the assessment. For assessing all of the students at a time teachers mostly use gradual question-answer method in ICT class. After getting test score, teachers try to recap the topic and re-instruct lessons as remedial steps until the student achieve satisfactory outcome.

The teacher explains that,

> *I always try to keep up student's attention using real life examples relating to the topic. I use question-answer method to assess the learning outcome of the students and I try to give feedback on their performance by written or oral instruction (ITMIST1).*

According to the data, Though ICT subject is not fearful to the students; teachers suggest students to get help from seniors and teachers for proper understanding. If any student is unable to achieve satisfactory score he/ she have to sit for the re-test exam.

4.2 Case B: School B

The following section consists of teaching-learning practices in ICT classes along with ICT feasibility of School B.

Table 4.4: Teaching-learning practices of School B

	Yes	No	No Comment
Motivation in teaching learning process	94.8%	5.2%	0.00%
Engagement in Teaching learning process	58.6%	29.3%	12.1%
Teacher's steps in holding students attention	87.9%	10.3%	1.7%

	Yes	No	No Comment
Use of teaching aid in teaching-learning process	64.9%	21.1%	14.0%
Participation of all students in assessment	56.1%	22.8%	21.1%
Feedback is provided by their teacher after assessment in classroom	91.4%	8.6%	0%
feedback is useful for the students	84.2%	5.3%	10.5%
If homework is given	100.0%	0%	0%
Evaluation of homework	84.5%	12.1%	3.4%
Group work	34.5%	58.6%	6.9%

Assessment pattern		
Open	Closed	Total
94.7%	5.3%	100.00%

Ways of Assessment			
By group	By individual	By peer	Total
20.7%	79.3%	0%	100.00%

Assessment by whom		
Teacher	Classmates	Total
91.4%	8.6%	100.00%

According to the Table 4.4, all most all (94.8%) the students of School B have expressed that they get motivation from the teacher in teaching learning process along with more than half (56.6%) of the students have addressed that teaching-learning process is participatory where a considerable number (29.3%) of students disagree with this. As well most (87.9%) of the students have expressed that their teacher takes steps in holding their attention, however, maximum (64.9%) students have said that their teacher uses teaching aid in teaching-learning process.

In addition, more than half (56.1%) of the students of School B have perceived that participation of all students in assessment in the teaching-learning process are assured whereas almost all (91.4%) the students have said that their teacher gives them feedback. Accordingly, most (84.2%) of the students have expressed that feedback is useful for them. Besides, all (100.0%) the students of School B have said that their teacher gives them homework and most (84.5%) of the students have said that their homework is evaluated by their teacher.

Moreover, more than half (58.6%) of the students have expressed that they are not given group work where considerable number (34.5%) of students disagree with it. Furthermore, almost all (94.7%) the students of School B have expressed that assessment pattern in their classroom is open and maximum (79.3%) students of School B have said that they are assessed individually where considerable number of students (20.7%) have said that they are assessed in group. Finally, almost all (91.4%) the students have said that they are assessed by their Teacher.

Table 4.5: Use of ICT at School B

	Yes	No	No Comment
Students fear in ICT subject	22.8%	66.7%	10.5%
Having computer in students home	51.7%	48.3%	0%
Having sufficient opportunity in ICT lab	82.8%	10.3%	6.9%
Regular ICT class	74.1%	19.0%	6.9%
If ICT class is taken by assigned subject teacher regularly	93.0%	7.0%	0%
If ICT lab class is taken regularly	25.9%	70.7%	3.4%
Availability of internet in the ICT lab	60.3%	12.1%	27.6%
Opportunity to use internet	12.1%	63.8%	24.1%

The preceding table shows that maximum (66.2%) students of School B have no fear in ICT subject along with more than half (51.7%) of the students have computer in their home. Besides, most (82.8%) of the students have expressed that their ICT lab is well-equipped and have sufficient opportunity to use it and maximum (74.1%) students have expressed that their class is taken regularly. Almost all (93.0%) the students of School B have said that their ICT class is taken by their assigned ICT teacher, in contrary, maximum (70.7%) students have said that their ICT lab class isn't taken regularly where considerable number of students (25.9%) disagree with it. Furthermore, majority (60.3%) of the students of have said that there is internet connection in their computer lab whereas maximum (63.8%) students disagree with they have opportunity to use internet.

Table 4.6: Classroom Observation of School B

Category	Yes	No	No Comment
Examine Prior Knowledge	100%	0%	0%
Removal of misconception	100%	0%	0%
Motivate alternative thinking	0%	50%	50%
Determination of Learning objectives	100%	0%	0%
Participatory Teaching-learning	100%	0%	0%
Motivation in classroom	100%	0%	0%
Chances of Debate	100%	0%	0%
Any alternative strategy	0%	100%	0%
Adopted strategy ineffective	0%	0%	100%
Conducting practical work	50%	50%	0%
Competitive attitude among students	100%	0%	0%
Any feedback	100%	0%	0%
Attaining learning outcome	50%	50%	0%
Attaining practical skills	50%	50%	0%
Assessment Pattern	Closed	Open	
	0%	100%	
Assessment by whom	Group Work	Pair Work	Individual
	0%	0%	100%

The above table shows that, prior knowledge is examined, learning objectives is determined and feedback is given in all (100%) observed classes in School B. Again Teacher is seen to motivate the students and there is chances of debate in all (100%) observed classes. In addition, Teaching learning is participatory and students have competitive attitude in all (100%) observed classes.

In the support of quantitative data some qualitative data are collected which stated that, Teaching-learning methods and techniques are selected based

on topic; mostly used lecture, demonstration and teacher-students participatory methods in ICT classroom. Before entering into the classroom students know what they are going to learn today and they are instructed to seat in group as seated in the previous class. So teachers have to prepare lesson plan regularly before the class and they take preparation about content knowledge from text book and online resources on ICT.

It is found that teachers conduct ICT class based on lesson plan. As teaching aids in ICT class is mostly used text book, picture in text book, multimedia materials like projector. Students in some cases are used as teaching aids in ICT classroom.

Teacher explains that,

> *In ICT teaching-learning students can also be used as important teaching material. Because sometimes students know better than me on some particular topics, e.g. I don't know graphics well but some of my students know it better than i. So in some cases I use them to teach other students properly (ITMMST1).*

According to the data, Teacher reflects on his performance by self-reflection and he uses to observe student's facial expression and attention to class lecture and if it feels below satisfactory then think about further improvement. The teacher don't conduct the class always but facilitate in teaching-learning activities and let students conduct the class as to make to them responsible for each-other's learning effectively. He always encourages the students to use ICT which helps to motivate them learning ICT properly.

The teacher expresses that,

> *Forbidden thing lasts longer. ICT technologies are forbidden for the students by their parents in most cases. So it increases the negative use of technological devices by young generation. But I do encourage them to use it as an important learning component in the technology civilization (ITMMST1).*

Tough class time is not enough to assess the learning outcome of all students in one class teacher tries to focus on lower level students and takes care of them especially. For the clear understanding of particular topic it is used story telling method relating to real life examples. Oral & written test is used to assess the student's learning outcome in this school. As it is so tough to evaluate learning outcome of all students, some of them are drawn as sample then assessed by question-answer and the real scenario is understood by this practice. On the basis of assessment, unsatisfactory

scorer are instructed and facilitated by the top level scorer until the proper understanding is attained on that concept.
According to the data, ICT subject is not fearful to the students at all in that. However, for lower level students it is suggested to participate regularly in ICT club in the School and engage in e-learning platform to learn well about ICT content.

4.3 Case C: School C

The following section consists of teaching-learning practices in ICT classes along with ICT feasibility of School C.

Table 4.7: Teaching-learning practices of School C

	Yes	No	No Comment
Motivation in teaching learning process	86.7%	4.4%	0.00%
Engagement in Teaching learning process	46.7%	28.9%	24.4%
Teacher's steps in holding students attention	82.2%	6.7%	11.1%
Use of teaching aid in teaching-learning process	24.4%	68.9%	6.7%
Participation of all students in assessment	59.1%	25.0%	15.9%
Feedback is provided by their teacher after assessment in classroom	93.3%	2.2%	4.4%
feedback is useful for the students	81.8%	11.4%	6.8%
If homework is given	93.3%	6.7%	0%
Evaluation of homework	84.4%	13.3%	2.2%
Group work	33.3%	62.2%	4.4%

Assessment pattern		
Open	Closed	Total
31.1%	68.9%	100.00%

Ways of Assessment			
By group	By individual	By peer	Total
11.1%	82.2%	6.7%	100.00%

Assessment by whom		
Teacher	Classmates	Total
70.5%	29.5%	100.00%

According to the Table 4.7, most (86.7%) of the students of School C have expressed that they get motivation from the teacher in teaching learning process along with less than half (46.7%) of the students have expressed that teaching-learning process is participatory where a considerable number (28.9%) of students disagree with this. As well most (82.2%) of the students have expressed that their teacher takes steps in holding their attention, however, maximum (68.9%) students have said that their teacher don't use any teaching aid in teaching-learning process.

In addition, majority (59.1%) of the students of School C have expressed that participation of all students in assessment in the teaching-learning process are assured whereas almost all (93.3%) the students have said that their teacher gives them feedback. Accordingly, most (81.8%) students have expressed that feedback is useful for them. Besides, almost all (93.3%) the students of School C have said that their teacher gives them homework and most of (84.4%) the students have said that their homework is evaluated by their teacher.

Moreover, majority (62.2%) of the students have expressed that they are not given group work where considerable number (33.3%) of the students disagree with it. Furthermore, majority (68.9%) of the students of School C have expressed that assessment pattern in their classroom is closed and most of (82.2%) students have said that they are assessed individually where few students (11.1%) have said that they are assessed in group. Finally, majority (70.5%) of the students of School C have said that they are assessed by their Teacher where considerable number (29.5%) of students said that they are assessed by their classmates.

Table 4.8: Use of ICT at School C

	Yes	No	No Comment
Students fear in ICT subject	11.1%	84.4%	4.4%
Having computer in students home	77.8%	22.2%	0%
Having sufficient opportunity in ICT lab	6.7%	93.3%	0%
Regular ICT class	100.0%	0%	0%
If ICT class is taken by assigned subject teacher regularly	100.0%	0%	0%
If ICT lab class is taken regularly	4.4%	93.3%	2.2%
Availability of internet in the ICT lab	31.1%	53.3%	15.6%
Opportunity to use internet	91.1%	8.9%	0%

The preceding table shows that most (84.4%) of the students of School C have no fear in ICT subject along with majority (77.8%) of the students have computer in their home. Besides, almost all (93.3%) the students have

expressed that their ICT lab isn't well-equipped and have no opportunity to use it and all (100.0%) students have expressed that their class is taken regularly. All (100.0%) the students of School C have said that their ICT class is taken by their assigned ICT teacher, in contrary, almost all (93.3%) students have said that their ICT lab class isn't taken regularly where very few (4.4%) disagree with it. Furthermore, more than half (53.3%) of the students of have said that there is internet connection in their computer lab whereas almost all (91.1%) the students have said that they have opportunity to use internet.

Table 4.9: Classroom Observation of School C

Category	Yes	No	No Comment
Examine Prior Knowledge	0%	100%	0%
Removal of misconception	0%	100%	0%
Motivate alternative thinking	0%	100%	0%
Determination of Learning objectives	100%	0%	0%
Participatory Teaching-learning	100%	0%	0%
Motivation in classroom	0%	0%	100%
Chances of Debate	0%	0%	100%
Any alternative strategy	0%	0%	100%
Adopted strategy ineffective	0%	0%	100%
Conducting practical work	0%	0%	100%
Competitive attitude among students	100%	0%	0%
Any feedback	100%	0%	0%
Attaining learning outcome	0%	0%	100%
Attaining practical skills	0%	0%	100%
Assessment Pattern	Closed	Open	
	100%	0%	
Assessment by whom	Group Work	Pair Work	Individual
	0%	0%	100%

The above table shows that, learning objectives have been determined and feedback is given in all (100%) observed classes of School C. In all (100%) observed classes, Teaching-learning process is participatory and students have competitive attitude. But prior knowledge isn't examined in all (100%) observed class and learning outcome hasn't been achieved. Unlike other schools, assessment pattern is closed in all (100%) observed classes in School C.

In qualitative data it is found that, Most of the time teachers conduct ICT class by lecture method and text book reading method in secondary level. For practical part it is used the ICT lab for student's hands on experience. Teachers prepare lesson plan regularly before the class and take necessary information from the text book and online materials like Youtube video tutorial. In the class they also use text book & sometimes multimedia projector as ICT teaching material. After conducting the class teachers check their performance by self-reflection and if need be further improvement on any particular topic e.g. graphics, they use Youtube tutorials and other online resources. Most of the time it feels too tough using peer reflection strategy to improve the teaching quality of ICT teacher due to isolated shift in that school.

Teacher of that school expresses that,

> *Normally I use lecture and text book reading method to teach the students on ICT topic and I also use ICT lab for practical part. Sometimes I do self-reflection of the class questioning the students, if need be further improvement I take help from YouTube video tutorial for particular topic. There is a few opportunity of peer-reflection in my school (ITVST1).*

In that school teachers normally use verbal admiration to motivate the students for learning the topic properly. They always try to make prepare students to achieve high scores. Ensuring student's participation & concentration they use individual checking line by line text reading of text book. For assessing student's learning outcome of theoretical part teachers prefer both written & oral question-answer method and for practical part Lab practical test is conducted in ICT Lab. To ensure the assessment of all students, class works & home works are given to students which are measured by selected formative assessment system. If any student feels unsatisfactory or fail to understand the topic properly teacher re-discuss and recap the topic by peer or group discussion. Then he/ she evaluate the outcome of the students by oral or written test and give them feedback by oral or written instruction in the test sheet.

The teacher discloses that,

> *If any student needs further discussion to understand the topic clearly I always try to recap the topic by myself or by peer/ group discussion until he/ she gets the topic properly. To assess the student's learning outcome I use written test and homework or class work and evaluate them by formative assessment in the classroom. If need be any Improvement they are instructed orally and sometimes in written (ITVST1).*

According to that school it is rear that ICT subject is fearful to the students rather than other subject. So that no remedial action is need to improve the quality of teaching-learning.

4.4 Case D: School E

The following section consists of teaching-learning practices in ICT classes along with ICT feasibility of School E.

Table 4.10: Teaching-learning practices of School E

	Yes	No	No Comment
Motivation in teaching learning process	100%	0%	0%
Engagement in Teaching learning process	73.2%	26.8%	0%
Teacher's steps in holding students attention	92.9%	7.1%	0%
Use of teaching aid in teaching-learning process	38.1%	59.5%	2.4%
Participation of all students in assessment	74.4%	23.1%	2.6%
Feedback is provided by their teacher after assessment in classroom	92.5%	7.5%	0%
feedback is useful for the students	82.9%	9.8%	7.3%
If homework is given	100.0%	0%	0%
Evaluation of homework	90.5%	9.5%	0%
Group work	31.0%	61.9%	7.1%

	Yes	No	No Comment
Assessment pattern			
Open	Closed	Total	
71.4%	26.2%	100.00%	
Ways of Assessment			
By group	By individual	By peer	Total
2.4%	88.1%	7.1%	100.00%
Assessment by whom			
Teacher	Classmates	Total	
95.1%	4.9%	100.00%	

According to the Table 4.10, all (100.0%) the students of School E have expressed that they get motivation from the teacher in teaching learning process along with majority (73.2%) of the students have expressed that teaching-learning process is participatory where a considerable number (26.8%) of students disagree with this. As well most (92.9%) of the students have expressed that their teacher takes steps in holding their attention, however, more than half (59.5%) of students have said that their teacher don't use any teaching aid in teaching-learning process.

In addition, majority (74.4%) of the students of School E have expressed that participation of all students in assessment in the teaching-learning process are assured whereas almost all (92.5%) the students have said that their teacher gives them feedback. Accordingly, most (82.9%) of the students have expressed that feedback is useful for them. Besides, all (100.0%) the students of School E have said that their teacher gives them homework and almost all (90.5%) the students have said that their homework is evaluated by their teacher.

Moreover, majority (61.9%) of the students have expressed that they are not given group work where only considerable number (31.0%) of students disagree with it. Furthermore, majority (71.4%) of the students have expressed that assessment pattern in their classroom is open and most (88.1%) of students of School E have said that they are assessed individually. Finally, almost all (95.1%) the students of School E have said that they are assessed by their Teacher.

Table 4.11: Use of ICT at School E

	Yes	No	No Comment
Students fear in ICT subject	28.6%	66.7%	4.8%
Having computer in students home	90.5%	9.5%	0%
Having sufficient opportunity in ICT lab	47.6%	45.2%	7.1%
Regular ICT class	85.7%	14.3%	0%
If ICT class is taken by assigned subject teacher regularly	100.0%	0%	0%
If ICT lab class is taken regularly	11.9%	78.6%	9.5%
Availability of internet in the ICT lab	45.2%	52.4%	2.4%
Opportunity to use internet	11.9%	85.7%	2.4%

The preceding table shows that maximum (66.7%) students of School E have no fear in ICT subject along with most (90.5%) of the students have computer in their home. Besides, around half (47.6%) of the students have expressed that their ICT lab is well-equipped and have sufficient opportunity to use it where almost same number (45.2%) of students disagree with it and most (85.7%) of the student have expressed that their class is taken regularly. All (100.0%) the students of School E have said that their ICT class is taken by their assigned ICT teacher, in contrary, maximum (78.6%) students have said that their ICT lab class isn't taken regularly where few (11.9%) disagree with it. Furthermore, less than half (45.2%) of the students have said that there is internet connection in their computer lab whereas more than half (52.4%) of the students disagree with they have opportunity to use internet.

Table 4.12: Classroom Observation of School E

Category	Yes	No	No Comment
Examine Prior Knowledge	100%	0%	0%
Removal of misconception	100%	0%	0%
Motivate alternative thinking	0%	0%	100%
Determination of Learning objectives	100%	0%	0%

Participatory Teaching-learning	100%	0%	0%
Motivation in classroom	100%	0%	0%
Chances of Debate	0%	0%	100%
Any alternative strategy	0%	50%	50%
Adopted strategy ineffective	0%	100%	0%
Conducting practical work	0%	0%	100%
Competitive attitude among students	100%	0%	0%
Any feedback	50%	50%	0%
Attaining learning outcome	100%	0%	0%
Attaining practical skills	0%	0%	100%
Assessment Pattern	Closed	Open	
	100%	0%	
Assessment by whom	Group Work	Pair Work	Individual
	50%	0%	50%

The above table shows that, learning objectives have been determined and attained and motivation is given in all (100%) observed class of School E. In all (100%) observed class, Teaching-learning process is participatory and students have competitive attitude. In addition, prior knowledge is examined and misconception is cleared in all (100%) observed class.

In qualitative part of the study, collected data stated that ICT class is conducted by teacher's lecture, teacher-students participatory and demonstration method normally. Sometimes practical classes are taken in ICT lab. Teachers prepare themselves based on same lesson plan regularly which is centrally controlled by school. Teachers use text book and online resources mostly for content knowledge. They also use text book, video material in ICT class by digital devices e.g. laptop, multimedia projector as ICT teaching Aids.

However, teachers use self-observation, self-motivation and peer-reflection with other teachers in the school to improve their teaching quality. In that school teachers normally use verbal admiration to motivate the students to

learn the topic properly. It is tried to make the students understand clearly on the particular topic, if need be repeatedly discuss the concept until they get it clearly. To keep up the student's concentration teachers use story telling relatively. It is also used the question-answer method to make sure the participation of all level students. For student's learning outcome assessment it is tested by oral and written question-answer test. It is rarely possible to assess huge number of student's learning outcome at forty minutes class.

The teacher informs that,

> *Sometime It is so challenging to ensure all student's participation in the classroom and assess their learning outcomes in a short period of time. Group discussion method can be helpful in this case but it makes disorganization of the classroom for huge number of students (ITMST1).*

According to the data of that school, ICT subject is not fearful to the students at all. Besides students have access to internet. If need be any kinds of remedial action based on student's ICT evaluation score it is conducted discussion with students and guardians to address the problem properly then identify the ways of solution

The teacher expresses that,

> *ICT is not fearful but interesting subject to the students in our school. The reason behind that ICT materials e.g., online resources, video tutorials are available in the internet and they are too expect at using internet. Sometimes they respond better than my expectation in the ICT Class (ITMST1).*

4.5 Case E: School D

The following section consists of teaching-learning practices in ICT classes along with ICT feasibility of School D.

Table 4.13: Teaching-learning practices of School D

	Yes	No	No Comment
Motivation in teaching learning process	100.0%	0%	0%
Engagement in Teaching learning process	80.0%	20.0%	0%
Teacher's steps in holding students attention	97.5%	2.5%	0%

Use of teaching aid in teaching-learning process	92.7%	7.3%	0%
Participation of all students in assessment	72.5%	27.5%	0%
Feedback is provided by their teacher after assessment in classroom	92.7%	7.3%	0%
feedback is useful for the students	73.2%	26.8%	0%
If homework is given	36.6%	63.4%	0%
Evaluation of homework	22.0%	78.0%	0%
Group work	19.5%	80.5%	0%

Assessment pattern		
Open	Closed	Total
90.2%	9.8%	100.00%

Ways of Assessment			
By group	By individual	By peer	Total
24.4%	75.6%	0%	100.00%

Assessment by whom		
Teacher	Classmates	Total
95.1%	4.9%	100.00%

According to the Table 4.13, all (100.0%) the students of School D have expressed that they get motivation from the teacher in teaching learning process along with most (80.0%) of the students have expressed that teaching-learning process is participatory where a considerable number (20.0%) of students disagree with this. As well almost all (97.5%) the students have expressed that their teacher takes steps in holding their attention, however, almost all (92.7%) the students have said that their teacher uses teaching aid in teaching-learning process.

In addition, majority (72.5%) of the students of School D have expressed that participation of all students in assessment in the teaching-learning process are assured whereas almost all (92.7%) the students have said that their teacher gives them feedback. Accordingly, majority (73.2%) of the students have expressed that feedback is useful for them. Besides, majority (63.4%) of the students of School D have said that their teacher doesn't give them homework and majority (78.0%) of the students has said that their homework is not evaluated by their teacher.

Moreover, most (80.5%) of the students have expressed that they are given group work. Furthermore, almost all (90.2%) the students of School D have expressed that assessment pattern in their classroom is open and maximum (75.6%) students have said that they are assessed individually where considerable number of students (24.4%) have said that they are assessed in group. Finally, almost all (95.1%) the students of School D have said that they are assessed by their Teacher.

Table 4.14: Use of ICT at School D

	Yes	No	No Comment
Students fear in ICT subject	17.1%	82.9%	0%
Having computer in students home	65.9%	34.1%	0%
Having sufficient opportunity in ICT lab	75.6%	24.4%	0%
Regular ICT class	85.0%	15.0%	0%
If ICT class is taken by assigned subject teacher regularly	97.6%	2.4%	0%
If ICT lab class is taken regularly	82.9%	17.1%	0%
Availability of internet in the ICT lab	97.6%	2.4%	0%
Opportunity to use internet	48.8%	51.2%	0%

The preceding table shows that most (82.9%) of the students of School D have no fear in ICT subject along with majority (65.9%) of the students have computer in their home. Besides, maximum (75.6%) students have expressed that their ICT lab is well-equipped and have sufficient opportunity to use it and most (85.0%) of the students have expressed that their class is taken regularly. Almost all (97.6%) the students have said that their ICT class is taken by their assigned ICT teacher, in contrary, most (82.9%) of the students have said that their ICT lab class isn't taken regularly where few (17.1%) disagree with it. Furthermore, less than half (48.8%) of the students have said that there is internet connection in their computer lab whereas more than half (51.2%) of students disagree with they have opportunity to use internet.

Table 4.15: Classroom Observation of School D

Category	Yes	No	No Comment
Examine Prior Knowledge	100%	0%	0%
Removal of misconception	100%	0%	0%
Motivate alternative thinking	50%	50%	0%
Determination of Learning objectives	100%	0%	0%
Participatory Teaching-learning	100%	0%	0%
Motivation in classroom	100%	0%	0%
Chances of Debate	0%	100%	0%
Any alternative strategy	50%	50%	0%
Adopted strategy ineffective	0%	100%	0%
Conducting practical work	100%	0%	0%
Competitive attitude among students	100%	0%	0%
Any feedback	100%	0%	0%
Attaining learning outcome	100%	0%	0%
Attaining practical skills	0%	100%	0%
Assessment Pattern	Closed	Open	
	0%	100%	
Assessment by whom	Group Work	Pair Work	Individual
	100%	0%	0%

The above table shows that, learning objectives have been determined and attained in all (100%) observed classes. Again feedback and motivation is given in all (100%) observed class of School D. In all (100%) observed class, Teaching-learning process is participatory and students have competitive attitude. In addition, prior knowledge is also examined in all (100%) observed class. Unlike other schools, Practical work is conducted in all (100%) observed classes.

In qualitative part of the study, it is explored that ICT class is conducted by teacher's lecture and demonstration method usually in secondary level school. For practical part of ICT practical classes are taken in ICT lab. Teachers take preparation from text book content and conduct the class according to regular written lesson plan. They use digital material (power point slide) in association with digital devices e.g. computer, laptop, multimedia projector as ICT teaching Aids.

However, teachers use self-reflection in terms of taken class from the student's feedback by question-answer. This teacher maintains punctuality and discipline to manage the classroom activities. In that school teacher plays a role for the advocacy on the importance of ICT skills in technology civilization to motivate the students to learn ICT properly.

The teacher informs that,

> *As we are living in technology civilization I try to do advocacy on ICT literacy and other ICT skills focusing on the importance of ICT in present era. I always try to be punctual and responsible to maintain discipline in classroom management which is most important to achieve the expected learning outcome of the students (ITMST1).*

According to the data of that school, teachers always try best to conduct the class attractively using digital materials and present updated information to retain student's attention in the ICT class. Oral and Written Question-answer method is used to assess the student's learning outcome and class works, home works are also considerable for assessment part. Sometimes it is facilitated group discussion of different group of students for total number of student's assessment. In case of unsatisfactory outcome re-discussion, recapitulation on particular topic is done as remedial strategy by the teacher and given feedback orally to students based on their performance in the classroom assessment.

As a technical subject ICT seems tough to the lower level students, however, practical class is conducted to remove the fear of ICT subject by hand's on activities in ICT lab. Students who achieve unsatisfactory score are not allowed to get promotion for the next class and guardians are informed it from the school authority to take care of their child.

The teacher expresses that,

> *We always try our best for student's proper understanding on ICT topic in both theoretical and practical part. Some of the students don't give enough attention to achieve better score in ICT as other subjects. That is why unsatisfactory scorer are not allowed to be promoted in next level of class until they achieve satisfactory score (ITMST1)*

4.6 Cross- Case Analysis

The following section consists of cross-sectional analysis of teaching-learning practices in ICT classes along with ICT feasibility of above five schools.

Table 4.16: Motivation in teaching learning process

Motivation in teaching learning process						
	School B	School A	School C	School D	School E	Total
Yes	94.80%	97.40%	86.70%	100.00%	100.00%	95.60%
No	5.20%	2.60%	4.40%	0.00%	0.00%	2.70%
No comments	0.00%	0.00%	8.90%	0.00%	0.00%	1.80%

According to the table 4.16, almost all (95.60%) the students of mentioned 5 schools have said that they get motivation in teaching-learning process from their teacher.

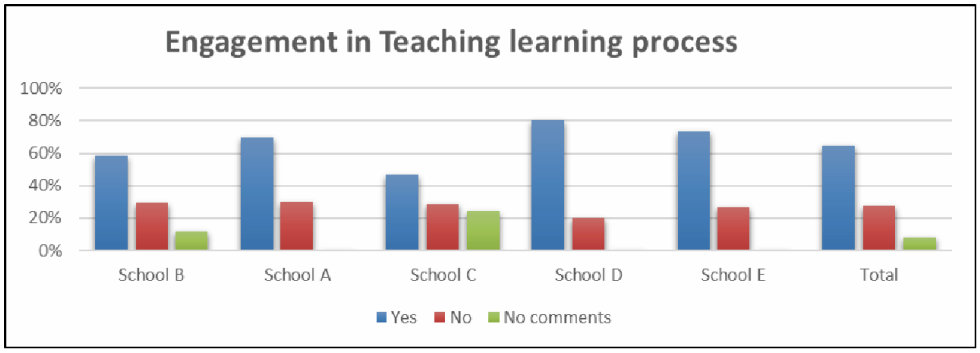

Figure 4.1: Engagement in Teaching-Learning process

According to the figure 3, majority (64.7%) of the students of mentioned 5 school said that teaching learning process is participatory. Where most (80.0%) of the students of School D have agreed and less than half (46.7%) of the students of School C have agreed with this.

Table 4.17: Participation of students in assessment

Participation of all students in assessment						
	School B	School A	School C	School D	School E	Total
Yes	56.1%	80.0%	59.1%	72.5%	74.4%	67.3%
No	22.8%	17.5%	25.0%	27.5%	23.1%	23.2%
No comments	21.1%	2.5%	15.9%	0.00%	2.6%	9.5%

According to the table 4.17, majority (67.3%) of the students of mentioned 5 schools have expressed that participation of all students in assessment is assured by their teacher where considerable number (23.2%) of students have disagreed with it. Most (80.0%) of the students of School A have agreed with it.

Table 4.18: Teacher's feedback after assessment in classroom

Feedback is provided by their teacher after assessment in classroom						
	School B	School A	School C	School D	School E	Total
Yes	91.4%	94.9%	93.3%	92.7%	92.5%	92.8%
No	0.0%	2.6%	2.2%	7.3%	7.5%	3.6%
No comments	8.6%	2.6%	4.4%	0.00%	0.00%	3.6%

According to the table 4.18, almost all (92.8%) the students of described 5 schools have said that feedback is provided by their teacher after assessment in classroom.

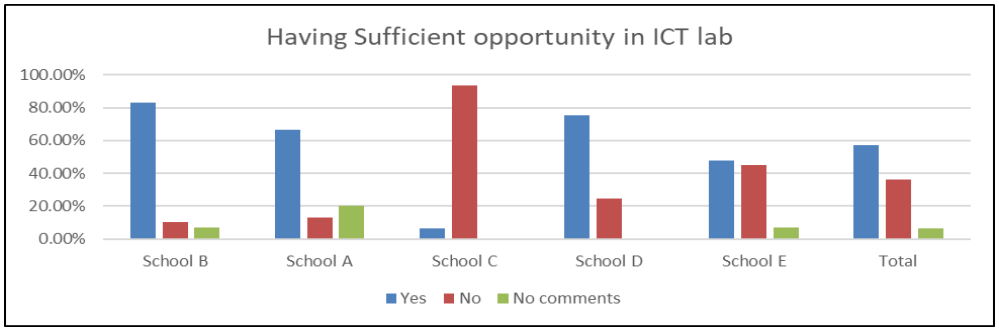

Figure 4.2: Sufficient opportunity in ICT lab

According to figure 4 shows that, ICT lab facility isn't same in these 5 schools according to the students. Students of School B (82.8%) and School D (75.6%) have said that they have sufficient opportunity in the ICT lab. On the other hand, almost all (93.3%) the students of School C have said that they have limited opportunity in ICT lab.

Table 4.19: Regularity of ICT class

Regular ICT class						
	School B	School A	School C	School D	School E	Total
Yes	74.1%	77.5%	100.0%	85.5%	85.7%	84.0%
No	19.0%	20.0%	0.0%	15.0%	14.3%	13.8%
No comments	6.9%	2.5%	0.0%	0.00%	0.0%	2.2%

According to the table 4.19, most (84.0%) of the students of mentioned 5 schools have said that ICT class is taken regularly. Whereas all (100.0%) the students of School C have said that their ICT class is taken regularly.

Table 4.20: ICT class is taken by assigned subject teacher regularly

If ICT class is taken by assigned subject teacher regularly						
	School B	School A	School C	School D	School E	Total
Yes	93.0%	92.5%	100.0%	97.6%	100.0%	96.4%
No	7.0%	7.5%	0.0%	2.4%	0.0%	3.6%
No comments	0.0%	0.0%	0.0%	0.00%	0.0%	0.0%

According to the table 4.20, almost all (96.4%) the students of mentioned 5 schools have said that their ICT class is taken by their assigned subject teacher regularly.

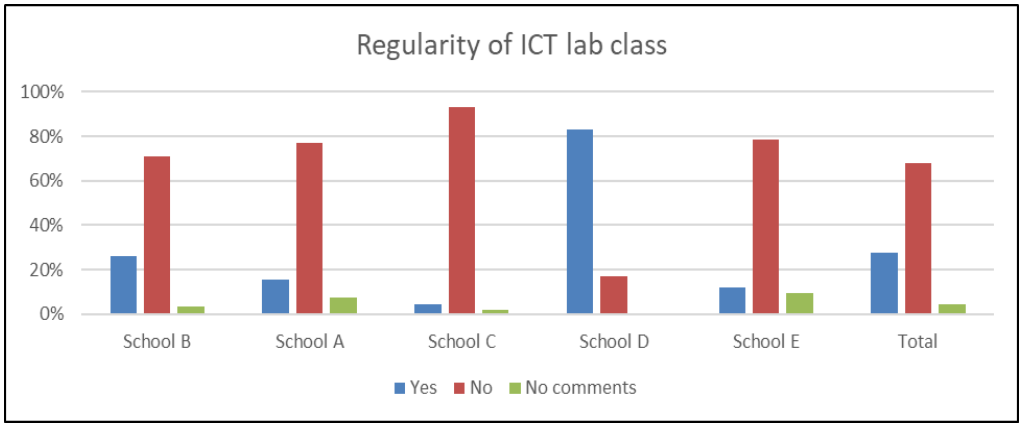

Figure 4.3: Regularity of ICT Lab class

According to the figure 5, the condition of taking regular ICT lab class is not satisfactory in the mentioned 5 school except School D. Most (82.9%) of the students of School D have expressed that their ICT lab class is taken regularly. On the other hand, almost all (93.3%) the students of School C have expressed that their ICT lab class isn't taken regularly.

4.7 Cross-sectional table of classroom observation

Table: 4.21 Class observation of 5 schools

		School B	School A	School C	School D	School E	Total
Examine prior knowledge	Yes	100.00%	0%	0%	100.00%	100.00%	66.70 %
	No	0%	100.00%	100.00%	0%	0%	33.30 %
Determination of learning objectives	Yes	100.00 %	100.0 %	100.0%	100.0 0%	100.00 %	100.0 %
	No	0%	0%	0%	0%	0%	0%
Participatory teaching-learning	Yes	100.00 %	100.0 %	100.0%	100.0 0%	100.00 %	100.0 %
	No	0%	0%	0%	0%	0%	0%

Motivation in the classroom	Yes	100.00 %	50.0%	0%	50.0%	100.00 %	66.7 %
	No	0%	0%	0%	50%	0%	11.1 %
	No comments	0%	50%	100%	0%	0%	22.2 %
Conducting practical work	Yes	50.0%	0%	0%	100.00%	0%	33.0 %
	No	50.0%	0%	0%	0%	0%	11.1 %
	No comments	0%	100.0 %	100.0%	0%	100.0%	55.6 %
Any feedback	Yes	100.00 %	100.0 %	100.0%	100.00%	50.0%	88.9 %
	No	0%	0%	0%	0%	50.0%	11.1 %
Attaining learning outcome	Yes	50.0%	50.0%	0%	100.00%	100.00 %	66.7 %
	No	50.0%	0%	0%	0%	0%	11.1 %
	No comments	0%	50.0%	100.0%	0%	0%	22.2 %
Assessment pattern	Closed	0%	100.00 %	100.00%	0%	0%	33.30 %
	Open	100.00 %	0%	0%	100.00%	100.00 %	66.70 %
Assessment by	Group	0%	0%	0%	100.0 %	50.0%	33.30 %
	Individual	100.00 %	100.0 %	100.0%	0%	50.0%	66.70 %

The above table reflects that, ICT teachers of School B, School D and School E have a practice of examining prior knowledge where teachers of School A and School C have no practice of examining it. Besides, all (100%) the teachers of mentioned 5 schools have a practice to determine learning objectives. Also, teachers in majority (66.7%) of the observed class have motivated the students during class work. But motivation is neglected in School C. In addition, only considerable number of observed classes (33.0%) is seen to conduct practical work. Where all observed

classes (100%) in School E is seen to conduct practical work. Furthermore, teachers in most of the observed classes (88.9%) have given feedback to the students. Likewise, learning outcome is attained in majority (66.7%) of the observed class. Where observed classes in School C have no scope to attain learning outcome. As well, assessment pattern in majority (66.7%) of the observed classes are open. Where assessment pattern of observed classroom in School A and School C is closed just as, students are assessed individually in majority (66.7%) of the observed classes. Where students are assessed in group in all (100.0%) observed classes in School D.

Chapter 5: Discussion

5.1 Discussion

The study explored that the top most 5 secondary level schools of Dhaka city practice lecture method, demonstration method and participatory approach for teaching-learning activities of ICT class. The data also surprisingly found that, in most cases teachers use only book reading technique to engage the students in teaching-learning process. This data discloses that the teaching learning activities of ICT class are mostly teacher-oriented in these schools. In contrary, according to March (2006),while we cannot establish definitively that some methodologies are better than others, we can affirm that higher order goals such as the development of critical thinking or autonomous learning are achieved more effectively and appropriately through student-centered methods that maximize student participation. These methodologies, in which the learning responsibility depends on the student's activity, implication and commitment, produce deeper, more significant and longer-lasting learning and facilitate knowledge transfer. Further, some studies show that using active learning can improve student's results in certain fields of knowledge (Freeman et al., 2014).

We found that teachers try to motivate students to achieve learning objectives. According to, Githua and Mwangi (2003) academic self-concept and students' motivation important factors to influence student learning.

Most of the school have sufficient infrastructure to conduct ICT lab and sometimes practical classes are taken in ICT lab. Previous studies have proven that it limited ICT capacities make trouble to use ICT in a classroom (Kennewell, Parkinson & Tanner 2000; Chigona & Chigona, 2010; UNESCO, 2002; Zhao & Cziko, 2001).

The study reveals that, teachers prepare lesson plan regularly before the class and they take preparation about content knowledge from text book as well as e-learning resources. Besides, teachers conduct ICT class based on lesson plan. Teaching aids in ICT class is mostly used text book, picture in text book, multimedia materials like projector. According to Yuen et al. (2004), teacher's role has the strongest impact on the student's role, and thus for the learning outcomes.

Besides, oral & written test is used to assess the student's learning outcome in this sample schools. Students are assessed individually by using Q/A technique. Open and closed both assessments are found. Usually feedback is provided by written or oral instruction. Cotton (2001) outlined these functions of questioning and states that 'Instruction which includes posing questions is more effective in producing achievement gains than instruction carried out without questioning students'.

ICT subject is not fearful to the students at all. If any student feels unsatisfactory or fails to understand the topic properly, teacher re-discusses and recaps the topic by peer or group discussion. Mishra and Koelher (2006, p.63) added that the cost of not having a comprehensive content knowledge could be prohibitive as students can receive incorrect information and develop misconception in the subject area.

Learning objectives are achieved and in most of the cases learning outcomes are achieved. Some teachers have higher degree in Computer Science but some have only 6 month training experience. Content and practical knowledge is highly necessary in conducting secondary level. Some teachers have sound academic knowledge on subject matter. The teacher's motivation to use ICT in the classroom highly depends on their competence on the particular application (Flanagan, 2008).

5.2 Limitations of the study

The selection of this study schools as well as respondents was based on using purposive sampling techniques but not randomly selected. All the schools and all the learners were not as sample. Even the selection of teachers for interview in some cases might biased by purposive sampling techniques. There was not any standard format which is nationally or internationally accepted tool to evaluate teaching-learning activities of ICT classroom. There was also a question for duration of the study, if it was more times than the allocated time, it would be better for the study. Furthermore, only top five schools from capital city Dhaka were comprised. A different scenario and perspective could be found if the schools from rural areas of Bangladesh could be reported on. The infrastructural capabilities and resources of rural schools are largely different from the secondary schools located in urban or city. So, further study is suggested to explore the overall scenario of ICT teaching learning in secondary level education in Bangladesh comparing rural and urban/ city secondary schools in large scale.

5.3 Recommendations

Based on the significant findings of the study some recommendations are suggested as follows:

1. Learning outcome should be achieved in satisfactory level. All of the teachers achieved learning outcomes in the classes, thus, leading to students' academic success.

2. Sufficient number of PC is highly needed to enhance students leaning opportunity. Student – computer ratio is almost satisfactory for observed schools.

3. Almost in each school, ICT class is conducted by assigned teachers. So, every school should try to maintain class schedule to make teaching-learning process smoother.

4. Students are assessed individually along with feedback is provided. So, if any school wants to make journey towards success, then assessment and feedback process should be followed properly.

5. Teachers competency is vital to motivate students. Almost each school has competent teachers. So other school may go for teachers having ICT background.

6. As ICT is a technical subject teaching-learning activities should be more focused from teacher-centered to student's activity based.

7. The more emphasize should be given to ICT practical to ensure student's hands on experience.

8. Classroom assessment should not be conducted only by oral question-answers but should emphasize on problem-solving of ICT related topic.

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Assessing the impact of ICT integration in the classroom of secondary school in Bangladesh

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Contents

Tables

LFigures

Executive Summary

ICT generally relates to those technologies that are used for accessing, gathering, manipulating and presenting or communicating information. ICT integration is a complex and multi layered phenomenon. Government of Bangladesh (GoB) has formulated ICT policy 2015 to emphasize the integration of ICT in the field of Education and Research to ensure quality teaching-learning. Previously the researchers studied the current status of ICT in the context of secondary education in Bangladesh. However, there is still a lack of a research that focuses on how effectively the teachers integrate ICT. This study aims to fill the gap by determining how teachers integrate ICT in teaching-learning effectively and by exploring the changes in the teaching-learning of secondary education after ICT integration. This study also explores the challenges which hampers the effective integration of ICT and recommends some suggestions to overcome this situation.

This study has used Logic Model for Evaluation of Technology Integration to determine whether the teachers are integrating ICT effectively in classroom situation. The data sources were two teachers and thirty students from each of ten schools. Hence, total sample size is of the study was 320 (300 students + 20 teachers). Moreover, one teacher from each class has been observed to explore practices. Data obtained from questionnaire and observation has been analyzed using Statistical package software SPSS v20.0.

According to our findings, majority of secondary schools are not well equipped with ICT facilities like multimedia, sound system and internet. Besides, those schools have no scope of using ICT to apply and complete admission process; however, providing test result through ICT has been adopted in most of the schools. Though ICT has been integrated in the classroom, teachers and students are in short of sound technical skills to use ICT for educational purpose. As such, usage of ICT is very limited. Teachers are well aware of the positive impact the ICT enabled teaching learning can have on learning outcomes. However, they do not find time to develop their ICT skills as well as devote sufficient time for developing ICT enabled teaching learning materials. Furthermore, majority of our teachers have faced problems with handling of hardware, application software as well as other forms of technical glitches.

By exploring these issues, this research can inform the policy- makers, curriculum developers, teachers and other stakeholders about the level of implementation as well as the occurrences of changes in teaching-learning that ICT integration brings in secondary education.

Chapter One : Introduction

1.1 Background of the study

ICT generally relates to those technologies that are used for accessing, gathering, manipulating and presenting or communicating information (Toomey, 2001). This broad definition of ICT includes such technologies as radio, television, video, DVD, telephone (both fixed line and mobile phone), satellite systems and computer and network hardware and software as well as the equipment and services associated with these technologies such as videoconference, email and blogs (UNESCO, 2007). ICT integration is a complex and multi layered phenomenon. Studies have confirmed that integration of ICT in education brings positive changes in the culture of teaching-learning. Milton (2003) stated that successful integration could be demonstrated by its affects which included culture of innovation, pedagogical goals (student-centered and authentic), collaborative learning, robust and reliable hardware and access to expertise.

Government of Bangladesh has formulated an ICT Policy 2015 to integrate Information and communication technology (ICT) in teaching-learning to ensure quality teaching-learning. It is necessary to study the changes in teaching-learning as integration of ICT has been identified as a key element to complement a teacher's existing pedagogical practices in bringing positive effects on students' achievements. Previous researchers studied the current status and challenges of ICT integration in the context of secondary education in Bangladesh. There is a lack of a research that focuses on the changes occurred in the secondary education classrooms after the ICT integration. We observed that teachers use text-based digital content; the teaching-learning approach remained traditional.

1.2 Statement of the problem

ICT policy 2015 emphasized the integration of ICT in the field of Education and Research to ensure quality teaching-learning. ICT needs to be integrated in the teaching-learning in a manner that it vanishes in the background of the classroom Lloyd (2005). Effective integration of ICT in teaching-learning will enhance students' construction of knowledge, establish a student-centered learning environment and promote independent learning. There are several frameworks which explains how to integrate ICT in teaching-learning effectively. However, I observed that most of the secondary teachers used text-based digital content with traditional teaching-

learning approach. Most of the teachers perceived ICT integration as using technologies in classroom with no changes in their traditional approach of teaching. This lack of understanding of teachers about ICT integration resulted in the failure to upgrade the quality of teaching-learning in secondary education.

Previous researchers studied the current status of ICT in the context of secondary education in Bangladesh. However, there is a lack of a research that focuses on how effectively the teachers integrate ICT. To the best of our knowledge, no such research has been conducted on this aspect in recent years. This study aims to fill the gap in the literature. By exploring this issue, this research can inform the policy- makers, curriculum developers, teachers and other stakeholders about the changes in teaching-learning that ICT integration brings in secondary education level to understand the level of implementation of ICT policy in the field of education and research.

1.3 Purpose statement

The study has two major purposes: to determine how teachers integrate ICT in teaching-learning effectively and explore the changes in the teaching-learning of secondary education after ICT integration. The study also studied the challenges which hampers the effective integration of ICT and recommended some suggestions to overcome this situation.

1.4 Research questions of the study

The following research questions are going to address the above purpose of the study and will also direct the readers about how this study was organized:

1. To what extent is ICT being used in the classrooms by the teachers of secondary education level?

2. What are the changes occurred after integrating ICT in classroom teaching-learning?

3. What are the challenges to implement ICT integration in teaching-learning?

1.5 Scope of the study

The Government of Bangladesh has taken an enormous mission to integrate ICT in all levels of education to improve the quality of teaching-learning.

By exploring this issue, the research can inform the policy- makers about the situation of ICT integration in secondary education level.

Secondary teachers can be informed about their extent of effective ICT integration in classrooms. This knowledge will bring a change in their practice. Furthermore, the teachers will be notified about the challenges that impede the integration of ICT in teaching-learning process. This will help them to overcome the challenges and integrate ICT effectively in various levels of instructions.

1.6 Outline of the study

This study consists of five chapters. The first chapter describes introduction, statement of the problem, purpose, research questions and audience of the study.

The second chapter includes review of relevant literature on ICT, elements of ICT integration, benefits of ICT integration, challenges of ICT integration and solutions to overcome the challenges.

The third chapter includes methodology of the study. In this chapter, I have discussed research design, data sources, sample and sampling, data collection, instruments, data analysis and ethical consideration.

The fourth chapter represents the results section of this quantitative study. Data has been analyzed by using descriptive statistics (frequency, mean, standard deviation). Statistical test (t test, ANOVA) has been used for Hypothesis testing.

In chapter five, I have presented the discussion section in which I have discussed the findings of this research study in relation to my review of literature. This discussion has been organized based on the order of research questions of this study. This chapter also includes my personal reflection of the study. Finally references have been added to refer to literature and other information sources and instruments which are used in this study are included in appendices.

Chapter Two: Literature Review

This chapter explores all the relevant literatures that are needed to understand this study. The chapter discusses ICT, integration, ICT integration, elements of ICT integration, benefits of ICT integration, obstacles to ICT integration and solutions to overcome the obstacles.

2.1 ICT

The acronym ICT stands for Information and Communication Technology. Before defining the term Information and Communication Technology, two other terms have to be defined as they are closely related to the definition of Information and Communication Technology. The two terms are Informatics and Informatics Technology (IT).

2.1.1 Informatics and informatics technology (IT)

According to UNESCO (2002), "informatics" is the science which deals with the design, realization, evaluation, use, and maintenance of information processing systems, including hardware, software, organizational and human aspects, and the industrial, commercial, governmental and political implications of these. Informatics technology is defined as the technological applications (artifacts) of informatics in society. (UNESCO, 2002)

2.1.2 Information and Communication Technology

Information and communication technology, or ICT, is the combination of informatics technology with other, related technologies, specifically communication technology (UNESCO, 2002). Toomey (2001) has provided another definition for ICT, in which ICT means technologies that are used for accessing, gathering, manipulating and presenting or communicating information. The technologies could include hardware (e.g. computers and other devices); software applications; and connectivity (e.g. access to the Internet, local networking infrastructure, and videoconferencing).

2.2 What is ICT integration?

According to Wang & Woo (2007), ICT integration is defined as a process of using any ICT resources (including information resources on the web, multimedia programs in CD-ROMs, learning objects, or other tools) to enhance students' learning.

2.3 Benefits of ICT integration

2.3.1 Transforming teaching practice

According to numerous studies, integration of ICT has the potential to assist in transforming traditional teaching practice into reconstructed teaching (Blackmore et al., 2003). This means in the new teaching paradigm, ICT can shift the focus of teaching towards learning through problem solving, group work and independent/self-paced learning. The focus shifts towards thinking about learning or metacognition, becoming more hands on and action oriented (Blackmore et al., 2003). Research has also indicated that the integration can support new instructional approaches and make hard-to-implement instructional methods such as simulation or cooperative learning more feasible (Chang & Wu, 2012).

2.3.2 Creating open ended learning environment

Constructivist learning theory is the contemporary form of learning. Constructivist learning theory places learners at the center of teaching-learning where they construct their knowledge themselves by active participation rather than just being at the receiving end of knowledge transmission (Duffy & Cunningham, 1996, as cited in Amin, 2013). Therefore, an open ended learning environment is an absolute need for students' construction of knowledge. An open ended learning environment is learner centered which engages learners in self-regulated learning by using appropriate technology, resources and scaffolding. Amin (2013) also voiced that ICT may contribute to create powerful learning environments.

2.3.2 Promotes self-regulated learning

An open ended learning environment promotes self-regulated learning where learners learn more with less effort and report higher levels of academic satisfaction (Schraw, Crippen & Kendall Hartley, 2006). Self-regulated learning has three major components such as cognition, metacognition and motivation.

According to Jonassen (1999, as cited in Amin, 2013), ICT may function as a facilitator of active learning and higher-order thinking. Agnew (2002) continued by asserting that students are encouraged to develop higher order thinking skills though ICT. An important element of students' learning, metacognition, has two main subcomponents such as knowledge of cognition and regulation of cognition (Schraw & Moshman, 1995, as cited in Amin, 2013). Knowledge of cognition refers to what we know about our cognition and regulation of cognition refers to planning, monitoring, and evaluation of our cognition (Schraw & Moshman, 1995, as cited in Schraw,

Crippen & Hartley, 2006). In a study by Hollingworth and McLoughlin (2001), ICT has been integrated in teaching-learning to promote learners' metacognitive skills.

ICTs such as videos, television and multimedia computer software that combine text, sound, and colorful moving images can be used to provide challenging and authentic content that will engage the student in the learning process. Interactive radio likewise makes use of sound effects, songs, dramatizations, comic skits, and other performance conventions to compel the students to listen and become more involved in the lessons being delivered. Some of the parents of the respondents opined that their children were feeling more motivated than before in such type of teaching in the classroom rather than the stereotype 45 minutes lecture. They were of the view that this type of learning process is much more effective than the monotonous monologue classroom situation where the teacher just lectures from a raised platform and the students just listen to the teacher.

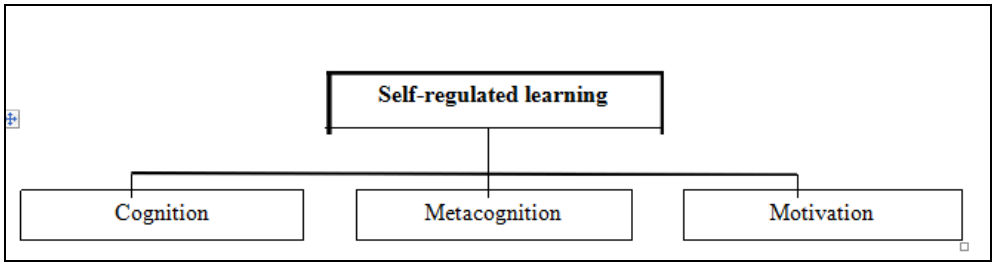

Figure 2.1 Components of self-regulated learning

2.3.3 Enhances students' motivation

Several studies confirmed that integration of ICT can enhance students' motivation towards learning. Cox (1997) and Bullock (2001) carried out individual studies on the use of ICT on students' motivation where they found significant improvement in students' motivation by integrating ICT in teaching-learning process. According to Cox (1997), the regular use of ICT for various topics can have a stimulating and beneficial effect on students' learning. Bullock's study found that students were more enthusiastic to start the tasks, and this zeal continued over the period of the task. Learning in an ICT environment brings excitement and amusement in lessons, more enjoyment of the learning experience, gaining control on their own learning process, more self-confidence and more self-esteem.

2.4 A Continuum of approaches in ICT integration

UNESCO (2002) stated that a continuum of four broad approaches has been identified through which assists individuals and institutions can

integrate ICT in education. These four approaches are emerging, applying, infusing, and transforming.

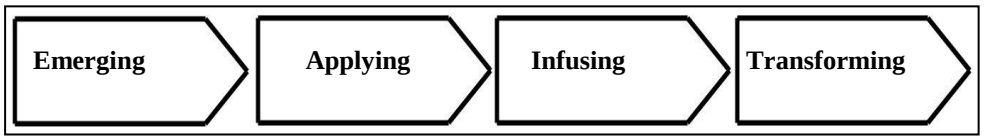

Figure 2.2 A continuum of approaches

The emerging approach

The emerging approach is the first phase of the continuum. In this approach, educational institution begins to acquire ICT tools. Afterwards, policy and strategies are developed to build awareness for ICT and integrate ICT in teaching-learning. However, the integration of ICT at this phase does not exclude traditional teaching-learning approach.

The applying approach

The second phase of the continuum is named as the applying approach in which teachers begin to utilize ICT for different administrative and management related tasks. Teachers are the controller of the teaching learning in this phase as well. Teachers start applying ICT in various subject areas with specific tools and software.

The infusing approach

At the next stage, the infusing approach involves integrating or embedding ICT across the curriculum, and is seen in those schools that now employ a range of computer-based technologies in laboratories, classrooms, and administrative offices. Teachers explore new ways in which ICT changes their personal productivity and professional practice.

The transforming approach

ICT becomes an integral though invisible part of daily personal productivity and professional practice in this phase which is termed as the transforming approach. The focus of the classroom is now learners and integrates subject areas in real-world applications.

2.5 Evaluation of ICT integration

There are some major components of Logic Model for Evaluation of Technology Integration (adapted from Alliance+: Professional Development

through Technology, a TICG project (Friedman, 2000; Yepes-Baraya, 2000)) to determine whether the teachers are integrating ICT effectively in classroom situation.

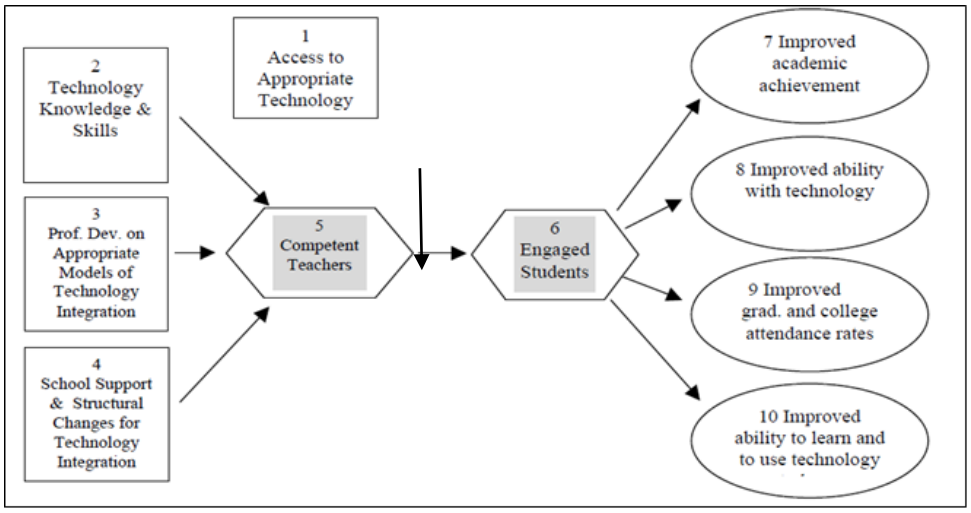

Figure 2.3 Logic Model for Evaluation of Technology Integration

2.6 Obstacles to ICT integration

Several studies including Pelgrum (2001), Salehi and Salehi (2012) and Mndzebele (2013) have identified various challenges that impede the integration of ICT. The challenges are lack of equipment including hardware, software and internet access, lack of teachers' knowledge and skills about ICT, lack of time to integrate ICT in teaching-learning, inadequate technical support, insufficient funds to increase the infrastructure of the educational structure etc.

i. Lack of equipment including hardware and software and internet access

Availability of up-to-date resources such as hardware and software resources is a key feature in the integration of ICT (Gulbahar, 2007; as cited in Mndzebele, 2013). However, this is a rare experience in educational institutions. Most of the educational institutions have no adequate equipment to integrate ICT effectively in teaching-learning process. Blackmore et al. (2003) also found that the insufficient number of computers was the major barrier to the integration of ICT in educational institutions. Other studies by Kay, (2006), Doering, Hughes & Huffman, (2003) have summarized that insufficient access to ICT is an obstacle that has prevented successful implementation of technology

ii. Lack of teachers' knowledge and skills about ICT

Teacher's lack of knowledge and skills is one of the main hindrances in the use of ICT in education Mndzebele (2013). It is expected that ICT will bring technical difficulties in the classroom. Teacher with low level of knowledge and skill when face technical fragility of ICT, that leads to high levels of teacher anxiety over use of ICT and this leads to avoidance behavior rather than adoption activity. (Blackmore et al., 2003). Furthermore, as teachers are not trained on how to integrate ICT in pedagogy, they have a tendency to avoid it purposefully.

According to the several studies, many teachers kept on thinking that they are not knowledgeable and skilled enough to use ICTs effectively. Literature by Çakır and Yıldırım, (2009, as cited in Glazer, Hannafin and Song, 2005) indicate that effective technology integration requires teachers to obtain learning experiences within the context of their teaching so that they can practice, reflect, and modify their practices. Indeed other studies have shown that if teachers feel that they are not adequately prepared, then there is a high likelihood that they will not use the technologies or will view them as an unfair additional challenge (Angondi, 2013).

iii. Teachers' attitude towards ICT integration

Several barriers to ICT integration in teaching and learning have been identified in various literatures. These barriers include lack of equipment, lack of time for training and the use of ICT, Lack of technical support, lack of competence to use ICT, lack of follow up for new skills, lack of differentiated training programs, technical faults with ICT equipment etc.

However, among these, the major obstacle is the teachers' belief system. Studies by Korte & Husing (2007), Blanknskat et al (2006) and Angondi (2013) have revealed teachers contrasting perceptions which depicts that despite the continuous hype of the advantages of ICTs in teaching and learning, there is still a small group of teachers who do not see any considerable benefit to learners while using ICT.

Furthermore, studies showed that another major impediment is the teachers' reluctance to abandon their existing pedagogy which Rodgers (2002) views as a major obstacle to integration of ICT than even limited resources. Teachers' beliefs about their own efficacy play an important role in integrating ICT in pedagogy (Angondi, 2013). This is a definite proof that unless teachers see the connection between technology and the subject content they teach, they are unlikely to develop a technology supported pedagogy.

iv. Lack of time to integrate ICT in the teaching-learning

Teachers have been found to be the major predictors of the integration of ICT in instructional settings. The teacher needs time to collaborate with other teachers as well as learn how to use hardware and software. Studies indicate the effective use of ICT requires teachers with different skills to work together in planning. Planning and consultation is most important for dealing with students with particular needs. Time is needed to plan the integration of ICT (Blackmore et al., 2003). However, most of the teachers teach more than one subject and then they have to teach with ICT which means they have a heavy load. As a result, these teachers do not find time to design, develop and incorporate ICT into teaching and learning (MoET, 2012).

v. Inadequate technical support

There have been several initiatives from the Ministry, the private sector and international partners to integrate ICT in educational institutions. However, educational institutions that had necessary equipment face challenges in the maintenance and upgrading of that equipment (Mndzebele, 2013). Lack of technical support means that teachers can be quickly discouraged by equipment failures or software behavior they do not understand. Institutions attempting to integrate ICT on a wide scale need on-site technical assistance. If technical problems arise frequently and teachers have to wait hours, days, or weeks to get them resolved, they will abandon their efforts to integrate ICT (Blackmore et al., 2003).

vi. Insufficient funds to increase the infrastructure of the educational structure:

Educational institutions often face with the problem of insufficient funds to increase the infrastructure of ICT. In most developing countries it is very hard when it comes to integrating technology into education systems because it involves substantial funding by the government. Integration of ICT demands a lot of funds and setting up the infrastructure, maintenance and support from technical and administrative wings (Mndzebele, 2013).

2.7 Solutions to overcome the challenges

According to Mndzebele (2013), there are few ways in which the challenges in the ICT integration can be overcome. One of the ways is providing teachers with in-service training of ICT. Another way is to involve the stakeholders in this venture so that they understand the importance of ICT integration and assist in the way of it.

i. Teacher training

Teacher training is considered to be an effective way to overcome the challenges in ICT integration. Hence, technology skills should be integrated throughout the teacher education curriculum, thus providing pre-service teachers with experience in applying technology to specific content areas and pedagogical approaches (Kay, 2006). Besides, Goktas, Yildirim and Yildirim (2006) stated in their study that teachers indicated that in-service training about ICT should be improved in quantity and quality.

ii. Collaboration of stakeholders

ICT integration demands collaboration from its stakeholders such as learners, facilitators, guardians, school staff and technicians. This will be possible if teachers' class burdens are reduced. By reducing teachers' workload, they will have more time to design the integration of ICT in their pedagogy by taking help from other colleagues, students and school staffs. One possible strategy is that school leaders "buy time" for teachers by using block scheduling, providing monthly or quarterly curriculum-development or professional development days, scheduling extended planning time for same-grade-same subject teams, reorganizing teaching loads, or implementing innovative staffing procedures, such as using permanent substitutes, student teachers, parent volunteers (Ertmer, 1999).

iii. Support

According to Wong (2000), the most common problem a teacher faces when conducting an ICT-lesson is technical problems, both hardware and software-related ones. It is thus crucial to provide teachers with technical support, especially help in trouble-shooting ICT-related problems, so that teachers can concentrate on conducting the actual lessons (Strudler & Wetzel, 1999).

Chapter Three : Methodology

The study has been conducted to determine how effectively ICT is integrated in the teaching-learning of secondary education in Bangladesh. In addition, the study has been done to explore the challenges that impede the integration of ICT in teaching-learning and in what ways, these challenges can be overcome. The methods and techniques followed in this study are presented in this chapter. This chapter includes strategy of inquiry, data sources, sample and sampling, data collection, instrument, data analysis and ethical consideration.

3.1 Strategy of inquiry

Research questions of this study are:

1. To what extent ICT is being used in the classrooms by the teachers of secondary education level?

2. What are the changes occurred after integrating ICT in classroom teaching-learning?

3. What are the challenges to implement ICT integration in teaching-learning?

The research questions deal with how the teachers integrate ICT in teaching learning, what changes the integration brought in the traditional teaching-learning and what changes they are facing while implementing the changes in teaching-learning process. Quantitative research approach has been used to find out the impact of ICT integration in secondary classrooms. RQ1 and RQ3 ask “how many” and RQ2 seeks to confirm a hypothesis. The methods is highly structured and consistent during data collection using a questionnaire with closed-ended questions and structured classroom observation. The results have provided numerical data that has been analyzed statistically for a correlation between ICT integration and changes occurred. Quantitative methodology is the best apply to this research problem.

3.2 Sources of Data

The detailed description of the data sources along with a diagram are given in the following for a clear understanding.

Table 3.1 Sources of Data

Research question	Source of data	Instrument/tools
1	Teachers	Questionnaire
	Students	Questionnaire
	Classroom	Structured Observation
2	Teachers	Questionnaire
	Students	Questionnaire
3	Teachers	Interview
	Students	Questionnaire
	Classroom	Structured Observation

3.3 Sample and sampling

The data of my study was collected from ten schools. Two teachers and thirty students from each of the schools were treated as sample. Hence, the study total sample size was 320 (300 students + 20 teacher). Moreover, one teacher from each class has been observed.

3.4 Data Collection tools

According to Bell (2005), a well-designed questionnaire gives the information we need, that will be acceptable to the subjects and that will give you no problems at the analysis and interpretation stage. So, the questionnaire has been given to the students and teachers.

According to Robson (2002), structured observation is a way of quantifying behavior and the key features of structured observation are the development of coding scheme. Hence, structured observation method has been used to observe ICT integration while teaching-learning process in the classroom.

3.5 Data analysis

Data obtained from questionnaire and observation has been analyzed using descriptive statistics (frequency, mean, and standard deviation). Statistical test (t test, ANOVA) has been used for Hypothesis testing. Cronbach's

alpha has been measured to check internal consistency. Statistical package software SPSS has been used to analyze data.

3.6 Ethical consideration

Teachers and students have been informed about the purpose of the study before involving them as samples. According to Creswell (2012), to gain support from participants need to convey to participants that they are participating in a study and inform them of the purpose of the study. Total confidentiality and anonymity will be ensured in presenting data in data analysis section. Individual teacher and student identities have not been used in analysis data.

Chapter 4: Findings

The analysis of the data is presented in the following sections. The following sections are going to address to what extent ICT is being used in the classrooms by the teachers of secondary education level, which sort of changes have been occurred after integrating ICT in teaching-learning activities and the types of challenges that hinder to implement ICT integration in teaching-learning.

4.1 Facility available in the classroom of secondary school in Bangladesh

According to our observation, majority of secondary school are not well equipped with ICT facilities. Near half of the school has multimedia classroom (43.75%), however, opportunity of using Internet is lower (30.20%). On the other hand, very few schools (28.60%) have sound system. (Figure 4.1)

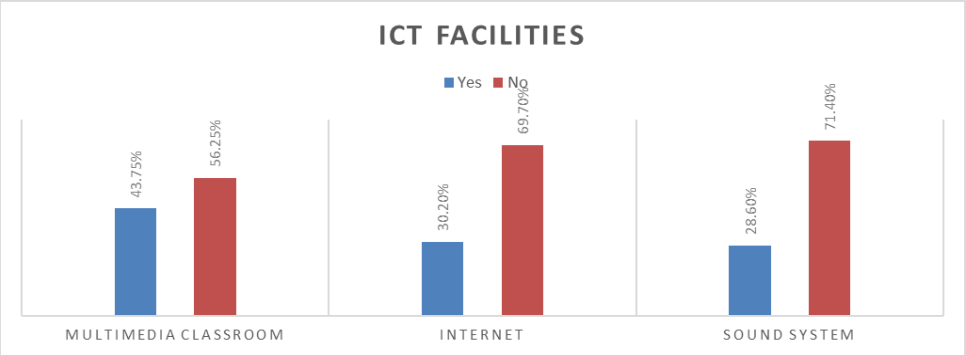

Figure 4.1 Available ICT facility in the classroom of secondary school

4.2 Satisfaction on ICT facilities in the classroom of secondary school in Bangladesh

According to the Figure 4.2, in response to ICT facilities are satisfactory in classroom, more than 50% teachers shown dissatisfaction, however, students are satisfied with existing facilities.

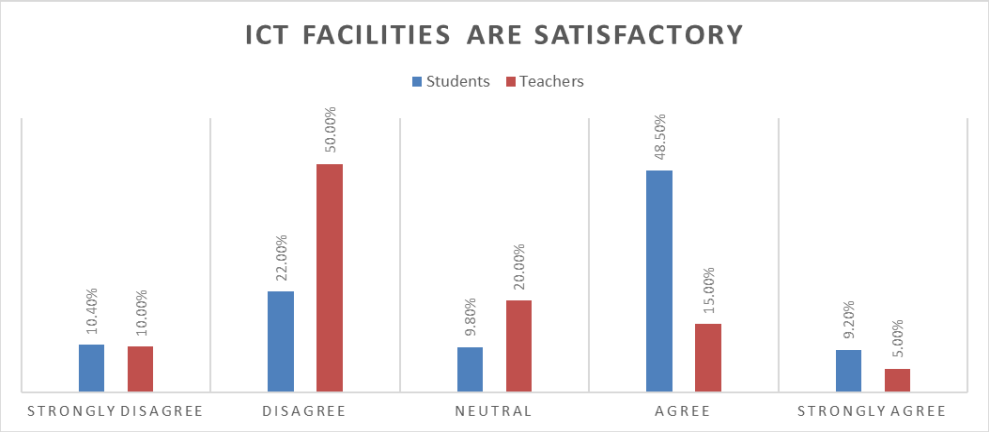

Figure 4.2 Satisfaction on ICT facilities

4.3 Software skills of Teachers

According to the following table, few teachers have no experience on above skills. Around half of the teachers have beginner or intermediate level of skills. As for example, 41.2% teachers have Photoshop skill. Considerable number of teachers have advanced and mastery level of skill. (Table 4.1)

Table 4.1 Skill level of teachers for variety of software that may be used for ICT integration

Skill	No experience	Beginner	Intermediate	Advanced	Mastery
Presentation (MS Power point)	5.0%	35.0%	25.0%	20.0%	15.0%
Word processing (MS Word)	20.0%	25.0%	20.0%	15.0%	20.0%
Spreadsheet (MS Excel)	22.2%	22.2%	22.2%	11.1%	22.2%
Image/photo (paint/Photoshop)	17.6%	17.6%	41.2%	-	23.5%
Web Browser	5.9%	23.5%	23.5%	23.5%	23.5%
Video (You Tube)	5.3%	5.3%	26.3%	42.1%	21.1%
E-mail	10.5%	15.8%	31.6%	15.8%	26.3%

4.4 Software skills of students of different class

The table 4.2 shows that, more than half of the students of class 6 have beginner level skill in Presentation (MS Power point), Word processing (MS Word), processing Image/photo (paint/Photoshop), using web browser and using E-mail. 42.9% students are at advanced level in watching video

in YouTube. On the other hand, considerable number of students has never used MS Excel and Illustrator. Very few students are at mastery level in those skills.

Table 4.2 Skill level of class VI students for variety of software that may be used for ICT integration

Skill	No experience	Beginner	Intermediate	Advanced	Mastery
Presentation (MS Power point)	28.6%	53.6%	14.3%	-	-
Word processing (MS Word)	10.7%	60.7%	17.9%	7.1%	-
Spreadsheet (MS Excel)	39.3%	39.3%	3.6%	14.3%	-
Image/photo (paint/Photoshop)	7.1%	46.4%	7.1%	25.0%	14.3%
Graphics (Illustrator)	32.1%	57.1%	7.1%	-	-
Web Browser	10.7%	50.0%	7.1%	28.6%	-
Video (You Tube)	-	32.1%	7.1%	42.9%	17.9%
E-mail	10.7%	53.6%	14.3%	14.3%	3.6%

The table 4.3 shows that majority of the students of class 7 have no experience in using MS Power point (76.4%), MS Excel (76.4%) and Illustrator (77.8%). Around half of the students have no experience in using Web Browser, E-mail and watching video in You Tube. Majority of the students have beginner level skill in MS Word (65.3%). Very few students have mastery level in those skills.

Table 4.3 Skill level of class VII students for variety of software that may be used for ICT integration

Skill	No experience	Beginner	Intermediate	Advanced	Mastery
Presentation (MS Power point)	76.4%	18.1%	2.8%	2.8%	-
Word processing (MS Word)	25.0%	65.3%	4.2%	2.8%	1.4%
Spreadsheet (MS Excel)	76.4%	19.4%	-	-	1.4%
Image/photo (paint/Photoshop)	38.9%	40.3%	11.1%	8.3%	1.4%
Graphics (Illustrator)	77.8%	13.9%	2.8%	1.4%	-
Web Browser	48.6%	23.6%	5.6%	12.5%	4.2%
Video (You Tube)	51.4%	15.3%	11.1%	11.1%	9.7%
E-mail	56.9%	22.2%	4.2%	12.5%	2.8%

The table 4.4 reflects that, around half of the students of class 8 have no experience in using MS Power Point (60.6%), MS Excel (52.1%), Illustrator (60.6%) and E-mail (49.3%). Considerable number of students are at beginner level in using MS Power point, MS Word, MS Excel, processing Image/photo (paint/Photoshop), using web browser, using E-mail and watching video. Few students have mastery level in those skills.

Table 4.4 Skill level of class VIII students for variety of software that may be used for ICT integration

Skill	No experience	Beginner	Intermediate	Advanced	Mastery
Presentation (MS Power point)	60.6%	31.0%	2.8%	4.2%	-
Word processing (MS Word)	38.0%	40.8%	7.0%	9.9%	2.8%

Skill	No experience	Beginner	Intermediate	Advanced	Mastery
Spreadsheet (MS Excel)	52.1%	35.2%	4.2%	4.2%	2.8%
Image/photo (paint/Photoshop)	18.3%	25.4%	28.2%	12.7%	15.5%
Graphics (Illustrator)	60.6%	28.2%	4.2%	4.2%	2.8%
Web Browser	31.0%	29.6%	16.9%	4.2%	16.9%
Video (You Tube)	12.7%	31.0%	11.3%	22.5%	22.5%
E-mail	49.3%	28.2%	8.5%	7.0%	7.0%

The table 4.5 reflects that, less than half of the students of class 9 have no experience in using MS Excel (44.0%) and Illustrator (48.0%). More than half of the students have beginner level skill in MS Power Point (52.0%). Only considerable number of students has beginner level skill in MS Word (31.0%), Photoshop (38.0%), using web browser (32.0%) and using E-mail (39.0%). Around half of the students have intermediate level skill in MS Word (43.0%). On the other hand, around half of the students have mastery level skill in watching video in You Tube (46.0%).

Table 4.5 Skill level of class IX students for variety of software that may be used for ICT integration

Skill	No experience	Beginner	Intermediate	Advanced	Mastery
Presentation (MS Power point)	24.0%	52.0%	11.0%	10.0%	2.0%
Word processing (MS Word)	13.0%	31.0%	43.0%	6.0%	7.0%
Spreadsheet (MS Excel)	44.0%	19.0%	12.0%	15.0%	10.0%
Image/photo (paint/Photoshop)	20.2%	38.0%	20.0%	12.0%	9.0%
Graphics (Illustrator)	48.0%	36.0%	7.0%	8.0%	1.0%
Web Browser	6.0%	32.0%	14.0%	13.0%	30.0%
Video (You Tube)	5.0%	20.0%	15.0%	13.0%	46.0%
E-mail	13.0%	39.0%	13.0%	15.0%	19.0%

The table 4.6 reflects that around half of the students of class 10 have beginner level skill in MS Power Point (62.0%), MS Word (49.3%), MS Excel (49.3%). Considerable number of students has beginner level skill in Photoshop, Illustrator, Web Browsing, watching video and using E-mail. Considerable number of students has intermediate, advanced and mastery level in those skills.

Table 4.6 Skill level of class X students for variety of software that may be used for ICT integration

Skill	No experience	Beginner	Intermediate	Advanced	Mastery
Presentation (MS Power point)	7.0%	62.0%	18.3%	7.0%	5.6%
Word processing (MS Word)	8.5%	49.3%	15.5%	16.9%	7.0%
Spreadsheet (MS Excel)	22.5%	49.3%	11.3%	2.8%	12.7%
Image/photo (paint/Photoshop)	14.1%	38.0%	21.1%	11.1%	14.3%
Graphics (Illustrator)	33.8%	40.8%	7.0%	7.0%	8.5%
Web Browser	31.0%	22.5%	21.1%	14.1%	8.5%
Video (You Tube)	8.5%	22.5%	21.1%	19.7%	28.2%
E-mail	19.7%	29.6%	15.5%	18.3%	14.1%

4.5 Using ICT for teaching-learning purpose

According to the following table, considerable number of teachers has never communicated with their students (47.8%) and colleagues (31.6%) through ICT. It is surprising that, 35.7% teachers have never accessed and used E-book. Considerable number of teachers do net surfing for educational purpose (40.0%) and use digital platforms (36.8%) more than 10 times per month. Majority (60.0%) of the teachers use social networking sites. (Table 4.7)

Table 4.7 Status of learning experience of Teachers

	Never	Less than monthly	1-4 time/ month	5-10 times/ month	More than 10 times/month
Communicate with students through ICT	47.4%	15.8%	15.8%	5.3%	15.8%
Communicate with colleagues through ICT	31.6%	10.5%	26.3%	21.1%	10.5%
Enhancing face to face learning in classroom by using ICT	26.3%	10.5%	26.3%	26.3%	10.5%
Accessing digital material/ resources	21.1%	26.3%	21.1%	21.1%	10.5%
Net surfing for educational purpose	13.3%	20.0%	20.0%	6.7%	40.0%
Accessing and using E-book	35.7%	7.1%	28.6%	21.4%	7.1%
Using digital platforms (Google site, Google. Classroom, Google drive)	10.5%	26.3%	10.5%	15.8%	36.8%
Using social networking site (Facebook, twitter)	20.0%	-	13.3%	6.7%	60.0%

The following table reflects that most of the students use ICT to find information (83.3%) what they need to know. 64.9% students use ICT to communicate information. 43.6% use ICT to evaluate and 26.3% use ICT to create information. (Table 4.8)

Table 4.8 Students' learning preference using ICT

Learning purpose	Opinion in favor
To find information	83.3%
To evaluate information	43.6%
To create information	26.3%
To communicate information	64.9%

According to the Table 4.9, more than half (56.3%) of the students have never accessed and used E-book. Considerable number of students has never communicated with their teachers through ICT (37.4%), have never accessed to digital materials (38.1%), have never done net surfing for educational purpose (29.6%), have never used digital platforms (38.3%) and networking sites (33.1%). On the other hand, 37.2% students communicate with their peers through ICT more than 10 times per month and they also use social networking sites more than 10 times per month.

Table 4.9 Students' learning preference using ICT

	Never	Less than monthly	1-4 time/ month	5-10 times/ month	More than 10 times/month
Communicate with teacher through ICT	36.4%	24.3%	26.1%	10.0%	3.2%
Communicate with peers through ICT	21.8%	10.6%	19.3%	10.6%	37.8%
Enhancing face to face learning in classroom by using ICT	47.4%	22.0%	22.9%	3.1%	4.6%
Accessing digital material/ resources	38.1%	25.9%	21.3%	5.5%	9.1%
Net surfing for educational purpose	29.6%	21.3%	21.0%	9.3%	18.9%
Accessing and using E-book	56.3%	15.1%	16.3%	6.9%	5.4%
Using digital platforms (Google site, Google. Classroom, Google drive)	38.3%	21.3%	16.5%	6.3%	17.5%
Using social networking site (Facebook, twitter etc.)	33.1%	12.8%	14.9%	10.0%	29.2%

Since $p < .05$ i.e. is less than our chosen significance level $\alpha = 0.05$, we can reject the null hypothesis, and conclude that the mean scope of using ICT for boys (M=1.27, SD=.445) and girls (M=1.39, SD=.489) is significantly different. (Table 4.10)

Table 4.10 t-test for equality of means according to gender for scope of using ICT

Independent Samples Test										
		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Scope of ICT	Equal variances assumed	22.917	.000	-2.264	331	.024	-.121	.053	-.225	-.016
	Equal variances not assumed			-2.315	286.042	.021	-.121	.052	-.223	-.018

4.6 Using ICT for admission and assessment purpose

According to the following table, all the students of School-I have said that they have never applied and completed admission process through ICT. Again, majority of the students of School-F (72.80%) and School-G (76.00%) have expressed that they have never done any admission process through ICT. Majority of the students of School-H have said that they have never done any admission process through ICT but they are thinking to apply through it. On the other hand, a considerable number of students (37.90%) of School-J have said that they apply and complete their admission through ICT regularly. (Table 4.11)

Table 4.11 Students' Admission using ICT

School name	Never	Not yet, But Think to apply	Exists but does not apply	Occasionally	Regularly
School-A	14.70%	47.10%	17.60%	11.80%	8.80%
School-B	14.20%	14.30%	25.00%	28.60%	17.90%
School-C	21.60%	28.30%	26.10%	2.20%	21.80%
School-D	18.90%	47.70%	23.80%	9.60%	-
School-E	31.80%	43.80%	6.20%	3.10%	15.10%
School-F	72.80%	25.00%		-	2.30%
School-G	76.00%	24.00%	-	-	-
School-H	-	70.00%	16.70%	13.30%	-

School name	Never	Not yet, But Think to apply	Exists but does not apply	Occasionally	Regularly
School-I	100%	-	-	-	-
School-J	38.00%	24.10%	-	-	37.90%

According to the following table, majority of the students of all the school have said that they have never been assessed by using ICT, where all the students of Schoo-I agree with it. 47.00% students of School-A have said that assessment through ICT exists but has not been applied. (Table 4.12)

Table 4.11 Students' assessment using ICT

School name	Never	Not yet, But Think to apply	Exists but does not apply	Occasio nally	Regul arly
School-A	32.40%	20.60%	47.00%	-	-
School-B	69.00%	6.90%	10.30%	10.30%	3.40%
School-C	56.50%	21.70%	17.30%	4.40%	-
School-D	33.30%	14.30%	33.30%	9.50%	9.50%
School-E	34.40%	25.00%	21.90%	12.40%	6.20%
School-F	63.60%	13.60%	18.10%	-	4.60%
School-G	80.00%	12.00%	8.00%	-	-
School-H	70.00%	16.70%	-	13.30%	-
School-I	100.00%	-	-	-	-
School-J	75.90%	24.10%	-	-	-

According to Table 4.13, all the students of School-I have said that they never get test result through ICT. Again, most of the students of School-B (82.10%) and School-H (80%) have said that they never get test result through ICT. More than half of the students of School-C and School-F have said that they get test result through ICT occasionally. (Table 4.10)

Table 4.12 Students' Test result using ICT

School name	Never	Not yet, But Think to apply	Exists but does not apply	Occasionally	Regularly
School-A	24.20%	9.10%	12.10%	36.40%	18.20%
School-B	82.10%	-	-	10.70%	7.10%
School-C	28.30%	2.20%	-	52.20%	17.40%
School-D	47.60%	19.00%	9.50%	19.00%	4.80%
School-E	34.50%	6.90%	10.30%	20.70%	27.60%
School-F	9.10%	11.40%	-	59.10%	20.50%
School-G	14.00%	24.00%	6.00%	28.00%	28.00%
School-H	80.00%	3.30%	3.30%	3.30%	10.00%
School-I	100.00%	-	-	-	-
School-J	37.90%	24.10%	-	-	37.90%

Finally, we conclude that the mean of using ICT in case of admission (F = 14.596, $p < 0.001$), assessment (F = 8.162, $p < 0.001$) and test result (F = 12.928, $p < 0.001$) is significantly different for at least one of the schools. (Table 4.14)

Table 4.13 ANOVA table

ANOVA						
		Sum of Squares	df	Mean Square	F	Sig.
Test result	Between Groups	233.916	9	25.991	12.928	.000
	Within Groups	651.368	324	2.010		
	Total	885.284	333			
Admission	Between Groups	155.991	9	17.332	14.596	.000
	Within Groups	389.483	328	1.187		
	Total	545.473	337			
Assessment	Between Groups	74.441	9	8.271	8.162	.000
	Within Groups	333.406	329	1.013		
	Total	407.847	338			

4.7 Types of ICT tool that are used while teaching and their percentage of uses

According to Table 4.15, around half of the teachers have said that they use power point slide (50.0%) and image (47.4%) 1-4 times per month while teaching. Considerable number of teachers has never used animation (33.3%), Microsoft Excel (41.2%) and E-mail (46.7%) in teaching. Around half of the teachers use video clip (47.4%) and Web Browsing (50.0%) less than monthly. 42.9% teachers use Microsoft word /PDF 1-4 times per month.

Table 4.14 Usage of ICT tools by teachers

Tools	Never	Less than monthly	1-4 time per month	5-10 time per month	More than 10 times/month
MS Power point	10.0%	5.0%	50.0%	15.0%	15.0%
Image/photo	10.5%	10.5%	47.4%	15.8%	15.8%
Animation	33.3%	26.7%	20.0%	6.7%	13.3%
Video clip	15.8%	47.4%	10.5%	15.8%	10.5%
Microsoft Word, PDF	14.3%	7.1%	42.9%	28.6%	7.1%
Microsoft Excel	41.2%	23.5%	29.4%	29.4%	5.9%
Web Browsing	16.7%	50.0%	22.2%	-	11.1%
E-mail	46.7%	20.0%	26.7%	6.7%	-

According to Table 4.16, 69.2% teachers have strongly agreed that there is a great impact of using ICT in regular classroom teaching-learning.

Table 4.15 Opinion of teachers on impact of using ICT in regular classroom teaching-learning

Strongly Agree	Agree	Disagree
69.2%	30.8%	0%

4.8 Teachers' problem in handling the ICT during the class period

According to the following table, majority of the teachers have said that they face some problem in handling hardware (63.2%) and application software (73.7%). On the other hand, 47.4% teacher have some problems with technology based communication. (Table 4.17)

Table 4.16 Problems faced by teachers in case of handling ICT

Problem faced in handling ICT	Opinion in favor
Hardware	63.2%
Application software	73.7%
Technology based communication	47.4%

According to Table 4.18, Considerable number of teachers agreed that there is a lack of time to learn ICT enhanced instruction (36.8%) and develop ICT enhanced curriculum (42.1%). Majority of the teachers have also agreed that they have lack of technical (68.4%) and administrative support (73.7%) to integrate technology into classroom instruction.

Table 4.17 Barriers to integrate ICT in teaching-learning

Barriers	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Lack of time to learn about ICT enhanced instruction	10.5%	36.8%	21.1%	26.8%	5.3%
Lack of time to develop about ICT enhanced curriculum	5.3%	42.1%	15.8%	36.8%	-
Lack of technical support	10.5%	68.4%	15.8%	5.3%	-
Lack of administrative support	5.3%	73.7%	10.5%	10.5%	-
Lack of recognition	5.3%	47.4%	21.1%	21.1%	5.35%

Chapter Five: Discussion

This study has used Logic Model for Evaluation of Technology Integration (adapted from Alliance+: Professional Development through Technology, a TICG project (Friedman, 2000; Yepes-Baraya, 2000) to determine whether the teachers are integrating ICT effectively in classroom situation. Teachers and students have been asked questions to assess the level of ICT integration in the teaching learning process. In this chapter, I am going to discuss the findings from the previous sections.

5.1 ICT usage in the classrooms by the teachers of secondary education level

According to our findings, majority of secondary schools are not well equipped with ICT facilities. Most of the classrooms are not under the coverage of multimedia, sound system and internet. As such, most of the teachers are not satisfied with the ICT facility available in their classrooms. Previous studies have proven that limited ICT capacities create hindrances in the effective use of ICT in a classroom (Kennewell, Parkinson & Tanner 2000; Chigona & Chigona, 2010; UNESCO, 2002; Zhao & Cziko, 2001).

Majority of the schools have no scope of using ICT to apply and complete admission process and majority of the school do not assess students using ICT. More specifically schools situated in rural areas do not exercise their practice of using ICT in admission and assessment. But providing test result through ICT has been adopted in most of the schools. In addition, around half of the teachers have never communicated with their students through ICT tools and more than half of the students have never accessed and used E-book, although, they use social networking sites. Kuşkaya and Koçak (2010) discovered that educators used ICT most regularly for administrative purposes and less for actual educational purposes.

5.2 Changes after integrating ICT in classroom teaching-learning

In our findings, ICT has been integrated in the classroom. According to Cox (1997), the regular use of ICT for various topics can have a stimulating and beneficial effect on students' learning. However, we found around half of the teachers have beginner or intermediate level of skills in using different kind of software for educational purpose. Majority of the students of different classes have no experience or beginner level skill in using

variety of software. Condition of using Graphics and spreadsheet is very poor. But, condition of using video (You tube) for education purpose is increasing. In most of the cases they use ICT for communicating and finding information.

Though teachers believe that there is a great impact of using ICT in regular classroom teaching-learning, their usage is limited to Microsoft word or PDF in teaching-learning process. In spite of varying degrees of ICT acceptance in schools in many countries, no major changes have occurred in teaching practice and classroom activities (Coll et al., 2009).

5.3 Challenges to implement ICT integration in teaching-learning

Availability of up-to-date resources such as hardware and software resources is a key feature in the integration of ICT (Gulbahar, 2007; as cited in Mndzebele, 2013). From our findings, it is argued that majority of secondary school are not well equipped with ICT facilities.

Kay (2006), Doering, Hughes & Huffman, (2003) have summarized that insufficient access to ICT is an obstacle and may prevent successful implementation of technology.Majority of our teachers have faced some problems in handling hardware, application software as well as technological based communication. According to Blackmore and et al. (2003), teacher with low level of knowledge and skill when face technical fragility of ICT leads to high levels of teacher anxiety over use of ICT and this leads to avoidance behavior rather than adoption activity.

Adequate time is needed to plan the integration of ICT (Blackmore et al., 2003). More surprisingly, our teachers have lack of time to learn about ICT enhanced instruction and develop about ICT enhanced curriculum. Again, most of the teachers have no technological and administrative support and lack of recognition after adopting ICT tools. Researchers opine if technical problems arise frequently and teachers have to wait for hours, days, or weeks to get them resolved, they will abandon their efforts to integrate ICT (Blackmore et al., 2003).

5.4 Recommendations for ensuring ICT integration

- Though ICT integration in the classroom has already been introduced, however, majority of secondary schools are not well equipped with ICT facilities. According to Smarkola (2007), the ease of use of an innovation and helpfulness are the best predictors of teachers' acceptance and utilization of technology. Hence, sufficient ICT facilities should be installed in classrooms to reduce the dissatisfaction of the teachers.

- Moreover, teacher training should focus on developing ICT skills of teachers along with integrating ICT in pedagogy. However, teacher training alone cannot help teachers to understand the concept of ICT integration in teaching-learning, which is much more than using power point presentations in classroom. Bingimlas (2009) and Goktas et al. (2009) that revealed effective teacher training is one of the important factors which can influence the integration of ICT in the classroom.
- Some teachers recommends professional learning community (PLC) can play an important role. They also uttered they can use lesson study to observe each other's lesson so that they can discuss and provide feedback on each other's strategies. In a previous study by Mutohar (2012), teachers' professional development had a significant influence on ICT integration.

5.5 Personal reflection

Though I commenced this study to explore the ICT usage in teaching-learning activities, I ended up exploring the changes occurred after ICT integration in teaching learning along with the obstacles of ICT integration. I believe that I barely scratched the surface of the issues I have been exploring and this needs more vigorous studies to get a complete understanding. It is very important to identify and investigate all possible factors that influence teachers' acceptance of ICT and its integration in the classroom.

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Understanding teachers' professional development for quality primary education

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Abstract

Teachers' understanding of quality education plays a pivotal role to ensure quality education at school system. In recent years, Bangladesh government is providing a huge number of training through different programs to primary school teachers. However, very limited study documented how teachers perceive quality education and how they perceive the training provided to them to enhance quality education. The study employed a mixed method approach using both quantitative and qualitative data to investigate the research questions. Quantitative data were generated from 100 teacher participants (F=50) from 10 schools of Dhaka division. For qualitative data, interviews were conducted with 10 teachers and 5 teacher trainers. The findings of study reveal that though teachers' understanding of quality education and training are mostly aligned with national and international policy principles, teachers' have identified additional aspects from their practitioners' point of view. The study findings further revealed that teachers' additional workload, scarcity of school resources and students' lack of readiness and motivation are the major challenges to implement the skills teachers received from in-service trainings. These findings of practitioners' point of views have significant implications particularly when teachers are the main protagonist in implementing quality education at school.

Contents

Tables

Figures

Chapter One
Introduction

Bangladesh has achieved a number of targets of MDGs including gender parity, increased net enrollment ratio and decreased dropout rate (MDG, 2015). Despite these achievements, quality of education remains as one of the top concerns of the education system in Bangladesh (Ahmed and Rahman, 2016). While Bangladesh already started to work towards achieving the new global Sustainable Development Goals (SDG) by 2030 which focuses on "inclusive and equitable quality education at all levels" (UN, 2015), emphasis on quality education achieved strongest importance. Teachers' understanding of quality education, however, plays a pivotal role to ensure quality education at school system. UNICEF (2000) pointed that teachers and their ongoing professional development are one of the major dimensions of quality education.

Despite the recent achievements in primary education, students' learning achievement is still far from the expected level and in the alarming stage. It is found from the national assessment report (ASPR, 2014) conducted by the Government of Bangladesh that majority of the students are very poor in achieving literacy and numeracy skills. The report (2014) pointed that only 25% of grade 5 students achieved learning competencies in Bangla as per their grade level. Another study (Saha & Ehsan, 2015) mentioned that only 3.5% students (both boys and girls) of grade 3 were able to answer a set of questions by reading a text through a comprehension test. Several aspects both from inside and outside the school are identified to contribute positively in school achievements (Rand, 2018). And teachers are the one of the key factors in school as well as classroom to ensure the learning achievement. Continuous Professional Development (CPD) is one of the ways through which teachers can enhance both teaching and pedagogical skills. In addition, subject based training, regular refresher trainings also have strong impact on teachers' teaching learning and motivation (ASPR, 2014). It is found (Saha and Khan, 2014) that teachers of government primary schools who received subject based training have not been getting refresher training for several years.

Teachers' professional development is the important component to ensure the quality education and to accelerate learning achievement of the

students. However, very little is known about the teachers' understanding of quality education and how they perceive quality training. The present study attempts to explore teachers' perception and understanding of quality education and how teachers perceive professional development as to enhance quality education.

Rationale of the study

Teachers are important stakeholders of the education system. Poor quality of teaching is recognized as one of the key variables contributing to the low level of learning achievement in primary schools (BEPS, 2002). The study (BEPS, 2002) further pointed that deficiency of teacher training and supervisory system are responsible for low level of student learning. The concept of quality education has undergone transformations over the last few decades. The focus of teaching, for example, has been moved from traditional emphasis of rote memorization to developing concept and creativity in the classroom. Wider ideas and components had been added to the present concept of quality education. However, if teacher's understanding is not aligned with the contemporary concept of quality education, any effort towards quality education may not be achieved fully. Understanding teachers' concept and belief of quality education are necessary to initiate any intervention programs. Understanding of teachers' existing conceptualization helps to design better training program. Teachers are being aware and familiarized with upgraded understanding of different dimensions of quality education through training. It is expected that the study findings will help teacher trainers of the primary education system to familiarize themselves with the views of the teachers, their need and the existing situation to develop need based training session for primary school teachers. At the same time the policy makers may get essential insights from the trainee (teachers) and trainers (UEO, AUEO, URC Instructor) about their views and the existing situation of training of the primary education system of Bangladesh. This will add value to the future planning towards ensuring quality education by 2030 under SDG. .

Research Objectives

The present study attempts **to explore how teachers understand quality education and training they received as continuous professional development**. The study was guided by the following objectives.

- To understand the perception of the teachers and teacher trainers about quality of education
- To understand the teachers' perception of quality professional training to ensure quality education
- To identify teachers' perceived challenges to implement training skills in classroom teaching-learning practice

Research questions

1. How do teachers perceive quality education?
2. How do teacher trainers perceive quality education?
3. How do teachers perceive effective professional training in ensuring quality education?
4. How do teachers implement skills received from training in classroom teaching practice?

Chapter Two
Literature Review

Education is a powerful element of the society for its ability to bring positive changes in the world. A number of actors play important role to ensure quality education; teacher being the most significant among them. However, the concept of quality education has been perceived differently over different time period and geographical location. In recent decades, along with we are being global, the concept of quality education becomes universal. According to UNICEF (2000), quality education includes:

- **Learners-** healthy, well-nourished and ready to participate and learn, and supported in learning by their families and communities
- **Environments-**healthy, safe, protective and gender-sensitive, and provide adequate resources and facilities;
- **Content** -reflected in relevant curricula and materials for the acquisition of basic skills-e.g. literacy, numeracy and skills for life-health, nutrition, HIV/AIDS
- **Processes-**child-centred teaching approaches, managed classrooms and schools and skillful assessment to facilitate learning
- **Outcomes-** encompass knowledge, skills and attitudes, and linked to national goals for education and positive participation in society"

This study basically focused on quality processes specially teachers' professional development and training in relation to ensure quality education.

Teachers' professional development usually refers as training and development. Professional Development (PD) is a key function within school environments, and helps teachers develop into more effective practitioners in educational field. According to Richards and Farrell (2005), the term training refers to,

> "activities directly focused on a teacher's present responsibilities and is typically aimed at short-term and immediate goals. Often it is seen as preparation for instruction into a first teaching position or as preparation to take on a new teaching assignment or responsibility. Training involves understanding basic concepts and principles as prerequisite for applying them to teaching and the ability to demonstrate principles and practices in the classroom. Teacher training also involves trying out new strategies in the classroom, usually with supervision, and monitoring and getting feedback from others on one's practice. The content of training is usually determined by experts and is often available in standard training formats or through prescriptions in methodology books" (p. 3).

Concurrently, development refers to, "general growth not focused on a specific job. It serves a longer-term goal and seeks to facilitate growth of teachers' understanding of teaching and of themselves as a teacher" (Richards & Farrell, 2005, p. 5). Though training is important for professional development, research also showed some other views like higher job satisfaction, motivation, working environment, teacher collaboration and peer network have a great impact on professional development (Boudersa, 2016; GEMR, 2016).

Like any other education system, Bangladesh education system offers huge training activities through different programs for primary school teachers. As Bangladesh government runs the largest stake of mainstream primary schooling system, the government teacher training efforts are mainly organized by in-service mode. However, there is a limited provision of pre-service training in different universities. After joining in the primary education system, teachers usually attend a one-year full-time (C-in-Ed) or recently introduced one and a half year (DPEd) program, a residential teaching training at the district-level Primary Teachers Training Institute (PTIs). Along with this, teachers also receive subject based training (in service) from Upazila Resource Center (URC) and sub-cluster training from the education officials (URC, Upazila Education Officers (UEO), Assistant UEOs) and selected Head teachers.

In recent time, teachers are expected to be competent in subject matter and also be professional in the field to possess knowledge and skill to ensure standard and quality of education. According to Boudersa (2016),

> *"Good quality teacher training and professional development programs alongside motivating environments will have positive impacts on the teaching/learning improvement. In-depth and up-to-date knowledge, teaching and assessment skills, clear and well-set educational goals, love and dedication, commitment and positive attitudes toward the teaching profession are, inter alia, central factors that all educational and teachers' training institutions have to consider and give due importance" (p. 3).*

At present, almost 94% teachers have C-in-Ed level professional qualifications in primary education system and females are ahead of male teachers in receiving this. On the other hand, 93% teachers have the subject based training. Though the percentage is high still female assistant teachers are short from achieving the PEDP3 target of 95% by 2017 (ASPR, 2016).

However, providing all these regular training, refresher training is significant to support teachers' professional development (GEMR, 2016; Saha & Ehsan, 2015). Despite efforts made by the government for teacher training both in terms of number and types, the quality of the education remains flat over the years. There are very limited studies that explore the gap between training and implementation of training skills in the classroom particularly through the lenses of teachers, who are the main actor of implementation. This study aimed to explore how teachers perceive quality education and quality training and what are the major challenges of applying training skills into classroom teaching learning practice.

Chapter Three
Methodology

This section describes the research methodology, design, instruments used in the study. The section further presents data analysis procedure and ethical consideration taken during data collection to report writing.

Research Design

This study employed a mixed method research approach to explore teachers' understanding of effective professional development for quality primary education and the implementation of training skills in classroom teaching learning practice. To explore these aspects of quality education, the mixed method design is better suited to review the "...perspectives of the research participants toward events, beliefs, or practices" (Gay & Airasian, p. 163). To do this both qualitative and quantitative aspect were focused simultaneously. This study was followed by the convergent parallel mixed method research design to supplement and triangulate both qualitative and quantitative data each other (Creswell, 2012).

Population and participants

In line with the purpose of the study and the research questions, all primary school teachers and trainers were the population of the study. There are 122,176 primary schools in Bangladesh. Out of these 38,306 are government and 25,240 are newly nationalized govt. primary schools. In total 63,546 schools are govt. primary schools. Together they cover more than 52% of primary schools (ASPR, 2016, p. 27). However, the researcher considered to limit the study only to Government Primary School (GPS), because it is the largest category of primary schools in Bangladesh. Consequently, the same time trainer involving with the government primary schools were included in the population.

Participants and source of data collection

For quantitative data, a non-probability convenience sampling was applied to select schools of the study from five Upazilas of Dhaka District. All the upazilas of Dhaka district were selected for this study. The Upazilas were Dohar, Keranigonj, Dhamrai, Nawabganj and Savar upazila. Two government primary schools were selected from each Upazila. Upazila Education Officer (UEO) of each Upazila was requested to provide the school details to select the schools. From each school, more than ten teachers were required for data collection; teachers who were available on the data collection day were selected on for the study

All the teachers of the selected school were asked to respond to the questionnaire for quantitative data collection. A total of 122 teachers from 10 primary schools responded to the questionnaire. (Table 2).

Table 1 Participants of the study for quantitative data

Source of Data Upazila	No. of Upazila	No. of school	No. of participated Teacher		Total no. of Participants
			Male	Female	
	5	5×2=10			
Dohar			9	14	
Keranigonj			4	22	
Dhamrai			8	16	
Nawabganj			7	16	
Savar upazila			4	22	
Total	5	10	32	90	122

For qualitative data, a maximum variation sampling was employed to generate participants' varied view regarding the perception of quality primary education and teachers' professional training. To do so, participants were selected from the ten (10) selected schools of five (5) different Upazilas of Dhaka district of Bangladesh.

In addition to teachers, the in-service teacher trainers of the government primary schools were also included as participants of the study. For this study, five Upazila (each for each Upazila) Education officers (UEO) or Assistant Upazila Education officers (AUEO) were selected as participants.

Table 2 Participants of the study for qualitative data

	Source of Data	No. of Upazila	No. of school	No. of participants		Total no of Participants
				Male	Female	
1.	Teachers	5	10	5	5	10
2.	Trainers	5				5

Finally, the participants consisted of Government Primary school teachers, trainers who actually provide training to the primary school teachers like Upazila Education officer (UEO) or Assistant Upazila Education officer (AUEO). As brief, from each Upazila, two government primary schools and one trainer were selected (Table 1 and 2).

Data collection tools

According to the purpose and the concerns of the study, the study requires both in-depth information and trends of the teachers' understandings of quality education and training. The study used interview guidelines and a perception scale for the teachers and trainers. The study also used field notes as another source of collecting data. Data were collected through two means, i.e. qualitative data instruments and quantitative instruments. For qualitative data, interview guideline was used for teachers to get the data on their views regarding their own definition on quality education, the components of quality education and their perception about it. At the same time, the tool also administered to know the linkage between training and quality education; as well as the issues regarding implementation of the training in the classroom. On the other hand, another interview guideline for trainers was used to collect the data similar to the teachers' interview guideline. For quantitative data, perception scale was used for teachers to know their perception about quality education and professional development training.

Matrix: Objectives, Data Source, Data Collection instrument and Data Analysis

Research Objective	**Research Question**	**Data Source**	**Data collection Tool**	**Data Analysis**
1. To understand the perception of the teachers' and teacher trainers' about quality education	1. How do teachers perceive quality education?	Teachers	Interview	Thematic analysis
			Perception scale	Statistical Analysis
	2. How do teacher trainers perceive quality education?	Teacher trainers	Interview	Thematic analysis
2. To explore teachers' perception on professional training in ensuring quality education	3. How do teachers perceive effective professional training to ensure quality education?	Teachers	Interview	Thematic analysis

Research Objective	Research Question	Data Source	Data collection Tool	Data Analysis
3. To explore the alignment of existing professional development training and teachers' implementation in the classroom teaching-practice	4. How do teachers implement skills received from training in classroom teaching practice?	Teachers	Interview	Thematic analysis

Data analysis process

Both quantitative and qualitative data were collected for the study. Data were also analyzed in two different ways. Quantitative data were analyzed by statistical software SPSS. SPSS generated both descriptive and inferential analysis and produced frequency, percentages, means and test reliability. On the other hand, qualitative data were analyzed thematically as per requirement of the study.

Chapter Four
Results

This section is divided into two parts. The first section presents the quantitative data while the second part presents qualitative. A total 122 teachers participated from all five sub-districts (Upazilas) of the Dhaka district. Teachers included from all urban regions of Dhaka District. Both quantitative and qualitative data were collected from all the participants of the study. Findings revealed from data presented accordingly.

Part One: Quantitative Data

This section presents results obtained from quantitative data through survey questionnaire and two scales including demographic, teachers' perception scale of quality education and quality training.

Demographic Findings

Gender

Most of the teachers found in the selected primary schools were female (74.74%). Out of 122 teachers, the numbers of male and female teachers were 31 and 91 respectively (Figure 1).

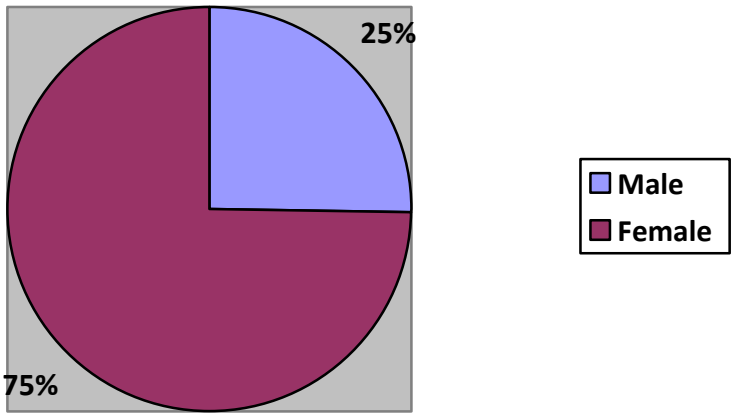

Figure 1 Percentage of participants by gender

Age of the teachers

Though the mean age of teachers is 42.3 years, the variation among the teachers' age was quite high. Data presented in table 3 shows that the minimum age of teachers is 23 years and maximum 59 years.

Table: 3- Age of teachers

	Min	Max	Mean	SD
Age	23	59	42.3	8

Teachers' academic qualification

A good number of teachers have masters (39.30%) degree as well as bachelor (43.40%) degree. It was also found from the table that only 18% (H.S.C and S.S.C) of the teachers have no university graduation degree.

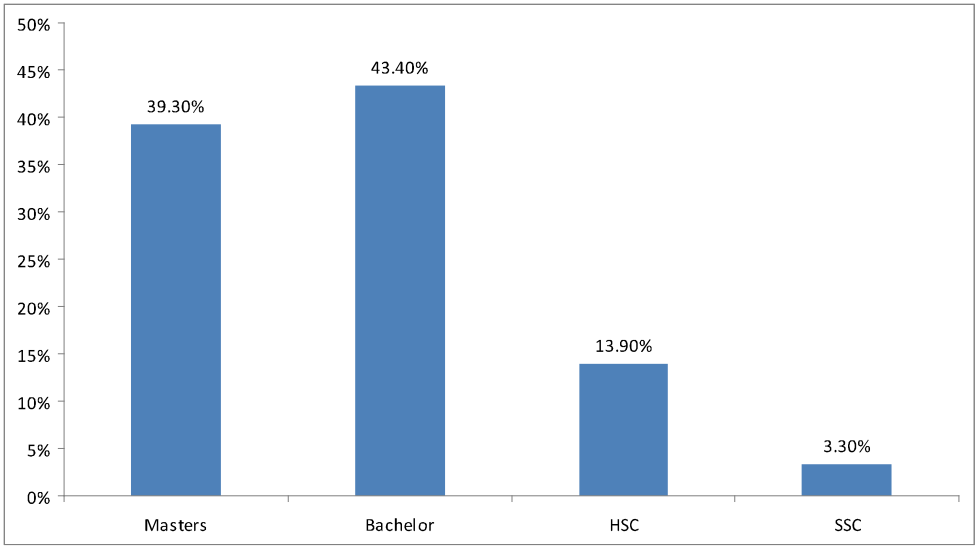

Figure 2: Teachers Academic Qualification

Teachers' Pedagogical Qualification

Data found from the pedagogical qualification of the teachers' revealed that 63% teachers of the sample have C-in-Ed degree, where 21% of them have B.Ed degree. Rest of the teachers has M.Ed (5%), DPEd (5%) degree. On the other hand 6% of the participated teachers did not have any pedagogical degree.

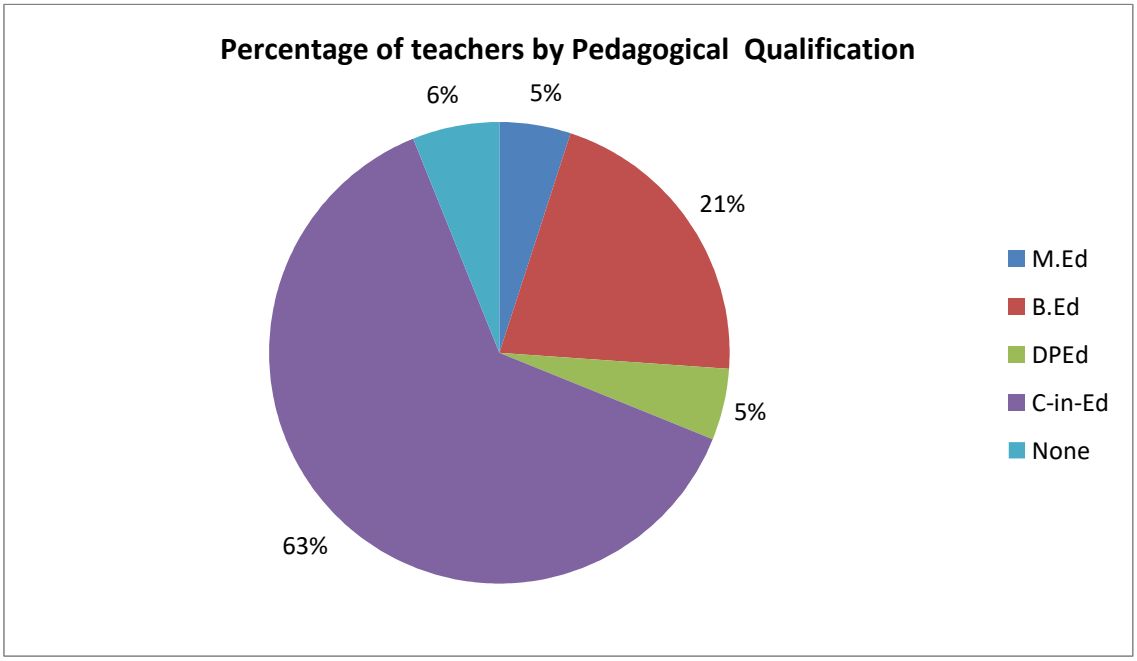

Figure 3: Teachers' Pedagogical Qualification

Table 4: Percentage of Teachers by educational and pedagogical qualifications

Educational Qualifications	(%)	Pedagogical Qualifications	(%)
Masters	39.3	C-in-Ed	63
Bachelor	43.4	MEd	5
HSC	13.9	BEd	21
SSC	3.3	DPEd	5
-		None	6

Teaching Experience

Information related to teachers' teaching experience is presented in Table 5 as follows. Result shows that average teaching experience of the teachers is 18.05 years, where minimum length of teaching experience is one (1) year and maximum length of teaching experience is 38 years.

Table 5: Teachers' Teaching Experience

	N	Range	Minimum	Maximum	Mean
Teaching Experience	119	37	1	38	18.05

Teachers' perception of Quality Education and quality training

The results show that teachers' attitude towards quality education is quite positive. The results show participants' scores ranged from minimum 50 to maximum 71. The mean of the participants' scores was 62, which is quite high from the mid-point score of 30 (in a scale between 15 and 75 points). It is to mention that the measure was 15 item scales with 5 point response option. With a small sample size the test produce a reliability of Cronbach's Alpha .55. (comment: Needs to be explained in a footnote)

Table 6: Teachers' perception of Quality Training

	Range	Minimum	Maximum	Mean	SD
Perception on Training	25	41.00	66.00	53.18	4.4

The results show that teachers' attitude towards training is quite positive as well. It shows participants' scores ranged from 41 to 66. The mean of the participants' scores was

53.18, which is quite high from the midpoint score of 28 (minimum scale point 14 to maximum 70). It needs to be mentioned that the measure was 14 item scales with 5 point response option.

Part Two-Qualitative Data

This section presents qualitative data obtained through interview with the teachers. The qualitative data was analyzed thematically and organized by the major research questions.

Teachers' Perception of Quality of Edcaution

The findings show that teachers referred quality education around five aspects.

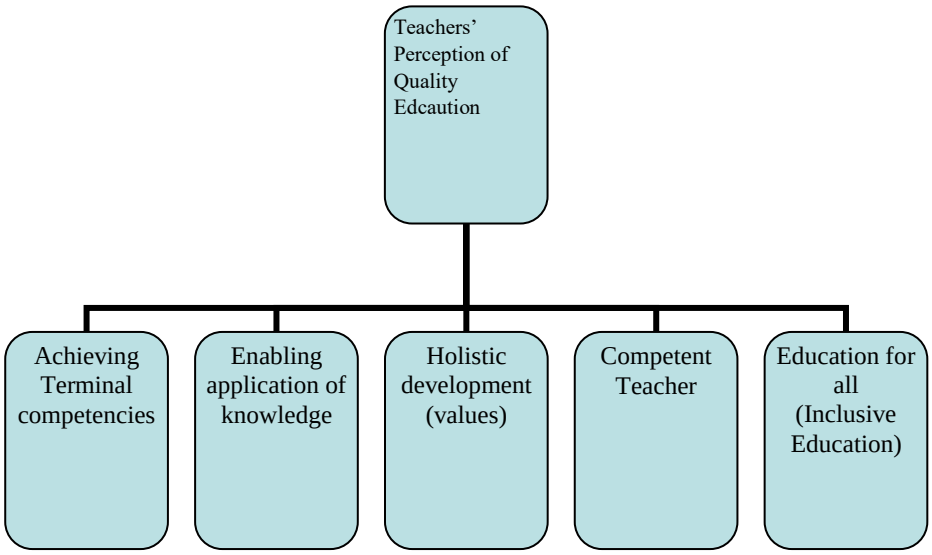

Figure 4 : Teachers' Perception of Quality Edcaution

1. Quality education referees achieving terminal competencies

Teachers frequently indicated achieving terminal competencies as the measure of quality education. Teachers' statements denote that education which ensure age appropriate learning outcome can be considered as quality education. In the words of a teacher, "*education system which enables their students to achieve terminal competencies, considered quality education*" (T5)

2. Quality education refers enabling application of knowledge

Teachers perceived that quality education refers an educational procedure where students are being enabled to apply their knowledge in daily life. One teacher stated, "Scores *of the examination do not indicate quality education, quality education refers application of learned knowledge in real life"* (T9). Few other teachers extended that along with application of knowledge, "*quality education enables one to adapt successfully in the society*". (T8)

3. Quality education refers holistic development

Other than achieving competencies and enabling students applying knowledge, teachers connected quality education as a process of child's holistic development. Teachers included physical, mental, aesthetic, social and spiritual development as part of quality education. As one teachers uttered,

"*the education through which a student is facilitated to gain positive behavioral change in his/her psychological, social, spiritual and aesthetic mind is considered as quality education*". (TR2)

4. Quality Education refers competent teachers

Few teachers perceived quality education depended on teachers' competencies rather than students' ability to learn. Teachers' experience, academic qualification and attitude towards teaching were the expressed measure of quality education. (T7)

5. Quality education refers education for all

Finally the other aspect perceived by the participants related to quality education had to do with ensuring education for all. As one of the teachers stated in response to the question of how he/she understood quality education, *"participation of all in education and ensuring equal education to all levels of students is quality education."* (T10)

Components of Quality Education

The qualitative data reveals teachers' three main components of quality education including skilled teacher, school resource and parents' awareness.

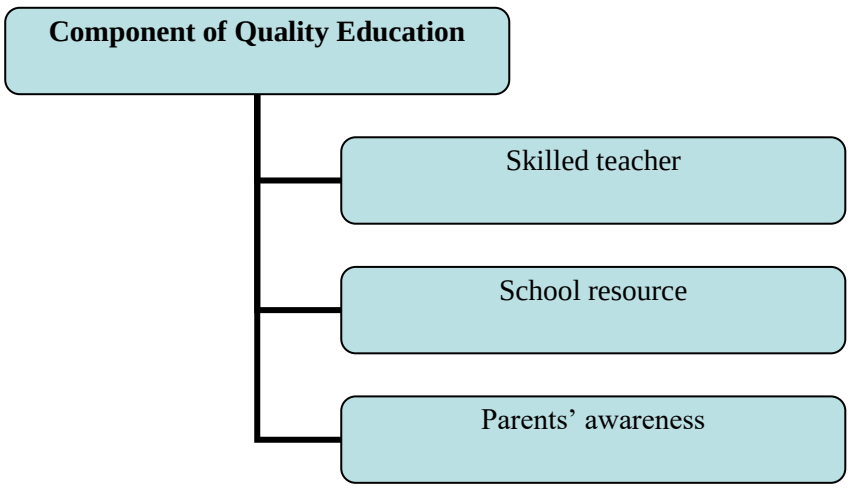

Figure 5: ***Components of Quality Education***

(But in the text it is written teachers qualification, experience and attitude)

Skilled Teacher

Almost all the Teachers ranked teachers' ability to teachincluding both pedagogical and content knowledge to be vital for ensuring quality edcuation. To do so, teachers frequently mentioned that teacher need training on their respective subjects, use of teaching aids and refersher training.

School Resources

School resource including both built in school enviroment and non-physical infrastructure are mentioned as two of the key components to ensure quality edcuation. Built in infrastruture includes adequate classrooms, washroom and installation of digital instruments in the school. In terms of other teaching learning resource decorated class room, teaching aids and quality supplementary books are also considered to bring quality edcaution in the school. Study further shows along with built in environment, regular arragement of co-curriculer activities, classroom management and standard student teacher ratio are considered crucial componet of quality edcuation. As one of the teachers quoted, "school environment, safe drinking water, clean wash room, teaching aids, adequate teaching time and ensuring a sense of security are needed to acheive a quality edcuation". (T10)

Parents' awareness

Teachers further considered that parents' awareness is one of the key components forquality education. Parents' support and demand for quality education can promote schools effort to implement other quality components at schools.

Teachers' perception of Quality Training

Teachers found quality teachers training with three aspects, one, enhancing subject knowledge, development of professional skills and stimulating motivation for profession.

Figure 6: Teachers' perception of quality training

Enhancing Subject Knowledge

Teachers considered that quality training helped them enhancing content knowledge. Through quality training, teachers get refreshed with further content knowledge as one participant quoted that "...through training I have obtained content knowledge which helps me in conducting class effectively" (T10).

Develiping Pedagogical Skills

Teachers perceived that quality eduction faciliates developing pedagogical knowledge. A particiapted teacher mentioned that through qualitative training, "(we) came to know about different (teaching) methods. how to draw students' attention, use of teaching aids, and evaluation methods" (T1).

Stimulating Motivation for profession

Along with content and pedagogical knowledge, few teachers identified quality training as a motivation program for them. As in the words of a teacher, "(*I) came to know how to enjoy teaching profession through training*" (T2).

Gap and challenges of training skills and classroom application
Participants identified both skills received from training they enable to apply in their classroom and skills they faced challenged to implement in the classrooms practice.

Teaching skills enabled to practice in the classroom
Teaching skills enabled to practice in the classroom consists of stimulate classroom motivation stimulation.

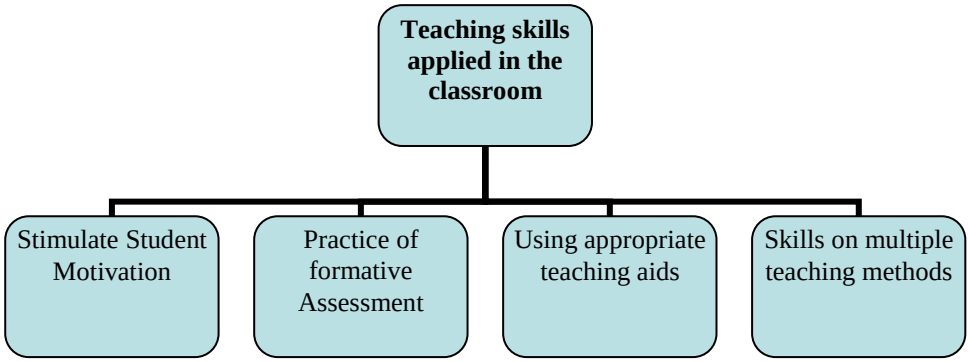

Figure 7: Gap and challenges of training skills and classroom application

Stimulate Students Motivation

Teachers identified that in-service training helped them to learn how to motivate students. The teachers indicated that after training, teachers motivated students through *"greeting, cheering them (students) all, using teaching aids to draw their attention"* (T1). Other teacher claimed that they have learned different techniques through training to motivating student including, *"calling students by name and praising students to encourage"* (T5).

Practice formative assessment

Teachers claimed that training helps them to learn how to use different assessment techniques in the classroom. As one teacher said that he *"evaluates students through asking short questions and through providing writing tasks after completing each lesson"* (T4). Teachers indicated that after training, they were encouraged to provide more feedback than before.

Using appropriate teaching aids

The respondent teachers identified that training not only motivate them to use teaching aids but it also helped them to use teaching aids appropriately. One teacher said that he now *uses "lesson related teaching aids"* (T2). Another teacher mentioned that he *himself "makes teaching aids for the class" (T4).*

Skills on multiple teaching methods

Training helped teachers learn different teaching methods and to mad them aware of using appropriate method in teaching. Participants mentioned that skills they have learned from training used in the classroom practice including discuss comparatively harder concepts repetitively and ask students work and study in group. One participated teacher describe further details, "from the training (I) have come to know various methods and techniques, for an example, easy to hard, concrete to abstract. (I) do follow these principles during the lesson delivery" (T4).

Skills challenged to implement in the classrooms practice

A number of challenges were identified that hinder teachers to implement their skills learnt from the training they have received. The major challenges are time constraint, resource constraint and students' unpreparedness.

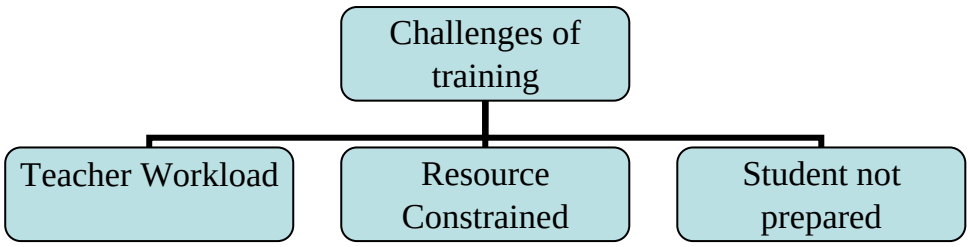

Figure 8: Implementation challenges of training

Teacher workload

In addition to rather pressing teaching load, teachers of primary school are engaged with number of government orders and administrative works. As one teacher mentioned that he could not apply the skillsthat he has learned

from the training due to "time constraint and various government task round the year"(T1). While the participants uttered, "everyday (I) have to take 8 classes, as a result I could not develop content and deliver the lesson according to the plan. Due to taking excessive class load on daily basis and additional administrative work, it is hard to keep the quality in classroom delivery" (T6).

Resource Constrained

Teachers identified that both school built-in resource scarcity and unfavorable learning environment often created challenges for the teachers to apply their skills in classroom teaching. Inadequate number of classroom and poor infrastructure often impede teachers to offer standard teaching learning activities. On the other hand, high student teacher ratio, lack of teachers and poor student attendance and irregularity create serious challenges for the delivery of quality education.

Student are not prepared

Teachers identified that teacher and school related components are very important but not enough to ensure quality education. If students are not motivated and ready to take the lesson, it would be hard to implement engaging teaching learning activities in the classroom. As one participant teacher uttered, "students come to school without having food, after several long class, many students are not able to concentrate, eventually they fall in sleep during noon time, as a result teaching learning process get hampered" (T10).

Trainers' perception of quality education

In addition to teachers, the teacher trainers were asked about their perception on quality education. Trainers have shown similar perception as their trainees including achieving terminal competencies, application of achieved knowledge, acquiring age appropriate knowledge and holistic development of a child including physical, mental, social and aesthetic development. One of the teacher trainer mentioned that, - *"Quality education is the education which helps a child to attain positive change of behavior in every aspect of life".* (TR2)

Participated teacher trainer pointed out several components of quality education. One of the teacher trainers stated that "*teacher and student are the most important component of quality education"* (TR2). Another participant expresses few other points as components of quality education

including curriculum, taking right decision in favor of education and primary education program. Almost all the trainers mentioned about teachers training especially subject based training, teaching material, physical facilities, limited number of student, joyful environment and sufficient fund as components of quality education. However, one of the participants pointed that 'teacher's cordiality' as a component of quality education.

Importance of training

All the trainers intermewed acknowledges the importance of training and supervision of the teachers in primary education. They emphasized that training is very much important as well as necessary to ensure quality education. It helps the teachers to know the current development in education system and also can be aware about the different educational program in the system. One of the participants mentioned that "*training helps the teachers to use different teaching methods and fulfill the desired goal of the education system"* (TR3). Additionally, another respondent pointed that *"training helps the teachers to coordinate with all the teachers and create the accountability to ensure quality education*" (TR4).

Conclusion

The findings from both quantitative and qualitative data reveal that most of the teachers' perception of quality education is aligned with the national and international perception of quality education. Teachers further show similar high awareness regarding their perception of quality training. The study findings further reveal that teachers' additional workload, scarcity of school resources and students' lack of readiness and motivation are the major challenges to implement the skills they have learned from in-service trainings.

Chapter Five

Discussion

The study attempts to understand three important aspects of quality education implementation effort in primary sector, one, teachers' perspective of quality education, two, teachers' perspective of quality training and third, the teachers' perceived gap between training and practice. The study further explored how trainers perceive quality education and training and how they differ from teachers.

The finding of the study shows that teachers' attitude towards quality education was quite comprehensive. The study measured the quality education based on the document of UNICEF -'Defining Quality in Education' (2000) which consists of five dimensions of quality education- quality learner, quality learning environment, quality content, quality process and quality outcome. Teacher high score of quality education scale indicated teachers' understanding of quality education is quite aligned with the international benchmark of quality education. Teachers, in the qualitative data, identified five different aspects of quality education which are achieving terminal competencies, application of knowledge, holistic development of a student, competent teacher and ensuring education for all (Inclusive education). Application of knowledge, holistic development (values) and ensuring education for all (Inclusive education) are the additional aspects from UNICEF quality education components. Teachers' focus on application of knowledge in terms of quality education indicates that teachers perceived better education as education having practical value. This understanding of quality in education has implication in teaching learning process. If teachers do not find a particular content and methodology useful for the students' daily life, teachers may not be encouraged to teach those to and use them for their students. Teacher trainers may consider these issues and provide adequate orientation of how each of the curriculum content and methodology has direct impact on students' present and future learning.

The other two additional aspects of quality education the teachers' identified were directly related to the cultural values of Bangladeshi society. As members of the society, the teachers felt that students are expected to have values and belongingness for their community and

education is counted as a means to achieving it. However, the study also revealed that the teachers assigned very high significance to achieving the required competencies as means to ensuring quality educationThe implication of this understanding denotes that the teachers over emphasise on the success of examination (UNICEF, 2016). One of the reasons might be teachers see quality education from practitioners' point of view.

In addition to the above, teachers identified three major components to ensure quality education. The components are skilled teacher, school resources and parents awareness. Enhancing skilled teacher and school resources are largely agreed upon with major policy and program efforts (BDF, 2018; OECD, 2009). Primary Education Development Program (PEDP) 4 for instance, is the largest education programfor primary education had hugely invested programs and plans for teachers training. Similarly, earlier two PEDPs had huge investment for school infrastructure and strengthening school resource availability. Recently, School Level Improvement Plan (SLIP), a cash allocation initiative for the schools to spend by themselves for teaching learning material or any local improvement on needs basis has been increased annually. Further initiatives can be seen in recent years through providing support for classroom decoration in preprimary and digital classroom facilities for primary schools (BDF, 2018). However, studies show that instead of buying or supplying ready-made teaching material, preparing and developing low and no-cost materials by teachers and students by themselves facilitated the learning skills of both teachers and students. Additionally, a sense of ownership increased among different stakeholders of the school and ultimately they work together to ensure the quality of the education (UNESCO, 2015).

One of the components teachers mentioned for quality primary education has been hardly seen through policy papers is parents' awareness. This is particularly important for the government primary schools where most of the students' are from rural and low socio-economic family context. It is not possible to ensure quality education without participation of parents and their participation increase learning achievement of the students (Cotton & Wikelund, n.d). The major existing efforts in the government primary school to bring the students to school are through cash transfer and

school feeding program. Though financial support and accessibility through money sent to parents' mobile directly has impact on students' attendance, there are limited evidence that this effort increases parents' awareness of importance of education for their children. Similarly, the school feeding program may increase student attendance and keep students longer at school. This effort either does not ensure parents' awareness. Understanding the significance of education is vital for parents to involve in their children's' education. To ensure quality education, parents not only need to let their children come to school but also provide them appropriate facilities and space at home.

Along with understanding of quality education, the study intended to understand effective teacher training for quality education. The quantitative data shows that most of teachers had above average positive attitude toward teacher training to ensure quality education. This result indicates that though most of the respondent teachers (94%) have professional training, teachers are having a positive attitude towards receiving further training.

Teachers identified three main aspects of an effective teacher training including training which enhance 1) subject knowledge, 2) generate motivation and 3) professional skill. In practice, training for the primary school in Bangladesh mostly isrelated to subject based and pedagogical training. These types of training helps them to acquire content knowledge as well as increase professional skills (Richards and Farrell, 2005). Teachers of this study identified effective training as motivation for their professional development and teaching. Teaching is a dynamic profession where teachers have to accommodate themselves with this ever changing learning environment. Short term in-service trainings work as "a wake-up call to remind teachers of their teacher roles and enhances their professional ethics which in the end will improve their performance and thus quality education" (Kabeera, 2017). Motivation is considered one of the important things in training (Boudersa, 2016; GEMR, 2016).

The final research question of this study was to find gaps between skills obtained from training and its application in the classroom. Teacher explicitly indicated three major challenges to implement training skills in the classroom teaching learning process including excessive workload, scarcity of resource and students readiness. Series of other studies (Nath et

al., 2004; Ahamed, Billah & Alam, 2013; Yunus & Shahana, 2016) consistently showed teachers' excessive workload and engagement with non-teaching activities create hinderences in making teachers to perform at their best. The second most commonly uttered challenges was scarcity of resources which consists of both infrastructure physical facilities and learning materials. Despite huge infrastructural development that took place in the last few years in primary education sector, yet many rural schools lack adequate number of classrooms, washroom facilities and school furniture. Quality teaching learning activities often need open and flexible classroom space to organize group works and other activities where teacher can reach any student. Many of the classrooms are with fixed sitting arrangement, which are congested and overcrowded. Together with lack of classroom storage or display facilities, many of learnt teaching skills are often impossible to organize. In addition to built-in-facilities, many of the school are with shortage of teachers (Rogan, Habib, Shafiq, Bagmer & Pace, 2018) where teacher are to take additional classes and multiple classes together. Teachers are left with very limited time to plan and develop resource for a quality lesson.

In addition to school and teacher related challenges, students preparedness has been found as one of the challenges to implement learnt skills in the classroom teaching. Quality teaching need quality students (Unicef, 2000) which has to do with students having sound mental and physical health. Evidence from the present study clearly supports that students coming to school hungry or with inadequate food intake get tired early and remain inattentive throughout teaching learning process. Teachers without student engagement and enjoyment are neither able to conduct a quality teaching nor apply any effective teaching learning skills effectively that translates into successful learning outcome..

Limitation of the study

Due to limited time and budget frame, the study faced a number of limitations. . The major limitations are discussed below

1. The researchers did not include all schools from each sub-district of Dhaka district. Only 2 government primary schools from each sub-district were chosen as sample, which is one of the limitations of this study.

2. This is a mixed method research. Researcher was supposed to complete this research within six months period. The lime frame was not sufficient for the single researcher to cover the sample size and process the collected information.
3. Another limitation of the study is that it was originally intended to select equal number of male and female teachers. However, in reality female teachers significantly outnumbered their male counterpart, which distorted the gender balance. Recommendations

   Based on the study findings and comments from the research participants as well as the reflections of the researcher, A number of recommendations have emerged which are as follows:
4. Most of the teachers focused mainly on learning achievement as quality education. But other aspects like students' health, teacher-student ratio and joyful environment also needs to be addressed to ensure quality education.
5. Parents are one of the important stakeholders of the education system. It is recommended by the study that parents as stakeholders needs to be more aware about their children's education to ensure quality of the education.
6. Regular refresher training on professional development should be arranged equally as giving subject based training.

Teachers should be motivated through professional development inputs.

Conclusion

The findings of the study indicated that policy makers and education administrators need to consider how teachers understand quality education and what types of training best suits them. The study offers discussion to bring teachers' understanding of quality education and training on board to reorganize existing teacher professional development. The study further opens future research pathway to explore practitioners' perspectives to develop a need based professional training program for the primary school teachers. Parents as important stakeholders need to be aware about their children's education to ensure quality education.

Teachers are the most important workforce to obtain and enhance educational procedure. Teachers' understanding, of subject matter as well as positive attitude and skills inclined towards education are means of achieving quality education. In Bangladesh, the highly centralized primary education system often accommodates little room to teachers' perception and understanding in educational enhancement programs including training content, procedure resources. Growing number of studies repetitively indicate that top down model particularly in education sector is not only less effective, but in many cases, it can be counter productive.. Teaching is an art which needs heart, hand and head altogether to enhance and nourish to the potentials of a teachers. This mixed method study focused on different significant stakeholders of the education like teachers', trainers' and their opinion in professional development to ensure quality education. Understanding and incorporating teachers' point of view in policy and program development certainly would provide added value to more sustainable efforts in the field of primary education system in Bangladesh.

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এস.এস.সি পরীক্ষায় পরীক্ষার্থীদের তুলনামূলক ফল খারাপ করার কারণঃ ঢাকা মহানগরীর বিদ্যালয় গুলোর মধ্যে এস.এস.সি. পরীক্ষায় খারাপ করেছে এমন ১০ টি বিদ্যালয়ের উপর কেইস স্টাডি

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শিক্ষার সকল স্তরে শিক্ষার্থীর হার বৃদ্ধি পেয়েছে সত্য কিন্তু এখনও দেখা যাচ্ছে অনেক বিদ্যালয় এস.এস.সি. পরীক্ষায় শিক্ষার্থীরা ভাল ফলাফল করতে পারেছে না। কেন শিক্ষার্থীরা ভাল ফলাফল করতে পারছে না সেটি অনুসন্ধানের জন্য এই গবেষণাটি পরিচালিত হয়েছে। বাংলাদেশের শিক্ষা ব্যবস্থার সমস্যা সমূহ সমাধানের জন্য নীতিনির্ধারকদের দৃষ্টি আকর্ষণ এবং সিদ্ধান্ত গ্রহণে ভূমিকা রাখবার জন্য এই গবেষণায় এসএসসিতে খারাপ করেছে এমন বিদ্যালয়ের শিক্ষার্থী, শিক্ষক, অভিভাবক, বিদ্যালয় ব্যবস্থাপনা কমিটি ও শিক্ষা ব্যবস্থাপকগণের থেকে তথ্য মতামত সংগ্রহ, বিশ্লেষণ ও আলোচনা করা হয়েছে। পর্যালোচনায় দেখা যায় খারাপ করা বিদ্যালয়গুলিতে শিখন শেখান কার্যক্রম চালাবার জন্য শিক্ষক, বিদ্যালয় ব্যবস্থাপনা, অবকাঠামো, বিদ্যালয়ের শিক্ষা বান্ধব পরিবেশ, শিক্ষার্থীর মূল্যায়ন, নিয়মমাফিক শিক্ষা কার্যক্রম পরিচালনা ইত্যাদি বিষয়ে যথেষ্ট ঘাটতি রয়েছে।

জরিপে উঠে এসেছে বিদ্যালয়গুলির সাথে কোচিং সেন্টারগুলো যুক্ত হয়ে শিক্ষা বোর্ড থেকে শিক্ষার্থীদের রেজিস্ট্রেশন পূর্বক পরীক্ষায় অংশগ্রহণ করার ব্যবস্থা করা হচ্ছে। এ সকল শিক্ষার্থী ও কোচিং সেন্টার সমুহ শিক্ষা প্রশাসনের কোন প্রকার জবাবদিহিতার মধ্যে নেই। কোচিংসেন্টার সমূহের মালিকগণ তাদের নিজের মত করে তাদের ব্যবসা চালাচ্ছেন। ফলে শিক্ষার্থীরা তাদের কাঙ্ক্ষিত লক্ষ্য অর্জন করতে পারছে না।

ক্লাসরুমে শিখন কার্যক্রম পর্যবেক্ষণ পূর্বক দেখা গেছে অধিকাংশ শিক্ষক শিক্ষার্থীদের মূল্যায়নে পারদর্শী নন। শিক্ষার্থীর যথাযথ মুল্যায়ন করা হচ্ছে না। এই দুর্বল শিক্ষার্থীরা পাবলিক পরীক্ষায় অংশগ্রহণ করে পরীক্ষায় ফলাফল আশানুরূপ হয়না।

বিদ্যালয়গুলিতে শিক্ষায় ডিগ্রিপ্রাপ্ত শিক্ষকের সংখ্যা খুবই কম। যাদের শিক্ষায় ডিগ্রি আছে তাদের বেশীরভাগই প্রাইভেট কলেজ থেকে ক্লাসের কার্যক্রমে অংশগ্রহণ না করে শুধু পরীক্ষায় অংশগ্রহণ করে বি.এড ডিগ্রি নিয়েছেন। এ ডিগ্রির কার্যকারিতা তেমন লক্ষ্য করা যায়নি। অভিজ্ঞ ও পারদর্শী শিক্ষক দ্বারা শিক্ষাকার্যক্রম পরিচালিত হচ্ছে না ফলে শিক্ষার্থীরা ক্ষতির সম্মুখীন হচ্ছে।

ভৌত অবকাঠামো সকল বিদ্যালয়ে শিক্ষাবান্ধব নয়। শিক্ষাবান্ধব পরিবেশ তৈরি করার জন্য দুর্বল ভৌত অবকাঠামোগুলির উন্নয়ন করা একান্ত প্রয়োজন।

জরিপকৃত বিদ্যালয়গুলিতে বিষয় ভিত্তিক শিক্ষকের অভাব রয়েছে। বিষয় ভিত্তিক শিক্ষক নন এমন শিক্ষক দ্বারা পাঠদান চালাবার ফলে শিক্ষার্থীদের শিখন ফলপ্রসূ হচ্ছে না। বিদ্যালয়গুলিতে বিষয় ভিত্তিক শিক্ষক দ্বারা পাঠদান করা প্রয়োজন।

শিক্ষাপ্রতিষ্ঠানে স্থানীয় জনগণের সম্পৃক্ততার ঘাটতি দেখা গেছে। সকলের সম্পৃক্ততা ছাড়া শিক্ষা প্রতিষ্ঠানের থেকে ভাল ফলাফল আশা করা যায় না। শিক্ষা প্রশাসন, বিদ্যালয়ের ব্যবস্থাপনা কমিটি ও প্রতিষ্ঠানকে এ বিষয়ে বিশেষভাবে কার্যকরি পদক্ষেপ গ্রহণ করতে হবে।

পর্যবেক্ষণ পূর্বক দেখা গেছে গার্লস স্কুল গুলোতে স্থানীয় বখাটেদের উৎপাতে মেয়েরা বিদ্যালয়ে নিয়মিত আসা যাওয়া করতে পারছে না। বিদ্যালয়ের কর্তৃপক্ষ বিষয়টি নিয়ন্ত্রণ করতে পারছেন না। সামাজিক আন্দোলন ও স্থানীয় জনপ্রতিনিধিদের সম্পৃক্ততা পূর্বক এবং প্রসাশনের নজরদারির মাধ্যমে সমস্যার সমাধান প্রয়োজন।

সীমাবদ্ধতার কারণে ঢাকা মহানগরীর ১০ টি বিদ্যালয়ের উপর সমীক্ষাটি পরিচালনা করা হয়েছে। মাদ্রাসাকে অন্তর্ভুক্ত করা হয়নি। সীমাবদ্ধতা সত্ত্বেও প্রাপ্ত ফলাফল দেশের বিদ্যমান শিক্ষা সমস্যার এবং সমাধানের উপর আলোকপাত করতে সহায়ক হবে।

সূচিপত্র

১. পটভূমিঃ

গত দুই দশকে শিক্ষা ক্ষেত্রে বংলাদেশ বহুলাংশে উল্লেখযোগ্য অগ্রগতি অর্জন করেছে। বিদ্যালয়ে শিক্ষার্থী ভর্তি, শিক্ষায় পাশের হার, শিক্ষা প্রশাসন ব্যবস্থা, প্রতিবন্ধী শিক্ষার্থীদের জন্য বিদ্যালয়ে বিশেষ ব্যবস্থা ইত্যাদি ক্ষেত্রে বাংলাদেশ যথেষ্ট অগ্রগতি অর্জন করেছে। তথ্য সূত্র থেকে দেখা যাচ্ছে বিদ্যালয়গুলোতে শিক্ষার্থীদের মধ্যে পাশের সামঞ্জস্যতা নেই। ফলাফলের মধ্যে ভিন্নতা লক্ষণীয়। দেখা যাচ্ছে কোন কোন বিদ্যালয়ে ১০০% পাশ, আবার কোন বিদ্যালয়ে ৪৮% পাশ, কোন কোন ক্ষেত্রে পাশের হার ০%। অনেক বিদ্যালয়ের ক্ষেত্রে পাশের হার সন্তেষজনক নয়। জাতীয় পর্যায়েও এই ফলাফল অনেক ক্ষেত্রে সন্তষজনক নয়। ২০১৭ সালে এসএসসি পরীক্ষার ৮ টি বোর্ডের ফলাফল এখানে উল্লেখ করা হল।

সারণী ১: ২০১৭ সালে এসএসসি পরীক্ষার ৮ টি বোর্ডের ফলাফল

বোর্ডের নাম	পাশের %	ফেলের %
কুমিল্লা	৫৯	৪১
বরিশাল	৭৭.৪	২২.৬
যশোর	৭৯.৬	২০.৪
সিলেট	৮০.৩	১৯.৭
দিনাজপুর	৮৪	১৬
চট্টগ্রাম	৮৪	১৬
ঢাকা	৮৬.৪	১৩.৬
রাজশাহী	৯০	৯.৩

শিক্ষার্থীদের এই খারাপ ফলাফল এর কারণ সমূহ বের করে তার সমাধান খুঁজে বের করা একান্ত প্রয়োজন। কিছু কিছু বিদ্যালয় শিক্ষার্থীর শিখনের ক্ষেত্রে প্রয়েজনীয় ব্যবস্থা গ্রহণ করতে ব্যর্থ হচ্ছে। গবেষণালব্ধ প্রতিবেদনে দেখা যাচ্ছে যে, শিক্ষায় মানোন্নয়নের ক্ষেত্রে নজর দেয়া একান্ত প্রয়োজন।

সরকারি এবং বেসরকারি প্রতিষ্ঠান সমূহ শিক্ষা ক্ষেত্রে যথেষ্ট পরিমাণে বিনিয়োগ করার পরও শিক্ষার মান উন্নোয়নে কিছু কিছু বিদ্যালয় তাদের ফলাফল ভাল করতে পারছে না। কেন এ সকল বিদ্যালয় ভাল ফলাফল করতে পারছে না তা খুঁজে বের করার জন্য এই গবেষণাটি পরিচালিত হয়েছে।

(ক) গবেষণার পরিধিঃ

ঢাকা মহানগরীর বিদ্যালয় গুলির মধ্যে খারাপ ফলাফল করেছে এমন ১০ টি বিদ্যালয় গবেষণায় অন্তর্ভুক্ত করা হয়েছে। সম্পদের সীমাবদ্ধতার জন্য স্বল্প সংখ্যক স্কুলে গবেষণা

পরিচালনা করা হয়েছে। একই কারণে গবেষণা ঢাকা শহরের ফলাফল খারাপ করা স্কুলের মধ্যে সীমাবদ্ধ রাখা হয়েছে। এই বিদ্যালয় গুলোতে ২০১৭ সালে এসএসসি পরীক্ষায় পাসের হার ৪৮% থেকে ৭০% মধ্যে রয়েছে। গ্রামীন জনপদের বিদ্যালয় গুলো থেকে শহরের বিদ্যালয় গুলো কোন কোন ক্ষেত্রে শিক্ষায় অধিক সুযোগ রয়েছে তারপরও শহরের কিছু কিছু বিদ্যালয় তার কাঙ্ক্ষিত হারে ফলাফল অর্জন করতে ব্যর্থ হচ্ছে। ২০১৭ সালে ঢাকা বোর্ডের পাশের হার ছিল ৮৬.৪% । পরীক্ষার্থীর সংখ্যা ছিল ৪৪৯৭২৯ তার মধ্যে পাশ করেছে ৩৮৮৭৪৪ ও অকৃতকার্য হয়েছে ৬০৯৮৫ জন ।

গবেষণায় নিম্নোক্ত পদ্ধতি অনুসরণ করে বিদ্যালয়, ফেল করা ও পাশ করা ছাত্র-ছাত্রী নির্বাচন করা হয়ঃ

ঢাকা শিক্ষা বোর্ডের ২০১৭ সালে অনুষ্ঠিত এসএসসি পরীক্ষার ফলাফল ব্যানবেইস থেকে সংগ্রহ করা হয়েছে। সেখান থেকে খারাপ ফলাফলের ১০ টি বিদ্যালয়ের তালিকা প্রস্তুত পূর্বক তার মধ্য থেকে ছয়টি থানার থেকে ১০ টি বিদ্যালয় নির্বাচিত করে সেগুলো থেকে তথ্য সংগ্রহ করা হয়েছে। থানাগুলো হলো কোতওয়ালী, ধানমন্ডি, মোহাম্মদপুর, আদাবর, মিরপুর ও উত্তরা থানা ।

বিদ্যালয়গুলো থেকে ফেল করা শিক্ষার্থীদের রোল নম্বর ও রেজিস্ট্রেশন নম্বর সংগ্রহ করা হয়েছে। শিক্ষা বোর্ডের তথ্য ভান্ডার থেকে ফেল করা ঐ সকল শিক্ষার্থীদের পরীক্ষার ফলাফল নিরীক্ষা করে সেখান থেকে শিক্ষার্থীদের তালিকা প্রস্তুত ও বিদ্যালয় হতে ঠিকানা সংগ্রহ পূর্বক শিক্ষার্থীদের বাড়িতে যেয়ে তাদের এবং তাদের অভিভাবকদের থেকে তথ্য সংগ্রহ করা হয়েছে ।

বিদ্যালয়গুলোতে যেসব বিষয়ে বেশি সংখ্যক শিক্ষার্থী ফেল করেছে এবং সেইসব বিষয়ের যারা শিক্ষক ছিলেন সেই সকল শিক্ষকদের থেকে তথ্য সংগ্রহ করা হয়েছে ।শিক্ষার্থী, শিক্ষক ছাড়াও অভিভাবক ও স্থানীয় সচেতন ব্যক্তিবর্গ, জেলা শিক্ষা কর্মকর্তা, একাডেমিক সুপারভাইজার, জেলা প্রশিক্ষণ কো-ওর্ডিনেটর ও থানা মাধ্যমিক শিক্ষা কর্মকর্তাদের থেকে তথ্য সংগ্রহ করা হয়েছে ।

(খ) গবেষণার লক্ষ্য ও উদ্দেশ্যঃ

২০১৭ সালের এস এস সি পরীক্ষার ফলাফল বিশ্লষণ পূর্বক দেখা যায় যে ঢাকা শহরের কিছু বিদ্যালয়ের পরীক্ষার ফলাফল খুবই খারাপ, পাশের হার ৪৮% থেকে ৭০% এর মধ্যে । এই গুণগত গবেষণার প্রধান লক্ষ্য হচ্ছে কি কি কারণে এই সকল বিদ্যালয়ের শিক্ষার্থীরা পরীক্ষায় ভাল করতে পারছে না, তা চিহ্নিত করা এবং সমস্যা গুলো কিভাবে

সমাধান করা যায় সে বিষয় গুলো নির্ধারণ করা। পর্যালোচনার পুর্বক দেখা যায় যে, এই সকল বিদ্যালয়ের শিখন শেখানো কার্যক্রম ও বিদ্যালয়ের ব্যবস্থাপনা অত্যন্ত দুর্বল ।

(গ) সুনির্দিষ্ট উদ্দেশ্যঃ

- এস এস সি পরীক্ষায় তুলনামূলকভাবে খারাপ করার কারণ নির্ণয় করা/ খুঁজে বের করা।
- এই সব প্রতিষ্ঠানে কি কি ব্যবস্থা গ্রহণ করতে হবে। সে বিষয় সমূহের উপর অলোকপাত করা।

২. গবেষণা পদ্ধতিঃ

২০১৭ সালে এসএসসি পরীক্ষার ঢাকা মহানগরীর যে সকল বিদ্যালয় ফলাফলের দিক থেকে সবচেয়ে নিচের দিকে রয়েছে তাদের মধ্য থেকে ১০ টি বিদ্যালয় হতে তথ্য সংগ্রহ করা হয়েছে। শিক্ষার্থী, অভিভাবক, শিক্ষক, বিদ্যালয় ব্যবস্থাপনা কমিটি ও শিক্ষা ব্যবস্থাপকদের নিকট থেকে দলগত আলোচনা ও ব্যক্তি পর্যায়ে তথ্য সংগ্রহ করা হয়েছে। শিক্ষকের নিকট থেকে বিদ্যালয়ে সার্বিক ব্যবস্থাপনা, পরিবেশগত অবস্থা, শিক্ষকদের শিক্ষাগত যোগ্যতা ও শিক্ষার্থীদের বিষয় সম্পর্কে তথ্য সংগ্রহ করা হয়েছে। ১০ টি বিদ্যালয় থেকে ৭৮ জন শিক্ষার্থী, ৪৩ জন বিষয় ভিত্তিক শিক্ষক (গণিত ১৮ জন, ইংরেজী ১০ জন, বিজ্ঞান ১ জন,পদার্থ ২ জন, রসায়ন ৪ জন, হিসাব বিজ্ঞান ৪ জন, ফিন্যান্স ব্যাংকিং ১ জন, ব্যবসায় উদ্যোগ৩ জন) এবং ৪৬ জন অভিভাবক থেকে তাদের সন্তানদের বিষয়ে আলোচনার মাধ্যমে তথ্য সংগহ করা হয়েছে।তথ্য সমূহ লিখিত, মৌখিক মতামত ভিত্তিক, গুণগত গবেষণাপদ্ধতি অনুসরন করে পরিচালিত হয়েছে। তথ্য ও উপাত্ত সংশ্লিষ্ট সাহিত্য পর্যালোচনা সাক্ষাৎকার গ্রহণ ও পর্যাবেক্ষণ এই তিন পদ্ধতিতে তথ্য সংগ্রহ করা হয়েছে এবং তা বিশ্লেষণ ও সংশ্লেষণের পর ফলাফল সুপারিশ সমূহ উল্লেখ করা হয়েছে।

এই গবেষণায় প্রতিনিধিত্বমূলক নমুনায়ন পদ্ধতি অনুসরণ করা হয়নি। তবে চেষ্টা করা হয়েছে প্রত্যেক দল থেকে প্রতিনিধিত্বমূলক সংখ্যক থেকে তথ্য সংগ্রহ করা ।

মাঠপর্যায়ে তথ্য সংগ্রহঃ

১ এপ্রিল, ২০১৮ থেকে ৩১ মে, ২০১৮ তারিখ সময়ের মধ্যে নিম্নে উল্লেখিত ১০ টি বিদ্যালয় ও কোচিং সেন্টার সমূহ থেকে তথ্য সংগ্রহ করা হয়েছে। কোতওয়ালী থানার কসাইটুলি মুসলিম একাডেমি থেকে প্রথম তথ্য সংগ্রহের কাজ শুরু করা হয়। তথ্য সংগ্রহের প্রশ্নমালাটি এই বিদ্যালয়ে তথ্য সংগ্রহ করার সময় প্রয়োজনীয় সংশোধন করা হয় এবং একই প্রশ্নমালা ও গাইড লাইন অনুসরণ পূর্বক অন্যান্য প্রতিষ্ঠান সমূহ থেকে

তথ্য সংগ্রহ করা হয়। নিম্নের সারণীতে বিদ্যালয় সমূহের নাম ও শিক্ষার্থীদের পাশ ফেলের অবস্থা দেখানো হল।

সারণী ২: বিদ্যালয়ের নাম ও পাশ ফেলের অবস্থা দেখানো হল।

	বিদ্যালয়ের নাম	এসএসসি (২০১৭) পরীক্ষায় অংশ গ্রহনকারী শিক্ষার্থীর (সংখ্যা)	শিক্ষার্থী পাশ (সংখ্যা)	শিক্ষার্থী ফেল (সংখ্যা)	পাশ (%)	ফেল (%)
১.	কসাইটুলি মুসলিম একাডেমি	৮২	৫৭	২৫	৭০	৩০
২.	আজিজিয়া ইসলামিয়া হাই স্কুল এন্ড কলেজ	১৫৩	১০৭	৪৬	৭০	৩০
৩.	নব দিগন্ত আদর্শ হাই স্কুল	১১৩	৭৮	৩৫	৬৯	৩১
৪.	আল নাহিয়ান হাই স্কুল	২৩৭	১৬৩	৭৪	৬৯	৩১
৫.	পাইক পাড়া স্টাফ কোয়ার্টার হাই স্কুল	১১১	৭৬	৩৫	৬৮	৩২
৬.	শাহ আব্দুল হামিদ কালান্দার গার্লস হাই স্কুল	৮৫	৫৮	২৭	৬৮	৩২
৭.	ঢাকা আহসানিয়া মহিলা মিশন হাই স্কুল	৩৮	২৬	১২	৬৮	৩২
৮.	জরিনা শিকদার গার্লস স্কুল এন্ড কলেজ	৪৬	৩১	১৫	৬৭	৩৩
৯.	কচি কন্ঠ উচ্চ বিদ্যালয়	৫১	২৯	২২	৫৭	৪৩
১০	উত্তরা রেসিডেন্সিয়াল স্কুল এন্ড কলেজ	৪৮	২৩	২৫	৪৮	৫২

সারণী ৩: যাদের থেকে তথ্য সংগ্রহ করা হয়েছে তাদেরকে নিম্নে ছক আকারে দেখান হল:

	বিদ্যালয়ের নাম	শিক্ষার্থী	শিক্ষক	অভিভাবক	এসএমসি	শিক্ষা প্রশাসক
১.	কসাইটুলি মুসলিম	৮	২	২	২	থানা মাধ্যমিক

	একাডেমি					শিক্ষা অফিসার মোহাম্মদপুর, মিরপুর । জেলা শিক্ষা অফিসার, ঢাকা । একাডেমিক সুপার ভাইজার মিরপুর ও মোহাম্মদপুর । জেলা ট্রেনিং কো-অর্ডিনেটোর, ঢাকা ।
২.	আজিজিয়া ইসলামিয়া হাই স্কুল এন্ড কলেজ	১৩	৬	১৩	২	
৩.	নব দিগন্ত আদর্শ হাই স্কুল	১৩	৬	৫	২	
৪.	আল নাহিয়ান হাই স্কুল	১১	৪	০	৩	
৫.	পাইক পাড়া স্টাফ কোয়ার্টার হাই স্কুল	৫	৩	৫	২	
৬.	শাহ আব্দুল হামিদ কালান্দার গার্লস হাই স্কুল	১০	৩	৮	২	
৭.	ঢাকা আহসানিয়া মহিলা মিশন হাই স্কুল	২	৩	০	২	
৮.	জরিনা শিকদার গার্লস স্কুল এন্ড কলেজ	৯	৫	৫	৩	
৯.	কচি কণ্ঠ উচ্চ বিদ্যালয়	৫	৫	৫	২	
১০.	উত্তরা রেসিডেন্সিয়াল স্কুল এন্ড কলেজ	২	৪	৩	৩	
	মোট	**৭৮**	**৪১**	**৪৬**	**২৩**	

৩. গবেষণার প্রতিবন্ধকতা সমূহঃ

১. যে বিদ্যালয় থেকে শিক্ষার্থীরা এস.এস.সি পরীক্ষায় অংশগ্রহণ করেছিল। সে বিদ্যালয়ের শিক্ষকগণ অকৃতকার্য শিক্ষার্থীদের অনেকের সম্পর্কে কোন তথ্য দিতে পারেননি, কারণফেল করা শিক্ষার্থীরা অনেকে কোচিং সেন্টারে লেখাপড়া করেছে। তথ্য সংগ্রহের জন্য কোচিং সেন্টারে যেয়ে তথ্য সংগ্রহ করতে হয়েছে। যার জন্য তথ্য সংগ্রহ করতে সময় লেগেছে। গবেষণায় ১০ টি বিদ্যালয় থেকে তথ্য সংগ্রহ করার কথা ছিল কিন্তু প্রকৃতপক্ষে কোচিং সেন্টার সহ মোট ২০ টি প্রতিষ্ঠান থেকে তথ্য সংগ্রহ করার প্রয়োজন হয়েছে।

২. অভিভাবকবৃন্দ প্রায় সকলেই কর্মজীবী তাই তাদের থেকে বার বার সময় নিয়ে তথ্য সংগ্রহ করতে হয়েছে। ফলে জরিপে সময় বেশি লেগেছে।

৩. অভিভাবকগণ তাদের সন্তানের পরীক্ষার খারাপ করার বিষয়ে আভ্যন্তরীণ কোন তথ্য দিতে স্বাচ্ছন্দবোধ করেন না (মাদকাসক্ত, খারাপ সংঘের সাথে মিশে, লেখাপড়ায় একেবারেই মনোযোগ নেই, বিদ্যালয়ে উপস্থিতি অনেক কম), নিবিড় তথ্য সংগ্রহ

পদ্ধতিতে আলাপ পূর্বক তথ্য সংগ্রহ করা হয়েছে ফলে তথ্য সংগ্রহ করতে সময় বেশি প্রয়োজন হয়েছে।

৪. বিদ্যালয় সমূহে তথ্য ভা-ার খুবই দুর্বল, পরিসংখ্যানগত কোন তথ্য সরবরাহের কথা বললেই তারা সময় ক্ষেপণ করে। একদিনের কাজের জন্য পাঁচ দিন পর্যন্ত যেতে হয়েছে।

৫. শিক্ষকদের নিকট একাডেমিক বিষয়ে প্রশ্ন করলে অধিকাংশ শিক্ষক তার কাছে কি চাওয়া হচ্ছে তা বুঝতে পারেন না। ফলে অনেক ক্ষেত্রে যৌক্তিক উত্তর পাওয়া যায় না।

৬. জরিপকৃত বিদ্যালয়ের কিছু প্রধান শিক্ষকঅনৈতিকভাবে বিদ্যালয় পরিচালনা করছেন। তথ্য প্রদানের ক্ষেত্রে তারা মিথ্যা তথ্য প্রদান করতে চান, বিনিময়ে তথ্য সংগ্রহের সময় তথ্য গ্রহণকারীকে অনৈতিক অর্থ প্রদান করতে চেয়েছেন, যা অত্যন্ত দুঃখজনক এবং লজ্জারও।

৪. সংশ্লিষ্ট সাহিত্য পর্যালোচনা

পাঠ্যপুস্তক অধ্যয়নঃ

শিক্ষার মৌলিক উদ্দেশ্য হলো মানুষকে বিকশিত করা, আলোকিত করা, ভিতরের আবেগ গুলোকে উদ্বেলিত করা। আর এইগুলি প্রতিফলিত হয় একটি আদর্শ শিক্ষাক্রম বাস্তবায়নের মাধ্যমে। একটি জাতির জন্য এবং রাষ্ট্রের মৌলিক উদ্দেশ্য সাধনের জন্য আদর্শ সংবিধান, শিক্ষানীতি ও শিক্ষাক্রম প্রণয়ন করা হয়।

প্রত্যেকটি দেশেই শিক্ষাব্যবস্থায় পাঠ্যপুস্তক একটি অতীব প্রয়োজনীয়। শিক্ষাক্রমকে বাস্তবায়ন করার জন্য প্রধান উপাদান হলো পাঠ্যপুস্তক। শিক্ষার প্রতি স্তরে শিক্ষার্থীর যোগ্যতা অর্জনের জন্য এই পাঠ্যপুস্তক একটি সহায়ক উপকরণ হিসেবে গণ্য করা হয়ে থাকে।

পাঠ্যপুস্তক অধ্যয়নের মাধ্যমে একজন শিক্ষার্থী তার শিখনফল ও প্রান্তিক যোগ্যতা অর্জন করতে পারে। শিক্ষকের শেখানো নানাবিধ কার্যকরী পদক্ষেপের মাধ্যমে শিক্ষার্থী তার শিখন অর্জন করে থাকে।

শিক্ষাক্রমকে সামনে রেখে নানান পরীক্ষা নিরীক্ষাপূর্বক পাঠ্যপুস্তকের বিষয় নির্ধারণ করা হয়ে থাকে, যাতে করে শিক্ষার্থী তার শিখন ফল অর্জন করতে পারে ও প্রান্তিক যোগ্যতা অর্জন করতে সমর্থ লাভ করে। জাতীয় শিক্ষাক্রম ও পাঠ্যপুস্তক বোর্ড শিক্ষাক্রম বাস্তবায়নের জন্য অত্যন্ত দায়িত্বের সাথে পাঠ্যপুস্তক রচনার এই কাজটি করে যাচ্ছে।

শিক্ষার্থীগণ পাঠ্যপুস্তক ছাড়াও নানাবিধ তথ্য ভান্ডার থেকে জ্ঞান অর্জন করতে পারে কিন্তু পাঠ্যপুস্তকের বিষয়গুলোকে এমনভাবে সুবিন্যস্ত করা হয় যেখানে শিক্ষার্থীরা প্রতিটি স্তর থেকে যেন তাদের নির্ধারিত প্রান্তিক যোগ্যতা অর্জন করতে সমর্থ হয় ।

জাতীয় শিক্ষানীতি, ২০১০:

জাতীয় শিক্ষানীতি ২০১০ পর্যলোচনা পূর্বক দেখা যায় যে, এখানে জাতির শিক্ষার উদ্দেশ্য ও লক্ষ্য নির্ধারণ করা হয়েছে । এখানে প্রধানতম ৩০টি লক্ষ্য ও উদ্দেশ্যের কথা উল্লেখ করা হয়েছে ।

এই লক্ষ্যগুলি অর্জন করবার জন্য জাতীয় শিক্ষাক্রম ও পাঠ্যপুস্তক বোর্ড শ্রেণিভিত্তিকভাবে প্রান্তিক যোগ্যতা অর্জন ভিত্তিক পাঠ্যপুস্তক প্রণয়নের কাজ সম্পাদন করেছে । অতএব শিক্ষানীতির লক্ষ্য অর্জনের জন্য পাঠ্যপুস্তকের বিষয়গুলি অধ্যয়নের গুরুত্ব অপরিসীম । শিক্ষার্থী কিভাবে শিখবে? এই শিখন তার কি কাজে লাগবে? এসকল মৌলিক বিষয়কে গুরুত্ব দিয়ে পাঠ্যবই এর বিষয় নির্ধারণ পূর্বক পাঠ্যবই প্রণয়ন করা হয়েছে । জরিপকৃত শিক্ষার্থীদের সাথে আলোচনা করে জানা গেছে ফেল করা শিক্ষার্থীরা বেশিরভাগ পাঠ্যপুস্তকের চাইতে গাইড বই এর উপর বেশি জোর দিয়েছে,ফলে তাদের শিখন প্রক্রিয়ায় দুর্বলতা রয়ে গেছে । স্তরভিত্তিকভাবে তারা দুর্বল থেকে আরও দুর্বল হয়ে দশম শ্রেণিতে উত্তীর্ণ হয়ে এস.এস.সি পরীক্ষায় অংশ গ্রহণ করেছে ফলে অনেক শিক্ষার্থী পরীক্ষায় একাধিক বিষয়ে খারাপ করেছে এবং চূড়ান্তভাবে অকৃতকার্য হয়েছে ।

গাইড বইয়ের ব্যবহার ও মানসম্মত পাঠদান

জরিপে সাক্ষাৎদানকারী সকল শিক্ষার্থী গাইড বই পড়েছে । পরীক্ষার প্রস্তুতির জন্য গাইড বইকে তারা প্রধান পাঠ্য বই হিসাবে বিবেচনায় নিয়েছে । শিক্ষার্থীরা বাজারে প্রচলিত লেকচার, অনুপম, নিউটন, আদিল ও পাঞ্জেরী গাইড বই ব্যবহার করেছে । অধ্যাপক সৈয়দ মঞ্জুরুল ইসলাম তাঁর এক লেখায় বলেছেন," এখন স্কুল কলেজগুলোর শ্রেণিকক্ষে যে মানের পাঠদান হওয়া প্রয়োজন অনেকাংশেই তেমনটি হচ্ছে না । বিদ্যালয়ে ক্লাস নেবার ক্ষেত্রে শিক্ষকরা নিষ্ঠার পরিচয় দিতে পারছেন না । বহুবিধ কারণে শিক্ষার্থীরা নোট বইয়ের দিকে ঝুকছে ।

উচ্চমানের মেধা নিয়ে অনেকে শিক্ষকতা পেশায় আসছে না । ক্লাসের শিক্ষকরাই বাড়িতে টিউশনি করায়ে থাকেন । বর্তমানে নোটবই নির্ভর লেখাপড়ায় রূপ নিয়েছে । মেধাবিরা অন্য পেশাতে বেশি গুরুত্ব দিচ্ছেন । এই পেশায় সমাজে সম্মান পাওয়া যায় না । বিশাল সংখ্যায় শিক্ষার্থীর মূল্যায়ন করা একটি বড় চ্যালেঞ্জ । অন্যদিকে লেখাপড়া হয়ে পড়েছে

বাজারমুখী ।এখানে শিক্ষার্থীর পরীক্ষায় পাশ করাই হল মূল উদ্দেশ্য আর এর জন্য শিক্ষার্থীরা নোট বইয়ের সহায়তা নিয়ে থাকে। অভিভাবকরা সন্তানের কাছে ভাল ফলাফল চায় । নোট গাইড শিক্ষার্থীর মাথা খেয়ে ফেলেছে বলেও তিনি মন্তব্য করেন" ।

এ বিষয়ে শিক্ষকদের সাথে কথা বলে জানা গেছে শিক্ষা প্রশাসনের সাথে আর্থিক লেনদেন থাকার জন্য কোচিং সেন্টার, গাইড বই এবং ব্যবসা সরকারি আইন থাকা সত্ত্বেও বন্ধ করা যাচ্ছে না । সারা দেশে গাইড বইয়ের এক বিশাল মাফিয়া চক্র কাজ করছে এবং তারা শিক্ষার মেরুদন্ড ভেঙ্গে দিচ্ছে ।

সৃজনশীল পদ্ধতি

জরিপকৃত শিক্ষার্থীরা জানিয়েছে তারা অনেকেই সৃজনশীল অংশে ফেল করেছে। শিক্ষার্থীরা বিষয়বস্তুর মধ্যে ঢুকতে পারে না । পাঠ্যপুস্তকটি তারা ভাল করে পড়ে না এবং বুঝে পড়ে না। অনেক শিক্ষকরা সৃজনশীল সম্পর্কে পরিষ্কার ধারণ নেই। ঢাকা বিশ্ববিদ্যালয়ের আই.ই.আর এর অধ্যাপক ছিদ্দিকুর রহমান বলেছেন "সৃজনশীলে আমাদের শিক্ষকরা দক্ষ নন এ কথা অস্বীকার করার উপায় নেই । সৃজনশীল পদ্ধতি সম্পর্কে অনেক শিক্ষকের ধারণা নেই। শিক্ষকরা শিক্ষার্থীদের সৃজনশীল শিক্ষা দিতে পারছেন না। সৃজনশীল শিক্ষা দিতে হলে শিক্ষক প্রশিক্ষণের পাশাপাশি প্রশিক্ষণের পদ্ধতিও পরিবর্তন করা প্রয়োজন। সরকার শিক্ষক প্রশিক্ষণের ব্যবস্থা করেছেন কিন্তু সংখ্যার দিক দিয়ে যা খুবই কম। অল্প কয়েকদিন প্রশিক্ষণের মাধ্যমে সৃজনশীল বিষয়ে শিক্ষকদের পূর্ণ শিখন সম্পন্ন করা সম্ভব নয়। শিক্ষার্থীদের সৃজনশীল শিক্ষা দেবার জন্য অবশ্যই শিক্ষকদের আগে সৃজনশীল শিক্ষায় শিক্ষিত হতে হবে। সৃজনশীল শিক্ষায় শিক্ষিত করার জন্য সরকারের পক্ষে পর্যাপ্ত ও মানসম্মত ব্যবস্থা নেই। শুধু পরীক্ষা পদ্ধতিতে সৃজনশীল হবে এমনটি নয়। শিক্ষার্থীর শিখন ব্যবস্থাতেও সৃজনশীল হওয়া প্রয়োজন।

এ জন্য শিক্ষকদেরকে সৃজনশীল প্রশিক্ষণ হাতে কলমে শেখানোর যথেষ্ট ব্যবস্থা রাখতে হবে। বর্তমান পদ্ধতিতে সত্যিকার অর্থে শিক্ষার্থীরা সৃজনশীল হয়ে উঠছে না, যার ফলে শিক্ষার্থীরা পরীক্ষায় ফলাফল আশানুরূপ হয় না। বেশিরভাগ শিক্ষক গাইড বইয়ের সাহায্যে প্রশ্ন প্রণয়ন করছেন। উপযুক্ত প্রশিক্ষণের অভাবে কিভাবে প্রশ্ন প্রণয়ন করতে হয় তা তারা যথাযথভাবে আয়ত্ত করতে পারছেন না। এরই ফলাফল যেয়ে পড়ছে শিক্ষার্থীর শিখনে। ফলে আমাদের প্রজন্ম মানসম্মত শিক্ষা থেকে বঞ্চিত থেকে যাচ্ছে ।"

৫. প্রাপ্ত ফলাফলের উপর পর্যালোচনা

(ক) বিদ্যালয়ে শিক্ষার পরিবেশ :
বিদ্যালয়গুলি পরিদর্শন পূর্বক দেখা গেছে ১০টি বিদ্যালয়ের মধ্যে চারটি বিদ্যালয়ের অবকাঠামো শিক্ষার্থী ও শিক্ষাবান্ধব নয় ।

শাহ আব্দুল হামিদ কালান্দার গালর্স হাই স্কুল ভবনটি ব্রিটিশ আমলে তৈরি । দুইতলা ভবন । পলিস্তার ভেঙ্গে পড়েছে । এখানে শিক্ষক শিক্ষার্থীরা বিদ্যালয় চলকালীন সময়ে ভয়ের মধ্যে থাকেন । ভবনটির অবস্থা ঝুঁকিপূর্ণ বলে পর্যায়ক্রমে এখানে ছাত্রী ভর্তির হার কমে যাচ্ছে । প্রধান শিক্ষক জানালেন জমিটি অর্পিত সম্পত্তি হবার কারণে এখানে নতুন ভবন তৈরি করা যাচ্ছে না । ঢাকা জেলা প্রশাসক ভবনটি ভাঙ্গার অনুমতি দিচ্ছেন না বিধায় বিদ্যালয়ের নতুন ভবন তৈরি করা যাচ্ছে না । বিদ্যালয় ব্যবস্থাপনা কমিটি এ বিষয়ে কিছু করতে পারছেন না । বিদ্যালয় প্রাঙ্গণে খোলা জায়গা বা খেলার মাঠ নেই । ঢাকার মিডফোর্ড হাসপাতালের কাছে লৌহপট্টিতে এই বিদ্যালয়ের অবস্থান । এখানে শিক্ষার্থীদের লেখাপড়া করার উপযুক্ত পরিবেশ নেই ।

কচিকণ্ঠ উচ্চ বিদ্যালয়টি একটি ভাড়া করা ২ তলা ভবনে পরিচালিত হচ্ছে । বিদ্যালয়টি একটি বস্তির মধ্যে অবস্থিত । চারদিকে টিনের ছাপড়া । বিদ্যালয়ের ওয়াশব্লক অপরিসর ও ব্যবহার যোগ্য নয় । প্রধান শিক্ষক বসেন একটি ছোট অন্ধকারাচ্ছন্ন ঘরের মধ্যে । বিদ্যালয় চলা কালীন সময়ে বিদ্যালয়ের গেট তালা লাগানো থাকে । শিক্ষার্থীরা ঝুঁকির মধ্যে ক্লাস করে থাকে । যে কোন সময় যে কেন দুর্ঘটনা ঘটতে পারে ।

পাইকপাড়া স্টাফ কোয়াটার হাই স্কুল একটি একতলা ভবন ও একটি টিনশেড নিয়ে এই বিদ্যালয় । এই বিদ্যালয়ে ভারপ্রাপ্ত প্রধান শিক্ষক বিতর্কিত একজন ব্যক্তি । শিক্ষক ও স্থানীয়দের মতে বিদ্যালয়ের উন্নয়নে তার কোন ভূমিকা নেই । যার ফলে বিদ্যালয়ে নানাবিধ সমস্যা বিদ্যমান । তিনি ঠিকমত বিদ্যালয়ে আসেন না, অধিকাংশ সময় তিনি রাজনৈতিক ব্যক্তিদের সাথে থাকেন । বর্তমানে বিদ্যালয়টি বন্ধ হবার উপক্রম হয়েছে । প্রতি বছর শিক্ষার্থী ভর্তির হার কমে যাচ্ছে । জরিপের সময় ৬ষ্ঠ শ্রেণির একটি শ্রেণিকক্ষে মাত্র ৬ জন শিক্ষার্থী উপস্থিত পাওয়া যায় । শিক্ষার্থীদের জন্য শৌচাগার পরিদর্শন করে দেখা গেছে সেগুলো ব্যবহার উপযুক্ত নয় । টিন শেডের পিছনে অন্ধকারচ্ছন্ন পরিবেশে টয়লেটটি অবস্থিত । লাইব্রেরির বইগুলো যেখানে সেখানে ছড়ানো ছিটানো । সরকার প্রদত্ত বিনামূল্যের বইগুলো খুবই অগোছলোভাবে ছড়ানো ছিটানো রয়েছে । বিদ্যলয়ের সার্বিক পরিবেশ শিক্ষাবান্ধব নয় । সহকারী শিক্ষকদের সাথে কথা বলে জানা যায় তারা ভারপ্রাপ্ত প্রধান শিক্ষাকের পরিবর্তে একজন ভাল প্রধান শিক্ষক চান । যিনি বিদ্যালয়টিকে পুনরায় ভাল শিক্ষাবান্ধব অবস্থানে নিয়ে যেতে পারেন । স্থানীয় ক্ষমতাধরদের প্রভাবের

কারণে বিদ্যালয়টি শিক্ষাবান্ধব অবস্থায় ফিরিয়ে নেয়া সম্ভব হচ্ছে না। শিক্ষা প্রশাসন বর্তমান ভারপ্রাপ্ত শিক্ষকের পক্ষে কাজ করে থাকেন। শিক্ষা প্রশাসনকে লিখিতভাবে অভিযোগ করার পরও কোন ফলাফল পাওয়া যায়নি।

কসাইটুলি মুসলিম একাডেমি বিদ্যালয়টি খুবই ছোট পরিসরে পুরানো ঢাকার ঘিঞ্জি এলাকায় প্রতিষ্ঠিত। সাততলা বিশিষ্ট একটি ভবন, এর বাইরে কোন খালি জায়গা বা মাঠ নেই। ভিতরে প্রতিটি ফ্লোরে তিনটি করে শ্রেণিকক্ষ এবং একটি করে আলাদা কক্ষ আছে খুবই ছোট, যা কোন ফ্লোরে প্রধান শিক্ষকের কক্ষ, কোন ফ্লোরে শিক্ষকদের জন্য কক্ষ, কোন ফ্লোরে টয়লেট। শ্রেণি কক্ষগুলো কোন ফ্লোরে দেয়াল দিয়ে আলাদা, করা আবার কোন ফ্লোরে হার্ডবোর্ড দিয়ে আলাদা করা। এভাবে পাশাপাশি তিনটি ক্লাস যখন চলে তখন একটি ক্লাসের শব্দ অন্য ক্লাসে শোনা যায় তাতে করে শ্রেণিতে শিক্ষক বা শিক্ষার্থীদের মনোযোগ রাখা সম্ভব হয় না। বিদ্যালয়ে কোন খোলা জায়গা না থাকায় প্রধান শিক্ষকের কক্ষ থেকে মাইকে প্রার্থনা এবং জাতীয় সঙ্গিত বাজানো হয় এবং প্রতিটি শ্রেণির শিক্ষার্থীরা যার যার শ্রেণিতে উঠে দাঁড়ায় এবং নিজেরাও জাতীয় সঙ্গীত গায়। এভাবে বিদ্যালয় শুরু হয়। শরীরচর্চা যার যার শ্রেণিতে করানো হয়।

অবকাঠামোগতভাবে অন্য ৬ টি বিদ্যালয়ের শিক্ষার পরিবেশ বেশ ভাল। কোন কোনটি খুবই ভাল। তবে এর মধ্যে কয়েকটিতে আরও যোগ্য প্রধান শিক্ষক ও সহকারি শিক্ষক নিয়োগ দিতে পারলে বিদ্যালয়ে শিখন কার্যক্রম আরও উন্নত করা সম্ভব। বিদ্যালয়ের পরিবেশ আরও উন্নত করতে পারলে এই সকল বিদ্যালয় থেকে ভাল শিক্ষার্থী বের হয়ে আসবে এবং তারা পরীক্ষায় ভাল ফলাফল করবে।

(খ) বিদ্যালয় ব্যবস্থাপনা ও প্রশাসন

জরিপকৃত বিদ্যালয়গুলিতে স্থানীয় জনগণের সম্পৃক্ততার ঘাটতি রয়েছে। বিদ্যালয় ব্যবস্থাপনা কমিটি ও প্রধান শিক্ষকের মধ্যে দ্বন্দের কারণে বিদ্যালয়গুলিতে শিক্ষকগণ শিক্ষকতায় যথাযথভাবে মনোনিবেশ করতে পারছেন না।

(গ) ঝরে পড়া দুর্বল শিক্ষার্থী

অন্য বিদ্যালয়ের ঝরে পড়া শিক্ষার্থী অথবা নামকরা বিদ্যালয় থেকে নানা কারণে বের করে দেয়া শিক্ষার্থীদের নিয়ে এ সকল বিদ্যালয় শিক্ষাক্রম পরিচালনা করে থাকে। ফলে চূড়ান্তভাবে শিক্ষার্থীরা পরীক্ষায় ভাল ফলাফল করতে পারে না। লেখাপড়ায় দুর্বল শিক্ষার্থীগণ দুর্বল বিদ্যালয়ে জড় হচ্ছে ফলে পরীক্ষার ফলাফল অতিমাত্রায় খারাপ হচ্ছে।

(ঘ) বিদ্যালয়ের আর্থিক সমস্যা

১০ টির মধ্যে ৮টি বিদ্যালয়ই এমপিও ভুক্ত বিদ্যালয় নয়। এমপিও ভুক্ত নয় এমন বিদ্যালয়ে অনেক সময় শিক্ষকের ৪-৫ মাসের বেতন বাকি থাকে। স্কুল কর্তৃপক্ষ অর্থাভাবে তাদের বেতন দিতে পারেন না। ফলে অভিজ্ঞতা সম্পন্ন শিক্ষকগণ বার বার বিদ্যালয় বদল করে থাকেন। এই সব বিদ্যালয়ে সুযোগসুবিধা কম থাকার ফলে ভাল শিক্ষককে ধরে রাখা সম্ভব হয় না। কোন কোন ক্ষেত্রে দেখা গেছে বিদ্যালয়ে শিক্ষক নিয়োগের সময় অনৈতিক অর্থ লেনদেন করা হয়েছে। ফলে ঐ সকল শিক্ষক শ্রেণিকক্ষে পাঠদানের চেয়ে তার বাড়িতে শিক্ষার্থীদের কোচিং/প্রাইভেট পড়াতেবেশি সময় ব্যয় করেন। (সহকারী শিক্ষকদের থেকে প্রাপ্ত তথ্য)।

অনেক সময় অভিভাবকগণ শিক্ষার্থীর বিদ্যালয়ের মাসিক বেতন দিতে পারেন না। ৪১ জন শিক্ষকের সাথে আলোচনা করে জানা গেছে তারা ৩০০০/- টাকা থেকে ১০,০০০/- টাকা মাসিক বেতন পেয়ে থাকেন।অসচ্ছল পরিবারগুলো তাদের সন্তানদের অর্থনৈতিক সংকটের জন্য ভাল শিক্ষা প্রতিষ্ঠান/ভাল নামকরা শিক্ষকদের নিকট পড়াতে/ পাঠাতে পারেন না, ফলে শিক্ষার্থীরা নিম্নশ্রেণি থেকে শিখনে দুর্বল থেকেই উপরের শ্রেণিতে উঠতে থাকে,ফলে তারা এসএসসি পরীক্ষায় (পাবলিক পরীক্ষায়) ফলাফল ভাল করতে পারে না।

(ঙ) অভিভাবকদের সচেতনতা

ঢাকার মধ্যে বিদ্যালয়গুলি অবস্থিত হলেও জরিপকৃত বিদ্যালয়গুলো অনুন্নত এলাকায় অবস্থিত। অধিকাংশ অভিভাবক শিক্ষার ব্যাপারে সচেতন নন, অর্থনৈতিক ভাবেও তারা অস্বচ্ছল। শিক্ষার গুরুত্ব সম্পর্কে তারা বোঝেন না। দেখা গেছে বিদ্যালয় থেকে অভিভাবক সভা আহবান করলে (ফোন করা হয়, চিঠি দেয়া হয়, শিক্ষার্থীদের মাধ্যমে জানান হয়) তার পরেও দেখা যায় ১০০ জনকে জানালে ১০/১২ জন উপস্থিত হন।এমন অনেক পিতামাতা রয়েছেন, তাদেরকে জিজ্ঞাসা করলে তার সন্তান কোন শ্রেণিতে পড়ে তা বলতে পারেন না। অভিভাবকদের বিদ্যালয়ের শিক্ষাকার্যক্রমে সম্পৃক্ততার যথেষ্ট অভাব রয়েছে।

(চ) শিক্ষকদের শিক্ষাগত যোগ্যতা ও প্রশিক্ষণ

শিক্ষকদের মধ্যে অনেকেরই প্রশিক্ষণের অভাব রয়েছে। বিদ্যালয়গুলি এমপিও ভুক্ত না হওয়ার ফলে সরকারিভাবে শিক্ষকদের যে সকল প্রশিক্ষণ দেয়া হয় এই সকল বিদ্যালয়ের শিক্ষকরা সে প্রশিক্ষণের সুযোগ পান না। ফলে সংশোধিত শিক্ষাক্রম ও শিক্ষায় অন্যান্য বিষয় যে সকল প্রশিক্ষণ হয় তা থেকে এ সকল বিদ্যালয়ের শিক্ষকগণ জানতে পারেন না। ফলে তার ক্ষতির ফল শিক্ষার্থীদেরকে ভোগ করতে হয়। পর্যবেক্ষণে

দেখা গেছে বি এড ধারী শিক্ষক থাকলেও শিক্ষাকার্যক্রমে তারা তৎপর নন। বিদ্যালয়ের নানাবিধ সমস্যার কারণে শিক্ষকগণ শিক্ষার্থীদের একাডেমিক কার্যক্রমে যথেষ্ট সময় দিতে পারেন না। (অবকাঠামো, বিদ্যালয় ব্যবস্থাপনা কমিটি, প্রধান শিক্ষকদের নিয়ে সমস্যা, অন্যান্য শিক্ষকের সাথে সমস্যা, আর্থিক সমস্যা,অনিয়ম, দুর্বল শিক্ষার্থী, সচেতন অভিভাবকের অভাব ইত্যাদি সমস্যা বিদ্যমান)।

যাদের বি.এড ডিগ্রি আছে এমন কয়েকজন শিক্ষকের নিকট থেকে জানা গেছে কেউ কেউ জাতীয় বিশ্ববিদ্যালয়ের অধীনে প্রাইভেট বি.এড কলেজ থেকে বি.এড ডিগ্রি নিয়েছেন। তারা ক্লাস না করেই বিএড সার্টিফিকেট পেয়েছেন। শ্রেণি কক্ষে পাঠদান পর্যবেক্ষণ পূর্বক দেখা গেছে বিএড সার্টিফিকেট পাবার পর শ্রেণিকক্ষে বা শ্রেণিকক্ষের বাইরে শিক্ষার্থীদের পাঠদানের ক্ষেত্রে এই সকল শিক্ষকদের মধ্যে একাডেমিক কার্যক্রমে কাঙ্ক্ষিত পরিবর্তন লক্ষ্য করা যায়নি।

(ছ) বিদ্যালয়ে বিষয় ভিত্তিক শিক্ষক

জরিপকৃত বিদ্যালয়গুলিতে বিষয় ভিত্তিক শিক্ষকের চরম অভাব রয়েছে। ইংরেজী পড়ান অন্য বিষয়ে লেখাপড়া করেছেন এমন শিক্ষক। গণিত পড়াচ্ছেন যার গণিত বিষয়ে ডিগ্রি নেই অথবা অভিজ্ঞ নন এমন শিক্ষক। যেমন কসাইটুলি মুসলিম একাডেমী স্কুলের গণিতের শিক্ষক রসায়নে লেখাপড়া করেছেন। যিনি ইংরেজী পড়ান তিনি গার্হস্থ্য অর্থনীতি বিষয়ে লেখাপড়া করেছেন। এর ফলে শিক্ষার্থীর বিষয়ের গভীর সমস্যা নিরুপনে শিক্ষকগণ ব্যর্থ হন, ফলে শিক্ষার্থীর মধ্যে বোধগম্যতার দুর্বলতা থেকেই যায়। ফলে শিক্ষার্থীরা পরীক্ষায় ভাল করতে পারে না।

শাহ আব্দুল হামিদ গালর্স হাই স্কুলের ইংরেজী শিক্ষক জাতীয় বিশ্ববিদ্যালয় থেকে সমাজ বিজ্ঞানে সম্মান ডিগ্রি প্রাপ্ত। গণিত পড়ান একজন ডিপ্লোমাধারী চাকুরী থেকে অবসরপ্রাপ্ত সিনিয়র শিক্ষক।

গণিত, ইংরেজী ও বিজ্ঞান শিক্ষায় পড়াবার মত অভিজ্ঞ শিক্ষকদের এসব বিদ্যালয়ে ধরে রাখা সম্ভব হয় না। আর্থিক সুবিধা ও মর্যাদা না পাবার কারণে তারা এই ধরনের বিদ্যালয় ছেড়ে অন্যত্র যেখানে ভাল সুবিধা পান, সেখানে চলে যান।

দুর্বল শিক্ষাদানের কারণে শিক্ষার্থীরা ভাল বোঝে না বিধায় লেখাপড়ায় তাদের মনোযোগ হারিয়ে ফেলে। তাদেরকে অমনোযোগী শিক্ষার্থী বলা হয় কিন্তু মনোযোগ আসবে কিভাবে? তারা কি পড়ছে তারা তো বোঝেই না?

শ্রেণিকক্ষে পাঠদানের জন্য শিক্ষকের পূর্ব প্রস্তুতির প্রয়োজন হয়। যেমন: লেসন প্ল্যান তৈরি করা, ব্যবহারিক ক্লাসের জন্য সরঞ্জাম ক্লাসে উপস্থাপন করা। পর্যবেক্ষণপূর্বক দেখো গেছে যে, ১০ টির মধ্যে ৮ টি বিদ্যালয়েই নিয়ম মোতাবেক পাঠদান কার্যক্রম পরিচালিত হয় না।

(জ) কোচিং সেন্টার

কোচিং সেন্টার সমূহের শিক্ষার্থীদের বিদ্যালয় থেকে রেজিস্ট্রেশন পূর্বক এসএসসি পরীক্ষা দেবার ব্যবস্থা করা হয়। এই সকল শিক্ষার্থীর বিষয়ে বিদ্যালয়গুলো কোন খোঁজ খবর রাখেন না। দেখা গেছে ১০ টি বিদ্যালয়ের মধ্যে ৯ টি বিদ্যালয় কোচিং সেন্টার সমূহের শিক্ষার্থীদের রেজিস্ট্রেশন পূর্বক এসএসসি পরীক্ষা দেবার ব্যবস্থা করে।

বিদ্যালয় থেকে কোচিং সেন্টার সমূহের ঠিকানা সংগ্রহ পূর্বক পরিদর্শন করা হয়েছে। দেখা গেছে ভাড়া করা ছোট ছোট রুমে শিক্ষার্থীদেরকে অনভিজ্ঞ ও ডিগ্রি নেই এমন সব শিক্ষকগণ (ছাত্র) দিয়ে পাঠদান কার্যক্রম চালানো হচ্ছে।

আল নাহিয়ান বিদ্যালয়ের প্রধান শিক্ষাকের নিকট জানতে চাওয়া হয় কোচিং সেন্টারগুলো সম্পর্কে আপনি কি জানেন? উত্তরে তিনি বলেছেন কোন শিক্ষার্থীকেই তিনি চেনেন না বা জানেন না। শুধু মাত্র ফরম পূরণ করে এখান থেকে শিক্ষার্থীরা পরীক্ষায় অংশগ্রহণ করে এটাই শুধু তিনি জানেন।

কোচিং সেন্টারের শিক্ষার্থীদের পরীক্ষা দেবার সুযোগ করে দেবার জন্য আল নাহিয়ান উচ্চ বিদ্যালয় আর্থিক দিক দিয়ে লাভবান হয়ে থাকে। এই বিদ্যালয়ে বর্তমানে আর্থিক সংকট বিদ্যমান। তথ্য সংগ্রহের সময় (মে, ২০১৮) এই বিদ্যালয়ে শিক্ষকদের ৪ মাসের বেতন বকেয়া ছিল। প্রধান শিক্ষক জানিয়েছেন স্কুল ম্যানেজমেন্ট কমিটি উক্ত বিষয়টি সম্পর্কে অকেবহাল।

অনেক সময় কোচিং সেন্টার সমূহের চটকদারী বিজ্ঞাপন দেখে অভিভাবকগণ তাঁদের ছেলে মেয়েদেরকে আনুষ্ঠানিক বিদ্যালয়ে ভর্তি না করে কোচিং সেন্টারে ভর্তি করে থাকেন। অভিভাবকদের সাথে সাক্ষাৎ করে ও তাদের সাথে আলোচনা পূর্বক দেখা গেছে অধিকাংশ অভিভাবক সন্তানের শিক্ষার বিষয়ে সচেতন নন। তারা বোঝেননা কি করলে তাদের সন্তানের পড়াশোনা ভাল হবে।

অভিভাবকদের সাথে নিবিড় সাক্ষাতের মাধ্যমে জানা গেছে এই সকল শিক্ষার্থীর (বেশিরভাগ) কোন না কোন নেতিবাচক ইতিহাস রয়েছে। যার ফলে অভিভাবকগণ তাদের সন্তানদের আনুষ্ঠানিক বিদ্যালয়ের পরিবর্তে কোচিং এ ভর্তি করে থাকেন এবং কোচিং সেন্টারের মাধ্যমে অন্য বিদ্যালয় থেকে রেজিস্ট্রেশন পূর্বক এস.এস.সি পরীক্ষায় অংশগ্রহণ করার ব্যবস্থা করে থাকেন। অবশ্য এর ব্যতিক্রমও দেখা গেছে। কয়েকজন অভিভাবক জানেন না যে, এটি আনুষ্ঠানিক কোন বিদ্যালয় নয় এটি একটি মহল্লায় গড়ে উঠা কোচিং সেন্টার। [এখানে নেতিবাচক বলতে বোঝান হয়েছে: মাদকাসক্ত, বখাটে, নিম্নশ্রেণি থেকে দুর্বল থেকে উপরের শ্রেণিতে উত্তীর্ণ, অন্য বিদ্যালয় থেকে টিসি প্রাপ্ত]

কোচিং সেন্টার সমূহের শিক্ষার্থীদেরকে যে বিদ্যালয় থেকে রেজিস্ট্রেশন ফরম পূরণ করা হয় সে সকল বিদ্যালয় শিক্ষার্থীদের থেকে বেশি ফি আদায় করে থাকে।কোচিং সেন্টারের শিক্ষার্থীদেরকে চার দেয়ালের মধ্যে আটকিয়ে রাখা হয়। সর্বক্ষণ কোচিং সেন্টারের গেট বন্ধ রাখা হয়, ফলে শিক্ষার্থীদের মনোজগতে একধরনের মানষিক অসুস্থতা লেগেই থাকে। এখানেশিক্ষার্থীদের পূর্ণ বিকাশ হবার কোন সুযোগ নেই, ফলে শিক্ষার্থীর শিখন কার্যক্রম ব্যাপকভাবে ব্যহত হয়।

কোচিং সেন্টারের শিক্ষার্থীদের সার্বক্ষণিক দেকভাল করার জন্য কোন অভিজ্ঞতা সম্পন্ন শিক্ষক নেই। যারা এই কোচিং সেন্টারের কার্যক্রম চালাচ্ছেন তারা শিক্ষার্থীদেরকে ক্ষতির মুখে ঠেলে দিচ্ছেন।

কোচিং সেন্টার গুলোতে যে সকল পরীক্ষা অনুষ্ঠিত হয় সেই সকল পরীক্ষায় অদক্ষব্যক্তিরা (শিক্ষক নহেন এমন) প্রশ্ন করে থাকেন। ফলে শিক্ষার্থীদের মধ্যে শিখনে বিভ্রাট ঘটে, যার কারণে এই সকল শিক্ষার্থীরা পাবলিক পরীক্ষায় ভাল ফল করতে সমর্থ হয় না।

(ঝ) যে সকল বিষয়ে পরীক্ষায় খারাপ করেছে:

বিদ্যালয় থেকে শিক্ষার্থীদের রোল নম্বর ও রেজিস্ট্রেশন নম্বর সংগ্রহ করে শিক্ষাবোর্ডের তথ্য ভান্ডার থেকে তাদের নম্বরপত্র সংগ্রহ পূর্বক দেখা যাচ্ছে যে বেশিরভাগ শিক্ষার্থী গণিত ও ইংরেজী পরীক্ষায় খারাপ করেছে। এর পর খারাপ করেছে রসায়ন, পদার্থ বিজ্ঞান ও হিসাব বিজ্ঞানে।

(ঞ) দূর্বল শিক্ষার্থী হিসাবে পরীক্ষায় অংশ গ্রহণ

শিক্ষকগণ বলেছেন শিক্ষার্থীরা নিম্নের শ্রেণি থেকে দুর্বলভাবে উপরের শ্রেণিতে উত্তীর্ণ হয়ে আসছে, ফলে তাদের শিখন ভিত দুর্বল হওয়ায় এই সকল শিক্ষার্থীদের পরীক্ষায় ফলাফল বিপর্যয় হচ্ছে। বেশিরভাগ শিক্ষার্থী টেকস্টবুক পড়ে অন্তর্নিহিত বিষয়ের ভিতর

ঢুকতে চায় না। শিক্ষার্থীরা গাইড বই নির্ভর মুখস্থ করে থাকে। ফলে আনেক শিক্ষার্থী পরীক্ষায় খারাপ করে থাকে।

(ট) বখাটে শিক্ষার্থী

শিক্ষার্থীদের পিতামাতার থেকে জানা গেছে বখাটে শিক্ষার্থীরা তাদের বাড়িতে পিতামাতাকে লাঞ্ছিত করে থাকে, যার ফলে অভিভাবক বাধ্য হয়ে (নিজের ইচ্ছার বিরুদ্ধে) সাময়িক যন্ত্রণা থেকে মুক্তি পাবার আশায় আবাসিক কোচিং সেন্টারে ভর্তি করে সেখানে রেখে চলে যান। বখাটে শিক্ষার্থীরা ঘরের আলমিরা ভেঙ্গে টাকা নেয়, পিতার শার্টের পকেট থেকে টাকা নেয় ও জোর করে মা বাবার থেকে টাকা আদায় ইত্যাদি করে থাকে।শিক্ষার্থীরা অধিকাংশ ক্ষেত্রে তাদের দুর্বলতার বিষয়গুলি অভিভাবকদের সাথে আলোচনা করে না। শিক্ষকগণ অভিভাবকদেরকে ডেকে না পাবার ফলে এখানে একটি অজানা দূরত্ব তৈরি হয়, ফলে শিক্ষার্থীরাই ক্ষতিগ্রস্ত হয়ে থাকে।

ফেল করা শিক্ষার্থীদের অভিভাবকদের আর্থ-সামাজিক অবস্থাঃ

অভিভাবকদের কাছে জানতে চাওয়া হয় তাদের এস.এস.সি পরীক্ষায় খারাপ করার কারণ। ছেলেমেয়েদের এসএসসি পরীক্ষায় খরাপ করার কারণ কি ছিল? বিদ্যালয়ে স্যারেরা কেমন পড়িয়ে থাকেন? পরীক্ষায় ফলাফল খারাপ করার পিছনে বিদ্যালয়ের কোন দুর্বলতা থাকলে বলুন। পরিবারের আর্থিক অবস্থা, অভিভাবকের পেশা, শিক্ষাগত যোগ্যতা, বাড়িতে সন্তানের লেখাপড়ার পরিবেশ কেমন ছিল? এসব উন্মুক্ত প্রশ্নের উত্তরে তারা যা জানিয়েছেন তার বিবরণ নিচে তুলে ধরা হল।

অভিভাবকরা বলেন তাদের ছেলেমেয়েরা ঠিকমত লেখা পড়া করে নাই। তারা লেখা পড়ায় অমনোযোগী ছিল। শিক্ষকগণ শিক্ষার্থীর লেখাপড়ার তদারকি করতেন না। তাঁরা নিজেরা লেখাপড়া বিষয়ে বোঝেন না। কোনো কোনো ক্ষেত্রে বাবা মা একেবারেই লেখা পড়া জানেন না। আর্থিক অনটনের কারণে শিক্ষার প্রয়োজনে সময়মত টাকা যোগাতে পারেননি।বাসায় লেখাপড়া দেখিয়ে দেবার মত কোন সাহায্যকারী ছিল না। কিছু শিক্ষার্থীর লেখাপড়ার সাথে সাথে কাজ করে সংসারের খরচ চালাতে হয়। পরিবারে পুষ্টির অভাব, পারিবারিকঅশান্তি, (স্বামী-স্ত্রীর মধ্যে ঝগড়া) মেয়েদের ক্ষেত্রে অসুস্থতা (গাইনি সমস্যা)। বাসার পাশে বাজার সারাদিন মাইকের শব্দ, শিক্ষার্থীর লেখাপড়ায় মনোযোগ থাকে না। পরীক্ষার পূর্বে মা বাবার মৃত্যুবরণ, ঘরে পড়ার পরিবেশ নাই, চেয়ার টেবিল নাই, গাদাগাদি করে সকলে এক সাথে থাকতে হয়। । ছেলে মেয়েরা মোবাইল নিয়ে ব্যস্ত থাকে। শিক্ষার্থীরা যে সকল বিষয় বোঝে না সেসকল বিষয়ে একেবারেই পড়তে চায় না। নিচের ক্লাসে দুর্বল থাকার জন্য ক্লাসে বিষয়বস্তু বুঝতে অসুবিধা হত। ছেলে-মেয়েরা গণিতে এবং ইংরেজীতে বেশি দুর্বল ।

পারিবারিক আয়ঃ

জরিপকৃত অভিভাবকদের বেশিরভাগই অষ্টম শ্রেণির নিচে লেখাপড়া করেছেন। অনেকে লেখাপড়া করেননি, কেউবা শুধুমাত্র স্বাক্ষর করতে পারেন। অধিকাংশ পরিবারের মাসিক আয় ২০,০০০ টাকার মধ্যে। পরিবারের গড় সদস্য সংখ্যা ৪/৫ জন। পেশার ক্ষেত্রে দেখা যাচ্ছে বেশিরভাগই নিম্ন আয়ের পেশাতে তারা কাজ করে থাকেন।

[সম্প্রতি সিডিপির পোশাক খরচের এক জরিপে উঠে এসেছে: ৬ আগস্ট ২০১৮ প্রথম আলোয় প্রকাশিত]

ঢাকায় শ্রমিক পরিবারের মাসিক ব্যয় খাদ্যের জন্য ৭৯১৯ টাকা ও খাদ্য বহির্ভূত ব্যয় ১৫০২০ টাকা মোট ব্যয় ২২৯৩৯/-) জরিপে দেখা গেছে ৫৭% অভিভাবক কোন সঞ্চয় করতে পারে না। ৮৬% বাথরুম ভাগাভাগি করে ব্যবহার করেন। ৮৫% রান্নাঘর ভাগাভাগি করেন। ১৭% কোনো শোবার খাট নেই। ৮১% মোবাইল ফোন আছে।

ফেল করা শিক্ষার্থীরা পরিবারের দিকে লক্ষ্য করলে দেখা যায় তাদের অবস্থা উপরোক্ত জরিপের ফলাফলের অনুরূপ। ঢাকায় বসবাসরত নিম্ন আয়ের পরিবারের শিক্ষায়, স্বাস্থ্য, সেনিটেশন, পুষ্টি, বাসস্থান বিষয়ে তাদের অবস্থান নিম্নমানের। অবস্থার উন্নতির জন্য পরিবারের সদস্যদের শিক্ষায় গুরুত্ব আরোপ ও শিক্ষায় বিনিয়োগ করা অত্যন্ত জরুরি।

পেশাঃ

৪৬ জন অভিভাবক থেকে সাক্ষাৎকার গ্রহণ পূর্বক তাদের থেকে প্রাপ্ত তথ্য অনুযায়ী তাদের পেশা নিম্নরূপ। ছোট ব্যবসা (দোকান, কাঁচা মালের ব্যবসা), গৃহিণী, কাঠের ব্যবসা, সরকারী আধা সরকারী ছোট চাকুরি, ড্রাইভার, পিয়ন, কৃষিকাজ, শিক্ষক, গৃহশিক্ষক, গার্ড, বাসা বাড়িতে বুয়ার কাজ, মুদি দোকান, গার্মেন্টসে কাজ, দিন মজুর, নির্মাণ শ্রমিক, ওয়ার্কশপে কাজ, মিষ্টির দোকানে কাজ, প্রেসে প্রিন্টিং এর কাজ, রং মিস্ত্রির কাজ ও গরুর দুধবিক্রি। দৈনিক আয়ের উপর এরা নির্ভরশীল। পেশায় ব্যস্ত থাকার কারণে অভিভাবকগণ সন্তানদের পড়াশুনা দেখতে পারে না।

শিক্ষাঃ

তথ্য সংগ্রহকৃত অভিভাকদের মধ্যে লেখাপড়া জানেনা ২ জন, স্বাক্ষর করতে পারেন ৬ জন, ৫ম শ্রেণি পর্যন্ত লেখা পড়া করেছেন ৯ জন, ৬ষ্ঠ-নবম শ্রেণি পর্যন্ত ৮ জন, এসএসসি ও এইচ.এস.সি. পাশ ১৬ জন, বিএ (অনার্স)পাশ ৫ জন।

অভিভাবক ও বিদ্যালয়ের মধ্যে যোগাযোগ

১০ টি বিদ্যালয়ের মধ্যে ৯ টি বিদ্যালয় কোচিং সেন্টার সমূহের শিক্ষার্থী সংগ্রহ পূর্বক শিক্ষাবোর্ডের রেজিস্ট্রেশন করিয়ে তাদেরকে এসএসসি পরীক্ষায় অংশগ্রহণ করার ব্যবস্থা

করে থাকেন। যে সকল বিদ্যালয়ের নামে শিক্ষার্থীরা পরীক্ষা দিয়ে থাকে আসলে তারা ঐ বিদ্যালয়ের শিক্ষার্থী নয়। এই বিদ্যালয়ের সাথে শিক্ষার্থীদের যোগাযোগ নেই। বিদ্যালয়ের প্রধান শিক্ষক ও কোচিং সেন্টার এর প্রধান যোগাযোগ করে অভিভাবকদের থেকে টাকা গ্রহণ পূর্বক শিক্ষার্থীদের পরীক্ষার ব্যবস্থা করে থাকেন। অভিভাবকদের নিকট জিজ্ঞাসা পূর্বক জানা গেছে যে তারা অনেকে জানেনই না যে তার ছেলেমেয়েরা যেখানে পড়ছে সেটি কোন সরকার কর্তৃক স্বীকৃত বিদ্যালয় নয়। যে বিদ্যালয় থেকে শিক্ষার্থীগণ পরীক্ষা দিয়েছে সেখান থেকে ঐ সকল কোচিং সেন্টারের ঠিকানা সংগ্রহ পূর্বক সরেজমিনে যেয়ে দেখা গেছে ছোট পরিসরে ঘর/ বাড়ি ভাড়া নিয়ে তারা আবাসিক /অনাবাসিক নাম দিয়ে, নাম মাত্র কোচিং সেন্টার/কোচিং ব্যবসা খুলে বসেছেন। এখানে কোন প্রশিক্ষিত শিক্ষক নেই। শিক্ষা উপকরণ, শিক্ষা কার্যক্রম চালাবার মত ভবন ও শিক্ষার পরিবেশ সবই অনুপস্থিত। যেমন মিরপুরের একটি বিদ্যালয় আল নাহিয়ান মাধ্যমিক বিদ্যালয়, এটি একটি নন এমপিও ভুক্ত বিদ্যালয়। এ বিদ্যালয় থেকে তাদের নিজেদের পরীক্ষায় অংশগ্রহণকারী শিক্ষার্থীর সংখ্যা মাত্র ৮০ জন। অথচ অত্র এলাকা থেকে আরও ১৫ টি কোচিং সেন্টার থেকে শিক্ষার্থী সংগ্রহ করে। কোচিং সেন্টার থেকে পরীক্ষায় অংশগ্রহণকারী শিক্ষার্থীর সংখ্য ১৫৭ জন।

উত্তরা রেসিডেন্টসিয়াল স্কুল এন্ড কলেজ থেকে পরীক্ষায় অংশগ্রহণ করেছিল তৌহিদুজ্জামান তুষার (তার রেজি নং ১৪১০৮২৪৩৩০, রোল নং ২০৭৬০২) বাবা জনাব আজগর আলী। গ্রামের বাড়ি রংপুরে। তিনি তার ছেলেকে শহীদ ক্যাডেট একাডেমী উত্তরাতে ভর্তি করেছিলেন। সরেজমিনে গিয়ে দেখা যায় যে এটি একটি বাসা বাড়ি ভাড়া নিয়ে ক্যাডেট ভর্তির জন্য কোচিং সেন্টার। সেন্টারের মালিকের সাথে কথা বলে জানতে পারলাম তিন চটকদার বিজ্ঞাপন দেন। আমাদেরকেও বিজ্ঞাপনের কিছু কপি সরবরাহ করলেন।

উল্লেখ্য যে তৌহিদের বাবাকে জানানো হয়নি যে, তার সন্তান কোচিং সেন্টার থেকে সরাসরি এসএসসি পরীক্ষায় অংশগ্রহণ করতে পারবে না। পরীক্ষার ফলাফল বের হবার পর তার বাবা জানতে পারেন তার ছেলেকে উত্তরা রেসিডেন্টসিয়াল মডেল স্কুল এন্ড কলেজ থেকে রেজিস্ট্রেশন পূর্বক পরীক্ষা দেবার ব্যবস্থা করা হয়েছিল। তৌহিদুজ্জামান রসায়ন বিষয়ে পরীক্ষায় ফেল করার জন্য সে ২০১৭ সালে ফেল করেছিল। কোচিং সেন্টারে গিয়ে দেখা গেছে সেখানে নবম-দশম শ্রেণিতে পড়ানোর মত কোন শিক্ষক নেই। রসায়ন পড়ানোর জন্য কোন ল্যাবরেটরি নেই, শিক্ষায় ডিগ্রিপ্রাপ্ত কোন অভিজ্ঞ শিক্ষক নেই। ভাড়া কার ছাত্র-ছাত্রী দিয়ে তিনি এই শহীদ ক্যাডেট একাডেমী চালিয়ে থাকেন। উত্তরা ৯ নং সেক্টওে রোডনং ১ বাড়ি নং ৩ এ ভবন ভাড়া নিয়ে তারা এই শিক্ষার্থী সর্বনাশের কোচিং সেন্টার চালিয়ে যাচ্ছেন।

অভিভাবকদের মধ্যে অনেকে বলেছেন তারা জানেন না এটি কোন কোচিং সেন্টার। আনুষ্ঠানিক বিদ্যালয় ভেবেই তারা তাদের সন্তানকে এখানে (কোচিং সেন্টারে) রেখেছেন কিন্তু তাদের যে ক্ষতি হয়েছে তা শুধরাবার নয়। অন্য দিকে দেখা গেছে সাক্ষাৎকারকৃত অধিকাংশ অভিভাবক শিক্ষা বিষয়ে যথেষ্ট সচেতন নন।

কয়েকজন অভিভাবককে এর ব্যতিক্রম ও পাওয়া গেছে যেমন তারা জানেন এটি কোচিং সেন্টার কিন্তু তার সন্তান যেহেতু উচ্ছৃঙ্খল ও বখাটে হয়েছে তাই সাময়িক উচ্ছৃঙ্খল অবস্থা থেকে বাচাবার জন্য কোচিং সেন্টারের আবাসিক শিক্ষার্থী হিসাবে ভর্তি করে দায়মুক্তি পাবার চেষ্টা করেছেন। কয়েকজন বলেছেন তাদের সন্তান ইতোমধ্যে মাদক নেয়ার ফলে অভিভাবকের কোন কথা তারা শোনে না। লেখাপড়ায় কোন মনোযোগ নেই। ফলে আবাসিক কোচিং সেন্টারে দিতে তারা বাধ্য হয়েছেন।

কিছু অভিভাবক বলেছেন তাদের সন্তান নিচের শ্রেণি থেকে লেখা পড়ায় দুর্বল থাকবার ফলে আনুষ্ঠানিক বিদ্যালয় থেকে টিসি দিয়ে বের করে দিয়েছে। উপায় না পেয়ে তারা জেনেও এই সকল কোচিং সেন্টারে ভর্তি করার মাধ্যমে এস.এস.সি পরীক্ষায় অংশগ্রহণ করার ব্যবস্থা করেছেন। মেয়েদের ক্ষেত্রে কিছু অভিভাবক জানিছেন বিয়ে দেবার ক্ষেত্রে অন্ততপক্ষে বলা যাবে আমার মেয়ে এস.এস.সি পরীক্ষা দিয়েছিল। এই জন্য পরীক্ষায় আশানুরূপ ফলাফল হবেনা জেনেও পরীক্ষায় অংশগ্রহণ করার ব্যবস্থা করেছিলেন।

কয়েকজন অভিভাবক জানিয়েছেন তাদের সন্তান সমাজে এমন সব কাজ করেছে যা বলতে তারা লজ্জা বোধ করেন। এই সকল কারণেই তাদের সন্তানদের লেখাপড়ার ক্ষেত্রে এমন অবনতি লক্ষ্য করা যাচ্ছে। (প্রেম ঘটিত বিষয় সেখানে মনোযোগ বেশি, ফেসবুকে অধিক সময় ব্যয় করা, খারাপ সংঘের সাথে উঠা বসা, মাদকগ্রহণ, দামি মোবাইল ক্রয়ের জন্য অভিভাবককে চাপ প্রদান)।

শিক্ষার্থীদের সাক্ষাৎকার বিশ্লেষণ

শিক্ষার্থীদের নিকট জানতে চাওয়া হয় সে নিয়মিত ক্লাস করতো কি না? কোন কোন বিষয়ে খারাপ করেছে? শিক্ষক যে পদ্ধতিতে পড়ান তা বুঝতো কি না? বাড়িতে সে কিভাবে লেখাপড়া করতো? গৃহশিক্ষক ছিল কিনা? মা বাবা তাকে লেখাপড়ায় সহায়তা করতো কিনা? বাড়িতে পড়ালেখার পরিবেশ কেমন? তার আলাদা পড়ার ঘর ছিল কিনা? বিদ্যালয়ে কত টার্ম পরীক্ষা হয়? টেস্ট প্রিটেস্ট পরীক্ষার ফলাফল কেমন ছিল? পরীক্ষার পূর্বে প্রস্তুতি কেমন ছিল? পড়তে ভাল লাগে কিনা? এসএসসি পরীক্ষায় ফলাফল ভাল না হওয়ার কারণ কি ছিল? গাইড বইয়ের সাহায্য নেয় কিনা? ২০১৬ সালে পরীক্ষায় অংশগ্রহণ করেছিল কি না? এবং পরীক্ষায় ভাল ফলাফল করার জন্য তার পরামর্শগুলো কি কি?

এসব প্রশ্নের উত্তরে ২০১৭ সালে এসএসসি পরীক্ষায় ফেল করা শীক্ষার্থীরা যা বলেছে তা নিম্নে তুলে ধরা হল ।

(ক) নিয়মিতভাবে লেখাপড়া :

৭৮ জন শিক্ষার্থীর মধ্যে ৫০% শিক্ষার্থী বলেছে লেখাপড়ার প্রতি তাদের আগ্রহ রয়েছে কিন্তু বিষয়বস্তু সম্পর্কে তারা ভালমত বোঝে না বিধায় তাদের লেখাপড়া করতে ভাল লাগে না এবং পড়ায় মন বসে না । নিম্ন শ্রেণি থেকেই এসব শিক্ষার্থী দুর্বল অবস্থায় ক্লাস উত্তীর্ণ হয়েছে,যার ফলে নিয়মিত লেখাপড়ায় তাদের মনোনিবেশ নেই । বিদ্যালয়ে যাওয়া আসায় তারা নিজেদের ইচ্ছাকেই বেশি গুরুত্ব দিয়ে থাকে । দেখা যায় মাঠে খেলা হলে তারা বিদ্যালয়ে উপস্থিত না হয়ে খেলার মাঠে উপস্থিত হওয়াকে বেশি গুরুত্ব দেয় । কসাইটুলি মুসলিম একাডেমী, নবদিগন্ত আদর্শ হাই স্কুল এর শিক্ষকরা জানিয়েছেন শিক্ষার্থীরা নিয়মিতভাবে বিদ্যালয়ে আসে না, যার ফলে বিষয় বস্তু সম্পর্কে তারা বুঝতে পারে না । ফলে পরীক্ষায় ফলাফল খরাপ করে থাকে ।

(খ) ইংরেজী ও গণিতে ফেল (ইংরেজী ও গণিতে ভীতি):

ফেল করা শিক্ষার্থীদের সাথে কথা বলে এবং তথ্য ভান্ডার থেকে তাদের নম্বর পত্র সংগ্রহ পূর্বক দেখা যাচ্ছে যে বেশিরভাগ শিক্ষার্থীরাই ইংরেজী ও গণিতে ফেল করেছে । শিক্ষার্থীদের সাথে নিবিড়ভাবে প্রশ্ন উত্তর ও আলোচনার মাধ্যমে জানা গেল নিচের ক্লাস থেকে তারা ইংরেজী ও গণিতে দুর্বল ছিল । কেউ কেউ বলেছে তারা ভাল প্রস্তুতি নিয়ে (মুখস্থ করে) পরীক্ষার হলে গিয়েছিল কিন্তু প্রশ্ন কমন পড়েনি । বিষয়বস্তু সম্পর্কে ভালভাবে না জানার ফলে এমসিকিউ অংশের পরীক্ষায় ফেল করেছে । ফলে ফলাফল ফেল এসেছে । গণিতের বেলাতেও একই অবস্থা । না বুঝার কারণে এমসিকিউ অংশে শিক্ষার্থীরা ভুল উত্তর দিয়েছে এবং এ বিষয়ে খারাপ করেছে ফলে ফলাফল অকৃতকার্য এসেছে । ইংরেজী ও গণিতের পর ব্যবসায় শিক্ষা ও হিসাব বিজ্ঞানে বেশিরভাগ শিক্ষার্থীরা খারাপ করেছে । সেখানেও একই কারণে খারাপ করেছে ।

(গ) শিক্ষকের ভূমিকা:

বিষয় ভিত্তিক শিক্ষকদের (ইংরেজী, গণিত, হিসাববিজ্ঞান, রসায়ন, ব্যবসায় শিক্ষা) সাথে কথা বলে জানা গেল শিক্ষকগণ চান তাদের শিক্ষার্থীরা পরীক্ষায় ভাল ফলাফল করুক । শিক্ষকদের ভাষ্যমতে এই সকলদুর্বল শিক্ষার্থীদের ফলাফল ভাল করাতে যেয়ে তারা নাজেহাল । নিচের ক্লাসে যে সকল শিক্ষার্থী না বুঝে উপরের ক্লাসে এসছে তাদেরকে কিভাবে বিষয়ের গভীরে বুঝাবেন? শিক্ষার্থীরা বলেছে তাদের বিদ্যালয়ের বেশিরভাগ শিক্ষকই বাসায় প্রাইভেট পড়ায়ে থাকেন । আর্থিক সংকটের কারণে অনেক শিক্ষার্থী প্রাইভেট পড়ার সুযোগ পায় না । প্রধান শিক্ষক ও অন্যান্য শিক্ষকগণ তাদের বিদ্যালয়ের ভাবমূর্তি ভাল রাখার জন্য ফেল করা শিক্ষার্থীদের জন্য অতিরিক্ত ক্লাসের ব্যবস্থা করে

থাকেন কিন্তু শিক্ষার্থীদের উপস্থিতি কম থাকে। কারণ হিসাবে শিক্ষর্থীরা বলেছে জুনিয়ারদের সামনে ক্লাস করতে তারা লজ্জা বোধ করে থাকে। বিশেষ করে মেয়েরা ফেল করেছে এটা তারা সহজে প্রকাশ করতে চায় না। অভিভাবকরাও এ বিষয়ে একমত হয়েছেন।

(গ) কোচিং সেন্টারের শিক্ষার্থী:

জরিপকৃত ১০ টি বিদ্যালয়ের মধ্যে ৯ টি বিদ্যালয় থেকেই কোচিং সেন্টারের শিক্ষার্থীদের বোর্ডকর্তৃক রেজিস্ট্রেশন পূর্বক এসএসসি পরীক্ষায় অংশগ্রহণ করার ব্যবস্থা করা হয়। এ বিষয়ে বিদ্যালয়ের প্রধান শিক্ষক ও অন্যান্য শিক্ষকদের নিকট থেকে প্রশ্ন করা হয়, "আপনারা কেন কোচিং সেন্টার সমূহের শিক্ষার্থীদের পরীক্ষায় অংশ গ্রহণ করার ব্যবস্থা করে থাকেন?" তারা জানিয়েছেন এখানে অর্থনৈতিক বিষয় রয়েছে। প্রধান শিক্ষক বিদ্যালয় থেকে বেশ টাকা পেয়ে থাকেন। ফেল করা শিক্ষার্থী খুঁজতে তথ্য সংগ্রহকারী ঐ সকল কোচিং সেন্টারে যেয়ে সরেজমিনে দেখা গেছে যে, ছোট ছোট বাসা বাড়ি অথবা ভাড়া করা ভবনে শিক্ষার্থীদেরকে নিয়ে সেন্টারগুলো শিক্ষা কার্যক্রম পরিচালনা করছেন। এই সকল কোচিং সেন্টারে যারা পড়ান তাদের প্রফাইল চেয়ে তাদের থেকে কোন তালিকা পাওয়া যায়নি। ভাড়া করা ছাত্র-ছাত্রীদের দিয়ে তার এই সেন্টার পরিচালিত করেছেন।

এখানে উল্লেখ্য, উত্তরা শহীদ ক্যাডেট একাডেমী তাদের শিক্ষার্থীদেরকে উত্তরা স্কুল এন্ড কলেজ থেকে পরীক্ষা দেবার ব্যবস্থা করে থাকে। এখান থেকে ফেল করা শিক্ষার্থীদের তথ্য আনার জন্য যেয়ে দেখা যায় বিজ্ঞান বিভাগের শিক্ষার্থীদেরকে এখান থেকে পরীক্ষা দেবার ব্যবস্থা করা হয়েছে। বিজ্ঞানে রসায়নে ফেল করা একজন শিক্ষার্থী ও তার বাবার সাথে কথা বলে জানা গেল তারা জানতেন না যে এখানে বিজ্ঞান পড়াবার মত কোন সুযোগ সুবিধা নেই। ফেল করার পর এবং তথ্য সংগ্রহ করার সময় তারা এ তথ্য জানতে পেরেছেন যে এটি কোন স্কুল নয়। এটি একটি কোচিং সেন্টার। স্কুলে লেখাপড়া করাবার জন্য যে পরিবেশ দরকার তার কোন কিছুই এখানে নেই। বিষয়গুলো যাদের দেখবার কথা তারা কেন দেখছেনা তা বোধগম্য নয়।

সংগৃহীত তথ্য থেকে জানা যায় যে, যেসকল শিক্ষার্থী পরীক্ষায় ফলাফল খারাপ করেছে তার একটি বড় অংশ হলো এই কোচিং সেন্টারের শিক্ষার্থীরা। নিম্নে আল নাহিয়ান হাই স্কুলও কোচিং সেন্টারের এর তথ্য উপস্থাপন করা হল।

আল-নাহিয়ান উচ্চ বিদ্যালয় হতে রেজিষ্ট্রেশনকৃত বিভিন্ন কোচিং সেন্টারের ২০১৭ সালে অনুষ্ঠিত এসএসসি পরীক্ষায় অংশগ্রহণকারী শিক্ষার্থীর সংখ্যা এবং ফলাফলের সারাংশ

নং	বিদ্যালয়ের নাম	বিদ্যালয়ের ঠিকানা	মোট শিক্ষার্থী	কৃতকার্য	অকৃতকার্য
	আল-নাহিয়ান উচ্চ বিদ্যালয়	সেকশন-২, মিরপুর, ঢাকা - ১২১৬	৮০	৫৬	২৪
	কোচিং সেন্টার	**কোচিং সেন্টারের ঠিকানা**			
১.	ইনডিপেনডেন্স ইন্টারন্যাশনাল স্কুল	বাসা# ১, রোড# ৯, কল্যানপুর, মিরপুর, ঢাকা	২৯	২১	০৮
২.	এ্যাম্বিশন ইন্টারন্যাশনাল স্কুল	কল্যানপুর, মিরপুর, ঢাকা	১২	১০	০২
৩.	প্রিপারেটরী স্কুল	মিরপুর # ১০, ঢাকা	০৬	০৬	০০
৪.	নতুনকুঁড়ি আদর্শ বিদ্যা নিকেতন	২০৫/১ ডি, ইমাম বুখারী মাজার রোড, মিরপুর -১, ঢাকা ১২১৬	৪০	৩১	০৯
৫.	চাইল্ড হ্যাভেন স্কুল	কাউন্দিয়া, মধ্যপাড়া, সাভার, ঢাকা	২৪	১৩	১১
৬.	খান ইন্টারন্যাশনাল স্কুল এন্ড কলেজ	কল্যাণপুর, ঢাকা	১২	০৭	০৪
৭.	মর্নিংবার্ড আদর্শ উচ্চ বিদ্যালয়	৩য় কলোনী, লালকুঠি, দারুসসালাম মিরপুর -১, ঢাকা-১২১৬	০৯	০৩	০৬
৮.	মধু ব্যাপারি স্কুল	ব্লক# এ, রোড#৬, সেকশন#১০, মিরপুরঢাকা	০১	০০	০১
৯.	গোল্ডেন ফিউচার মডেল স্কুল	৫৩/২ দিয়াবাড়ি, মিরপুর -১, ঢাকা-১২১৬	০৭	০৪	০৩
১০.	তাসনিম ইন্টারন্যাশনাল হাই স্কুল	১/বি/৮, আনন্দনগর, দারুসসালাম মিরপুর, ঢাকা-১২১৬	০৬	০৩	০৩
১১.	হলি ক্রিসেন্ট মডেল স্কুল	৪৪ প্রধান সড়ক, কল্যানপুর, মিরপুর, ঢাকা-১২০৭	০১	০০	০১
১২.	রেডিয়েন্ট মডেল হায়ার সেকেন্ডারি স্কুল	১/ডি, ৮/৪, উত্তর বিশিল, মিরপুর-১ ঢাকা-১২১৬	০১	০১	০০
১৩.	রেনেসা আইডিয়াল হাই স্কুল	বাসা#৬৮/খ, রোড#৬, উত্তর বিশিল, মিরপুর, ঢাকা	০১	০০	০১
১৪.	দোয়েল কিন্ডার গর্ডেন এন্ড হাই স্কুল	জোহুরাবাদ, দিয়াবাড়ি, মিরপুর -১, ঢাকা ১২১৬	০৯	০৮	০১
		মোট	২৩৮	১৬৩	৭৪

১. মোট শিক্ষার্থী -২৩৮ জন

২. অনুপস্থিত -০১ জন
৩. কৃতকার্য - ১৬৩ জন
৪. অকৃতকার্য - ৭৪ জন

উপরোক্ত সারণী থেকে এটাই প্রতীয়মান হয় যে, আল-নাহিয়ান উচ্চ বিদ্যালয়ের নিয়মিত শিক্ষার্থী মাত্র ৮০ জন কিন্তু সেই স্কুল থেকে পরীক্ষা দিয়েছে মোট ২৩৮ জন অর্থাৎ বাকি ১৫৮ জনই ১৪ টি কোচিং সেন্টার থেকে সংগৃহীত। নিয়মিত শিক্ষার্থীর পাশের হার ৭০শতাংশ এবং কোচিং সেন্টার থেকে সংগৃহীত শিক্ষার্থীর পাশের হার ৬৭.৬ শতাংশ। তাহলে দেখা যাচ্ছে শিক্ষার্থীদের পাশ ফেলের ব্যপারে কোচিং সেন্টারগুলো অত্যন্ত গুরুত্বপূর্ণ ভূমিকা পালন করে চলেছে। এ বিষয়টি আমাদের অবশ্যই আমলে নিতে হবে। তবে কি স্কুল টিচিং এর গুরুত্ব ক্রমান্বয়ে কমে আসছে। অন্য দিকে শিক্ষক, শিক্ষার্থী, অভিভাকদেরর থেকে জানা যায় যে প্রাথমিক পর্যায়ে শিক্ষার্থীরা লোখপড়ায় দূর্বল থাকলেও পরবর্তী ক্লাসে তাদের উঠিয়ে দেয়া হয় ফলে তাদের এই দূর্বলতা চলতেই থাকে। বছরের পর বছর ধরে এনসিটিবি মাত্রা ভিত্তিক যে শিক্ষাক্রম প্রবর্তন করেছিল মূল্যায়নের ক্ষেত্রে তার কোন প্রতিফলন ঘটেনি বলে অনুমিত হয়। প্রতিটি শ্রেণির জন্য যোগ্যতা নির্ধারিত আছে। সেগুলো পূরণ না হওয়া পর্যন্ত পরবর্তী ক্লাসে তাদেরউত্তীর্ণ করা সমীচীন নয় কিন্তু বাস্তবে তা হচ্ছে না এবং এগুলো দেখারও কেউ নেই ।

(ঙ) শিক্ষার্থীর অভিভাবকের পেশা, আয় ও বাড়িতে লেখাপড়ার পরিবেশঃ

ফেল করা শিক্ষার্থীদের বাড়িতে সরেজমিনে উপস্থিত হয়ে দেখা গেছে শিক্ষার্থীদের বেশিরভাগদের বাড়িতে পড়ার জন্য ঘর বা পৃথক পড়ার টেবিল নেই। অর্থনৈতিকভাবে তাদের পরিবার স্বচ্ছল নয়। পরিবারের আয় মাসিক ৩০০০/- টাকা থেকে ৪০,০০০/- টাকার মধ্যে। বেশীরভাগ পরিবারের গড় আয় ২০,০০০/- টাকা। পরিবারের সদস্য সংখ্যা ৪-৭ জন পর্যন্ত। একই ঘরে টেলিভিশন, পড়া, থাকা ও ঘুমাবার কাজ চলে। বেশিরভাগ পরিবার ২ টি ঘরের মধ্যে বাস করে। কোন কোন ক্ষেত্রে একটি মাত্র ঘরে ৪/৫ জন বাস করে। অভিভাবকের পেশার ক্ষেত্রে দেখা গেছে নিম্ন আয় ভিত্তিক পেশায় বেশিরভাগ অভিভাবক কাজ করেন। (পিয়ন ড্রাইভার, বাড়িতে কাজ, খাবার সাপ্লাই, দোকান ব্যবসা, ছোট ব্যবসা, তরকারি বিক্রি, ভ্যান/রিক্সা চালক, কাঠের দোকানে কাজ, চামড়া শিল্পে লেবারের কাজ, গৃহ শিক্ষক, গার্ড, গৃহিণী, মুদি দোকানের ব্যবসা, নির্মাণ শ্রমিক, ওয়ার্কশপের কাজ, প্রেসে কাজ, ছোট চাকুরী) ইত্যাদি। বিশেষ করে মেয়ে শিক্ষার্থীরা তাদের বাড়িতে লেখাপড়ার ভাল পরিবেশ পান না বলে জানিয়েছেন। ছেলেরা অনেক ক্ষেত্রে বাড়ির বাহিরে বেশি সময় ক্ষেপণ করে পড়ালেখার সুযোগ পায় কিন্তু মেয়েদের বেলায় সেটা সম্ভব হয়না। যাদের আয় ২৫,০০০/- টাকা থেকে ৪০,০০০/- টাকার মধ্যে তারা ছেলেমেয়েদের লেখাপড়ার খরচ ভালভাবে চালাতে পারেন। যাদের আয় এর নিচে তারা তাদের সন্তানদের জন্য প্রয়োজনের সময় শিক্ষায় খরচ করতে পারেন না। যে সকল অভিভাবকগণ শিক্ষার বিষয়ে বোঝেন না এবং সচেতন নন তারা

অন্যান্য খরচের সময় ঠিকই খরচ করেন কিন্তু শিক্ষায় খরচের বিষয়ে কার্পণ্য করেন। যাদের আয় ২৫,০০০/- টাকা থেকে ৪০,০০০/- টাকাতাদের সংসারে মৌলিক খরচাদি চালাতে টাকা শেষ হয়ে যায় যেমন ঘরভাড়া, পরিবারের খাবার, শিক্ষা, চিকিৎসা, গ্রাম থেকে আসা আত্মীয় স্বজনের জন্য খরচ ইত্যাদি।

(চ) শিক্ষার্থীর স্বাস্থ্য ও পুষ্টিঃ

জরিপকৃত ১০ টি বিদ্যালয়ের মধ্যে ৪ টি বিদ্যালয়ের টয়লেট ব্যবস্থা ভাল অন্য ছয়টির অবস্থা ব্যবহার যোগ্য নয়। বিশেষ করে মেয়েদের জন্য ব্যবহার অনুপযোগী। মেয়েদের বিশেষ সময়ে তারা ভাল টয়লেট ব্যবস্থা না থাকায় সেই সময়ে বিদ্যালয়ে যেতে আগ্রহী হয় না। যার জন্য প্রতি মাসেই তাদের বিদ্যালয়ে অনুপস্থিত দেখা যায়।

শিক্ষার্থীদের বাড়িতে পাকা টয়লেট থাকলেও তা যথেষ্ট পরিষ্কার নয়। পরিবারের সকল সদস্য মিলে এই সকল টয়লেট ব্যবহার করেন বিধায় সব সময পরিষ্কার রাখা সম্ভব হয় না। এখানে মেয়েদের জন্য বিশেষ ব্যবস্থা নেই যার জন্য তারা স্বাস্থ্য ঝুঁকির মধ্যে থাকে।

যাদের পরিবারে মাসিক আয় ১৫,০০০/- টাকার নিচে তাদের মধ্যে খাদ্য ঘাটতি ও পুষ্টির অভাব, চিকিৎসার অভাব ইত্যাদি সমস্যা বিদ্যমান রয়েছে। তারা প্রয়োজন মত/ইচ্ছামত পুষ্টিকর খাদ্য যেমন - ডিম, দুধ, টাটকা সবজি, মাংস, ফল ক্রয় করতে পারে না। পুষ্টির অভাবের কারণে শিক্ষার্থীদের লেখাপড়ায় মনোযোগ থাকে না বলে তারা জানিয়েছে।

(ছ) অভিভাবকের সচেতনতাঃ

যে সকল বিদ্যালয়ে পরীক্ষার ফলাফল খারাপ হয়েছে, সরেজমিনে দেখা গেছে বিদ্যালয়গুলি ঢাকার মধ্যে হলেও সেগুলো অনুন্নত এলাকার মধ্যে অবস্থান করছে। ঐ সকল এলাকায় মানুষ প্রথাগত ভাবে শিক্ষার বিষয়ে সচেতন নন এবং শিক্ষায় কম গুরুত্বদিয়ে থাকেন। পুরাতন ঢাকার কসাইটুলী মুসলিম একাডেমীতে যে সকল শিক্ষার্থীরা পড়ে এবং তাদের অভিভাবকদের পেশা ও শিক্ষা থেকে দেখা গেছে তাদের পেশার কারণে তারা শিক্ষার গুরুত্ব অনেকে বুঝতে পারেন না।

একজন অভিভাবক মাংস বিক্রয় করেন অর্থাৎ কসাই হলো তার পেশা, সে চায় তার ছেলে তার ব্যবসায় সাহায্য করুক। এখানকার অভিভাবকগণ সচেতনতার অভাবে সঠিক সিদ্ধান্ত নিতে পারেন না। দেখা যাচ্ছে পহেলা বৈশাখ অনুষ্ঠানে পরিবারে বেশ খরচ করছেন তখন টাকার অভাব হচ্ছে না অথচ বিদ্যালয়ে পরীক্ষার ফি দেবার সময় তাদের সামর্থ থাকে না।

(জ) বিষয়ভিত্তিক শিক্ষকের অভাবঃ

বিদ্যালয়গুলিতে বিষয়ভিত্তিক শিক্ষকের অভাব রয়েছে। যার ফল শিক্ষার্থীর শিখন কার্যক্রম যথাযথভাবে সম্ভব হচ্ছে না। কসাইটুলী মুসলিম একাডেমীতে গণিত পড়ান একজন রসায়নের শিক্ষক, ইংরেজি পড়ান গার্হস্থঅর্থনীতির ম্যাডাম। শাহ আব্দুল হামিদ কালান্দর বালিকা উচ্চ বিদ্যালয়ে ইংরেজি পড়ান একজন সমাজবিজ্ঞান (সম্মান) প্রাপ্ত নতুন শিক্ষক। গণিত পড়ান একজন সিনিয়র ডিপ্লোমাধারী অবসর প্রাপ্ত কর্মকর্তা।

কোচিং সেন্টারগুলোতে কোন বিষয়ভিত্তিক ও অভিজ্ঞ শিক্ষক নেই। কোচিং সেন্টার সমূহের শিক্ষার্থীরাই বেশি ফেল করেছে। অন্যদিকে কোচিং সেন্টারের ও নন এম.পি.ও এই সকল বিদ্যালয়ের শিক্ষকদের সরকারিভাবে কোন প্রশিক্ষণ কার্যক্রম চললে সেখানে তাদেরকে ডাকা হয় না। ফলে শিক্ষাক্রমের উপর ও শিক্ষা বিষয়ে যে সকল প্রশিক্ষণ হয় সেগুলো তারা একেবারেই জানতে পারেন না। কোচিং সেন্টারের শিক্ষকদের বেশিরভাগই চুক্তিভিত্তিক ভাবে সেন্টারে পড়িয়ে থাকেন এখানে শিক্ষকের ড্রপ আউট হার বেশি।

(ঞ) বখাটেদের হয়রানিঃ

১০ টি বিদ্যালয়ের মধ্যে ৩টি বালিকা বিদ্যালয়। জরিনা শিকদার গার্লস স্কুল এন্ড কলেজের শিক্ষার্থী, অভিভাবক ও শিক্ষকগণ জানিয়েছেন বিদ্যালয়ের গেটে ও মেয়েদের যাওয়া আসার পথে শিক্ষার্থীরা বখাটেদের দ্বারা হয়রানির শিকার হচ্ছে। বিদ্যালয় ব্যবস্থাপনা কমিটি এ বিষয়ে কার্যকর ব্যবস্থা গ্রহণ করতে পারছেন না। ফলে শিক্ষার্থীদের বিদ্যালয়ে আসার হার দিনে দিনে কমে যাচ্ছে এবং মেয়েরা ক্লাসের দিন ক্লাসে উপস্থিত থাকছে না । এখানকার অধিকাংশ অভিভাবগণ সকালে তাদের কাজে চলে যান, মেয়েদেরকে বিদ্যালয়ে পৌঁছে দেয়া সকলের পক্ষে সম্ভব হয় না। বিদ্যালয়ের প্রধান শিক্ষক এই বিষয়টি নিয়ে খুবই চিন্তিত আছেন। এই বিষয়টি মেয়েদের পরীক্ষায় ফলাফলের উপর দারুন প্রভাব ফেলেছে।

(ট) ইন্টারনেট /ফেসবুক এর প্রভাবঃ

ফেল করা শিক্ষার্থীদের সাথে কথা বলে জানা গেছে তাদের আর্থিক অবস্থা ভাল না হলেও প্রায় সকল শিক্ষার্থীর নিকট স্মার্টফোন সেট রয়েছে। কারো কারো মতে তাদের ফেসবুকে চ্যাট না করলে একেবারেই সময় কাটে না। এর কারণ হলো বাল্যকাল থেকেই তাদের পাঠাভ্যাস গড়ে উঠেনি বইয়ের দিকে বা বই পড়ার দিকে কোন আগ্রহ নেই। দুর্বল শিক্ষার্থীরা ইন্টারনেট ব্যবহার করার বিষয়ে বেশ অভিজ্ঞ। দিনের অনেকটা সময় তাদের নেটব্যবহার করার পিছনে সময় চলে যায়। বিদ্যালয় কর্তৃপক্ষ বিদ্যালয়ে মোবাইল

আনতে নিষেধ করলেও শিক্ষার্থীরা তা শোনে না। অভিভাবকগণের সাথে আলাপ করেও স্কুল কর্তৃপক্ষ শিক্ষার্থীদের মোবাইল ব্যবহার বন্ধ করতে সমর্থ হয়নি।

(ঠ) গাইড বই এর ব্যবহারঃ

সাক্ষাৎকার দেওয়া সকল শিক্ষার্থীই গাইড বই ব্যবহার করেছে। (লেকচার, অনুপম, নিউটন, আদিল,পাঞ্জেরী) উল্লখিত গাইড বইগুলি থেকে শিক্ষার্থীগণ তাদের পরীক্ষার জন্য প্রশ্নউত্তর পড়েছে। এইসকল শিক্ষার্থীগণ লেখাপড়ায় পিছিয়ে থাকাবার কারণে মূল বই এর চেয়ে গাইড বই তাদের নিকট অতীব গুরুত্বপূর্ণ ও প্রয়োজনীয়। শিক্ষার্থীরা জানিয়েছে টেক্সট বই ভালভাবে না পড়ার জন্য তারা সৃজনশীল প্রশ্নের উত্তর ভাল ভাবে দিতে পারেনি এবং এই অংশে ফেল করার জন্য ফলাফল খারাপ এসেছে। বুঝে পড়বার চেয়ে মুখস্থ করার দিকে তারা বেশি জোর দিয়েছে। শিক্ষাথীর নিকট জিজ্ঞাসা করা হয়েছিল পরীক্ষায় ভাল ফলাফল করার জন্য তোমাদের পরামর্শ কি? তার উত্তরে শিক্ষার্থীরা নিম্নের পরামর্শ সমূহ উল্লেখ করেছে।

শিক্ষার্থীর ও পরামর্শসমূহঃ

উপলব্ধি

১) বেশি বেশি করে টেক্সটবুকপড়া প্রয়োজন। টেক্সটবুক ভাল করে বুঝে পড়তে হবে।
২) ক্লাসের সময় পাঠে মনোযোগ দিতে হবে।
৩) বিষয় না বুঝলে স্যারকে বার বার প্রশ্ন করে তা বুঝে নিতে হবে।
৪) সব বিষয়ে বেশি বেশি করে পড়তে হবে এবং সব বিষয়ের প্রতি গুরুত্ব দিতে হবে।
৫) নিয়মিতভাবে পড়ালেখা করতে হবে। শুধু পরীক্ষার পূর্বেই পড়লে হবে না।
৬) দুর্বল বিষয়ে বেশি বেশি চর্চা করতে হবে।
৭) পড়ালেখা শুধু করলেই হবে না, মনোযোগ সহকারে পড়তে হবে।

পরামর্শসমূহঃ

১) পরীক্ষায় সৃজনশীল প্রশ্ন সহজ করা প্রয়োজন।
২) পরীক্ষায় সৃজনশীল প্রশ্নের পরিমাণ কম হলে ভাল হতো [নম্বর বরাদ্দকম করতে হবে]।
৩) গণিতে সৃজনশীল প্রশ্ন না থাকলে ভাল হতো।

<u>শিক্ষা প্রশাসকদের সাক্ষাৎকার গ্রহণ ও আলোচনাঃ</u>

২০১৭ সালের এসএসসি পরীক্ষার ফলাফল খারাপ হওয়া শিক্ষার্থীদের বিষয় জানতে চাওয়া হলে ঢাকা জেলার জেলা শিক্ষা অফিসার, মোহাম্মদপুর থানা মাধ্যমিক শিক্ষা অফিসার ও মিরপুর থানা মাধ্যমিক শিক্ষা অফিসার নির্দিষ্টভাবে ফল খারাপ হবার কারণ সম্পর্কে বলতে পারেনি। জেলা শিক্ষা অফিসার জানান তার কাছে ফলাফলের কপি শিক্ষা

বোর্ড থেকে পাঠানো হয় না বিধায় তিনি ফলাফল বিষয়ে অবগত নন। জরিপকৃত ১০ টি বিদ্যালয় এর মধ্যে দেখা গেছে ৯ টি বিদ্যালয় থেকে কোচিং সেন্টারসমূহের মাধ্যমে বিপুল সংখ্যক শিক্ষার্থী রেজিস্ট্রেশন পূর্বক এস.এস.সি পরীক্ষায় অংশ গ্রহণ করেছে। এ বিষয়ে জেলা শিক্ষা অফিসার ও থানা মাধ্যমিক শিক্ষা অফিসে কোন তথ্য নেই। কোচিং সেন্টার থেকে যারা পরীক্ষায় অংশ নেয় তাদের বিষয়ে শিক্ষা অফিস সমূহে কোন তথ্য নেই।

কোচিং সেন্টার গুলোতে সরেজমিনে গিয়ে দেখা গেছে বিপুল সংখ্যক সরকারি বিনা মূল্যের বই শিক্ষার্থীর মাঝে বিতরণ করা হয়নি। এই সকল বই কোচিং সেন্টারের মালিকগণ অন্য কোন বিদ্যালয়ের নামে উঠিয়ে নিয়ে শিক্ষার্থীদেরকে বিতরণ করে থাকেন। প্রয়োজনের চাইতে বেশি সংখ্যক বই তারা উঠিয়ে থাকেন। সরজমিনে মিরপুরে আল নাহিয়ান হাইস্কুল থেকে এস.এস.সি পরীক্ষা দিয়েছিল ২৩৮ জন কিন্তু আল নাহিয়ান হাইস্কুলের শিক্ষার্থীর সংখ্যা ছিল মাত্র ৮০ জন। তথ্য থেকে দেখা গেছে ১৪ টি কোচিং সেন্টারের মাধ্যমে বাকীরা পরীক্ষায় অংশগ্রহণ করেছিল। ১৪ টি কোচিং সেন্টারের মাধ্যমে ১৫৮ জন শিক্ষার্থীর পরীক্ষায় অংশগ্রহণ করে পাস করেছে ১০৭ জন শিক্ষার্থী। অর্থাৎ কোচিং সেন্টারের মাধ্যমে অংশগ্রহণকারী শিক্ষার্থীদের পাসের হার ৬৭% যা পূর্বেই বলা হয়েছে।

এখানে লক্ষ্যনীয় যে ৬৭ শতাংশ পাস দেখে আপাত দৃষ্টিতে মনে হতে পারে যে পাশের হার অনেক বেশি। কিন্তু ২০১৭ সালে ঢাকা বোর্ডের এস.এস.সি পরীক্ষায় পাশের হার ছিল ৮০ শতাংশেরও বেশি। যাঁরা কোচিং সেন্টার পরিচারনা করে তারা যেমন ধুরন্দর তেমনি বুদ্ধিমানও বটে। তারা কয়েক বছরের প্রশ্নপত্র ঘেঁটে ঘুটে বের করতে পারে, সামনের বছর পরীক্ষায় কী কী প্রশ্ন থকবে। তারা সে প্রশ্ন বাছাই করে সাজেশন দেন, তার ষাট শতাংশ প্রশ্নই কমন পড়ে যায়। দ্বিতীয়ত উত্তরপত্র মূল্যায়নের ক্ষেত্রে উদার নীতি গ্রহণ করার ফলে নম্বর আরও বেশি উঠে যায়। কোচিং সেন্টারগুলোতে কোন বালাই নেই Learning outcome এর কোন চিন্তা ভাবনা নেই। সেখানে চলে প্রশ্ন উত্তরের ব্যবসা। প্রশ্ন দাও উত্তর লিখে দেবো। এর বেশি কিছু জানিনা। কাজেই পাশের হার দেখে বিভ্রান্ত হলে চলবে না। আমরা ভাই প্রকৃত শিক্ষায় শিক্ষিত জনগোষ্ঠী।

জেলা শিক্ষা অফিসার ও থানা মাধ্যমিক শিক্ষা অফিসার জানান সরকারি রেজিস্ট্রিকৃত বিদ্যালয়গুলি ছাড়া কোচিং সেন্টারগুলোতে কি হচ্ছে সে বিষয়ে তাদের থেকে কোন মনিটরিং বা সুপারভিশন ব্যাবস্থা না নেয়ার ফলে যত্রতত্র যে কেউ বিদ্যালয় খুলে ব্যবসা করতে সুযোগ পাচ্ছেন। তবে তিনি বলেন বিদ্যালয়ের পর্যাপ্ত সুযোগ সুবিধা না থাকলে সেখানে শিক্ষাকার্যক্রম চালাতে দেওয়া যায় না। এই বিষয়টি তাদের পক্ষ থেকে দেখা একান্ত প্রয়োজন। কোচিং সেন্টারের শিক্ষার্থীরা যেন মূল ধারায় বিদ্যালয়ে সংযুক্ত হয়ে

ভালভাবে তাদের শিখন সম্পন্ন করতে পারে সে বিষয়ে তিনি নজরদারী বাড়াবেন এবং সংশ্লিষ্ট সরকারি কার্যালয়ে যোগাযোগ পূর্বক ব্যবস্থা গ্রহণ করবেন বলে উল্লেখ করেন ।

৬. ফলাফল বিশ্লেষণ

এ গবেষণার প্রধান দুটি উদ্দেশ্য: একটি হল এস এস সি পরীক্ষায় তুলনামূলকভাবে খারাপ করার কারণ নির্ণয় করা ও অন্যটি হল ফলাফল ভাল পর্যায়ে উন্নিত করার জন্য কি কি ব্যবস্থা গ্রহণ যেতে পারে?
পরীক্ষায় খারাপ করার কারণ সমূহ খঁজতে যেয়ে ১১ টি প্রধান কারণ এই ফলাফল খারাপ করার পিছনে কাজ করেছে । সংগৃহীত তথ্য থেকে বিষয় গুলো উঠে এসেছে ।

শিক্ষক, শিক্ষার্থী, অভিভাবক ও শিক্ষা প্রশাসকদের নিকট থেকে প্রাপ্ত তথ্য ও উপাত্ত থেকে ফলাফল খারাপ হবার বিষয়গুলি বিশ্লেষণ করা হল ।

বিদ্যালয়ে শিক্ষার পরিবেশ :
পর্যবেক্ষণ ও সংগৃহীত তথ্য পর্যালোচনা পূর্বক দেখা যাচ্ছে যে, বেশীরভাগ বিদ্যালয়ে শিক্ষাকার্যক্রম ভালভাবে পরিচালিত করার জন্য সক্ষম ব্যবস্থা নেই । শিক্ষাবান্ধব পরিবেশ ছাড়া বিদ্যালয়ে উপযুক্ত শিক্ষাকার্যক্রম পরিচালিত হতে পারে না । শিক্ষার্থীদের সাথে আলোচনা করে জানা গেছে তারা বিদ্যালয়ে সুন্দর পরিবেশ না থাকার ফলে শিক্ষাকার্যক্রমে পূর্ণ মনোনিবেশ করতে পারেনা । পরিবেশ অনুকূলে না থাকার কারণে বিদ্যালয়ে অনুপস্থিতির হার বেশী থাকে । ভবন ঝুঁকিপূর্ণ হওয়ায় শিক্ষক শিক্ষার্থী স্কুলে নিরাপত্তা হীনতার মধ্যে অবস্থান করছে ফলে পাঠদান কার্যক্রমে সঠিকভাবে মনোযোগ দিতে পারছে না স্থানীয় বখাটেদের উৎপাতের জন্য মেয়ে শিক্ষার্থীরা বিদ্যালয়ে গমনাগমনের পথে বাঁধা তৈরি হচ্ছে । ফলে মেয়েদের ঝরে পড়ার হার বৃদ্ধি পাচ্ছে । পূর্ণ দিন ক্লাসে না থাকার জন্য পঠিত বিষয় সমুহ তারা পূর্ণভাবে বুঝতে পারছে না । ফলে তাদের ফলাফল খারাপ হচ্ছে । বিদ্যালয় গুলিতে পরিবেশ ভাল করবার জন্য ভৌত অবকাঠামো, স্থানীয়ভাবে সামাজিক পরিবেশ ও বিদ্যালয়ে শিক্ষাবান্ধব পরিবেশ তৈরি করা একান্ত প্রয়োজন । তাহলে শিক্ষার্থীদের লেখাপড়ার প্রতি আগ্রহ বাড়বে ও পর্যায়ক্রমে তারা ভাল ফলাফল করতে পারবে । এই সমস্যা সমাধানের জন্য সমাজের সচেতননাগরিক ও প্রশাসনের যথেষ্ট নজরদারি বাড়াবার প্রয়েজন রয়েছে ।

বিদ্যালয় ব্যবস্থাপনা ও প্রশাসন

জরিপকৃত বিদ্যালয় গুলোতে শিক্ষক, অভিভাবক ও ব্যবস্থাপনা কমিটি সদস্যদের সাথে আলোচনা ও তথ্য থেকে দেখা গেছে বিদ্যালয়ের অধিকাংশ প্রধান শিক্ষক রাজনৈতিক প্রভাবের মধ্যে থেকেই বিদ্যালয় পরিচালনা করছেন। তথ্য, উপাত্ত পর্যবেক্ষণ করে দেখা যাচ্ছে যে শিক্ষার্থীদের শিখন কার্যক্রম কিভাবে ভাল করা যায় সে দিকের চাইতে স্থানীয় রাজনৈতিক নেতাদের তোষামোদী করতেই প্রধান শিক্ষকগণ বেশী ব্যস্ত থাকেন। তথ্য সংগ্রহকালে দেখা গেছে পধান শিক্ষকগণ কেউ কেউ বিদ্যালয়ে অনুপস্থিত রয়েছেন। মাস শেষে তারা বেতন উত্তোলন করেন, প্রভাবশালী রাজনৈতিক ব্যক্তিদের ছায়ায় থেকেই তারা এ অনৈতিক কাজ করে যাচ্ছেন, যা মোটেই সমীচীন নয়।

একজন শিক্ষা ব্যবস্থাপক যদি বিদ্যালয়ের সার্বিক সকল খোঁজ খবর সহ সমস্যার সমাধান না করেন তাহলে ঐ সকল বিদ্যালয়ে ভাল শিক্ষা কার্যক্রম চলতে পারে না। রাজনৈতিক প্রভাবের কারণে অনেক ক্ষেত্রে যোগ্য শিক্ষক নিয়োগ করা যাচ্ছে না।

বিদ্যালয়ের ব্যবস্থাপনা কমিটি তাদের কার্যকর ভূমিকা রাখতে পারছে না। তথ্য পর্যবেক্ষণ থেকে দেখা যায় যে বিদ্যালগুলি বর্তমানে প্রধান শিক্ষক ও রাজনৈতিক প্রভাব ও তাদের ইচ্ছা অনুযাযী পরিচালিত হচ্ছে, ফলে শিক্ষাকার্যক্রম ভালভাবে পরিচালিত হতে পারছে না, যার জন্য শিক্ষার্থীদের ফল বিপর্যয় ঘটেছে। এ বিষয়ে শিক্ষা প্রশাসনের প্রয়োজনীয় সুপারভিশন ও মনিটরিং কার্যকরিভাবে বাড়ানো প্রয়োজন।

দুর্বল শিক্ষার্থী

শিক্ষার্থীদের সাথে কথা বলে, আলোচনা করে ও শিক্ষকদের সাক্ষাৎকারের ভিত্তিতে দেখা গেছে যে, শিক্ষার্থীদেরকে নিচের শ্রেণি থেকে দূর্বল অবস্থায় উপরের শ্রেণিতে উত্তীর্ণ করার ফলে শিক্ষার্থীরা বিষয় সম্পর্কে পরিস্কারভাবে বুঝতে পারে না। নিজের চিন্তা শক্তি ও বোধগম্যতা থেকে পরীক্ষার খাতায় লিখতে পারে না। ফলে তাদের শিখন ভিত দুর্বল হওয়ায় এই সকল শিক্ষার্থীদের পরীক্ষায় ফলাফল বিপর্যয় হচ্ছে। অভিভাবকদের সাক্ষাৎকার নিয়ে দেখা যাচ্ছে যে, অধিকাংশ অভিভাবক তাদের সন্তানদের শিক্ষার বিষয়ে যথেষ্ট সচেতন নন, তাদের সন্তানরা নিচের ক্লাস থেকে ভাল করে উপরের ক্লাসে উত্তীর্ণ হলে শিক্ষার্থীর জন্য সেটাই ভাল। অভিাবকরা বিষয়টি সম্পর্কে সচেতন নন। বিদ্যালয় পর্যায়ে শিক্ষার্থীর যথাযথ মূল্যায়ন ঘাটতি রয়েছে। ভাড়া করা ছাত্র দিয়ে প্রশ্ন প্রণয়ন করে কোচিং সেন্টারগুলো মূল্যায়ন করে থাকে। অভিজ্ঞ নন এমন কেউ নির্ভরশীল অভিক্ষা তৈরি করতে পারেন না। আদর্শ অভিক্ষা নয় এমন অভিক্ষা দ্বারা শিক্ষার্থী মূল্যায়ন বিপদজনক। আমাদের শিক্ষার্থীর ক্ষেত্রে সেটা ঘটে থাকে। নির্ভশীল নয় এমন অভিক্ষায় শিক্ষার্থীদের মূল্যায়ন হচ্ছে বিধায় শিক্ষার্থীর শিখনে ঘাটতি থেকে যাচ্ছে। ফেলকরা শিক্ষার্থীর সাথে কথা বলে জানা গেছে তারা এমসিকিউ অংশে ফেল করেছে। অর্থাৎ

বিষয় সম্পর্কে শিক্ষার্থীর বোধগম্যতার ঘাটতি রয়েছে ফলে তারা ফেল করেছে। যোগ্য ও অভিজ্ঞ শিক্ষক দ্বারা সকল ধরনের শিক্ষাকার্যক্রম পরিচালিত করবার জন্য সরকারকে ব্যপক ব্যবস্থা গ্রহণ করা উচিৎ।

আর্থিক সমস্যা

জরিপকৃত বিদ্যালয়গুলিতে প্রকট আর্থিক সমস্যা রয়েছে। ১০ টি বিদ্যালয়ের মধ্যে ৮টি বিদ্যালয়ই এমপিওভুক্ত বিদ্যালয় নয়। জরিপের সময় দেখা গেছে শিক্ষকদের ৩/৪ মাসের বেতন বাকি রয়েছে। এই সকল বিদ্যালয়ের শিক্ষকদের মাসিক বেতনের পরিমান ৩০০০/- থেকে ১০,০০০/- টাকা । আর্থিক সমস্যার কারণে বিদ্যালয়ের অবকাঠামোগুলো শিক্ষা বান্ধবভাবে তৈরি করা সম্ভব হয়নি। ভৌত অবকাঠামো দুর্বল হওয়ার জন্য পরিবেশগতভাবেও বিদ্যালয়গুলো সমস্যার মধ্যে রয়েছে।

অভিভাবকগণ তাদের আর্থিক অনটনের জন্য সময়মত তাদের সন্তানদের বিদ্যালয়ের টিউশন ফি দিতে পারে না। পরিবারের আয় থেকে দেখা যাচ্ছে যে তাদের মাসিক আয় ৩০০০/- থেকে ৪০,০০০/- টাকার মধ্যে। অভিভাবকগণ তাদের সন্তানদের জন্য টাকা খরচ করে কোচিং সেন্টারে পাঠাতে পারে না। ফলে দেখা যায় শিক্ষার্থীরা প্রত্যেক ক্লাসে দুর্বল থেকেই উপরের শ্রেণিতে উঠতে থাকে, ফলে তারা এসএসসি চূড়ান্ত পরীক্ষায় ফলাফল ভাল করতে পারে না।

অভিভাবকদের সচেতনতা

জরিপকৃত বিদ্যালয়গুলো শহরের অনুন্নত এলাকায় অবস্থিত এবং এখানে অনেক নিম্ন আয়ের লোক বাস করে । এ সকল এলাকার অধিকাংশ অভিভাবক শিক্ষার ব্যাপারে সচেতন নন। পুরাতন ঢাকার কসাইটুলি মুসলিম একাডেমী, শাহ আব্দূল হামিদ কালান্দার গার্লস হাই স্কুল, জরিনা সিকদার গার্লস হাই স্কুল এন্ড কলেজ এ যে সকল শিক্ষার্থী পড়ে তাদের অভিভাবকদের পেশা ও শিক্ষা বিশ্লেষণ করে দেখা গেছে পেশার জন্য তারা শিক্ষার গুরুত্ব বোঝে না। মাংস বিক্রয়কারী অভিভাবকগণ চান তার সন্তান তাকে কাজে সহযোগিতা করুক। অভিভাবকের শিক্ষায় আগ্রহ কম। দেখা গেছে বিভিন্ন উৎসবে তারা টাকা খরচ করছে কিন্তু শিক্ষা খাতে খরচ করার জন্য টাকার অভাব হয়ে যায়। বিদ্যালয়ের প্রধান শিক্ষকগণ জানিয়েছেন বিদ্যালয়ে অভিভাবক সমাবেশ হলে ১০০ জনকে অনুষ্ঠানে আসার জন্য অনুরোধ করলে ১০/১২ জন উপস্থিত হন। এতে করে বোঝা যায় শিক্ষার বিষয়ে তারা সচেতন নন এবং তাঁদেও সন্তানদের রেখা পড়ার ব্যাপারে কেন যেন উদাসীন। তাঁদের ধারণা লেখাপড়া করে কি হবে বরং ব্যবসা করা ভাল।

শিক্ষকদের শিক্ষাগত যোগ্যতা ও প্রশিক্ষণ

জরিপকৃত বিদ্যালয়ের শিক্ষকগণ সরকারিভাবে শিক্ষকদের যে সকল প্রশিক্ষণকর্মসূচী অনুষ্ঠিত হয় সে সকল কর্মসূচীতে অংশ গ্রহণ করার সুযোগ পান না। ফলে সংশোধিত শিক্ষাক্রম বিষয়ে তারা অবগত হতে পারেন না। প্রাইভেট কলেজ থেকে বি. এড ধারী কিছু শিক্ষক রয়েছেন। ক্লাস না করেই অধিকাংশ শিক্ষক বিএড সার্টিফিকেট অর্জন করেছেন। পর্যবেক্ষণ পূর্বক দেখা গেছে বি.এড. সার্টিফিকেট আছে এমন কিছু শিক্ষক শ্রেণিকক্ষে সফলভাবে শিক্ষার্থীদের পাঠদান কার্যক্রম সম্পন্ন করতে পারছেন না। কোচিং সেন্টারগুলোতে ছাত্রদ্বারা শিক্ষকদের কাজ সম্পন্ন করা হয়ে থাকে। সফল শিক্ষক পেতে হলে যোগ্য ও প্রশিক্ষিত শিক্ষকের বিকল্প নেই। বিষয়টি অনুধাবন পূর্বক সরকারের কার্যকর পদক্ষেপ গ্রহণ করা জরুরি।

বিদ্যালয়ে বিষয় ভিত্তিক শিক্ষক

কসাইটুলি মুসলিম একাডেমী বিদ্যালয়ে রসায়নে লেখাপড়া করে গণিত বিষয় পড়াচ্ছেন। গার্হস্থ্য অর্থনীতিতে লেখাপড়া করেছেন তিনি ইংরেজী পড়াচ্ছেন। শাহ আব্দূল হামিদ কালান্দার গার্লস হাই স্কুলে ইংরেজী শিক্ষক জাতীয় বিশ্ববিদ্যালয় থেকে সমাজ বিজ্ঞানে লেখাপড়া করেছেন। গণিত বিষয়ে পড়ান একজন ডিপ্লোমাধারী সিনিয়র অবসরপ্রাপ্ত কর্মকর্তা। বিষয় ভিত্তিক শিক্ষক না থাকর কারণে শিক্ষার্থীরা বিষয়গুলো ভালমত বোঝে না বিধায় তারা লেখা পড়ায় মনোযোগ হারিয়ে ফেলে। শ্রেণিকক্ষে ভাল পাঠদান কার্যক্রম সম্পন্ন করতে হলে বিষয় ভিত্তিক ও প্রশিক্ষণপ্রাপ্ত শিক্ষকের প্রয়োজন। বিদ্যালয়গুলিকে এ বিষয় বিশেষভাবে নজর দিতে হবে এবং বিষয় ভিত্তিক শিক্ষক নিয়োগ করতে হবে।

কোচিং সেন্টার

জরিপে উঠে এসেছে কোচিং সেন্টারগুলো কোন বিদ্যালয়ের মাধ্যমে শিক্ষার্থীদেরকে রেজিস্ট্রেশন পূর্বক এসএসসি পরীক্ষা দেবার ব্যবস্থা করে থাকে।জরিপকৃত ১০ টি বিদ্যালয়ের মধ্যে ৯ টি বিদ্যালয় কোচিং সেন্টার সমূহের শিক্ষার্থীদের রেজিস্ট্রেশন পূর্বক এসএসসি পরীক্ষায় বসবার সুযোগ করে দিয়ে আসছে। অভিভাবকগন অনেক ক্ষেত্রে জানেন না তার সন্তান কোচিং সেন্টার থেকে পরীক্ষা দিচ্ছে? না কোন আনুষ্ঠানিক বিদ্যালয়ের মাধ্যমে পরীক্ষা দিচ্ছে?

কিছু শিক্ষার্থীর নেতিবাচক ইতিহাস থাকবার ফলে অভিভাবকগণ আনুষ্ঠানিক বিদ্যালয়ের পরিবর্তে কোচিং এ ভর্তি করে সেখান থেকে অন্য বিদ্যালয়ের মাধ্যমে রেজিস্ট্রেশন পূর্বক এস.এস.সি পরীক্ষায় অংশগ্রহণ করার ব্যবস্থা করে থাকেন। [নেতিবাচক বলতে এখানে মাদকাসক্ত, বখাটে, অন্য বিদ্যালয় থেকে টিসি প্রাপ্ত, দুর্বল শিক্ষার্থী বোঝান হয়েছে]

কোচিং সেন্টারগুলোতে দেখা গেছে কোন বিদ্যালয় বা কলেজের ছাত্র দ্বারা শিক্ষকের কাজ করানো হচ্ছে। অধিকাংশ কোচিং সেন্টারে ডিগ্রিপ্রাপ্ত ও প্রশিক্ষণপ্রাপ্ত শিক্ষক নেই, শাহীন স্কুল এন্ড কলেজ, সেইফ স্কুল এন্ড কলেজ, চাইল্ড হ্যভেন ইন্টারন্যাশনাল স্কুল এন্ড কলেজ এগুলো সবই কোচিং সেন্টার। অথচ নাম দেখে মনে হয় স্কুল বা কলেজ। এ

সকল কোচিং সেন্টার চালাবার মত অবকাঠামো, শিক্ষক, ও অন্যান্য সুযোগ নেই অথচ তারা কোচিং সেন্টারগুলো চালিয়ে যাচ্ছে। এ বিষয়ে সরকারভিাবে যথাযথ ব্যবস্থা গ্রহণ জরুরি।

ইন্টারনেটের প্রভাব

শিক্ষার্থী ও অভিভাবকের সাথে সাক্ষাৎকার নিয়ে জানা গেছে যে ফেল করা শিক্ষার্থীর বেশীরভাগ অভিভাবকই আর্থিকভাবে সমর্থবান নন। তবে প্রায় সকল শিক্ষার্থীর নিকট স্মার্ট ফোন রয়েছে। শিক্ষার্থীরা কেউ কেউ উল্লেখ করেছে ফেসবুকে চ্যাট না করলে তাদের সময় কাটে না। বাল্যকাল থেকে তাদের পাঠ্যাভ্যাস গড়ে উঠে নাই। ইন্টারনেট ব্যবহার করে অনেকটা সময় ব্যয় হয়। বিদ্যালয়ে স্মার্ট ফোন ব্যবহার করা নিষেধ থাকলেও শিক্ষার্থীরা তা মানতে চায় না। অভিভাবকরা বলেছেন সন্তানেরা মোবাইল ফোন কম ব্যবহার করার কথা বললেও সে বিষয়ে গুরুত্ব দেয় না। শিক্ষর্থীরা এ বিষয়ে সচেতন নয়। সমাজ, অভিভাবক, বিদ্যালয় শিক্ষার্থীদের সচেতন করে তোলার জন্য সকলকে একযোগে কাজ করতে হবে। বিদ্যালয় প্রশাসন ও অভিভাবকগণকে শিক্ষার্থীদেরকে সচেতন করার জন্য বোঝাতে হবে।

গাইড বই

শিক্ষার্থীদের সাক্ষাৎকার নেবার সময় দেখা গেছে সকলের বাসায় গাইড বই রয়েছে। সকল শিক্ষার্থী পরীক্ষার প্রস্তুতির জন্য গাইড বই ব্যবহার করেছে। যে সকল গাইড বই ব্যবহার করেছে সেগুলো হল লেকচার, অনুপম, নিউটন, জুপিটার, আদিল ও পাঞ্জেরী। ফেলকরা শিক্ষার্থীদের নিকট মূল বইয়ের চেয়ে গাইড বই অতীব গুরুত্বপূর্ণ। শিক্ষার্থীরা জানিয়েছে টেক্সট বই ভালভাবে না পড়ার জন্য সৃজনশীল প্রশ্নের উত্তর তারা ভালভাবে দিতে পারে নাই এবং এই অংশ খারাপ করার জন্য তাদের ফলাফল খারাপ হয়েছে। বুঝে পড়ার চেয়ে তারা মুখস্ত পড়ার দিকে বেশী জোর দিয়েছে। ফেল করার পর তাদের করনীয় কি জিজ্ঞাসা করলে তারা জানিয়েছে

- টেক্সট বই ভাল করে বুঝে পড়তে হবে।
- মনোযোগ সহকারে লেখাপড়া করা প্রয়োজন
- নিয়মিতভাবে সারা বছর ধরে পড়তে হবে ও
- দুর্বল বিষয়গুলি বেশি বেশি চর্চ্চা করতে হবে।

পাঠ্যপুস্তকে উপস্থাপিত বিষয়গুলি যত্নসহকারে বুঝে পড়তে হবে। গাইডবই কখনও শিক্ষার্থীর প্রধান পাঠ্য বই হতে পারে না। প্রশ্ন ভিত্তিক উত্তর পড়ে ও পরীক্ষার খাতায় সেগুলো লিখে পরীক্ষায় পাশ করা গেলেও শিক্ষার্থীর শিখনে পাঠ্যপুস্তকের কোন বিকল্প নেই। গাইড বইকে নিরুৎসাহী করার জন্য অভিভাবক, শিক্ষক ও শিক্ষাবিদদেরকে কাজ করতে হবে। সরকার গাইড বইকে নিষেধ করলেও একটি অসৎ চক্র গাইড বই বাজারজাত করছে। গাইড বই বন্ধ করার বিষয়ে সরকারকে কঠোর ব্যবস্থা নিতে হবে।

মাঠ পর্যায়ে শিক্ষাপ্রশাসনঃ

ঢাকা জেলা শিক্ষা অফিসার, মিরপুর মোহাম্মদপুর থানা মাধ্যমিক শিক্ষা অফিসার ও একাডেমিক সুপারভাইজারদের নিকট ফলাফল খারাপ হবার বিষয়ে জিজ্ঞাসা করা হয়েছিল। তারা বিদ্যালয়গুলোতে খারাপ ফলাফল হবার বিষয়ে নির্দিষ্ট করে কিছু বলতে পারেনি। ঢাকা জেলার জেলা শিক্ষা অফিসার বলেছেন শিক্ষা বোর্ড থেকে ফলাফলের কপি তার কাছে পাঠানো হয় না বিধায় বিদ্যালয় ভিত্তিক ফলাফল বিষয়ে তিনি অবগত নন। জরিপকৃত ১০ টি বিদ্যালয় এর মধ্যে দেখা গেছে ৯ টি বিদ্যালয় থেকে কোচিং সেন্টারসমূহের মাধ্যমে বিপুল সংখ্যক শিক্ষার্থী রেজিস্ট্রেশন পূর্বক এস.এস.সি পরীক্ষায় অংশ গ্রহণ করেছে। এ বিষয়ে জেলা শিক্ষা অফিসার ও থানা মাধ্যমিক শিক্ষা অফিসে কোন তথ্য নেই।

সরেজমিনে গিয়ে দেখা গেছে কোচিং সেন্টারগুলোতে বিপুল সংখ্যক সরকারি বিনা মূল্যের বই শিক্ষার্থীর মাঝে বিতরণ করা হয়নি। প্রয়োজনের চাইতে বেশি সংখ্যক বই তারা অন্য বিদ্যালয় থেকে সংগ্রহ করেছে। শিক্ষা প্রশাসন এসব বিষয়ে কিছু জানেন না বলে জানিয়েছেন। শিক্ষা প্রশাসন উদাসীনভাবে কাজ করতে পারে না, অবশ্যই শিক্ষা প্রশাসনকে এ বিষয়ে প্রয়োজনীয় ব্যবস্থা গ্রহণ করতে হবে।

৭. সুপারিশ

গবেষণায় প্রাপ্ত তথ্য উপাত্ত ও ফলাফলের ভিত্তিতেএখানে কিছু সুপারিশ তুলে ধরা হল। সুপারিশ গুলির বাস্তবায়ন করা হলে সমস্যা গুলির অনেকাংশে সমাধান হতে পারে।

১. বিদ্যালয়ের সাথে কোচিং সেন্টার যুক্ত হয়ে শিক্ষা বোর্ড থেকে রেজিস্ট্রেশন পূর্বক শিক্ষার্থীদের পরীক্ষায় অংশগ্রহণ করার ব্যবস্থা করা হচ্ছে। এই সকল শিক্ষার্থী শিক্ষা প্রশাসনের কোন প্রকার তদারকি বা জবাবদিহিতার মধ্যে নেই। কোচিং এর মালিকগণ তাদের নিজের মত করে তাদের ব্যবসা চালাচ্ছেন, ফলে শিক্ষার্থী তার কাঙ্ক্ষিত লক্ষ্য অর্জন করতে পারছে না।

- কোচিং সেন্টারসমূহ যেন তাদের কার্যক্রম চালাতে না পারে, তার জন্য কর্তৃপক্ষকে যথাযথ ব্যবস্থা গ্রহণ করতে হবে। কোন স্কুলে নিয়মিত শিক্ষার্থী না হলে তাকে বোর্ডের পরীক্ষায় অংশ নিতে অনুমতি দেয় সমীচীন হবে না।

২. ক্লাসরুমে শিখন কার্যক্রম পর্যবেক্ষণ পূর্বক দেখা গেছে অধিকাংশ শিক্ষক শিক্ষার্থীদের মূল্যায়ন করতে পারদর্শী নন। শিক্ষার্থীর শিখন ফলপ্রসূ করবার জন্য শিক্ষার্থীর পূর্ব মূল্যায়ন অতীব প্রয়োজন। শিক্ষকগণ আদর্শ অভীক্ষা তৈরি করতে পারদর্শী নন। তারা শিক্ষার্থীদের যথাযথ মূল্যায়ন করতে পারেন না। ফলে প্রকৃত মূল্যায়ন না করেই শিক্ষার্থীদের উপরের ক্লাসে উত্তীর্ণ করা হচ্ছে এবং পাবলিক পরীক্ষায় তাদের ফলাফল খারাপ হচ্ছে। এক্ষেত্রে শিক্ষকগণ মূল্যায়নের উপর প্রশিক্ষণ গ্রহণ করবেন এবং অভিজ্ঞতা ও প্রশিক্ষণ কাজে লাগিয়ে যথাযথ মূল্যায়ন পূর্বক শিক্ষার্থীদেরকে শিখন ত্বরান্বিত করার চেষ্টা করবেন তাহলেই শিক্ষার্থীর পরীক্ষায় ফলাফল ভাল হবে।

- যথাযথ মূল্যায়নের মাধ্যমে শিক্ষার্থীরা যেন উপরের ক্লাসে উত্তীর্ণ হয় সে বিষয়ে বিদ্যালয়গুলি সার্বিক ব্যবস্থা গ্রহণ করবেন। যোগ্যতা ভিত্তিক শিক্ষাক্রম প্রবর্তন পর শিক্ষার্থীদের কৃতিত্ব মূল্যায়নের ক্ষেত্রে এর প্রতিফলন থাকতে হবে।

৩. বিদ্যালয়গুলোতে যোগ্য ও পারদর্শী শিক্ষকের অভাব রয়েছে। শিক্ষায় ডিগ্রি রয়েছে এমন শিক্ষকের সংখ্যা খুবই কম। আবার যাদের ডিগ্রী আছে তারা প্রাইভেট বিএড কলেজ থেকে ডিগ্রী নিয়েছেন। তারা স্বীকার করেছেন বি.এড ক্লাস না করেই তারা পরীক্ষায় অংশ গ্রহণ করেছেন এবং ডিগ্রী পেয়েছেন। এই ডিগ্রি নিয়ে তারা পারদর্শী শিক্ষক হতে পারেননি। এই সব বিদ্যালয়ে আর্থিক সুবিধা কম থাকার ফলে ঘন ঘন শিক্ষক অন্যত্র চলে যান, এ সকল বিদ্যালয়ে অভিজ্ঞতা সম্পন্ন শিক্ষকের সংখ্যা খুবই কম। বিদ্যালয়গুলোতে শিক্ষকের আর্থিক সুবিধা নিশ্চিত করা, অভিজ্ঞ ও পারদর্শী শিক্ষক দ্বারা শিক্ষাকার্যক্রম পরিচালিত করতে হবে, তাহলে শিক্ষার্থীর ফলাফল ভাল হবে।

- বিদ্যালয়ের শিক্ষা কার্যক্রম ভালভাবে চালাবার জন্য অভিজ্ঞ, যোগ্য,পারদর্শী এবং মূল্যায়নে বিশেষজ্ঞ শিক্ষক নিয়োগ করতে হবে।

৪. ভৌত অবকাঠামোর দিক দিয়ে ১০ টি বিদ্যালয়ের মধ্যে ৫ টি বিদ্যালয় শিক্ষা বান্ধব। ১০টির মধ্যে ৪টি তে খেলার মাঠ আছে।বিদ্যালয়গুলির মধ্যে ৮টি বিদ্যালয় এমপিও ভুক্ত নয় । ফলে সেগুলোর আর্থিক সংকট প্রকট।অর্থিকভাবে স্বচ্ছল নয়। আজিজিয়া ইসলামিয়া হাই স্কুল এন্ড কলেজ, কসাইটুলি মুসলিম একাডেমি, পাইক পাড়া স্টাফ কোয়ার্টার হাই স্কুল, শাহ আব্দুল হামিদ কালান্দার গার্লস হাই স্কুল, নবদিগন্ত হাই স্কুল ভবনগুলো জরাজীর্ণ। কোন কোন ক্ষেত্রে ব্যবহার উপযোগী নয়। ক্লাসরুমের অবস্থা উল্লেখিত বিদ্যালয়গুলোতে স্বাস্থ্যসম্মত নয়। টয়লেটগুলি ব্যবহার

উপযোগী নয়। শিক্ষার পরিবেশ ভাল করতে হলে বিদ্যালয় ভবনের উন্নয়ন করা একান্ত প্রয়োজন।

- বিদ্যালয়ের ভৌত অবকাঠামো যেন শিক্ষা ও পরিবেশবান্ধব হয় সে বিষয়ে কর্তৃপক্ষ ব্যবস্থা গ্রহণ করবেন।

৫. বিদ্যালয়গুলিতে বিষয়ভিত্তিক শিক্ষকের অভাব রয়েছে। যিনি যে বিষয়ের শিক্ষক নন তার জন্য অন্য বিষয়ে পাঠ দান কার্যক্রম চালবার ফলে শিক্ষার্থীদের শিখন কার্যক্রম যথাযথভাবে হচ্ছে না। সকল বিদ্যালয়ে আশু বিষয় ভিত্তিক শিক্ষকদ্বারা পাঠ দানের ব্যবস্থা করা প্রয়োজন।

- শিক্ষাক্রম বাস্তবায়নের জন্য বিদ্যালয়ের সকল শিক্ষক যেন প্রশিক্ষণ পায় তার ব্যবস্থা থাকতে হবে এবং বিষয় ভিত্তিক শিক্ষক নিয়োগ করে বিদ্যালয়ের শিক্ষা কার্যক্রম চালাতে হবে।

৬. সকল বিদ্যালয়ে আর্থিক লেনদেন স্বচ্ছতার সাথে সম্পন্ন করা হচ্ছে না। প্রধান শিক্ষক বিদ্যালয়ে শিক্ষার্থীদের থেকে টাকা সংগ্রহ করে ব্যাংকে জমা না করে নিজেই টাকা আত্মসাৎ করেছেন বলে অভিযোগ পাওয়া গেছে। কোনো কোনো বিদ্যালয়ের শিক্ষকগণ এই তথ্য দিয়েছেন।

- বিদ্যালয়ের সকল আর্থিক কার্যক্রম স্বচ্ছতার সাথে সম্পন্ন করতে হবে।

৭. বিদ্যালয়গুলিতে শিক্ষক, শিক্ষার্থী, অভিভাবক ও স্থানীয় জনপ্রতিনিধিদের মধ্যে যোগাযোগের ক্ষেত্রে ঘাটতি রয়েছে। শিক্ষা কার্যক্রমের মধ্যেও ঘাটতি রয়েছে। যার ফলে শিক্ষার্থীরা পরীক্ষায় ফলাফল খারাপ করেছে।

- শিক্ষক, শিক্ষার্থী, অভিভাবক ও শিক্ষায় সম্পৃক্ত সকলের সাথে সামাজিক যোগাযোগ স্থাপন পূর্বক বিদ্যালয়ের শিক্ষায় পরিবেশ ভাল করার লক্ষ্যে সকলে একযোগে কাজ করে বিদ্যালয়কে একটি শিক্ষা পরিবেশ বান্ধব শিক্ষা প্রতিষ্ঠানে উন্নীত করতে হবে।

৮. গার্লস স্কুলগুলোতে বখাটেদের উৎপাতের কারণে মেয়েরা ঠিকমত বিদ্যালয়ে ক্লাস করতে পারে না। বিষয়টি বর্তমানে বিদ্যালয় কর্তৃপক্ষ নিয়ন্ত্রণ করতে পারছেন না। এ বিষয়টি সামাজিক আন্দোলন ও সচেতনতার মাধ্যমে দূর করা প্রয়োজন।

- সামাজিক আন্দোলন গড়ে তুলে স্থানীয় বখাটেদের উৎপাত দূর করার ব্যবস্থা করতে হবে। প্রশাসনকে এ বিষয়ে বিশেষভাবে নজর দিতে হবে।