



## QUALITY OF SECONDARY EDUCATION: A COMPARATIVE STUDY BETWEEN SCHOOLS AND MADRASAHS IN BANGLADESH

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### ABSTRACT

The aim of this study assesses the Quality of secondary Education and identifies the performance of students studying at both school and Madrasah. This research is quantitative as well as qualitative approaches where is used both primary and secondary data. In this study, the researcher has used a questionnaire survey and interview methods to collect data from the field. The respondent of this study consists of students, assistant teachers, and academician from different public universities of Bangladesh. Using a random sampling procedure, data have been collected from the separate area and analyzed by ANOVA and regression test with the help of SPSS software.

In this research, there is a strong relationship among the factors of learning achievement based on curriculum, training of teacher, school infrastructure, evaluation procedure of students, and Quality of Education at the secondary Level. Curriculum-based knowledge of both institutions is inferior in the context of quality education. However, school students are advance than the students of the madrasah. Moreover, the trained teachers and infrastructure of schools are better than that of the madrasah sectors. Evaluation systems of both streams are defected.

The findings of this research are integrated effort to recover quality of secondary education. It prescribes to the government for trained teachers, appropriate evaluation systems to ensure the quality of the secondary school.

### 1. Introduction

At present, quality education for the creation of skilled human resources has become a storm of discussion and criticism in the education sector of Bangladesh. It is an essential component in the education sector. In the meantime we have achieved some tremendous success in this segment; such as, almost hundred percent enrolment in the primary stage, free book distribution from class one to ten, female stipend up to graduation level, increasing passing rate, gender discrimination reducing programs, and remarkable higher educational graduated (GoB, 2018). But the question arises about the quality education. Our literacy rate, access to various modes of knowledge, GDP growth, and other facilities are increasing day by day. But we are far behind from the quality education. We have a lot of tasks to do for quality education. Different organizations of the world are emphasizing on the quality secondary education.

Especially UNESCO, UNICEF, World Bank, and other regional organizations talk about quality education. Many scholars and organizations have explored on this contemporary issue in our country. But people with proper training or rightly learned men are scarce in our country. For this reason, to create a knowledge-based society, quality education is essential. There are different stages of education in Bangladesh such, as Pre-Primary and Primary Education, Adult and Non-Formal Education, Secondary Education, Technical Education, Madrasah Education, Higher Education, Engineering Education, Medical, Nursing and Health Education, Information and Technology, Business Studies, Agriculture Studies, Law Studies, etc. (NEP, 2010). Among these stages, secondary education is the most vital stage. Secondary school plays a substantial role in creating the next generation of the country. This layer is the terminal stage for some learners in developing countries. Besides, this tier is a bonding and bridging phase between elementary level and higher education. So quality is obligatory at the secondary level. After completing secondary school, most of the learners of Bangladesh involve themselves in different livelihood activities for some social and real causes. So this section is central to every learner's life.

There are four streams at secondary level of Bangladesh education system, such as, i.e. high school education, madrasah education, vocational education, and English medium school learning. There are three streams of secondary education in Bangladesh National Education Policy-2010. But researcher want to include the English Medium School learning as a stream of secondary level; Even though mass people do not have access to the English medium schools because of its high cost and scarce availability. Comparatively weak and back-ward students get themselves admitted into vocational education. Moreover, there is a very few numbers of students in the vocational education sector. Almost 97% learners read in general and madrasah education sectors. So, the researcher wants to concentrate in these areas. Moreover, some people in Bangladesh observe madrasah education in the sight of suspicion, and again some people think that madrasah education is accessible, and it is applicable for poor people. Nevertheless, researcher wants to include madrasah

education in this research program to present an objective picture. It will help the researcher to deliver a real scenario at the secondary level and to make a comparison between two segments of the secondary level of education in Bangladesh.

### *1.1 Research Problem*

Quality education at the secondary Level of the country considers enormous importance in the education sector. As this Level of education is an indispensable part of man's life, the quality education in this stage cannot ignore. The issues of quality education are discussed to the conscious citizens and academicians after the global conference in 1990 & 2000 (Beleid and Jaharadak, 2019). The world leaders have uttered to achieve quality education in United Nations General Assembly in 2015 for implementing Sustainable Development Goals within 2030. So, the quality of the secondary school is a grave concern in our country for a local and global perspective (UNICEF, 2016). In this study, the researcher has considered the streams of general education and madrasah education to fulfill the objective of this study mentioned later. Quality education provides all learners with capabilities, economically productive, and the development of sustainable livelihoods. People with quality education can contribute to establish peaceful and democratic societies and enhance individual well-being. Beyond there is not appropriate education system which can ensure quality of education in secondary level. So, these arguments are proved by the following article (King, 2013; Mushtaq and Khan, 2012; World Bank, 2002). Still now, in the context of quality education, there is no inclusive and tangible research in Bangladesh. If a nation wants to confirm quality in the education sector, influential elements of education should be identified. However, the administrations of the education sector need a clear conception about these essential factors. But in the global perspective technologically advanced countries have performed instructive research about educational influencing issues and found some better policies, on the topic of educational quality. Applying these strategies, many developed countries have got an optimistic outcome in educational performance (Al-Refael et al. 2019; Bilale, 2007 and Tang, 1998). With the advantage of knowledgeable human resources, they were also able to display an encouraging revolution in the socio-cultural amphitheatre (Raychauduri et al. 2010; Tang, 1998; and Yimin, 2003).

In the context of Bangladesh, secondary education can play significant contribution in the socio-economic and political status, economic growth, health status (HIV/AIDS, Reproductive health), reducing juvenile crime and conflict, promoting for further education of peoples. But secondary education cannot serve to achieve the goals of human development and poverty eradication because the authority considers quantity instead of quality in the secondary education sector (The daily star, 2015). There are many causes behind the present states of secondary education such as the lack of leadership and strategic management, qualified trained teacher, learner personal skills and participation, appropriate curriculum, quality dimensional infrastructure, evaluation procedure, financial resources, guidance and support services, monitoring-supervision, remedial actions, capacity development, training & research of teachers, pedagogy, knowledge management, learning environment, teacher-student ratio, creative curriculum, private coaching, dependence on guidebooks and notes, ineffective school management committee and many more (Akhter, 2017; Hermayawati, 2020). World Bank, (2019) reveals that heavy curriculum, complex textbooks, low-quality questions including MCQs, abuses in exam halls, and a few critical management and governance issues are responsible lack of quality education in secondary level. Secondary Education Quality and Access Enhancement Project (SEQAEP) identifies almost 92 percent of learners don't have the required competence in English, 89 percent of them lack proficiency in Bangla, and more than 82 percent of them cannot gain expected competence in mathematics in the secondary school (The daily sun 20 July, 2016).

Madrasah education is an integral part of the education system in Bangladesh the learners of this tier has an opportunity to learn both religious and modern culture. In general, madrasah education belongs to a backward position from the mainstream. This sector has been suffering from qualified trained teacher, appropriate curriculum, physical facilities, and supervision (Karim, 2018). By taking into accounts the above factors, the quality of secondary school demands more investigation to know the present condition of quality. This study has drawn a real picture of secondary school, including both general and madrasah education. Through this study, policymakers, intellectuals, and concerned personalities can formulate some policies that will help to take necessary steps for improving quality of secondary education.

### *1.2 Objectives of this study*

The purpose of this research is to identify the factors that stimulus in attaining quality of education both school and madrasah in Bangladesh. Further specifically, the study aimed to achieve the following objectives:

1. To investigate the learning achievement of learners of school and madrasah based on the curriculum that effect quality of secondary education.
2. To explore the educational training of teachers in achieving quality secondary education.
3. To find out the quality dimensional infrastructure that contributes to achieve quality education at secondary school.
4. To examine the evaluation process of students of schools and madrasah.
5. To observe the learning performance of the students studying at schools and madrasahs.

### 1.3 Significance of the Study

Quality of secondary school is an influential catalysing instrument, which provides mental, physical, ideological, and moral training to the learners in their practical lives. It is an instrument that helps to prepare an ideal man. Without real learning of education, any nation could not achieve the aims of education. Ensuring quality education, we can hope accountability, good governance, democracy, transparency, efficiency, and effectiveness (Inbaya and Palaniappan, 2020). Secondary school is crucial to a nation because most of the students enter the working sector, and the rest of the students attempt to get admission to higher education. Quality education at the secondary level can increase social, cultural, economic, political, and moral responsibility (World Bank, 2019). It is right to say that the welfare, prosperity, and security of a nation depend upon quality education. The better success of any country is pre-condition to the quality of a secondary school. In the present age of science and technology, gathering quality-based knowledge; a state makes a better position in the world.

Now, through real learning of education and, science and technology-based advanced knowledge, a nation can survive and succeed in competing with the country. It is very urgent to acquire quality education to get rid of poverty and deficiency. By quality education young learners achieve four standard components, such as, good governance, transparent, well-known regulations, and responsibilities. As a result, they become the responsible and skillful citizens in a state. Moreover, the secondary school helps to get rapidly changing environmental information, and global issues. There are four streams at the secondary level. Among them, madrasah and high school are the principal streams. About 97% of the learners do study in these two segments (Banbaies, 2019). But most of the people think that the pupils of the madrasah sector lag to acquire the curriculum base knowledge. Yet there is no research base evident behind this sort of assumption in our country. The researcher tries to mention these two segments of education in this study, which may help to explore the reality behind this. Besides, it has offered a different suggestion for policymakers and practitioners who are concerned about the effectiveness of quality education. The research findings can provide a clear picture and the latest scenario of quality education in secondary level of Bangladesh and identified the main barriers to quality education.

## 2. Literature Review

In the contemporary world, the quality of secondary education is the pre-requisite of proper human resource development, which advance a nation. Quality education came to the attention of the developed countries and concerned stakeholders after the First World War. Then different nations were able to ensure quality education in their country. But we could not give attention to a quality education because of the aggressive attitudes of Pakistani rulers. After the liberation war, the educationist and another stakeholder of the newly independent country began to think about the quality education at all tiers. But there are no sufficient researches in quality of secondary education. Beyond, a few scholars have tried to research about the issue of quality education in the context of Bangladesh like Somir (2005), Dass (2001), Begum (1996), Mahamud (2002), and Ahmed Shafa (1995). Moreover, some international agencies like UNICEF, World Bank, and Europe union have conducted some studies on quality education and give some prescriptions and guidelines to ensure it.

Shahed (2002) identifies the lack of planning, improper textbook, and limitations of quality for forming questions are shortcomings for quality secondary education. In the present education system, there are high volume of the syllabus, complicated textbooks, and imperfect examination system. All of these are obstacles to quality education. In these cases, authority cannot ensure decent quality secondary education in a country. Most of the students at the secondary levels could not acquire appropriate competencies-based knowledge in the relevant subjects with a minor exception of some meritorious students. Lack of quality in secondary education affects our economic, social, and political spheres everywhere, with deteriorating our moral conduct badly, although Bangladesh has achieved impressive progress in gross enrolment rate in primary and secondary level. However, the gender discrimination gap has reduced at a satisfactory level in the primary and secondary stages (BANBEIS, 2017). Beyond, there are vigorous challenges in front of the nation, such as poor quality of learning outcome and many unprivileged children still left out of the secondary schooling system (Niaz Asadullah, 2009; World Bank, 2019)). The researcher also discusses the way of improvement in the quality of secondary education such as, ethical schooling, good governance of school management, and leadership. There are positive correlations between the teachers' leadership and the student's learning that affect national and international development. The researcher also discusses the quality of teaching-learning scenario, which affects the quality of secondary education (Mulford, 2006). Qadhi, (2020) have focused that Curricula, textbooks and their related aspects provide the main framework and substance of academic learning. Moreover, researcher also identifies the curriculum, teacher and management may have significant positive impact on quality of secondary school. Jimenez (1995) found that the learning outcomes of the students of secondary education are higher than the learners of madrasahs' students. The researcher investigates, that the students of secondary school come more privileged family than those of madrasah students. After that, the learners of madrasah could not gain adequate knowledge in the context of the curriculum. He also discusses the students' socio-economic conditions in this study.

Norman & Adamson Sigalla (2013) explore that quality education is the pillar of all sorts of economic and social development all over the world. But the main barrier of quality education is profound knowledge of teachers in the

context of the insufficient budget in the education sector. Moreover, researchers have also discussed the poor quality of teacher training, absence of action-based examinations. Through research, Scholars (Laub, 1999; Barbuto & Wheeler, 2006; Chan & Mak, 2014) found that education and training of teacher has a positive impact on the quality of the secondary school. To ensure quality of secondary education, teachers must reveal conclusive competence in terms of knowledge, skills, mastery of the curriculum, vast experience of particular subject substance, teaching methods, assessment techniques, and commitment to tasks and high discipline (Dhar & Sikder, 2018; Kartamiharja, 2020). Mayer et al. (2008) found that a properly trained teacher contributed to present useful teaching-learning session by which student could get a real knowledge of specific stages in the schools. Education and training of teachers helped to improve quality education (Abozed & Salem 2020; Savelli, 2017; Sepahvand et al., 2015; UNICEF, 2020). Raisuddin, & Hussion (2004) identify the education system of the madrasah, particularly at the level of dakhil madrasah education and investigate potential entry point for necessary educational assistance to children and the teachers' qualification in madrasah sectors. The researcher found that the lack of training of teachers in the madrasah sector affects the poor quality of madrasah education. Muzib (2003) identifies that the background of Islamic knowledge and the introduction of madrasah education in the subcontinent, especially the position of madrasah education through the National Education Policy in Bangladesh, was the demand of the society or context. He also discussed the curriculum, syllabus, teacher's qualification, and teaching method of madrasah education, which are very important for the quality education in the madrasah sector. Qadhi, et al. (2020) has highlighted the significance of teachers' training for quality of teaching and qualified teachers. It will help to enhance the educational system. Moreover, different schools and colleges can improve their teacher development practices by using the discussed teacher training in their institutional processes.

The assessment process and educational expenditure per student is an essential tool to measure quality education, but these indicators do not maintain appropriately in developing countries. They practice the traditional evaluation process, which is not the right way to justify the educational goal of any nation and barrier to achieving quality secondary education (Braun, 2006; Marcel et al., 2018). Iqbal (2012) pointed out that quality education in a country indicates the ability of human resources. Student's evaluation system in the education sector is a very crucial element to improve education quality. The researcher shows that the evaluation procedure and quality education have a positive correlation. Hoodbhoy (1998) found that the assessment process of learning in a secondary level public examination system is very controversial in ensuring quality education. The researcher mentions the improper evaluation process is responsible for poor quality education. According to Johnson Dei (2019), quality education is concerned with a systematic planned, and sustained of the procedures and processes of an evaluation laid down standards of teaching and assessment.

Asma, (2018) have found that madrasah education cannot help to lead a modern life because of its out-dated traditional methods and techniques of the teaching-learning process, which has made a negative effect on the contemporary subject. This education system follows a backward form of practice with the immediate environment of expertise. Muslim students should strive hard to acquire knowledge of the modern world. Besides, he has discussed that there is no uniform curriculum for madrasah education. Most of the madrasah has no sufficient infrastructure for quality education. Madrasah education needs a delicate balance between the critical concept of religion, religious practices, and real-life-related knowledge. The madrasah students must adjust between two streams, and they must compete with the students from comprehensive the general line-up. The madrasah must focus on the relevance of Islamic teaching to a modern pluralistic, secular, and inclusive society (Karim, 2018). Quality education at the secondary level becomes downward. It has shown the condition of infrastructure, as well as the Socio-cultural and political environment, is declining gradually. Besides, they have investigated the teacher's students- ratio. But Most of Non-Govt. College does not get students at a satisfactory level. They also identify the irregular attendance of teachers, students, and the head of the institution as the obstacles for quality education. Trained and expert teachers are insufficient, and weak administration is a usual scenario at the College level (Hossain & Bhuiyan, 2009). Madrasah education is the present reality of our country, which emerged from the social, cultural, and political phenomena. This schooling system creates contextual and spiritual factuality. We cannot ignore this system in the present context. This system produces a lot of self-guided young, affects society, and creates potential human resources. So, the state should concentrate on enhancing and enriching this direction by ensuring quality education. At the same time, quality education is secured in the general trend. So, the concentrated authority should be safeguarded to maintain the standard quality in the secondary education sector. So, fundamental research is necessary to recover quality of education sector. So, there is no specific research from the perspective of Bangladesh on the comparison between the general education system and madrasah education to the best of my observation. This study is a way out to denote the policies to ensure quality education for both systems.

### *2.1 Research Hypothesis*

- H1: There would be a significant association between the learning achievement of learners of school and madrasah based on the curriculum and quality of secondary education.
- H2: There would be a positive relationship between educational training of teachers and the quality of the secondary school.
- H3: There would be a significant relationship between the quality dimensional infrastructure of the school and the quality of secondary education.

H4: There would be a positive relationship between the evaluation process of school-madrasah and the quality of secondary education.

H5: There would be no difference between the learning performance of the students studying at schools and madrasahs

## 2.2 Conceptual framework

Quality of education is a burning issue to make knowledge-based society in the globalization era. There are many indicators to measure the excellence in the secondary education sector. Above them researcher has chosen four indicators such as, learning achievement according to curriculum, education and training of the teachers, quality dimensional infrastructure, and evaluation process, to know the status of quality of secondary schools. The result of outcomes is the quality of secondary school. This conceptual framework is formulated in the following manner:

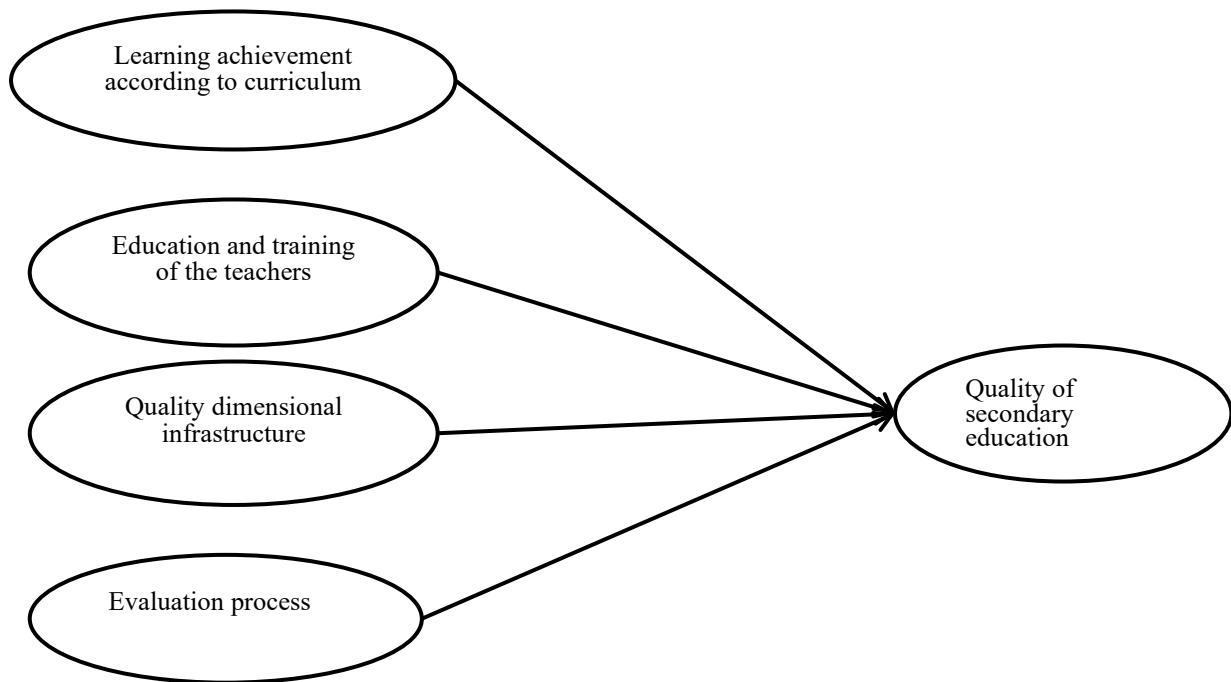


Figure 1: Conceptual framework

## 3. Research Methodology

In any study, methodology dependent on the situation of this research problem and its questions. This study has investigated the quality of secondary education, both general and madrasah stream. Mixed method strategies have been used in this study comprising qualitative and quantitative components. Data have been collected from primary sources as well as secondary documents. To realize the objectives of the research, the researcher has made textual analysis, in-depth interview, and the questionnaire survey method, which explore all research objectives and hypotheses.

### 3.1 Procedure of sampling and sample size

Sampling is the procedure used by a researcher to gather people, location or things to study. The sample is necessary because in many cases, it become very difficult to take a complete coverage of the population. In this research, simple random sampling and the purposive sampling have been used to select the respondents. Simple random sampling has been incorporated with students, and teachers who are betrothed unswervingly on teaching and learning activities. Researcher has chosen the head master, educational officers and educationist as respondents using purposive sampling. The total sample size of this study is 522. Distributions of respondents are as follows.

Table 1: Structure of Sampling Distribution

Study area	Category of respondent	Data collection tools	Sampling techniques	Number of respondents
Bangladesh	Assistant Teacher	Questionnaire survey	Simple random sampling	152
	Student	Questionnaire survey	Simple random sampling	354
	Head Teacher	Chick list	Purposively	7
	Educationist	In-depth interviews	Purposively	09
Total =				522

### 3.2 The Questionnaires

According to Kombo & Tromp (2006), a questionnaire is a research tool that can collect data over a large sample, where there is no opportunity for interviewer bias. By self-administered close-ended questionnaires, researcher has collected data understanding on quality of secondary education in Bangladesh.

### 3.3 Interview Guide

In qualitative study Interview is one of the data collection procedure which can interchange of information among two or many people for knowledge production in a research (Webster, 1985). Researcher has conducted interview with educational officer, headmasters and some educationists through face to face interview about different type of influential variable on quality of secondary education.

### 3.4 Data Analysis Techniques

According to the objectives and hypothesis of the study, Quantitative data have been analyzed with the help of SPSS 23.0 statistical software where adopted descriptive statistics, ANOVA regression, and factors analysis. Using Cronbach's alpha coefficients, the researcher has ensured the reliability and the validity of questionnaire items. Then qualitative data has been explained through methods of scientific explanation and of avoiding obscure, figurative and ambiguous language to make finding-based inferences more clear and distinct.

## 4. Data Analysis and Results

### 4.1 Results of Interviews: Quality Education in secondary Level

Learning outcomes are one of the crucial components of quality secondary education. The authority should have made conscious to the learners so that every student could acquire the proper knowledge from a specific level. Most of the key informants claim that a majority number of the students cannot achieve the experience according to their syllabus and curriculum. Because they are running behind the good result in the sense of GPA, i.e., GPA 5 (KII: RE 3). Vast numbers of intellectuals stated that our learners do not get proper and regular schooling in the specific session. If the learners get exact schooling in every corner of the country, they will be able to learn their lessons appropriately. But most of the students can not avail of the opportunity to gain knowledge of those institutions. As a result, maximum students pass the secondary school certificate without achieving the specific competencies (KII: CS, 1, 2, 3). A good number of key informant comments that most of the learners are running behind the excellent result instead of learning. Besides, they are promised in coaching center and private tuition to get excellent results in secondary school certificates. Moreover, the learners do not understand the textbook but depend on the coaching center and guidebooks. Therein the students are acquiring less knowledge according to the curriculum (KII: RE, 1, 2, 3, 4, 6). Maximum of the superintendents explains that the learners of madrasah stream do not get equal opportunity in the Higher education and jobs market. As a result, many guardians are not interested to send their children to learn in the madrasah stream. After all, comparatively less meritorious students get admission to the madrasah sector. So, the learners of this stream are not capable of managing the two types of knowledge, such as general syllabus and Islamic ideology related program. As a result, they receive partial instruction, and they do not contest the students of the general stream (KII: HT, 5, 8).

Some famous educationist remarks that the government changed the education mode extensively eight years ago and introduced the creative system at the secondary level. But maximum teachers cannot assimilate this education method because they could not get proper and sufficient training. So, they are not able to make the question and to evaluate the answer scripts rightly. Even the majority numbers of the teachers could not teach the students properly. As a result, students depend on coaching center and guidebooks. So, they are depriving of quality education in the educational institutions (KII: RE, 1, 3, 4). One of the renowned educationists points out that the existing examination system and

evaluation process are spiking the reality of education. The teacher is one of the essential components in school. Without a qualified and responsible teacher, no nation expects quality education. Besides, they also mention that a half portion of teachers does not get any training to improve their teaching profession (KII: RE, 2, 3, 5, 6). So, a few numbers of educationist explain that vast numbers of teachers have no proper knowledge about their own subject which they teach to the students. All most 90%-95% of teachers do not study to enrich their professional expertise. Despite lacking teachers' knowledge, the authority does not arrange sufficient professional development training for the teachers. Even most of the existing practice is not adequate in increasing the teacher's skill (KII: RE, 2, 3, 5). One the other hand, some interviewee states that a teacher becomes an expert through continuous training, but skilled and qualified trainers are very shortage in the training institutes. Besides, a trainee does not get training-oriented lessons properly. Even that is the teacher applying training in the classes or not? The authority does not monitor it. As a result, training of the teachers does not make fruitful in the education sector (KII: GO, 3).

Renowned educationists point out that there are no appropriate evaluation activities in the internal and external examination. They also have explained that some student has no qualification to attain pass marks, let alone they obtain GPA three or GPA four. Defective evaluation procedure discourages the students to avoid the hard study (KII: RE, 1,3, 5). Most of the headteachers reveal that the board authority gives a short time to evaluate the answering script and instruct to provide marks liberally. They also explain that if the students write a answer of question right or wrong, you will provide marks to pupils. Even because of carrying fail score, such kinds of these examiners do not get an answering script next year (KII: HT 2, 3, 4, 6). One of the interviewees points out that evaluation is the objective base and continuous process. But the authority does not maintain the evaluation system appropriately. Yet they change evaluation procedure from time to time. A student has not been evaluated all sides of learning by the present evaluation system. It measures content base knowledge, but these are not correct. He also mentions that the questions arise about the objectivity and standard of evaluation (KII: GO, 1). Most of the government officials comment that the examiners have assessed to the examinee liberally that will not give a positive outcome in the education sector. After all, the learners have overcome the secondary level without acquiring specific competence (KII: GO 1, 3).

Most of the key informants stated that the quantity of passing rate is getting importance to the quality through the present public examination evaluation process. They say to make a question in the base of the aim and objectives of education. They also discuss following the various steps of evaluation and train up the teachers. The authority should prescribe the significant appropriate matter for giving marks to the examinee in the public examination. Moreover, the examiner should evaluate the students according to Bloom Taxonomy evaluation methods (KII: RE 1,3,4, GO 1,2,3, & CS 1,3, HT 1,2,3,4). Some key informants say that now the nation is anxious. They are observing the defective education management system. The quality of education is decreasing day by day. Education is destroyed by the present examination system and evaluation process because without realizing the new education system, the authority is applying it half and half. So, the examination has become ridiculous to the scholars. Without receiving proper competence, the students are passing SSC and HSC examination (daily kalar kontho, 11 October 2016). A key informant states that the present students' evaluation process is not correct because the examiners do not judge language skill and complete relevance of a question to examine the students' examination answer sheet. He also explains that the teachers give marks to the students without reading the answer sheet (KII: RE, 4).

The infrastructural facilities of school contribute to acquiring the student's knowledge. Quality secondary education depends on infrastructure and other quality dimensions such as the size of the classroom and its environment, availability of lavatories and clean water supply, sufficient space for movement, furniture, separate latrines for girls, and safe environment up down in the school. These are affecting quality education in the school and madrasah. Most of the key information opines that good infrastructure is dynamic to acquire quality education. They also explain that supports and other quality dimensions are related to quality education indirectly. But the reality is more sorrowful in the rural regions. There is no sufficient fan-light and furniture in school and Madrasah of rural areas (KII: RE, 3.6). Some government officials say that a neat and clean school campus, free from the racket, and surrounded natural scenery are very suitable for the teaching-learning process. But such a kind of environment is the absence of the maximum educational institution. They also explain that most of school and madrasah is not seen hygiene condition inside of school campus. As a result, some students do not pay full attention to their studies (KII: GO 2, 3). Renowned educationists opine that a pleasant environment in the classroom is very crucial for active learning. They have also mentioned that light- air, sufficient space in class is essential for the learning environment. Moreover, educational aids such as a map, chart, glob, blackboard, whiteboard, chalk, and duster play a vital role in holding the learners' attention in the learning. But these facilities are not available in school and madrasah (KII: RE, 3, 5). Another Renowned educationist states that the internal environment of education, such as family, home study room of learners, and mental construction of learners, is crucial to quality education. This recognizes that most of the learners could not get a sound internal environment in their house. So, the teachers should encourage the students to learn academic knowledge (KII: RE, 5).

#### *4.2 Results of Questionnaire Analysis*

This section provides the consequences of the estimations towards attaining the objectives set in this study. The assumptions draw from the questionnaire survey of secondary-level teachers, students, and educationists in Bangladesh. The estimation results of the multiple regression model and One-way ANOVA show that the influence of learning

achievement according to curriculum, education, and training of teachers, the infrastructure of the school, and students' evaluation process of the secondary school is an essential factor in achieving quality education.

Before analyzing, validity of data is justified in the context of analysis. According to Harman, the researcher has conducted a single factor test to prove the data, which will show the concrete results of the study. Using SPSS 23.0 statistical software, the researcher has verified to know consistency of the questionnaire. Checking the measurement results of Table-1 shows that Bartlett Sphericity test is significant ( $P < 0.000$ ), and the values of reliability and validity both are above 0.7, indicating that the scales have excellent reliability and validity. Each item is respectively corresponding to each factor, which demonstrates that the levels have higher convergent validity. Through principal component, and exploratory factor analysis method, the items with load values less than 0.6 and cross loading more than 0.4 are accepted. The factors with a characteristic value higher than one are extracted. And then the measurement scale of this paper is determined.

Table 2: The Reliability and Validity

Variable	Factor loading	Eigen Values	Variance Explained (%)	KMO	Cronbach's Alpha
LAC	0.721	2.143	12.67	0.863	0.907
ETT	0.667	2.942	15.87	0.893	0.731
SIO	0.852	1.897	11.01	0.844	0.898
EPS	0.658	2.348	9.59	0.801	0.759
QSE	0.798	3.765	14.74	0.922	0.974

Table 3: Correlation Analysis

	LAC	ETT	SIO	EPS	QSE
LAC	1				
ETT	.754**	1			
SIO	.849**	.711**	1		
EPS	.817**	.687**	.787**	1	
QSE	.823**	.677**	.797**	.742**	1

LAC: Learning achievement according to the curriculum; ETT: Education and training of teacher; SIO: Infrastructure of school and other quality dimensions; EPS: Evaluation process of students in school and madrasah; QSE: Quality secondary education.

Table 4: The Status of the Effect of Independent Variable towards Quality Education in Secondary level

Model	Sum of Squares	Df	Mean Square	F	P-value
Regression	87695.352	4	28643.357	113.672	0.001
Residual	59654.234	264	213.162		
Total	147349.586	268			

Dependent Variable: QSE

Predictors: (Constant), LAC; ETT; SIO and EPS.

According to the ANOVA or the F test, the calculated value of the F test is 113.672, and the P-value is 0.001, which is less than 0.05. So, the test is statistically highly significant. The regression model can be used to predict acquiring quality secondary education based on learning achievement according to curriculum, education, and training of teacher, infrastructure school, and other quality dimensions, the evaluation process of school, and madrasah, respectively.

Table 5: Multiple Regression Analysis of LAC, ETT, SIO, and EPS towards Achieving Quality Education

Model	Unstandardized Coefficients		Standardized Coefficients	T	P-value
	B	Std. Error	Beta		
Constant	0.265	5.797	0.302	0.061	0.961
LAC	0.293	0.065	0.257	5.584	0.000
ETT	0.304	0.053	0.325	6.791	0.001
SIO	0.427	0.041	0.403	9.178	0.000
EPS	0.204	0.039	0.272	8.659	0.002



Note: LAC: Learning achievement of the curriculum; ETT: Education and training of teacher; SIO: School infrastructure and other quality dimensions; EPS: Evaluation procedure of students.

Table-5 demonstrate that there is a positive relationship among learning achievement based on the curriculum, education, and training of teacher, school infrastructure, and other quality dimensions and evaluation procedure of students. LAC, ETT, SIO, and EPS (because P-values 0 these, factors are less than 0.05) are the essential elements to develop quality education at the secondary level. H1 states that, there would be a significant association between the learning achievement of learners of school and madrasah based on curriculum and quality of secondary education. Hair et al. (2010) present that in the case of the path coefficient value minimum 0.15 and above, the result will be considered as statistically significant. In this aspect, -regression model, reveals that the values of the coefficient 'learning achievement based on the curriculum' of secondary school are 0.257, 0.293 standardized and unstandardized coefficients, respectively. So the quality of secondary education is significantly affected by learning achievement based on the curriculum. Besides, the p-value is 0.000, which is less than 0.05. Therefore, this research accepts Hypothesis 2. The educational training of the teacher influences the quality of education at the secondary level.

The results will consider as statistically significant, if the path of coefficient value is minimum 0.15 and above (Hair et al., 2010). In this aspect, the regression model reveals that the values of coefficient pragmatism education and training of teachers in secondary schools are 0.325, 0.304 standardized, and unstandardized coefficients, respectively. So educational training of the teacher significantly affects quality education at the secondary level. Since the p-value is 0.001, which is less than 0.05, the present study has accepted hypothesis 2. H3 presents that, the quality dimensional infrastructure of the school influences on quality education at the secondary stage. Hair et al. (2010), reveal that the path coefficient value should be minimum 0.15 or above then it will be statistically significant. In this aspect, the regression model table 3 depicts that the value of coefficient pragmatism quality dimensional infrastructure of school at the secondary level is 0.403, 0.427 standardized and unstandardized coefficients, respectively. Besides, the p-value is 0.000, which is less than 0.05. Therefore, this research accepts hypothesis 3. This study presents that, the quality of secondary education influence by the evaluation procedure of students. Hair et al. (2010), state that the path coefficient value should be minimum 0.15 or above. Then it will be statistically significant. In this aspect, the regression model exposes that values of the coefficient pragmatism evaluation procedure of students at the secondary school are 0.272, 0.204 standardized, and unstandardized coefficients, respectively. So, students' evaluation procedure positively impacts on the quality of secondary education. Moreover, the p-value is 0.002, which is less than 0.05. Therefore, this research has accepted hypothesis 4.

Table 6: Consequence of learning achievement based on the curriculum, educational training of teachers, quality dimensional infrastructure of school, and student's evaluation procedure on quality secondary education

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.798	0.672	0.622	15.231

Table 6 indicates that the value of coefficients of determination (R<sup>2</sup>) is 0.672, which means 67.2% variance in quality education is predictable from learning achievement based on the curriculum, education, and training of the teachers, the quality dimensional infrastructure of the school, and evaluation procedure of students at the secondary level. The quality of secondary education is influenced 32.8% by the other factors. The researcher touches the ultimate decision, that if the learning achievement based on curriculum, educational training of the teachers, quality dimensional infrastructure of the school, and students' evaluation procedure is increased the quality of secondary education will be improved.

Table 7: mean rank test analysis

Variables	Respondents of Schools and Madrasahs	N	Mean Rank	Sum of Ranks
LAC	Secondary school	275	288.09	79223.50
	Dakhil madrasah	205	176.67	36216.50
	Total	480		
ETT	Secondary school	275	308.73	84901.00
	Dakhil madrasah	205	148.97	30539.00
	Total	480		
SIO	Secondary school	275	296.43	81519.00
	Dakhil madrasah	205	165.47	33921.00
	Total	480		
EPS	Secondary school	275	290.38	79855.00

	Dakhil madrasah	205	173.59	35585.00
	Total	480		
QSE	Secondary school	275	294.29	80931.00
	Dakhil madrasah	205	168.34	34509.00

Table 7 indicates that the quality of a secondary school is higher than in the madrasah sector. Overall, the mean rank test analysis in this study is the highest means rank of the secondary school than the madrasah education. In this case, the quality of secondary school is higher than the madrasah segment. Because table 6, shows that the mean rank of the learning achievement of school students is 289.88, and madrasah students are 174.26, i.e., the students of schools are almost two times higher than the madrasah students in the perspective of quality education.

Table 8: Test Statistics

	LAC	ETT	SIO	EPS	QSE
Mann-Whitney U	12806.00	14470.00	13394.00	13439.00	14609.00
Wilcoxon W	33921.00	35585.00	34509.00	34554.00	35724.00
Z	-10.232	-9.125	-9.841	-9.811	-9.033
Asymptotic Significance (2-tailed)	0.000	0.000	0.000	0.000	0.000

This table shows the actual significance value of the test. Precisely, the table provides the test statistic, U statistic, as well as the asymptotic significance (2-tailed) P-value. From this analysis, the researcher can arrive at the final judgment in the context of the quality level at secondary school that the quality of secondary education is significantly higher than the Dakhil madrasahs as the Mann-Whitney U test statistic is 14609.000, and asymptotic P-value is 0.000.

Table 9: Group Statistics

	School type	N	Mean	Std. Error Mean
MARKS	School	241	3.1876	.0679
	Madrasah	105	2.1371	.0705

Table 9 reveals the mean values of the two school students. Here the school students have a higher mean than madrasah students. This mean indicates that the school's students are higher learning performance than the madrasah students.

Table 10: Independent Samples Test

	Learner's Test for Equality of Variances	t-test for Equality of Means								
		F	Sig.	t	df	Sig. (2-tailed)	M.D	S. E Difference	95% Confidence Interval of the Difference	
									Lower	Upper
The score of school and madrasah' learners	Equal variances assumed	20.199	.000	9.293	344	.000	1.05041	.1131	.8280	1.2727
	Equal variances not assumed			10.727	281.735	.000	1.05041	.0979	.8576	1.2431

Table 10 exposes the group means are profoundly dissimilar because the value in the "Significance (2-tailed)" row is less than 0.05. The Group Statistics table indicates the madrasah students have a lower mean score than the students of general stream. Therefore, researcher rejects the null hypothesis and concludes that school students have higher achievement in learning performance than madrasah students.

## 5. Discussion of the findings

This research aimed to enquire the influential factor of learning achievement according to curriculum, educational training of the teachers, quality dimensional infrastructure of the school, and students' evaluation procedure on quality of secondary education. A mixed-method strategy has been exerted, comprising qualitative data from face to face interviews with 9 educationists and 7 headmasters and quantitative data from the questionnaire. Based on the qualitative data, researcher has inferred that most of the learners are running behind the excellent result in the sense of GPA, i.e., GPA 5 instead of learning, understanding of textbook, and skills. Besides, the learners depend on coaching center and private tuition to get excellent results in secondary school certificates. So the students are acquiring less knowledge, skill and life competence according to the curriculum. Moreover defective student's evaluation procedure and lack of training of teacher is responsible for less quality of secondary education.

This study also attempted to understand that how much effect dependent variable on independent variable in the context of quality of secondary education in Bangladesh by learning achievement based on the curriculum, education, and training of the teachers, the quality dimensional infrastructure of the school, and evaluation procedure of students. Multiple regression analysis result shows that learning achievement of curriculum has a significantly positive impact on quality of secondary education ( $\beta=0.257$ ,  $P<0.000$ ). This verifies that there is significant relationship between the students learning achievement and quality education. ETT plays an obviously regulating role between the LAC and the QSE. ETT has positive influence on quality of secondary education ( $\beta=0.325$ ,  $P<0.001$ ). There is optimistic correlation between sufficient training of teacher and quality secondary education in Bangladesh. The quality dimensional infrastructure of school has a significantly positive effect on quality secondary education ( $\beta=0.403$ ,  $P<0.000$ ). However students' evaluation procedure has significantly positive impact on QSE ( $\beta=0.272$ ,  $P<0.002$ ). According to mean rank test, independent sample t-test and Mann-Whitney U test explore that Academic performance of school students is comparatively better than that of madrasah students. Coming to the last frontier of the discussion it can be assumed if authority increase 0.01 unit facility of the training of teacher, physical facilities of school and students evaluation procedure, the quality of education must be developed 0.01 units. Subsequently this is statistically ascertained that quality of secondary education is impressed by students' learning achievement, training of teacher, physical facilities of school and students evaluation procedure. The findings suggest that students' learning achievement, training of teacher, physical facilities of school and students evaluation procedure are essential components to advance education quality at secondary level in Bangladesh.

## 6. Scope of Further Research, Recommendation and Conclusion

### 6.1 Scope of Further Research

This study has uncovered numerous types of quality secondary education in Bangladesh. This contemporary issue is essential in locally and universally where quality education is needed to implement the sustainable development goals within 2030. There are wide ranges in the field of research in quality of secondary education. So, this study does not fulfil all sides of quality secondary education. After all this study has focused only four elements, i.e. i) curriculum base knowledge, ii) Educational qualification of teachers and their training, iii) Evaluation and steering of school education, iv) Infrastructure, and other quality dimensions. Whereas other aspects like involvement, in tertiary education, parental participation, Drop-out rates, Completion of secondary school, and educational expenditure per student can be addressed in further research. Moreover, research can be done to identify political interference, and their impacts on quality education. Even that there is scope to research the impact of principal administrative chief in initiating transformation towards quality secondary school. Besides there is some untouched aspects, which can be relevant and exciting areas of further research.

### 6.2 Implication of the Study

Government has a moral responsibility to ensure quality education. So the present study recommends that the government should take a step into the following issues.

- I. The teacher's appointment system should be fare so that the brilliant job seekers can hold the relevant job in showing their best performance in the competitive examination.
- II. The evaluation system of a public examination answer sheet should be perfect and to bring accuracy so that every student will be adequately judged. Even those who are not qualified do not overcome the public exam or get a qualification certificate.
- III. Education Ministry should guide for teacher practical professional training so that teachers can get pedagogical knowledge. Notably, the authority should train up every headteacher as skilled mentors for the keen observation of the teaching-learning process in his institution.
- IV. There will be upgrading salary structures and status of the secondary school teachers so that meritorious students are interested in coming to the teaching profession. Moreover, the authority should carry on the promotion system, so that every teacher gets promotion according to merit.

- V. The policy maker should arrange an excellent laboratory in every secondary school. If it is not possible for the administration, they will establish a productive, complete science laboratory in every Union council. Every school can perform his practical activities by turn in that of the laboratory.
- VI. Generally, the government needs to consider significant changes to the curriculum, teacher education, and development, as well as public examination assessment framework. Besides, the policymakers should formulate the textbook in the real-life oriented at least 75%.
- VII. The teacher is the most vital component to ensure the quality of education at the secondary level. So they should be friendly, co-operative, and supportive of student learning.
- VIII. Prioritize the provision of quality secondary education through redoubling investments in the teachers' training program and mentoring teaching-learning process, monitoring school & madrasah, and the appropriate implement of the curriculum.
- IX. Authority should reduce the number of subjects from class 3 at primary level to class 12 at the higher secondary, and simplify text books so that an average student can understand the basic content, and establish question banks for each subject will have positive impact on quality.
- X. Universally, the provision of QSE will be ensured when students are ready and to engage willingly in learning and optimistic about achieving the goal.

### 6.3 Conclusion

Teachers and guardians are the vital factors in ensuring quality education at the secondary level. With proper training and efficiency, a teacher becomes ideal and perfect in his professional area. Teachers' training is mandatory to make available quality education at the secondary level, but the real picture is different. A vast majority of teachers have not gotten a chance to strengthen their profession in achieving the quality of education at the secondary level. A significant number of teachers have no pedagogical knowledge. Both teachers and guardians think that the present evaluation system is deficient in ensuring quality education at the secondary school. Moreover, teachers and guardians believe that the authority directly orders to evaluate the answer script relaxation way. The teacher's salary is not sufficient to lead his livelihood. So they are to engage to lead their lives in other earning activities. For this reason, they do not pay full attention to teaching. All most teachers are involved in additional earning sources. To ensure quality education, guardian participation in children's education is essential because they can play a significant role in their children's learning. But many guardians cannot participate in the children's education efficiently.

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