



The Status of Geography and Environmental Studies at Secondary Level Education in Bangladesh

Mst. Nazira Akhter Rithu¹, Md. Mizanur Rahman^{2,3*} and Abdullah Al-Maruf¹

¹Department of Geography and Environmental Studies, University of Rajshahi, Rajshahi-6205, Bangladesh.

²Department of Fisheries Technology, Patuakhali Science and Technology University, Dumki, Patuakhali-8602, Bangladesh.

³Department of Food Science and Technology, Tokyo University of Marine Science and Technology, Tokyo, Japan.

Authors' contributions

This work was carried out in collaboration among all authors. Authors MNAR and AAM designed the study, wrote the protocol and conducted the research. Author MMR wrote the first draft of the manuscript, managed the literature searches and analyses of the data together with author MNAR. All authors read and approved the final manuscript.

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ABSTRACT

The study of geography and environmental studies deals with various environmental challenges i.e. climate change, natural disasters, sea level rise, ocean environment degradation, urban pollution so on. Due to the geographical location of Bangladesh, these incidents are regular phenomena and the people of this country have to adapt these kinds of challenges. To face the onslaught of natural disasters, the knowledge of geography and environmental studies is very crucial. However, the status of this knowledge is almost obscure in the country's education sector. Realizing the fact this present study attempted to investigate the entire condition of geography and environmental studies education and its limitation at secondary level in Bangladesh. A sample of secondary level educational institutions (n=20) under the education board of Rajshahi has been used to collect data for a period of ten months in 2012. Both primary data and secondary data have

*Corresponding author: Email: mizanft01@hotmail.com;

been used in the present study and the data were analyzed by various relevant statistics. The findings of the study represent that in the secondary level education the status of geography and environmental studies was not so satisfactory though the students have some basic idea about this subject. The reasons beyond the negative results are that the disinterest and discriminative approaches among the students, teachers and guardians as well as lacking of institutional facilities. At last but not the least, well planning, managements, monitoring, awareness building among the students, teachers and guardians, modifying and simplifying the teaching method can enhance the quality of geography and environmental studies education at secondary level.

Keywords: Bangladesh; geography and environmental studies; environmental challenges; secondary level education.

1. INTRODUCTION

The geographical position of Bangladesh is very important to the world map as it is vulnerable to different natural disasters. Owing to the environmental challenges i.e. climate change, natural disasters, sea level rise, ocean environment degradation, urban pollution etc. and the people of this country to keep conscious about these phenomena, the knowledge of geography and environmental studies is very important. In the context of this requirement, geography and environmental studies education was incorporated into the secondary education level of this country on the decade of 1980s. It is noteworthy that the subject of geography and environmental studies in the secondary level as a distinct text book was not incorporated for each individual class, but as some distinct classes. Later in 1995, the text book of 'Geography and Environment' was expressed by National Curriculum and Text Boards (NCTB). Since 1996, the new text book was introduced as an elective subject in the curriculum at secondary level education for humanities students of class IX-X and classes XI-XII whereas for classes VI-VIII, geography and environmental studies was incorporated as a part of the text book of 'Social Science' which are running until the present time by amending from time to time [1]. The status of environmental education at higher level studies in Bangladesh has been explored by some scientists [2]. However, the entire qualitative condition of geography and environmental studies education at secondary level in Bangladesh is obscure and studies are almost absent in the area of present study. Furthermore, according to the demand of the era the curriculum of geography and environmental studies has to be developed as like English secondary schools [3].

When education is considered to be a vital issue it is now an important time to act. Therefore, it is

necessary to focus on geography and environmental studies as an essential subject, and evaluate how far it can contribute to the improvement of education in Bangladesh. Successful geography and environmental studies education has a potential of changing peoples' mind-sets, and therefore can have a great impact on development processes in the education sector. So, focusing on geography and environmental studies as an essential subject at secondary school level, it is necessary to explore how far this subject can contribute to the improvement of education in Bangladesh.

On the last few decades a number of studies focused on school geography education within different national contexts [4]. Moreover, little literature have included some more empirically-based overviews of geography education at either the global, international, or national scales [5,6]. The extent to which these overviews focus on similar aspects of practice obviously varies. However, the following tend to be recurring themes: the place of geography and environmental studies in the curriculum approaches to teaching of this subject, content of the subject curriculum, and students' views about their geography and environmental studies education. The assessed performance of students in geography and environmental studies has also been addressed, often implicitly rather than explicitly, within these studies. This theme is explored here, with the aim of providing a window on entire status in assessment in geography and environmental studies education at secondary schools in Bangladesh at the 21st century. Our paper investigates current and emerging assessment issues in Bangladesh and high-lights implications for the wider geography and environmental studies education community. The importance of this research is therefore that it helps geography and environmental studies educationists from different contexts to assume the condition of their subjects, whilst providing an

impetus for policy makers, subject associations and academics to address raised issues.

The swatches of students' views as well as their guardians' opinion have to be examined in the light of present position of geography and environmental studies education in Bangladesh. It should be noted that this paper focuses sharply on the secondary education of Rajshahi board and the findings of our study could be generalized to other educational boards of Bangladesh, where there are same policies and practices adopted. The present study elucidates national trends of assessment in geography and environmental studies through the individual stories of secondary level educational institutions, whilst offering points for comparison with other national or international contexts. The aims of the research were to evaluate the state of geography and environmental studies in Bangladesh secondary level education by regarding the two key facts - assessment of the qualitative status of geography and

environmental studies education and find out the limitations of this education.

2. METHODOLOGY

2.1 Research Design and Tools

Primary data were collected from the 20 institutions (about 9% secondary schools and colleges) under the board of Rajshahi for a period of ten months (March to December) in 2012. The main research instrument was a questionnaire, which was followed up by a semi-structured interview between the students and the researcher from the department of Geography and Environmental Studies under the University of Rajshahi. The schools selected for use in the study comprised an opportunity sample (see below). All the questionnaires that were sent to schools were completed. This response rate is high because the questionnaires were sent directly to the Heads of Institutions, having previously gained their agreement to take

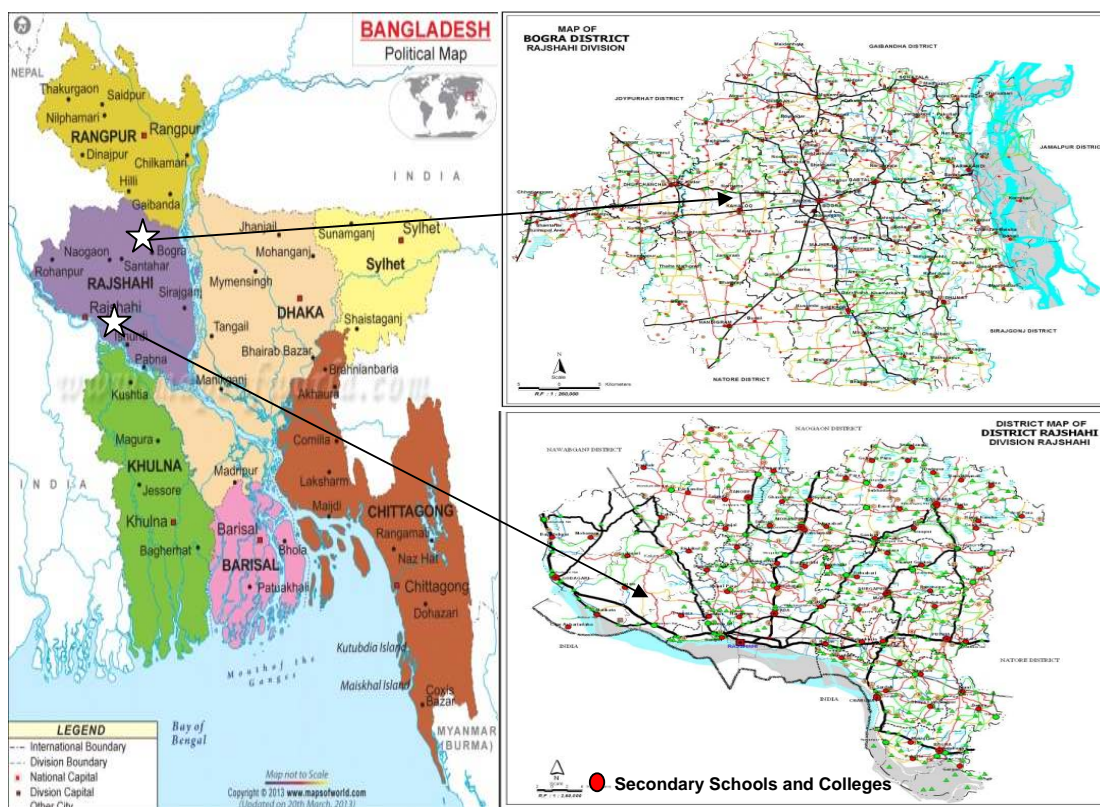


Fig. 1. Geographical location of the study area

part in the study through both letter and telephone contact. Following the completion of the questionnaire the researcher arranged to visit the schools to collect the questionnaire and to conduct a semi-structured interview. The process was innovative because each researcher sat with the respondent and his/her completed questionnaire and based part of the semi-structured interview on an immediate review of the answers provided in the questionnaire.

The questionnaire sought both quantitative and qualitative responses. It provided the basis for the subsequent interview, but also allowed for discussion of local differences. The questionnaire covered three main foci – the information about the primary idea of geography and environmental studies subject, the institutional structure (the content of geography and environmental studies in the curriculum and its approaches to teaching) and the employment opportunities of this subject. The information about the basic idea of the subject and its job implication was collected directly from the students.

A pilot questionnaire had previously been trialed to ensure, as far as possible, that questions were fit for the purpose. Primary data were supplemented by secondary data from the different text books of NCTB, Banglapedia, Wikipedia, journals and magazines [7-10].

2.2 The Sample

The educational institutions were selected from the two districts (Rajshahi and Bogra) under Rajshahi board as a sample where Rajshahi was a divisional city and Bogra was a district level city (Fig. 1). The researchers were residing in these two cities which were convenient to collect primary data. The schools and colleges used in the research sample were chosen by the researchers and they were trusted to have a sound appreciation of what would constitute an appropriate sample. The data were processed and statistically analyzed according to their classification, alignment and presentation compatibility.

3. RESULTS AND DISCUSSION

3.1 Primary Idea about Geography and Environmental Studies

As seen in Table 1, the analysis of the collected data from the survey revealed that 53.85% students at secondary level prefer geography

and environmental studies as a good subject. The main reason behind their opinions is they consider that they are close to the geography of the life sciences to learn more about the world as precisely as a means of better word to the world and as a scientific knowledge to sustain their existence in this world. On the other hand, 46.15% students consider the subject as complex, difficult and painful to memorize which indicate the cause of their disliking. Studies also have shown that 48% of the students think knowledge of geography and environmental studies is obligatory for everyone whereas the same percentage of the students think it is redundant and 4% students didn't offer any comments. The students who showed positive attitude about the subject think that it is essential to know the vast treasures of the world by gaining knowledge about unknown cryptic creature as well as to survive by adopting all of these things with our life. On the contrary, according to those students who feel unnecessary, as the subject is complicated and everyone can't keep knowledge about all things, so it does not require the geography and environmental studies knowledge for all people.

This survey also showed 54% students think that they have an adequate level of knowledge of geography and environmental studies whereas 36% of them feel that their knowledge is insufficient, and rest of them have no comment about their status of this subject knowledge. The knowledge level of the students on different topics related to geography and environmental studies subject have been documented (Fig. 2). Moreover, most of the students (94%) have some idea about geography map study though a large portion of the students (73%) think that it is not important.

According to the survey, planning for the future of their study about geography and environmental studies, 40.38% students at the secondary level are highly interested in learning geography and environmental studies whereas 42.31% students have low interest on this subject and 17.31% students refrain from giving comments. Those who are interested to learn geography and environmental science in future mentioned the reason behind that they want to learn about the world very deeply and to take advantage of this knowledge for human development. However, the disinterested students commented that though it is necessary to learn about geography and environmental studies but the employment opportunity of this subject area in Bangladesh is limited and their families showed very low

interest (31%) as the profession is not so respectable from the view point of society. Here, the views and opinions of their parents or guardian included to conform to such an opinion exist.

Studies have shown that the attitude of the guardians of most of the students about this subject is not so encouraging and their family members interested in this subject are limited (4%). Notwithstanding, most of the students at secondary level education had a variety of expected concepts about geography and environmental studies. Although a limited number of students mentioned that they don't know some of these things. The findings of the

present study are supported by some other researches which were conducted nationally and globally [4,5].

3.2 Institutional Structure of Geography and Environmental Studies

The survey of research on the institutional structure of geography and environmental studies was performed. According to the analysis of these studies revealed, most of the students think that the content of geography and environmental studies syllabus is very brief and general. Though a limited number of students think it's too complicated.

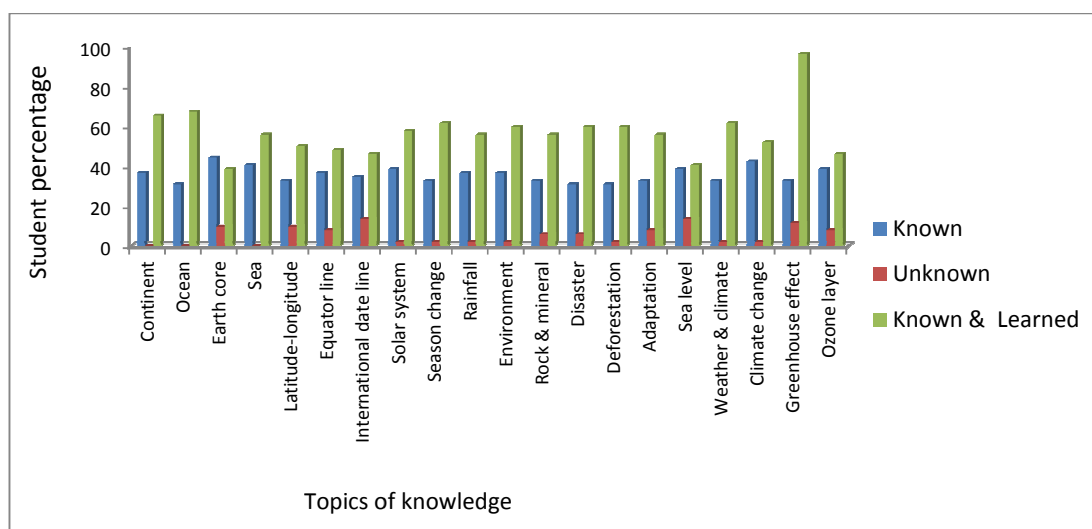


Fig. 2. Level of student's knowledge on different topics of geography and environmental studies

Table 1. Student's view (%) about the basic knowledge of geography and environmental studies subject

Category of the opinion	Category A		
	High	Low	No comment
Basic idea about the subject	54	36	10
Personal interest to learn the subject in future	40.38	42.31	17.31
Level of guardian's interest about the subject knowledge	21	17	62
Knowledge of guardians about the subject	36.54	48.08	15.38
Guardians approaches about the subject knowledge	21	17	62
	Category B		
	Yes	No	No comment
Likings of the subject	53.85	46.15	-
Obligation of the subject knowledge	48	48	04
Idea about map study	94	04	02
Importance of map study	27	73	-
Guardians preference about the subject related profession	31	67	02
Subject interested family members	04	96	-

Table 2 shows that 77% of the educational institutions have the individual teacher for teaching geography and environmental studies subject and the students can learn the subject by exposure to their teacher. 75% students think that they need to have an individual teacher of geography and environmental studies subject because a specialist teacher can keep a lot more knowledge about the thematic issues and capable to teach in too many details of the topic by very easy and simple way which are more beneficial to the students. On the other hand, one fourth of students showed a different opinion. They think that geography and environmental studies subject teacher is not so necessary at the secondary level education because the general teachers of other subjects are capable to teach this subject as they have a general knowledge on geography and environmental studies education. Students also commented that geography and environmental studies subject gets the same priority as like other subjects.

All of the educational institutions have the library for study. 88% students commented that they have no special textbook on geography and environmental studies subject in their library. They also said that their institutions are hands-on class lectures. Here, the projector is not used. In geography and environmental studies education system theoretical and practical context are existed. In accordance with the data obtained from the students, most of them like theoretical

part of the subject because they think that in a short time and with less work they can obtain much more knowledge from it. However, 48.08% of them are highly interested to practical class as they feel that practical part of the geographical knowledge can fulfill the lacking of theoretical part and it helps them to present the life sciences and earth globe intimately which is actually possible to use in external life. Note here that 77% students' educational institutions arrange practical class for them and rests of them don't arrange it, though their institutes gave less or no emphasis on the practical class as well. 83% students also said that their institutes have no sufficient practical class related instruments.

According to the data available from studies, geographical map considered to be one of the most important tools for learning of this subject was absent in most of the students classroom (73%). Moreover, workshop related to the study of geography was hardly conducted. Seminar and workshops on geography and environmental studies should be occurred frequently as they think and many of them requested for the matter to get attention. Little number of students has the idea about the journals of geography and environmental studies. They also commented that their most of the teachers didn't instruct them about this. Butt et al. [3] conducted the similar survey on English secondary schools which was much more compatible with the results of present study.

Table 2. Student's opinion (%) about the institutional structure of geography and environmental studies subject

Category of the opinion	Category A		
	Yes	No	No comment
Existence of individual teacher for the subject	77	23	-
Necessity of the individual subject teacher	75	25	-
Arrangement of practical class in the institute	23	77	-
Existence of geographical map in the classroom	27	73	-
Arrangement of geographical seminar in the institute	04	96	-
Knowledge about the geographical journal	40.39	57.69	01.92
Availability of related textbooks in the library	12	88	-
Availability of practical class related instruments in their institute	15	83	-
	Category B		
	High	Low	No comment
Importance of practical class in their institute	08	25	67
Level of interest about the practical class	48.08	19.22	33.70
Level of importance of this subject to the teacher	23	19.23	57.70
Level of importance of geographical journal to the teacher	40.38	55.62	04

3.3 Employment Opportunities of Geography and Environmental Studies

From this study the information about the job implication of geography and environmental studies were collected from the students view at secondary level and it was very effective opinion for the research. When asked about their future plan, students had expressed their interest in the profession of doctors, engineers, teachers, etc., and a very limited number of students who have harbored aspirations to become a geographer or environmental science related profession (Fig. 3).

However, 96% students quoted that the employment opportunity of geography and environmental studies sector is sufficient and the position of this employee in the job field is satisfactory from the social context (Table 3). Though their personal interest varies depending on their parent's view, the students overwhelmingly believe that geography and environmental studies education enhances their self-reliance. From the survey, nearly two-thirds of the students think that geographical knowledge is important for a country's development. But the effectiveness of this

geographical education is not enough in Bangladesh context as they think whereas a limited number of students think that it is effective. Thus, 85% students still believe that the knowledge of geography and environmental studies is essential for Bangladeshi people. From this study, there is a clear differentiation among the students' views and opinions as they expressed. Based on students' opinions by analyzing the data we can reach an inference that their conception on geography and environmental studies is positive and they are bearing a good idea about this subject though a very few students assume negative approaches on geography and environmental studies education.

Considering the various aspects of the research discussed above it can be concluded as of Haubrich's [6] and Gerber's [5] researches. The status of geography and environmental studies at secondary level education in Bangladesh is not so prospective and the students are facing many obstacles in which they are not getting any support to promote. Subsequently, they become confused to learn geography and environmental studies at higher level education in Bangladesh. Although the vast majority of the students are

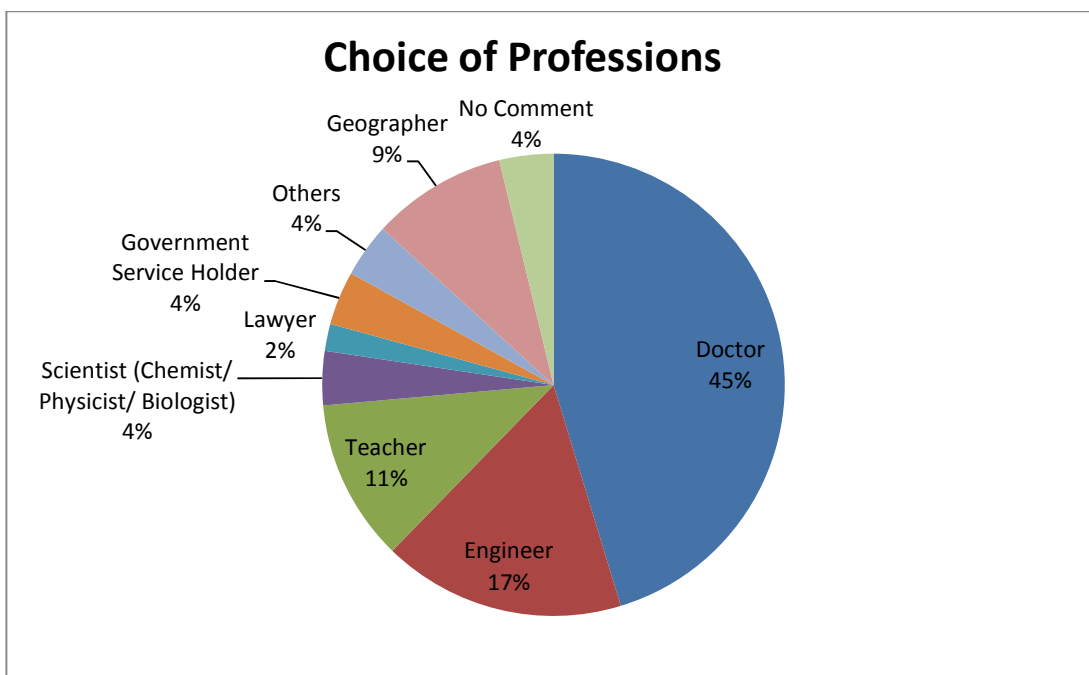


Fig. 3. Student's view about their future professions

Table 3. Comments of students about the job field of geography and environmental studies subject

Category of the opinion	Category A		
	Sufficient	Insufficient	No comment
Demand in job sector of Bangladesh	96%	04%	-
Importance level for the development of country	67.31%	1.92%	30.77%
Level of significance of the subject for Bangladesh (BD)	13%	77%	10%
	Category B		
	Yes	No	No comment
Enhancement of independency level	88.46%	05.77%	05.77%
Importance of the subject knowledge for the country's citizens	85%	06%	09%

encouraged to this subject the country's social situation is constantly getting frustrated and it is unfortunate for the education of geography and environmental studies. Moreover, students do not have adequate facilities in the educational institutions which can make them respectful to this intimate life science related subject. However, students are more or less aware of the matter that geographical knowledge is essential in the world to keep their existence. From this research it is frankly postulated that some clear and concrete steps should be taken for making successful geography and environmental studies education at secondary level in Bangladesh by following government policy strictly [11].

4. CONCLUSION

The present study revealed the important role of geography and environmental studies at secondary level education by their own opinions of the students though some of their opinion has been reflected as a complicated but instructive subject. From the results of the study, the overall condition of geography and environmental studies at the secondary education level including the potential challenges at the present time was visible and the main objective of this research has been attained with success. During conducting of this research we faced many obstacles as well as the analyzed findings visualized many limitations on the geography and environmental studies at secondary level education. Therefore, focusing on these issues for the improvement of entire condition of geography and environmental studies education at secondary level, some recommendations could be concluded in here.

Firstly, it is necessary to remove the negative idea about geography and environmental studies from the mind of the students and their families. Awareness growing among the students, their parents as well as all the citizens of the country about the importance of geography and environmental studies education is very crucial to keep compatible with the globalizing world and to sustain their existence in this earth. Students need to know about the importance and effectiveness of geographical map learning in the present world and for the reason the secondary level educational institutions should give emphasis on this subject and kept the geographical map in every classroom. Skill teachers on this subject aided with modern tools of teaching (power point projector, multimedia etc.) need to be appointed in the educational institutions to teach the students in a very simple, easy and lively way. Necessary steps have to be taken to develop the curriculum of geography and environmental studies. Moreover, practical and theoretical classes should be emphasized similarly and the instruments related to practical class have to be supplied when and where necessary for the students. The number of journals, magazines and news papers related to geography and environmental studies need to increase in the institute and some workshop or seminar could be arranged by government or non-government institutions. Finally, as the secondary level education is the pillar of knowledge achievement for the students, so government and non-government initiatives need to be approached to mitigate the limitations of geography and environmental studies education in Bangladesh. After all, we believe that this analysis of the status of geography and

environmental studies at secondary level education will contribute to develop the quality of geographical education as well as the education system of the nation.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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