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## EDITORIAL BOARD

# *Editorial*

## Acknowledging the Past, Celebrating the Present, and Looking Ahead

The National Academy for Educational Management (NAEM) takes immense pride in presenting volumes 34, 35, 36, and 37 of its research Journal.

This current volume (Volume-35) is a testament to the rich academic contributions made by researchers, educators, and scholars. The articles delve into crucial topics, shedding light on entrepreneurial potential among students of grades XI and XII and the pressing issue of bullying in Secondary-Level Institutions. They also address gender-responsive inclusive pedagogy, aligning with the aspirations of SDG-4, and explore the dynamic interplay between peer relations and the teaching-learning environment at the Higher Secondary Level.

We extend heartfelt gratitude to the dedicated researchers and editorial panel members whose tireless efforts have made these volumes possible. We are especially thankful to the Director General of NAEM and to the Ministry of Education for their unwavering support and funding, enabling the continuity of this vital academic endeavor.

**Prof. Dr. Ummay Asma**
Director, Research & Documentation, NAEM

&

Editor, NAEM Journal

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# Practicing Gender-responsive Inclusive Pedagogy in Higher Secondary Education in Bangladesh: Perspective of SDG-4

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## Abstract

*This research study titled "Practicing Gender-responsive Inclusive Pedagogy in Higher Secondary Education in Bangladesh: Perspective of SDG-4" aims to explore teachers' capacities in implementing gender-responsive inclusive pedagogy in higher secondary education. The findings reveal a lack of specific guidelines in the curriculum to achieve gender parity, create a gender-friendly learning environment, and address diverse learning needs, but the professional development training manual offers valuable insights. Thematic analysis identifies six key themes related to the study parameters, including pedagogical preparedness, teaching-learning activities, classroom management, language and interaction, feedback and assessment, and professional development. Based on the results, recommendations include the formulation of a policy guideline for gender-responsive education, incorporating gender-responsive pedagogy in training manuals, and strengthening institutional support for gender-responsiveness at the higher secondary level in Bangladesh.*

**Keywords:** Gender-responsive Pedagogy, Inclusion, Higher Secondary Education, Bangladesh, SDG-4

## Introduction

Quality education with gender equality is progressively acknowledged as crucial to achieving the sustainable growth and development, eradicating poverty, safeguarding human rights issues and women empowerment around the globe, particularly in developing countries (BRAC Annual Report 2020). Many countries including Bangladesh have advanced on building initiatives to exterminate gender disparities in education system (UNESCO Global Education Monitoring Report 2021). Some of the initiatives include curriculum revisions through gender lens, rewriting teaching materials including textbooks to address gender stereotypes, constructing gender-responsive school environments, building separate hygienic facilities for

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girl students, employing many female teachers to gain gender balance and promoting gender-responsive training for classroom teachers of each level of education.

Studies have identified that there are numerous barriers that prevent girls to complete their education cycle especially at secondary and higher secondary level in South Asia region including Bangladesh. Such salient barriers are i. inability to pay tuition fees, ii. inadequate food in the facility, iii. far distance of educational institutions, iv. early marriage and pregnancy, v. gender based violence, vi. lack of parental awareness and motivation, vii. lack of safety and security, viii. inadequate hygiene and sanitation management, ix. lack of proper guidance and support from teachers and so on (Girls' Education Roadmap 2021 Report, South Asia). Asian Development Bank (ADB) has also indicates that 68% of female students terribly experience many mental health and psychosocial issues to continue their education in Bangladesh (ADB Annual Report 2020).

Furthermore, a recent study jointly conducted by Bangladesh Bureau of Statistics and UCEP Bangladesh (2018) illustrated some significant facts that net enrollment of female students in higher secondary level (college) is 26.24% whereas drop-out rate from college level is 24.60% that is alarming and needs to be taken into account for intervention. In addition, BANBEIS (2019) has also studied that, among many, frequent gender based violence and practices of gender inequality in educational settings are substantial barrier of girl education in Bangladesh.

Gender-responsive pedagogy is an approach to teaching and learning that prioritizes meeting the unique and diverse learning needs of both boys and girls (UNESCO, Bangkok, 2017). It recognizes that learners have different experiences, abilities, and interests based on their gender, and seeks to create an inclusive and equitable educational environment that addresses these differences. In practical terms, gender-responsive pedagogy involves a comprehensive examination of various elements of the teaching and learning process. This includes the selection of appropriate teaching resources, the use of effective instructional approaches, the development of gender-sensitive content, the design of engaging learning activities, the consideration of the medium of instruction, the facilitation of positive interaction in the classroom, the provision of constructive feedback and assessment, and the arrangement of the physical learning environment (Mlama et al., 2005).

However, it is worth noting that gender-responsive pedagogy interventions have primarily been implemented in primary and secondary education, with less emphasis on higher secondary or tertiary education (Barker, 2012; Sadev, 2016). Over the past few decades, efforts to reduce gender inequality in educational enrollment have shown greater success in primary and secondary schools compared to higher education (Orodho, 2014; Skjortnes & Zachariassens, 2010)). This highlights the need for more attention and actionable initiatives to promote and practice gender-responsive pedagogy at higher secondary levels of education.

A gender-responsive teaching and learning environment begins with the recognition that the development of educational methods and approaches should aim to efficiently meet the diverse needs of current and future students (Becker, 2009; Bhat, 2015). Gender discrimination in various systems, such as access to knowledge resources, academic activities, and traditional

cultures, ultimately leads to gender inequality in educational outcomes (White et al., 2016). By adopting gender-responsive pedagogy, educational institutions can address these discriminatory practices and work towards creating a more inclusive and equitable educational system.

Teaching and learning actions should be delivered in a gender-sensitive setting, where there is a strong and prevalent communication from teachers that all learners are capable of studying and prospering (Gay, 2002; Wanjama & Njuguna, 2015). Gender inclusion is an important aspect of gender-responsive pedagogy, as it aims to prepare learners to develop pedagogical practices that prioritize gender equality in the education settings (Bramberger, 2015).

Promoting gender-responsive teaching and learning is essential for achieving social and economic development that is inclusive and equitable (Hawken, 2017; Luswata, 2018). Incorporating gender concerns in educational methods and approaches requires careful planning to sufficiently identify and address the diverse needs, expectations, and aspirations of both girls and boys (Bever, 2014). Gender equality in education has far-reaching implications, including encouraging women's social, administrative, and financial empowerment (OECD report, 2015). Gender-responsive teaching materials and classroom practices, aligned with the Sustainable Development Goal 4 of the 2030 Sustainable Development Agenda, have the potential to significantly transform the lives of all individuals, including girls and women, by providing equitable and inclusive quality education, which is a critical driver of sustainable progress (Doroba, 2017).

Research consistently highlights the significance of gender-responsive teaching and learning for promoting inclusive and equitable social and economic development. By addressing stereotypes and gender biases, fostering inclusive learning environments, and providing equal opportunities for all students, regardless of their gender, educators play a vital role in enabling girls and boys to fully realize their potential and contribute to a more equitable society. By adopting gender-responsive pedagogy, educational institutions and educators can work towards creating an educational friendly environment that promotes and supports the diverse needs and academic aspirations of all learners regardless of gender identity, ultimately fostering a more inclusive and equitable society.

Hence, understanding of student-centered and gender-responsive inclusive pedagogy is vital to transforming educational institutes into friendly learning atmospheres that enable each student to become productive member of the society. Gender-responsive inclusive pedagogy indicates teaching and learning procedures that addresses and meets the diverse learning needs of boys and girls (Girls' Education Roadmap-2021 Report). It refers to an educational approach that recognizes and addresses the specific learning needs of both girls and boys. It emphasizes the importance of teachers adopting an inclusive gender perspective throughout the entire teaching and learning process, including lesson planning, teaching methods, classroom management, and performance assessment (UNESCO, 2018).This can be recognized by estimating the challenges in life-skills and information gap for both female and male genders. Gender-responsive inclusive pedagogy allows teachers to foster sustainable development through inclusive gender approach in the courses of instruction designing and

planning, practices of teaching-learning in the classroom and ensuring equitable quality education and lifelong learning for all in the current period of achieving the Sustainable Development Goals (SDGs).

## Rationale of the study

Bangladesh is struggling hard to achieve Sustainable Development Goal in the field of quality education (Goal-4: Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all; Targets: 4.3, 4.4, 4.5 and 4.a) and gender equality (Goal-5: Achieve gender equality and empower all women and girls; Targets: 5.1, 5.2, 5.3, 5.4, 5.5, 5.a). Without appropriate knowledge, attitudes and practices of gender-responsive inclusive pedagogies, the goals and targets will not be efficiently achieved by the timeframe. 'Education 2030' framework envisages that research-based evidence can be helpful in shaping future action plan regarding gender equality.

## Objectives of the study:

The overall objective of the study is to explore teachers' capacities of practicing gender-responsive inclusive pedagogy in higher secondary education in Bangladesh. To achieve the objective three research questions were set-

- To what extent do the curricular guidelines address the gender-responsive inclusive pedagogy in higher secondary education?
- How do the teachers practice the gender-responsive inclusive pedagogy in higher secondary education in Bangladesh?
- What are the challenges of practicing gender-responsive pedagogy in higher secondary education?

## Methodology

The research utilized a qualitative research design, which can be an effective method for obtaining comprehensive findings and achieving the study's objectives in the field of education. This approach combines interviews and other participatory mechanisms to collect data within a single research study (Gay, Mills, & Airasian, 2009). The fundamental principle underlying this methodology is that such integration allows for a more thorough and synergistic utilization of data. It entails the researcher conducting the research process, analyzing the components independently, and interpreting the results together (Creswell & Plano Clark, 2011).

Criterion purposive sampling was utilized for the qualitative component of the study, specifically focusing on a co-educational government college at the higher secondary level. This type of sampling involves selecting cases that meet specific predetermined criteria of significance (Paton, 2002) Additionally, convenience sampling was employed in the qualitative portion of the study, while ensuring that the study parameters were appropriately maintained.

The study gathered essential data, insights, and relevant information from primary and secondary sources commonly utilized in social science and educational research.

Teachers including Principals of government colleges, higher secondary level boys and girl students, relevant officials of Directorate of Secondary and Higher Education were the primary sources of collecting data for the study.

Data were collected from 12 government colleges of 12 randomly selected districts throughout 6 divisions. A total number of 31 teachers (female 15 and male 16) and 21 students (female 11 and male 10) were systematically selected as respondent. Both teachers and students were considered from all three areas- science, humanities and business studies

The secondary sources of data encompassed various existing documents such as acts, policies, reports, studies, guidelines, and frameworks related to gender, inclusive education, and equitable quality education. Additionally, the national curriculum and teacher education curriculum were consulted to obtain vital information about the current state of gender-based teaching and learning.

The present research utilized a qualitative approach, employing the Thematic Analysis technique (Braun and Clarke, 2006) for data analysis. The qualitative data was critically examined to establish mutual support among different sources during data analysis and presentation of findings. The analysis and presentation of study findings were conducted in line with specific research questions.

To ensure coherence between the calculated proportions and logical/statistical assumptions, the findings were organized into distinct themes. The data were systematically presented using various methods, including textual presentation where facts were gathered and presented in written paragraphs, including relevant quotations. Tabular presentation involved organizing the data in statistical tables with columns and rows. Additionally, graphical presentation involved structuring and visualizing the data using different types of graphs or diagrams such as bar charts among others.

Thematic Analysis indicated by Braun and Clarke (2006) was followed for data analysis. Data analysis was accomplished according to the objectives and research questions of the study. The findings of the study are presented as narratives in this chapter based on raw data.

Documents of different sources of secondary data, for example, higher secondary level curriculum of National Curriculum and Textbook Board (NCTB), Foundation Training Course (FTC) brochure of National Academy for Educational Management (NAEM) and professional development training manual of Higher Secondary Teachers' Training Institute (HSTTI), were reviewed through the lens of gender-responsive pedagogy and inclusive education. Each documents were examined whether they address gender-responsive educational issues while training are provided by using those manuals. Each chapter or modules were critically checked to find out the relevant messages.

## Findings and discussion

Through the review of curriculum of National Curriculum and Textbook Board (NCTB) and Foundation Training Course (FTC) brochure of National Academy for Educational Management (NAEM), it is found that there is no specific guideline on how to-

- achieve gender parity in all educational activities
- create the gender-friendly learning environment
- address the diverse learning needs in classroom
- ensure gender-responsive pedagogical practice
- reduce gender discrimination in teaching-learning

However, in professional development training manual of Higher Secondary Teachers' Training Institute (HSTTI), there are sufficient amount of guidelines on how to -

- present lesson in line with gender responsive pedagogy
- manage class and interact, especially with female students
- use gender-neutral languages in classroom teaching process
- manage class by providing equal opportunity to all learners

## Analysis of quantitative data collected through likert-type survey

### Table-1: Statement specific responses in the survey questionnaire

| Statements | Strongly Disagree (1) | Disagree (2) | Neutral (3) | Agree (4) | Strongly Agree (5) |
|---|---|---|---|---|---|
| 1. The teachers integrate gender perspectives in their lessons. | 6 | 6 | 3 | 9 | 16 |
| 2. The teachers provide equal opportunities for all students. | 5 | 2 | 1 | 13 | 19 |
| 3. Teachers use inclusive teaching-learning materials & resources. | 3 | 3 | 2 | 15 | 17 |
| 4. The teachers encourage active participation from all students. | 2 | 1 | 1 | 14 | 22 |
| 5. The teachers create a safe and respectful learning environment. | 4 | 5 | 2 | 15 | 14 |
| 6. The teachers address and prevent inequality and gender-based discrimination. | 7 | 5 | 1 | 13 | 14 |
| 7. The teachers provide support and guidance to all students. | 3 | 2 | 2 | 17 | 16 |
| 8. The teachers promote gender equality in the classroom. | 2 | 3 | 1 | 16 | 18 |
| 9. Teachers involve parents and communities in fostering gender-responsive education. | 14 | 8 | 2 | 9 | 7 |

In summary, the analysis of the Likert scale survey data reveals both positive and areas for improvement regarding gender-responsive inclusive pedagogy in higher secondary education.

Overall, teachers are perceived positively in several aspects. They are seen as encouraging active participation from students, providing support and guidance, and promoting gender equality in the classroom. These findings suggest that efforts are being made to create an inclusive and supportive learning environment.

## Analysis of qualitative data collected through interviews and FGDs

Six steps of thematic analysis, as identified by Braun and Clarke (2006) were used in this study as the data analysis procedure. According to Creswell (2012), a thematic approach involves a thorough discussion of the core themes that emerge from examining a qualitative dataset. To support the themes, the techniques frequently employ extended quotes and detailed descriptions.

Through this procedure the following six major themes were extracted in accordance with the study parameters and findings presentation:

## Theme-1: Pedagogical preparedness with lesson plan for gender-responsive classroom

**Table-2: Different aspect-wise responses on pedagogical preparedness**

| Aspects or issues | Percentage of responses |
|---|---|
| Lesson plans with gender considerations | 72% |
| Incorporation of diverse gender perspectives | 68% |
| Integration of gender-sensitive content | 80% |
| Addressing and challenging stereotypes | 82% |
| Engaging both girls and boys in activities | 76% |
| Use of gender-neutral language | 88% |
| Promoting equitable participation | 75% |
| Providing opportunities for girls' voice | 70% |

These statistics highlight that 72% of teachers develop lesson plans with gender considerations, while 68% incorporate diverse gender perspectives. Additionally, 80% of teachers integrate gender-sensitive content, and 82% actively address and challenge stereotypes. In terms of engagement, 76% of lesson plans aim to engage both girls and boys in activities. Furthermore, 88% of teachers use inclusive language, and 75% actively promote equal participation. Finally, 70% of lesson plans provide opportunities for student voice on gender-related topics. These efforts contribute to a more gender-responsive classroom environment.

Most of the respondents (84%) are somewhat trained on pedagogy and related skills. Apart from subject specific content knowledge, the teachers have had different sort of professional development in-service training. But no specific training on gender responsive inclusive and equitable education was offered to them for which they experience difficulties to better prepare themselves and execute this in their classroom. A participant teacher (T-13-M-H) reported in a focus group discussion session

*In our lesson preparation, we focus only how to effectively deliver the content knowledge to my students. I usually do not consider the gender responsiveness in my teaching although I never neglect female students' learning achievement.*

A principal (T-20-M-S) supported the aforementioned comment and pointed out this way

*We all are committed to ensuring all of your students, including female students, achieve learning success. However, it's important to recognize that gender responsiveness in teaching goes beyond just ensuring equal learning outcomes. It also involves creating an inclusive learning environment that acknowledges and values the diverse experiences and perspectives of students of all genders.*

With regard to teachers' role in education process, a respondent (T-29-M-H) pointed out

*Teachers have an important role to play in promoting gender equality and equity in their classrooms. By being mindful of gender biases and stereotypes, and actively working to create an inclusive and respectful environment, we can help to ensure that all of our students feel valued and supported.*

In Focus Group Discussion, the students shared their expectation that their teachers should come to the class with adequate preparation and lesson should be planned how to deliver the contents by engaging all learners of the class. However, some teachers enter the class late and end the lesson before the time. They never think of addressing gender issues in our learning activities. A male student of business group pointed out

*I never think that our teachers are very sincere about lesson preparation with the aim of ensuring gender equality. However, they want to pay equal attention in teaching-learning. We believe that they practice the traditional style rather than applying knowledge and skills from teacher training on how to use this method.*

**Theme-2: Teaching-learning activities for ensuring gender-responsiveness and inclusion**

**Table-3: Activities of teaching-learning and students' participation and outcomes**

| Teaching-Learning Activities | Boys' Participation (%) | Girls' Participation (%) | Boys' Learning Outcomes (%) | Girls' Learning Outcomes (%) |
|---|---|---|---|---|
| Lecture | 90% | 80% | 85% | 90% |
| Group Discussions | 80% | 70% | 75% | 85% |
| Hands-on Experiments | 75% | 90% | 80% | 90% |
| Role-playing | 85% | 75% | 90% | 80% |
| Multimedia Presentations | 80% | 70% | 85% | 70% |

In summary, the analysis of the table indicates that boys tend to have higher participation rates than girls in most teaching-learning activities. However, girls' participation rates are slightly higher in group discussions and multimedia presentations. When it comes to learning outcomes, boys generally perform better, except for multimedia presentations where girls have slightly higher learning outcomes. However, girls tend to achieve better learning outcomes overall in most activities, except for group discussions and role-playing where boys' learning outcomes are slightly higher. These observations are based on the given data and represent general trends.

Majority of participants (78%) have stated that gender-responsive inclusive pedagogical practices are not always possible in the classroom teaching-learning activities. According to them, they sincerely try to address gender issues in teaching practices though it sometimes seems to be difficult as class hour is very short. A teacher (T-9-F-B) stressed

> *Equal participation of both female and male students are challenging in the context of our class nature. We mostly use lecture method where special attention to specific need of any student cannot be possible. Teaching materials are not equally provided to each student. However, by addressing the issue of unequal provision of teaching materials, educators can help to ensure that all students have an equal opportunity to succeed academically.*

In relation to classroom context and challenge of teaching, a Principal (T-2-M-H) argued that

> *The issue of unequal participation of female and male students in class is a complex one and requires a multi-faceted approach to address. We need to encourage active participation rather than relying solely on the lecture method, by asking questions and soliciting input from students and by providing equal access to teaching materials.*

Respondent students acknowledged in focus group discussion that most of the teachers are caring about quality learning of all students regardless of their gender identity. In particular, the young teachers are seen more serious in addressing equal participation in the classroom activities. Sometimes some female teachers pay extra attention to our female classmates to ensure their active participation. A male student expressed

> *Although we all are equal, sometimes teachers do not allow some of us to raise questions or participate in the science lab. Some of our teachers seem to be biased in giving learning opportunities to particular students rather than involving all of us. Female teachers are more serious to involve female students. Groups are sometimes formed with only female or only male students.*

**Theme-3: Classroom set up and management for gender-responsive inclusive teaching-learning**

Based on the responses obtained from teachers regarding gender-responsive classroom set up and management, the following table was formulated.

**Table-4: Different aspect wise responses for classroom management**

| Statements | Percentage of response |
|---|---|
| Teachers promote equal participation of all genders | 85% |
| Teachers provide equitable opportunities for all students with emphasis on girls | 78% |
| Teachers create a safe and inclusive classroom environment | 70% |
| Teachers incorporate gender-inclusive teaching materials | 81% |
| Teachers foster respectful and inclusive communication | 76% |
| Teachers promote gender-equitable learning experiences | 68% |
| Teachers address and prevent gender-based discrimination | 62% |

The statistics reveal positive efforts in implementing gender-responsive pedagogy, with varying levels of progress. Approximately 85% of teachers promote equal participation of all genders, indicating a strong commitment to inclusivity. About 78% of teachers provide equitable opportunities with an emphasis on girls, although further measures may be necessary to address gender disparities. Creating a safe and inclusive classroom environment is a focus for 70% of teachers, indicating the need for continued improvement. Around 81% of teachers incorporate gender-inclusive teaching materials, showcasing a commendable effort to challenge gender norms. Approximately 76% of teachers foster respectful and inclusive communication, emphasizing the importance of creating a welcoming environment for all students. While 68% of teachers promote gender-equitable learning experiences, there is room for growth in addressing underlying barriers and biases.

Many of the respondents (65%) asserted that they always face challenges to effectively manage the classroom because around 120 students sit in a single classroom. Many students including female students often attend class without having any sitting space. A participant (T-8-M-H) consciously urged

> *The authority must renovate the physical facilities for class. If students, particularly female students, take part the call by standing all the time is unpleasant and embarrassing for any teacher. They even cannot pay full attention to class discussion.*

Few teachers suggested that if teachers are sincere to solve the issue it is easy to address this in daily activity. A respondent (T-24-F-B) highlighted teachers' intelligence and practical experience to handle this. She has pointed out

> *It is important to take a proactive approach to address the issue of misunderstanding and conflict between male and female students in the classroom. With proper communication, guidelines, and training, it is*

*possible to create a more harmonious and productive learning environment. Additionally, it has to be ensured that both the male and female class representatives are trained and equipped to handle conflicts that may arise in the classroom.*

Some students raised a very important issue in a focus group discussion. They claimed that there are some teachers who always blame male students for any kinds of mismanagement with the classroom even though the males are not any part of the occurrence. In contrast, female students asserted that they are sometimes ignored when teachers form management group to control the class and other activities. A female student of humanities shared her disappointment

*Although both female and male students should always be considered as equal, but some senior teachers do not think that we, female students, are competent for leadership activities within the classroom because of our gender. Teachers often become spontaneously interested to hear from us that is bit uncomfortable.*

**Theme-4: Interaction with students by using language for ensuring gender-responsive practices**

According to more than 90% respondents, it was reported that they exchange dialogue with students in gender-friendly manner. The interaction between teachers and students occurs considering the learners' needs of both sex. The teachers usually don't ignore any students while questioning or answering based on gender identity. A teacher (T-3-F-H) deliberately commented

*I try to stimulate every student regardless of gender to respond to my question. However, female students often tend to exhibit shyness and timidity and are not interested to actively participate in classroom activities. In that case, I do pay extra attention to them so that they can be engaged and do not lose motivation. Overall, keep up the good work in encouraging all of our students to participate, and be open to adjusting our teaching methods to cater to different learning styles and personalities.*

For using language, many teachers have expressed their feeling and experiences. Most of the teachers think that way of using language and choice of vocabulary can change a student's mind set-up. In particular, female students are very sensitive when they face any untoward situation that is created by slang language. A senior teacher (T-5-M-B) stressed

*I believe and provide positive and encouraging language and give constructive feedback. My students feel supported and motivated to learn. Encouraging language can also help to build a progressive relationship between the teacher and the students, which can create a more positive classroom environment.*

Participants of focus group discussion pointed out that they want to interact with teacher and classmates in a friendly manner. However, there are some teachers who are reluctant to

come up with a gender-neutral attitude. Some teacher uses very formal and descent language whereas few teachers are not careful in their language approach and addressing by individual students' name. According to a female student of science group

> *Most of the respectable teachers warmly interact with us when needed. But a few young male teachers want to make friendly relationship with us. They offer to be connected in facebook and want to share mobile number. They unnecessarily give importance to us so that we can learn more and seek suggestions and motivation for academic improvement.*

**Theme-5: Learning assessment and feedback for creating gender-responsive inclusive teaching**

Majority of respondent teachers claimed that they equally provide feedback to the students who cannot learn the expected outcomes and require additional supports to learn. They never consider the gender in terms of providing feedback and measuring performances. In this regard a teacher (T-14-M-B) emphasized on

> *I always make sure the gender parity in my teaching especially in reviewing lesson, feedback, remedial teaching, assessing learning performances etc. I usually try to pay equal attention on both female and male students while doing calculation in accounting class. Even while marking exam sheets I never think of examinees' name and their sex.*

On the other hand a few respondents indicated that they allow relatively more time to female students to understand science practical. A participant (T-19-F-S) said,

> *I assume that the female students are bit weak in understanding practical topics and mathematical equation in Physics lab. Therefore I need to take care of them out of class time. It's essential to recognize that everyone has their unique strengths and weaknesses, and these can vary irrespective of gender.*

Most of the students who participated in the focus group discussion, declared that no assessment is conducted in their classroom. Providing feedback to the weak students is also not possible because of the large class size and short class time. Both a male and a female student expressed their feeling in the same way

> *Learning assessment in the classroom is never performed by our teachers. Our teachers handle around 120 students in a class which seems to be difficult to address each student. Teachers usually do not care about our gender identity. However, female friends are often given priority in exam preparation activities.*

**Theme-6: Teachers' professional development for fostering gender-responsiveness and inclusion**

Most of the teachers including institutional head participated in the study mentioned that they normally conduct educational activities inside and outside classroom without gender-biased attitudes. According to them, they seriously try to eliminate gender-discrimination and violence from their colleges. Although they all know about gender issues but GRIP related tools or checklist are unfamiliar to them. A teacher (T-11-F-S) claimed

> *Although we know about gender equality, gender violence etc, we have not been aware about gender-sensitivity and gender-responsiveness in teaching. We lack knowledge and skills of this how to address gender-responsiveness in our pedagogical practices.*

Some participants also indicated that the professional development activities for teachers do not significantly emphasize on gender issues in teaching-learning. A respondent teacher (T-9-F-B) shared her professional experience with disappointment and pointed out

> *We studied about women rights and their equal rights and movement against gender discrimination. However, no training content was on how to ensure this rights and how to reduce the gender gap in classroom practices. A guideline on gender equality and sexual harassment issue may be helpful in this regard.*

Few teachers realized that local training may not fulfil our low knowledge and skills to implement the gender-friendly education system. We have participated in many training programs in our country, but still we could not achieve our ultimate goal. According to a Principal (T-28-M-B)

> *We actually need foreign training on gender. Even United Nation agency can provide training on it. Training on sex education and gender-violation is also needed. Although attitude can change everything, some techniques of language use and interaction with female teachers can be taught in our training, In addition, psychological counseling services should be provided in every college for both female and male students and teachers.*

## Conclusion

The study on gender-responsive pedagogical practices is crucial for quality education. Its findings could have significant implications for secondary education and related policy guidelines in the country. The results can encourage colleges, teachers, and stakeholders to adopt gender-responsive pedagogy. The study aimed to promote equitable education, combat early marriage and pregnancy, and align with national development agendas like the National Women Development Policy and Sustainable Development Goals (Goal-4 and Goal-5). Ultimately, gender-responsive pedagogy can lead to an equitable and inclusive society, ensuring a better sustainable future for the country.

## Recommendations

The following recommendations are formulated based the findings-

- A policy guideline for gender-responsive education and inclusive pedagogy for higher secondary level in Bangladesh should be formulated.
- Adequate information and contents about Gender-Responsive Pedagogy should be incorporated in different training manuals to enhance teachers' knowledge and skills
- Appropriate curricular and instructional guidelines should be provided to teachers to overcome their lack of practical knowledge to ensure the gender-responsive class
- Infrastructural and hygiene facilities in college need to be addressed by the authority
- Excessive work load of class responsibilities should be lessened. To solve this issue, more teachers need to be recruited on regular basis
- Gender-friendly behavior of teachers, peers and staff need to be ensured by college authority
- College level awareness raising workshop or seminar can be organized with students and teachers especially on the day of women's day or national days
- Guidance and counseling services for both female and male students as well as teachers need to arranged in college level

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## References

Aguilar, L., et al. (2008). Training Manual on Gender and Climate Change. San José, Costa Rica: IUCN, UNDP, GGCA.

Atangana-Amougou, T. (2017). UNESCO and Gender Equality in Sub-Saharan Africa: Innovative programmes, visible results [E-book]. Paris: UNESCO. Retrieved from http://unesdoc.unesco.org/images/0025/002595/259590e.pdf

Bangladesh Bureau of Statistics and UCEP Bangladesh. (2017). Education Scenario in Bangladesh: Gender perspective

Barker V. (2012). A generational comparison of social networking site use: The influence of age and social identity. International Journal of Aging & Human Development, 74, 163-187.

Becker, G. (2009) Human Capital: A Theoretical and Empirical Analysis, with Special Reference to Education. 3rd Edition, University of Chicago Press, Chicago.

Bever. (2014). Creating Supportive Learning Environments for Girls and Boys: A Guide for Educators. *IREX*. Retrieved from https://www.irex. org/

Bhat R.A. (2015). Role of Education in the Empowerment of Women in India. Journal of Education and Practice, 6(10), 188-191

Bramberger, A. (2015). PädagogInnenprofession und Geschlecht: Gender Inclusion. Wien: academic press.

Chattopadhay, T. (2004). Role of Men and Boys in Promoting Gender Equality[Ebook]. Bangkok: UNESCO Asia and Pacific Regional Bureau

CIDA. (2007). Gender Equality Toolkit: CIDA China Program [Ebook]. Quebec: Canadian International Development Agency. Retrieved from http://publications.gc.ca/collections/

Derbyshire, H. (2002). Gender Manual: A Practical Guide for Development Policy Makers and Practitioners. DFID. Retrieved from http:// webarchive.nationalarchives.gov

Doroba, H. (2017). How African policies are promoting gender equality in education Retrieved from http://www.adeanet.org/en/how-african-policies-are-promoting-gender-equality-in-education

FAWE. (2005). Gender Responsive Pedagogy: A Teachers' Handbook. Nairobi: Forum for African Women Educationalists. for Education. Retrieved from http:// unesdoc.unesco.org/images/0013/001377/137780e.pdf

Frei, S., & Leowinata, S. (2014). Gender Mainstreaming Toolkit for Teachers and Teacher Educators [Ebook]. Canada: Commonwealth of Learning.

Gay G. 2002. Culturally Responsive Teaching: Theory, Research and Practice, New York, NY: Teachers College Press.

Hawken, P. (Ed.). (2017). Drawdown: The most comprehensive plan ever proposed to reverse global warming. Penguin.

IBE-UNESCO. (2017). Training Tools for Curriculum Development: A resource pack for gender sensitive STEM education. unesdoc.unesco.org/pdf

Jaafar, S. (2010). Evaluation of the Gender-Responsive Pedagogy (GRP) Model for the Forum for African Women Educationalists.

Kreitz-Sandberg, S. (2013). Gender inclusion and horizontal gender segregation: Stakeholders' strategies and dilemmas in Swedish teachers' education. Gender and Education, 25(4).

Leach, F., Dunne, M. and Salvi, F. (2014). School-Related Gender-Based Violence: A global review of current issues and approaches in policy,

Luswata, S. (2018). Gender Equality Strategy for the Continental Education Strategy for Africa, 2016-2025. FAWE, Kenya. retrieved from http://issuu.com/fawe/docs.

Maluwa-Banda, D. (2003). Gender sensitive educational policy and practice: the case of Malawi. Paper commissioned for EFA Global Monitoring Report 2003/4:

Ministry of Education, Ethiopia. (2014). Gender Responsive Pedagogy Manual: For Pre-service and In-service Teacher Training. Retrieved from http://www.moe.gov.et/documents/20182/36315

Mlama, P., M. Dioum, H. Makoye, L. Murage, M. Wagah, & R. Washika, 2005. Gender Responsive Pedagogy: A Teacher's Handbook. Nairobi: Forum for African Women Educationalists (FAWE).

Organisation for Economic Co-operation and Development (OECD, 2015), Education at a Glance 2015: OECD Indicators, OECD Publishing, Paris, https://doi.org/10.1787/eag-2015-en.

Orodho, J.A. (2014) Life Skills Education in Kenya: An Assessment of the Level of Preparedness of Teachers and School Managers in Implementing Life Skills Education. IOSR Journal of Humanities and Social Science, 19, 32-44.

Paulo Freire, (2000). Pedagogy of the Oppressed. New York :Continuum

Sadev (2016). Gender Equality In and Through Education. *Report 2016:9*. Sweden: Swedish Development for Development Evaluation.

Saihjee, A., Fyles, N., & Kanyangarara, T. (2017). Guidance for developing gender-responsive education sector plans (pp. 73-74). USA: The Global Partnership for Education. Retrieved from https://www.globalpartnership.org/guidance-developing-enderresponsive-education-sector

Skjortnes, M. & H. H. Zachariassen. 2010. Gender Perspective on Higher Education, Gender and Education, 22(2): 193–20

Strickland, R. & Duvvury, N. (2003). Gender Equity and Peacebuilding. From Rhetoric to Reality: Finding the Way. Washington: International Center for Research on Women.

Tollefson, K. & Osborn, M. (2008). Cultivating the Learner-Centered Classroom: From Theory to Practice. Thousand Oaks, CA: Corwin Press.

UNESCO. (2014, June). Comments for consideration by the Committee on the Elimination of Discrimination against Women (CEDAW) for the General Recommendation on Girls/Women's Right to Education.

UNESCO. (2015). Practical Tips for Teaching Large Classes: A Teacher's Guide. France: UNESCO

Unicef and Ministry of Education-Rwanda, (2018). National Gender Responsive Teachers' Guide.

Wanjama, L.N. & Njuguna, F.W. (2015). Documented Gender Responsive Pedagogy (GRP) Good Practices. Case study. Nairobi: Kenya.

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# Association between Peer Relations and Teaching Learning Environment in Higher Secondary Level Education of Bangladesh

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## Abstract

*The present study is based on the peer relations among the higher-secondary level (college) students which is considered as one of the most popular techniques to improve teaching-learning environment and learning capability of students in higher education sector of Bangladesh. To measure the peer relation and its impact, the study followed the attachment theory and used the measurement scales (intimacy, popularity, trust, and insightfulness) proposed by the theory. The main objective of the study is to assess the students' awareness regarding the concepts and importance of peer relations, and test the affiliation of peer relations with learning environment and learning capability of students. The study covered 526 sample respondents from 16-colleges of 4-districts of Bangladesh. The samples were selected randomly and data were collected using a well-structured questionnaire. The study found that there is an important affiliation between peer relations and learning environment but it is not formally practiced in most of the institutions; whereas the family and social support they received is not sufficient to ensure the best possible outcomes through peer relations. The study concluded with mentioning some suggestions for related parties and decision makers to take necessary actions and to create proper environment to improve peer relations and to develop students' learning capability. Though the study has some limitations, it has significant contribution in the literature of peer relations; and its social implication will help the students to learn with pleasure effectively.*

**Keywords:** Peer relations, teaching-learning environment, learning capability, higher-secondary level

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## Introduction

Educational institutions are working to improve various skills of the students. Intellectual skill that enables a student to process the subject matter while practical skill indicates specific subject area; and transferable skills comprise written and oral communication, team-work, self-management, problem-solving and critical thinking etcetera. Different pedagogical methods are used by educational institutions to develop the students' skills and learning capacity. Among all the techniques, peer learning is one of the effective techniques by its nature and flexibility (Bosworth and Hamilton, 1994, Neale, Carroll, & Rosson, 2004). Though the concept is not new, the formal and institutional application of peer relations in Bangladesh is lagging behind. There are some reasons behind the poor practices of peer relations in Bangladesh such as nuclear family, small numbers of siblings, urbanization, school-based coaching, political unrest, addiction through bad accompaniment, love and emotions, etcetera (Hossain 2013; Akter 2021). Experiencing social crises, many guardians or even educational institutions are reluctant to allow their children to make good relations with their peers and pass their time with their friends. In this situation, students become bored and to some extent mentally inconsistent; they feel nervous and uneasy to adjust to any new and challenging environments; or even working with a group of unknown people.

### 1.1 The Rationale of the Study

Once upon a time, it was practiced that senior students take part in teaching junior grade class and meritorious students of the same class do the same in their class. The class teacher tended to do it by their will to examine senior grade students' capability concerning analytical ability, explaining theoretical knowledge as well. Through this approach, students' relationship (fellow feelings) was remarkably improved in the previous days. Learning theorists reveal that learning through sharing with peers is one of the most important ways to learn with the course materials with the cooperation of friends and fellows (Bosworth and Hamilton, 1994). Peer relations allow students to participate keenly in group work, brainstorming for problem-solving by communicating with each other in every stage of their learning. It also helps learners to deal with complex concepts and formation for new ideas and solutions (Neale, Carroll, & Rosson, 2004). In addition, it facilitates more practical information in a systematic and well-organized way. It is an opportunity to use students' highest potential in the field of innovation and creativity through brainstorming, teamwork, group learning, and entertaining peer relations from guardians and educational institutions. Considering the above-mentioned importance, the researchers feel interested in doing the present study at the higher secondary level in Bangladesh.

### 1.2 Objectives of the Study

The main objective of the study is to identify the impacts of peer relations to improve students' academic achievements and learning. Along with this, there are some specific objectives which are stated below:

i. to assess the perceptions and awareness of college students about peer relations and its practices in higher secondary level educational institutions in Bangladesh;

ii. to investigate the institutional arrangements regarding extra-curricular activities to develop peer relations among college students; and

iii. to assess the impact of peer relations on the development of the teaching-learning environment and the learning capability of students.

## 2.0 Literature Review and Conceptual Framework

Peer relationships are establishing communication among peers or individuals with similar emotional and mental improvement, and are a form of social support. Here, in this study peer relations are considered as the relationships and sharing of information among the classmates within the class or outside of the class regarding academic and personal development. Peer relation has significant importance from different perspectives which is discovered in many former studies. Aziz & Hossain (2010) found that the effects of collaborative learning on mathematics are very significant, whereas some researchers argued that scholarly attainment, self-efficacy, and problem-solving ability of school children are highly affected by peer learning (Hossain 2013; Akter 2021). Islam, Sarker, & Islam (2022) conducted a study emphasizing better student-teacher interaction in both discussing online peer groups, and regular face-to-face classes and found that to promote innovation and contextual pedagogy and knowledge construction- sharing, interacting, and collaborative discussions among the students are very significant.

Many other studies revealed that teacher-student relations develop their intellectual level, interaction skills, and learning capability (Hossain 2016, Biswas 2015). Furthermore, Hossain & Tarmizi, (2013) conducted a study on the student's achievement and attitudes towards mathematics between two groups and found that the attitudes and achievements of the students about mathematical operations were influenced by the disclosure in the group learning. The students also gave preference to learning mathematics by exchanging their understanding. In the same way, they were happy when they could learn efficiently in peer relations. Moreover, Mim & Chowdhury (2018) argued that peer support is an important aspect of understanding science content. The effectiveness of mobile communication among peers in learning science content has been discovered in a way that not only helps both students and parents get more time from their daily routine but also bears the potential to reduce extra unwanted monthly expenses. The complex relationship in terms of Youth-Technology-Culture is revealed as an important aspect to be considered while introducing and implementing the interventions of m-learning.

Observing the findings of the above-mentioned studies in the context of Bangladesh and all over the world the researchers found valid ground to do the present study considering peer relations and the learning capability of students using the attachment theory as base theory. The previous studies and findings of the reviewed papers open a window in front of the researchers that peer relations could be an important topic to improve the teaching-learning environment and the learning ability of the students. On the basis of measuring scale and hypotheses, the reviewed literatures are presented categorically.

### *2.1 Intimacy and Peer Relations*

When students can talk to each other, and mingle, it creates a mutual respect and risk-taking mentality in their studies. A cordial relationship in the classroom creates a comfort zone between them. (Ciani, Middleton, Summers, & Sheldon, 2010; Martin & Dowson, 2009). Again, peer relationships play a role in eliminating conflicts and moral pollution between different groups. Overall, peer relationships are effective in identifying, expressing, and achieving effective goals. (Parr, 2002). Observing the previous supportive works of literature, it is hypothesized that-

*H1: Intimacy in peer relations has a significant impact on the development of the teaching-learning environment.*

### *2.2 Trust and Peer Relations*

Research on cooperative behavior has shown that interpersonal trust positively affects cooperative tendencies among individuals (Wang, G., & Hu, W. 2021; Acedo-Carmona and Gomila, 2019). A study conducted by Zavarrone & Vitali (2011) on university students found that when they have trust in their peers they make friends, create a network, exchange general information, and also exchange lecture notes with each other. Interpersonal trust reduces the cost of cooperation and is the starting point, prerequisite, and foundation of cooperative relationships (Malti et al., 2016). So, it is evident to hypothesize that-

*H2: There is a significant impact of trust on developing a teaching-learning environment.*

### *2.3 Popularity and Peer Relations*

Popularity is one of the important dimensions of peer relations which reflects prestige, visibility, and reputation (Cillessen and Marks 2011). Popularity is more salient in early adolescence and youth age than in other age groups (Cillessen and Rose 2005; Lafontana and Cillessen 2010). Researchers found that students' happiness with less support classmates is less than the more support classmates. Among all the students 1638 (76.1%) students are happy and 515 (23.9%) are unhappy in the fewer support classmates' group but 2245 students (88.7%) are happy and 286 (11.3%) are unhappy in the more support classmates' group as well as the number of bullied students are less in a more support classmates' groups than the others. (Tome et,al.2014). During adolescence, peers become increasingly important as peer relationships contribute to social, emotional, and cognitive development (Tarrant, 2002). So, it is hypothesized that-

*H3: Popularity in peer relations has a significant impact on developing the teaching-learning environment.*

### *2.4 Support of Teachers and Peer Relations*

In collaborative learning, the peers become the primary source of knowledge and sharing their ideas; whereas the trainer or teacher plays the role of a facilitator (Evlat & Avcioglu, 2022). Hoferichter et al., (2022) argued that teacher's support was interconnected to a high ability to be coped and bottom levels of weakness; whereas during classroom activities the support of peers was linked to better capacity to be coped and academic achievement. At the same time, another study also indicated that the students are more apparent to be benefited in the context of coping with and attainment in classes with peer relationships while they seem to demonstrate low coping capacity with the support of higher teacher (Blatchford & Baines, 2010). For example, Ma et al. (2021) found that perceived teacher support promoted the academic self-concept and enjoyment of learning, while Yildirim (2012) found a positive relationship between teacher support and students' use of learning strategies in mathematics. So, it is hypothesized that-

*H4: Support of teachers in peer relations has a significant impact on developing a teaching-learning environment.*

### *2.5 Social Support and Peer Relations*

Social relationships with peers play a pivotal role in students' stress and learning outcomes as they act as resources that support learning and mitigate feelings of stress (Wentzel et al., 2017). Murugan & Annadurai (2021) viewed that relationship with peers delivers an exclusive environment where boys and girls discover a variety of crucial societal psychological capabilities, including problem-solving strategies, cooperation, and empathy building. So, the following hypothesis is fully backed by the above-mentioned literature:

*H5: Social support in peer relations significantly affects the development of the teaching-learning environment.*

### *2.6 Insightfulness and Peer Relations*

Insightfulness indicates the expertise or clear understanding of any specific area and the person who holds such accurate and deep knowledge is well-accepted by his friends and peers. Sometimes, it is seen that school kids neglect their batch mates which turns hostility and insults, having violations through little infringement that draws into debates. The schoolroom is uneasy, and so much time is given to maintain the disciplinary activities. Forceful communications (i.e. controlling, enmeshed, or manipulative) degrade the genuine priority of a student and devalue the feeling of freedom. Students are frequently engaged in violent harmonies, such as trying to take an aggressive approach to capture their counterpart which tends to outside encouragement towards fellowship (Hawley & Pasupathi, 2002). So, it is rational to hypothesize that-

*H6: Insightfulness significantly affects the development of the teaching-learning environment.*

### *2.7 Learning Environment and Learning Ability*

Lu, F. (2020) argued that the majority of the students are satisfied with peer relationship; whereas most of the secondary and primary school students agreed that such relationship is supportive in their studies. The researcher holds the viewpoint on peer relationships for cultivating learning motivation. This study proposes that mixing positive academic emotions will cultivate the learning motivation of primary and secondary schools at an early age with children's cognitive will force (Tu & Chu, 2020). So, it is rational to hypothesize that-

*H7: A positive teaching-learning environment can significantly affect the improvement of the learning capability of the learners.*

## 2.8 Conceptual Framework

To develop the conceptual framework and scales for measuring the peer relations the researchers have considered the attachment theory which is used by Fatih Aydoğdu (2022). His study was about the development of peer relations scales for adolescents and he used four scales- intimacy, popularity, trust, and insightfulness. The researchers considered these four scales as the basis for peer relations and added two more variables- social support, and teacher support to measure the impact of peer relations on the development of the teaching environment and learning ability of the learners. Considering the attachment theory and the above-mentioned variables the researchers have developed the research model as follows:

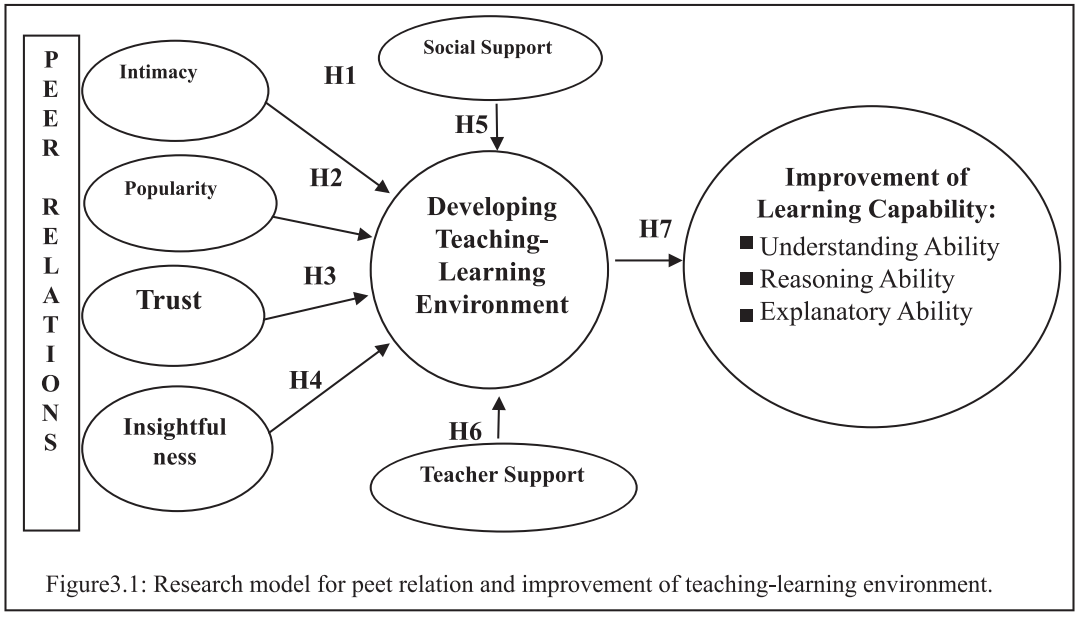


Figure3.1: Research model for peet relation and improvement of teaching-learning environment.

## 3.0 Research Methodology

The study followed an explanatory method to collect and analyze the data. To conduct the study, the researchers have used 526 randomly selected samples (not more than 10% samples from a single college) covering 16 colleges over 4-districts (Dhaka, Tangail, Barishal, and Jalakhati). The overall methodology used in this study is described in the following sub-section:

### *3.1 Sample Size Determination*

To determine the sample size the researchers have considered the suggestions of two scholars Mugenda (2003) and Besides, Cochran (1963). Applying the formula of Mugenda (2003) at a 5% precession level the sample could be 385 (**n**= $Z^2pq \div d^2$ = $(1.96)^2 * (0.5)\ (0.5)/\ (0.05)^2$ **= 385). In addition, Cochran (1963)** suggested where the total population is unknown or a large number such as a population>100,000; then the researchers can consider the sample size at least n= 400 at a 5% level of significance. In this study, the researchers used 526 sample respondents and think it is justified enough.

### *3.2 Sampling Techniques Used*

The study is based on 526 samples which were collected from 16 colleges located in Dhaka and Barishal division following the random sampling methods. Among those samples, the highest number is 47, and the lowest number is 22 from a single college which is not more than 10% of total samples from any single institution.

### *3.3 Sources of Data and Methods of Data Collection*

In this study, the researchers use both primary and secondary data. For secondary data, extensive literature was reviewed through a wide range of research articles, project papers, and seminar papers related to the topic. For primary data collection, the researcher has used questionnaire methods. For preparing the questionnaire, the researcher follows the back-translation method suggested by Brislin (1980). Initially, the questionnaire was developed in English language and then translated into the Bengali language and again back to English to ensure accuracy. The questionnaire was divided into two parts- one for the respondent's demographic information and another part for the questions related to the research objectives and related variables that were considered for the study. Five-point Likert scale is followed to design the questionnaire.

### *3.4 Methods of Data Analysis and Presentation*

Following the suggestions of Coffey and Atkinson (1996)- 'the prime intention of the researchers is to collect data only for the analysis and no one collects data without substantial analyzing intention', the researchers process, analyze, and present data using different statistical tools, and graphical presentation. To analyze the whole data, the researchers used IBM-SPSS 25. The data are presented using different statistical analyses such as descriptive statistics (mean, variance standard deviation, correlation, regression analysis, and hypotheses are tested), graphical presentation, and tabulation methods. To ensure the reliability of data the researcher used Cronbach's alpha (Hair, 1995); whereas the construct validity is measured by using factor analysis (Campebell & Fisk, 1959).

## 4.0 Data Analysis and Presentation

In this section, the overall data analysis is presented in different sub-sections such as respondent's biographical information, their awareness regarding peer relations and its importance to them, and the impact of peer relations on developing teaching environment and students' learning ability.

### 4.1 Respondents' and their Education Institution's Information

This section is divided into the following four sections: respondent personal profile, and family profile, surveyed education institution's information, and their arrangements to improve peer relations.

#### *4.1.1 Respondents' Demographic Information*

The biographic information of the respondents' such as age, gender, area of study, academic records etcetera are presented in the following table:

**Table 4.1: Biographic information of the respondents**

| Demographic information of respondents | Category | Frequency | % |
|---|---|---|---|
| **Age:** Categories into three cluster<br>▪ The respondents are homogeneous in terms of their age as 97% belong to the same range. | Below 16 years | 5 | 0.9% |
| | 16-18 years | 510 | 97.0% |
| | Above 18 years | 11 | 2.1% |
| **Gender:** Categories into two categories<br>▪ The male-female ratio is about 62:38. | Female | 198 | 37.6% |
| | Male | 328 | 62.4% |
| **SSC GPA:** Categories into four categories<br>▪ More than 81% of students have GPA between 4.00-5.00 in their SSC exam | GPA 1.00- 2.00 | None | 0% |
| | GPA 2.00- 3.00 | 13 | 2.5% |
| | GPA 3.00- 4.00 | 85 | 16.2% |
| | GPA 4.00- 5.00 | 428 | 81.4% |
| **Areas of Study:** Three major areas of study<br>▪ The ratio of science, commerce, and arts is 43:36:21 accordingly. | Science | 224 | 42.6% |
| | Business | 191 | 36.3% |
| | Social Science & Arts | 111 | 21.1% |

Total sample: 526; *Note: developed by authors*

#### *4.1.2 Institution's Clubs and Extra-curricular Activities to Improve Peer Relations*

The different clubs and their related co-curricular activities to develop peer relations in surveyed institutions are listed in the following two tables:

| Table 4.2: Club(s) in the College(s) | | |
|---|---|---|
| ▪ Most of the colleges have only BNCC & Rover scouts, debating clubs and cultural and sporting club but not play active roles to develop students' potential.<br>▪ Urban-based colleges sometimes have science & ICT club, language club, press club etcetera.<br>▪ Very few colleges have nature and geo club, business, arts & craft club, and others. | Cultural Club | Language Club |
| | Debating Club | Heritage Club |
| | Nature & Geo Club | Language Club |
| | Science & ICT Club | Business Club |
| | Photography Club | Press Club |
| | Arts & Craft Club | Sporting Club |
| | BNCC (3 Wings) | Rover Scouts |

Total sample: 16 Colleges; *Note: developed by authors*

| Table 4.3: Co-Curricular Activities in the College(s) | | |
|---|---|---|
| ▪ Most of the colleges just arrange annual sports and cultural programs and celebrate national days and college day(s).<br>▪ Some colleges arrange debate competitions, seminars and workshops, study tours, film festivals etcetera.<br>▪ Very few arrange ICT training, language training, case competition, Math and Science Olympiad fest etc. | Singing | Language Learning |
| | Drama | ICT Training |
| | Debate | Photography |
| | Recitation | Film festival |
| | Study tour | Math Olympiad |
| | Film | Case competition |

Total sample: 16 Colleges; *Note: developed by authors*

### 4.2 Assessments of respondents' awareness regarding the importance of peer relation

The respondents' awareness regarding the concepts of peer relations and the importance of peer relations are examined in the following two sub-sections:

#### *4.2.1 Respondent's Awareness Regarding the Concept of Peer Relations*

Peer relations are not well-practiced in Bangladesh in a formal way as society and institutions do not consider it always positively. Moreover, the following table represents the present status and students' awareness regarding peer relations in the context of the survey:

Table 4.4: Respondents' awareness regarding Peer Relations

| Questions regarding the Awareness of Peer Relations among Students | Category | Frequency | % |
|---|---|---|---|
| **1. Do you have any idea about peer relations?** | Yes | 393 | 74.7% |
| ▪ Yes. About 75% have minimum ideas | No | 133 | 25.3% |
| **2. Your level of knowledge of peer relations?** | Sufficient knowledge | 115 | 21.9% |
| | Average knowledge | 323 | 61.4% |
| ▪ The respondents do not have sufficient knowledge about PR; 61.4% report that they have average knowledge. | Little knowledge | 72 | 13.7% |
| | No knowledge at all | 16 | 3.1% |
| **3. Do you have a close group with whom you share studies, knowledge, and experiences?** | Yes and enjoy share | 146 | 27.8% |
| | Yes; sometimes share | 295 | 56.1% |
| ▪ Yes, only 27.8% love to share and enjoy. | Yes but rarely share | 85 | 16.2% |
| **4. How do you enjoy this group relationship in your personal and academic life?** | Enjoy a lot | 190 | 36.1% |
| | Moderately enjoy | 307 | 58.4% |
| ▪ Yes, 36.1% enjoy it a lot in both areas | Don't enjoy it at all | 29 | 5.5% |
| | Not in a formal way | 98 | 18.6% |
| **5. Usually with whom are interested to make peers?** | Previously known | 184 | 35.0% |
| | Same Academic group | 265 | 50.4% |
| ▪ Students feel comfortable to make peers with the same academic group students. | Same region/ area | 20 | 3.8% |
| | Same subjects | 57 | 10.8% |
| **6. What factors create problems in creating peers?** | Adjustment problem | 224 | 42.6% |
| | Poor communication | 123 | 23.4% |
| ▪ adjustment problems & Poor communication and create (66%) problems in making PR. | Unable to make peer | 82 | 15.6% |
| | Reluctant and rigid | 97 | 18.4% |
| **7. How/to what extent do peer relationships affect cognitive will force?** | Always affect | 306 | 58.2% |
| | Sometimes affects | 186 | 35.4% |
| ▪ About 58.2% argued that PR affects cognitive will force whereas 35.4% found it sometimes effective. | Little impact | 26 | 4.9% |
| | No effect at all | 8 | 1.5% |
| **8. Do clubs in educational institutions play a role in creating peers?** | Very Significant | 133 | 25.3% |
| | Significant | 317 | 60.3% |
| ▪ About 86% agreed that institutions' clubs play significant roles in PR. | Less significant | 62 | 11.8% |
| | No impact at all | 14 | 2.6% |

### *4.2.2 Respondent's Awareness Regarding the Importance of Peer Relations*

From the literature, it is evident that peer relations are very important in terms of collaborative learning, knowledge sharing, and creating a good academic atmosphere to learn and improve learning capability. The following table represents the respondents thinking about the importance of peer relations in their academic and non-academic lives:

Table 4.5: Respondents' awareness regarding the importance of peer relations

| Questions regarding Awareness of the Importance of Peer Relations | Category | Frequency | % |
|---|---|---|---|
| **1. How effective are groups in developing students' knowledge and skills?**<br>▪ About 87% of respondents agreed that PR is effective to develop students' ASK. | Very effective | 213 | 40.5% |
| | Effective | 245 | 46.6% |
| | Less effective | 60 | 11.4% |
| | Not effective at all | 8 | 1.5% |
| **2. Students at all levels get benefit from peer relationships.**<br>▪ Most of the respondents (93%) were somehow convinced regarding the benefits of PR. | Always | 231 | 43.9% |
| | Sometimes | 259 | 49.2% |
| | Little or seldom | 14 | 2.7% |
| | Not helpful at all | 22 | 4.2% |
| **3. Do you get the answer if you ask any questions to the peer? –** 89.4% straightly argued for Yes. | Yes | 470 | 89.4% |
| | No | 56 | 10.6% |
| **4. Does peer group discussion increase test scores? –** 83.5% argued that it improves marks. | Yes, Improve | 439 | 83.5% |
| | No impact | 87 | 16.5% |
| **5. If the peer group talks only about studies, how it affects the result?**<br>▪ About 66% argued that group talk regarding studies improves their academic results. | V.good/ effective | 128 | 24.3% |
| | Good or effective | 217 | 41.3% |
| | Average impact | 164 | 31.2% |
| | Not effective at all | 17 | 3.2% |
| **6. What level of change can bring friendly relations between students and teachers in Teaching Learning Environment?**<br>▪ About 86% believe in positive change | V. positive change | 236 | 44.9% |
| | Positive change | 215 | 40.9% |
| | Average impact | 70 | 13.3% |
| | No change at all | 5 | 0.9% |

**Note: Developed by authors**

### 4.3 Descriptive Statistics regarding model variables:

The table 4.6 indicates the descriptive statistics regarding variables and it indicates that the highest average (mean) is for teachers' support (4.1954) and the minimum mean for popularity in peers (3.7471); whereas all of them have a standard deviation less than 0.64241

which defend that all the variables have a significant impact on learning attitudes. Besides, the value of Cronbach's alpha (α) for the variables is between 0.771 to 0.928 which indicates that all the variables have a minimum value of reliability (0.70) mentioned by (Hair, 1995).

Table 4.6: Descriptive Statistics

| | N | Mean | Std. deviation | Variance | Alpha |
|---|---|---|---|---|---|
| Intimacy | 526 | 3.8839 | .75765 | .574 | 0.841 |
| Popularity | 526 | **3.7471** | **.97772** | .956 | **0.771** |
| Trust | 526 | 4.0595 | .75910 | .576 | 0.821 |
| Insightfulness | 526 | 4.1186 | .83882 | .704 | 0.804 |
| SS | 526 | 4.1051 | .76711 | .588 | 0.836 |
| TS | 526 | **4.1954** | .77856 | .606 | 0.862 |
| DTLE | 526 | 3.9336 | .73504 | .540 | 0.820 |
| ILC | 526 | 4.0165 | **.64241** | .413 | **0.928** |

Note: Authors self-study

### 4.4 Correlations among the Considered Variables of the Research Model

The correlations matrix among the variables indicates that all the variables are significantly correlated to each other (two-tailed, at a 95% significance level). In addition, it is found that variable DTLE and ILC have the highest value of correlation coefficient which is 0.690; whereas ILC& INS, has the lowest value of correlation coefficient which is 0.290.

Table 4.7: Correlation Matrix of Considered Variables

| INT | POP | TR | INS | SS | TS | DTLE | ILC | |
|---|---|---|---|---|---|---|---|---|
| INT | 1 | | | | | | | |
| POP | .556** | 1 | | | | | | |
| TR | .645** | .673** | 1 | | | | | |
| INS | .446** | .326** | .472** | 1 | | | | |
| SS | .354** | .374** | .434** | .310** | 1 | | | |
| TS | .317** | .278** | .328** | .286** | .548** | 1 | | |
| DTLE | .401** | .365** | .411** | .326** | .526** | .644** | 1 | |
| ILC | .387** | .446** | .479** | **.290**** | .545** | .584** | **.690**** | |

Note: Total Sample (N) = 526; Note: Authors self-study

Note: INT- Intimacy, POP- Popularity, TR- Trust, INS- Insightfulness, SS- Social support, TS-Support of teachers, DTLE- Development of teaching-learning environment, ILC- Improvement of learning capability.

### 4.5 Regression Analysis of peer relations on the Improvement of learning capability:

The following table represents the value of linear regression of different variables which indicates how peer relations affect the learning capability of the learners. The calculated value indicates that except intimacy (INT) and insightfulness (INS), all the considered variables for peer relation positively and significantly affect the learners' learning capability.

Table 4.8: Regression of peer relations on the Improvement of learning capability

| Model | | Unstandardized Coefficients | | Standardized Coefficients | T | Sig. | 95.0% Confidence Interval for ß | |
|---|---|---|---|---|---|---|---|---|
| | ß | Std. Error | ß | | | Lower Bound | Upper Bound | |
| 1 | (Constant) | .899 | .136 | | 6.626 | .000 | .632 | 1.166 |
| | INT | -.027 | .034 | **-.032** | -.792 | **.429** | -.093 | .040 |
| | POP | .082 | .026 | .125 | 3.113 | .002 | .030 | .134 |
| | TR | .117 | .039 | .138 | 3.043 | .002 | .042 | .193 |
| | INS | -.026 | .026 | **-.034** | -1.016 | **.310** | -.077 | .025 |
| | SS | .119 | .031 | .142 | 3.827 | .000 | .058 | .181 |
| | TS | .140 | .033 | .170 | 4.263 | .000 | .076 | .205 |
| | DTLE | .373 | .035 | .427 | 10.572 | .000 | .304 | .443 |

Dependent variable ILC (Note: Authors self-study)

**Here,** INT- Intimacy, POP- Popularity, TR- Trust, INS- Insightfulness, SS- Social support, TS- Support of teachers, DTLE- Development of teaching-learning environment.

## 4.6 Hypotheses Testing Results

The following table summarizes the hypotheses results for clear understanding of the readers.

Table 4.9: Impacts of Peer Relations on Improvement of Learning Capability

| **Formulated Hypotheses** | ß | ***P*** | **Acceptation or rejection decisions** |
|---|---|---|---|
| **H1: INT has significant impacts on DTLE** | **.010** | **.792** | **Null Hypothesis accepted (p≥0.05)** |
| H2: POP has significant impacts on DTLE | .100 | .001 | Null Hypothesis is rejected at 1% SL |
| H3: TR has significant impacts on DTLE | .136 | .001 | Null Hypothesis is rejected at 1% SL |
| **H4: INS significant impacts on DTLE** | **-.010** | **.717** | **Null Hypothesis accepted (p≥0.05)** |
| H5: SS has significant impacts on DTLE | .180 | .000 | Null Hypothesis is rejected at 1% SL |
| H6: TS significant impacts on DTLE | .306 | .000 | Null Hypothesis is rejected at 1% SL |
| H7: DTLE has significant effects ILC | .373 | .000 | Null Hypothesis is rejected at 1% SL |

Note: Authors self-study

**Here,** INT- Intimacy, POP- Popularity, TR- Trust, INS- Insightfulness, SS- Social support, TS- Support of teachers, DTLE- Development of teaching-learning environment,

The table- 4.9 represents the hypotheses testing result of the research which indicates out of seven formulated hypotheses five hypotheses are accepted (H2, H3, H5, H6, and H7; as their p-value is less than 0.05); whereas two hypotheses (H1, and H4) are rejected due to their p-value is more than or equal to 0.05 ($p \geq 0.05$). So, the study can conclude that peer relationships can influence the teaching-learning environment through popularity, trust, social support, and teachers' support; it is also evident that the teaching-learning environment significantly affects the learning ability of the learners.

## 5.0 Major Findings and Discussion

This research cultivates some important and vibrant issues related to peer relations and teaching-learning environments to develop learners' capability to learn which are as follows:

A great number of the colleges have only BNCC & Rover Scouts, and some colleges have debating clubs and cultural and sporting clubs but do not play active roles to develop students' potentiality through encouraging peer relations. Most of the colleges just arrange annual sports and cultural programs and celebrate national days and college day(s). Rarely, some colleges arrange debate competitions, seminars and workshops, study tours, film festivals etcetera. However, very few colleges arrange ICT training, language training, case competitions, and Math & Science Olympiad competitions.

The study found that about 75% of students have an idea or preliminary knowledge whereas about 22% have sufficient knowledge about peer relations and most of them are practicing it operationally but not academically. Besides, about 36% enjoy peer relations a lot and they argued that the same academic group is their precondition to make peer relations. Moreover, they have identified adjustment problems and poor communication as vital issues or influential factors in forming new groups or maintaining peer relations. Peer relations always affect cognitive will force (mental and intellectual ability increase) to learn and explore new things, or searching solutions to the existing problem.

Most of the students (about 86%) argued that educational institutions play a significant role in forming peer relations which leads them to learn academic lessons develop their skills and knowledge and achieve academic excellence. About 89.4% of respondents argued that peer relation helps them to get answers and probable solutions to any problems; whereas 85.5% claimed that peer relations help them to improve their academic results; they also viewed that problem-solving and opinion-sharing are enjoyable parts of peer relations.

In correlation analysis, all the variables considered in this research are significantly correlated to each other (two-tailed, 5% level of significance). The regression analysis shows that except two all five other variables have positive and significant effects on the learning ability of the learners. In the case of hypotheses analysis, except two (H1, H4; variable- Intimacy and Insightfulness), all other five hypotheses (H2, H3, H5, H6, H7; variables-

Popularity, Trust, Social support, Teachers support, T-L environment) are proved with at least 1% level of significance.

The study finds, for academic learning, the participatory class develops peer relations magnificently which is a resemblance to the findings of several former literature on mutual learning through group activities in the classroom (Beiswenger &Grolnick, 2010; Hossain & Tarmizi, 2013). Likewise, the study of Aziz & Hossain (2010) also identifies peer relations as an effective means for academic excellence and exam outcomes. This research also unveils that peer group appears as an easy solution by sharing opinions in the context of problem-solving and different queries on peers' enthusiasm to learn. Moreover, amicable behavior between teacher and student can create a compatible environment for learning which was also emphasized by the study of Islam, Sarker, & Islam (2022). In addition, many other former studies also considered the importance of peer relations from different perspectives such as group learning is effective in learning science, mathematics, and languages (Hossain & Tarmizi, 2013; Mim & Chowdhury 2018; Biswas, 2015), perceived academic support and teacher-students relations is highly related with students' academic achievements, (Hossain, 2016; Aziz & Hossain, 2010; Wentzel et al., 2017), whereas, unfriendly classroom environment and stressful peers negatively affects students learning ability and academic excellency (Akter, 2021). Moreover, this study reveals most of the students are used to gossiping during break time for not having a formal PR group though a positive view for liking break time is found by the existing study (Blatchford and Baines, 2006).

In addition, the present study also finds that among the six considered scales of peer relations (intimacy, trust, popularity, insightfulness, social support, teachers' support) have a significant impact on the development of the teaching-learning environment. This finding also validated by some previous studiessupportive peer relationships are important for student's mental and physical health (Ragelienė, 2016; Tome et, el. 2014); interpersonal trust positively affects cooperative tendencies among individuals (Wang, G., & Hu, W. 2021; Acedo-Carmona and Gomila, 2019); when peer trust is low, relationships are more distant, resulting in less significant cooperate tendencies (Wang and Chen, 2011); social relations can mitigate feelings of stress (Wentzel et al., 2017); In peer relations the teacher play role as a facilitator (Evlat & Avcioglu, 2002), teacher's support is interconnected to high ability to be coped with academic environment and achievement (Hoferichter et al., 2022; Blatchford & Baines, 2010).

Furthermore, the present study finds that a better teaching-learning environment significantly affects the learning capability of the learners which is also supported by some previous studies such as long-term student engagement is a predictor of student learning and achievement (Fredricks, Blumenfeld, & Paris, 2004), mutual learning gives learners a chance to take part in discourse, and make them critical thinkers (Babu et al., 2017; Mehar & Kaur, 2017), mixing positive academic emotions will cultivate the learning motivation and cognitive will force of the students (Tu & Chu, 2020).

## 6.0 Recommendations and Conclusion

In light of the study findings, the researchers have recommended some points for the policymakers, college administrators, teachers, guardians, or even for students to enhance peer relations and make students able to learn new things in groups. Firstly, the Ministry of Education should be careful to provide and accommodate effective student-friendly education policy considering the significant impact of behavioral patterns and the demand for student learning. The different academic and non-academic clubs can play active roles to develop students' potentiality which will be perfectly monitored by the Directorate of Secondary and Higher Education by its field staff.

Secondly, the college administrators, staff, and teachers should consider adopting practices that have been shown by the study to support, engage, and nurture students which will stimulate peer relations among the students. College administrators should organize different colorful cultural activities that students can perform in a couple of days by the group. For perfect monitoring, a group of students should be distributed under a guide teacher (student adviser); a code of conduct should be displayed on the notice board and also provided to the students which will be followed strictly by the college administration. Bullying, ragging, or ferocious unhealthy behavior should be stopped, and let them know about the zero-tolerance level of it. Teachers should make a plan for engaging in classroom activities to find out the adjustment and poor communication problems of the students.

Thirdly, peer relations should be well received by Students' guardians for the flourishing of their children's adjustment and growing positive attitude. But they have to maintain close contact with their youngster to overcome the negative aspects. Guardians should be careful enough about the company of their children, and also extend cooperation and care to their children so that the students can overcome the losses (if they are involved in any wrong peer relations, addiction, love, and affairs, or others) or wrong decision taken through the inspiration of their peers. The students as well as guardians should be careful of illegal events that may come from the misuse of the relationship peer group which leads them to a life full of darkness.

Finally, it is to be said that the findings from this study have significant implications concerning peer relations among classmates for improving the teaching-learning environment and learning capability of the learners. Though it covers a small area, it has ample scope to observe and examine students' capacity, adjustment or learning sensitivity, or learning willingness in the higher secondary or even in the tertiary, and higher education level in Bangladesh. Though the study has significant importance, it is not free from some limitations. Firstly, the study covers limited areas and institutions but it tries to blend the urban and rural students to get a general idea. Secondly, the sample respondents are not well-experienced in the term which makes the data collection more complex and time-consuming for the researchers. After completing the study, the researchers believe that the findings may assist policymakers, teachers, students, or even guardians to identify appropriate measures that could promote cooperative learning in the education sector of Bangladesh and to improve the learners' capability.

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## References

Acedo-Carmona, C., and Gomila, A. (2019). Personal trust extends cooperation beyond trustees: a Mexican study. *International Journal of Psychology*. 54, 687–704.

Akter, S. (2021). Factors Affecting Academic Self-Efficacy and Its Impact on Perceived Academic Burnout among Students in Bangladesh. *International Journal of Management, Entrepreneurship, Social Science and Humanities*, 4(1), 17-31.

Aydoğdu, F. (2022). Developing a Peer Relationship Scale for Adolescents: a validity and reliability study.*Current Issues in Personality Psychology*, 10(2), 164–176.

Aziz, Z., & Hossain, M. A. (2010). A comparison of cooperative learning and conventional teaching on students' achievement in secondary mathematics. *Procedia-Social and Behavioral Sciences*, 9, 53-62.

Babu, G., Suresh, P., &Pariventhan, K. (2017). Enhancement of learning through collaborative learning techniques. *New Man Journal of Multidisciplinary Studies*, 4(1), 29-38.

Beiswenger, K. L., &Grolnick, W. S. (2010). Interpersonal and intrapersonal factors associated with autonomous motivation in adolescents' after-school activities. *Journal of Early Adolescence*, 30, 369–394.

Biswas, D. (2015). Impact of classroom interaction on English language learning and teaching in secondary level of Bangladesh (Publication no.) [Doctoral dissertation, BRAC University].

Blatchford, P. and Baines, E. (2006). A Follow-Up National Survey of Break times in Primary and Secondary Schools (Report to Nuffield Foundation Ref: EDV/00399/G). Retrieved September 10, 2007, from http://www.breaktime.org.uk/NuffieldBreakTimeReport-WEBVersion.pdf.

Blatchford, P., & Baines, E. (2010). Peer relations in school. *International Handbook of Psychology in Education*, 227-274.

Bosworth, K and Hamilton, S.J. (1994) *Collaborative learning: Underlying processes and effective techniques. New directions for teaching and learning,* San Francisco: Jossey Bass.

Brislin, R. W. (1980). Translation and content analysis of oral and written materials. *Methodology*, 389-444.

Campbell, D. T., & Fiske, D. W. (1959). Convergent and discriminant validation by the multitrait-multimethod matrix. *Psychological bulletin*, 56(2), 81.

Ciani, K. D., Middleton, M. J., Summers, J. J., & Sheldon, K. M. (2010). Buffering against performance classroom goal structures: The importance of autonomy support and classroom community. *Contemporary Educational Psychology*, 35, 88–99.

Cillessen, A. H., & Marks, P. E. (2011). *Conceptualizing and measuring popularity:Popularity in the peer system*, 25-56.

Cillessen, A. H., & Rose, A. J. (2005). Understanding popularity in the peer system. *Current Directions in Psychological Science*, 14(2), 102-105.

Cochran, W. (1963). Sampling Techniques, New York, 1953. *Statistical Surveys E. Grebenik and CA Moser*.

Coffey, A., & Atkinson, P. (1996). *Making sense of qualitative data: complementary research strategies*, Sage Publications, Inc.

Evlat, A., &Avcioglu, H. (2002). Teachers' opinions on peer relations between students with special needs in primary education. *International Online Journal of Primary Education*, 11(2), 447-460.

Fredricks, J. A., Blumenfeld, P. C., & Paris, A. H. (2004). School engagement: Potential of the concept, state of the evidence. *Review of Educational Research*, 74, 59–109.

Hair, J. F., Anderson, R. E., Tatham, R. L., & Black, W. C. (1995*). Multivariate data analysis with readings*. NewYork, NY: PrenticeHall.

Hawley, P. H., Little, T. D., &Pasupathi, M. (2002). Winning friends and influencing peers: Strategies of peer influence in late childhood. *International Journal of Behavioral Development*, 26, 466–474.

Hoferichter, F., Kulakow, S., &Raufelder, D. (2022). How teacher and classmate support relate to students' stress and academic achievement. How social and personal resources support teaching and learning effectiveness, *Educational Psychology,* 13(2022),

Hossain, A., &Tarmizi, R. A. (2013). Effects of cooperative learning on Students' Achievement and Attitudes in secondary mathematics. *Procedia-Social and Behavioral Sciences*, 93, 473-477.

Hossain, S. (2013). A study of determining the relationship between academic achievement and problem behavior of urban secondary school students in Bangladesh. *The International Journal of Social Science*, 8(1), 1-10.

Hossain, S. (2016). An exploration of the factors that contribute to students' school satisfaction in Bangladesh [Doctoral dissertation, UNSW Sydney].

Islam, M. K., Sarker, M. F. H., & Islam, M. S. (2022). *Promoting student-centered blended learning in higher education: A model. E-Learning and Digital Media*, 19(1), 36-54.

LaFontana, K. M., &Cillessen, A. H. (2010). *Developmental changes in the priority of perceived status in childhood and adolescence. Social Development*, 19(1), 130-147.

Lu, F. (2020, December). *A Research on the Peer Relationship of Primary and Middle School Students and Its Impact on Self-learning Pressure and Motivation*. In 2020 3rd International

Conference on Humanities Education and Social Sciences (ICHESS 2020) (pp. 796-800). Atlantis Press.

Ma, L., Luo, H., and Xiao, L. (2021). Perceived teacher support, self-concept, enjoyment, and achievement in reading: a multilevel mediation model based on PISA 2018. Learn. Individ. Differ. 85:101947.

Malti, T., Averdijk, M., Zuffianò, A., Ribeaud, D., Betts, L. R., Rotenberg, K. J., et al. (2016). Children's trust and the development of prosocial behavior. *International Journal of Behavioral Development*. 40 (3), 262–270.

Martin, A. J., & Dowson, M. (2009). Interpersonal relationships, motivation, engagement, and achievement: Yields for theory, current issues, and educational practice. *Review of Educational Research*, 79, 327–365.

Mehar, R., & Kaur, P. (2017). Effect of Collaborative Learning Strategy on Achievement in Economics to Self Esteem. *International Journal of Research in Economics and Social Sciences* (IJRESS), 7(12).

Mim, S. A., & Chowdhury, M. A. (2018). Mobile Communication as a Platform for Learning Science from Peers: Possibilities in Bangladesh. *Journal of Research in Science, Mathematics and Technology Education*, 1(3), 267-282.

Mugenda, A. (2003). Research methods Quantitative and qualitative approaches by Mugenda. *Nairobi, Kenya*.

Murugan, G. S., & Annadurai, R. (2021). Family and Peer Relationship Among High School Students. *Ilkogretim Online*, 20(4), 3544-3554.

Neale, D. C., Carroll, J. M., & Rosson, M. B. (2004). Evaluating computer-supported cooperative work: models and frameworks. Proceedings of the 2004 ACM conference on computer supported cooperative work, Chicago, Illinois, USA, pp. 112–121.

Parr, J. M. (2002). Environments, processes, and mechanisms in peer learning. *International Journal of Education Research*, 37, 403–423

Ragelienė, T. (2016). Links of adolescents' identity development and relationship with peers: a systematic literature review. *Journal of the Canadian Academy of Child and Adolescent Psychiatry*. 25, 97–105. PMID: 27274745

Rubie-Davies, C. M., Stephens, J. M., & Watson, P. (Eds.). (2015). Routledge international handbook of social psychology of the Classroom. Routledge.

Tarrant, M. (2002). Adolescent peer groups and social identity. *Social Development*. 11, 110–123.

Tomé, G., de Matos, M. G., Camacho, I., Simões, C., &Diniz, J. A. (2014). Friendships quality and classmates support: How to influence the well-being of adolescents. *Higher Education of Social Science,* 7(2), 149-160. DOI:10.3968/5656

Tu, J. C., & Chu, K. H. (2020). Analyzing the Relevance of Peer Relationship, Learning Motivation, and Learning Effectiveness—Design Students as anExample. Sustainability, 12(10), 4061.

Wang, G., & Hu, W. (2021). Peer relationships and college students' cooperative tendencies: Roles of interpersonal trust and social value orientation. *Frontiers in Psychology*, 12, 656412.

Wang, P., and Chen, L. (2011). The influence of punishment and social value orientation on interpersonal trust and cooperative behavior in public goods dilemmas. *Acta PsychologicaSinica* 43, 52–64.

Wentzel, K. R., Muenks, K., McNeish, D., and Russell, S. (2017). Peer and teacher support to motivation and effort: a multi-level study. *Contemporary Education Psychology*. 49, 32–45.

Yildirim, S. (2012). Teacher support, motivation, learning strategy use, and achievement: a multilevel mediation model. The Journal of Experimental Education. 80, 150–172.

Zavarrone, E., & Vitali, A. (2011). Information, advice, friendship, notes and trust network: evidence on learning from a classmate. GRASPA WORKING PAPERS, 1-4.

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# Exploring Freelancing as a Path to Self-Employment of National University Graduates: Challenges and Prospects

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## Executive Summary

*This study investigates the potential of freelancing to solve the high unemployment rate among graduates from the National University (NU) in Bangladesh. The study utilizes a multi-method approach, including key informant interviews, case studies, focus group discussions, SWOT and PESTLE analysis, and a secondary literature review. Data analysis was conducted using SPSS-22, and a thematic examination was performed to establish associations between variables. The secondary data revealed that seventy two percent of respondents believed freelancing could alleviate the nation's unemployment problem, while about sixty nine percent of NU graduates viewed freelancing as a tool for self-employment.*

*Freelancing offered numerous benefits, including economic growth, independent work opportunities, skill development, and societal recognition. The study identified a positive outlook for freelancing regarding the political, economic, social, technological, legal, and environmental factors. The supportive legal factors were tax exemptions, innovative ID technologies, and eco-friendly options. However, freelancers face several challenges, including building local connections, income variability, societal perceptions, technology requirements, contract disputes, and the toll of extended screen time. Overcoming these obstacles requires collaboration among policymakers, buyers, and freelancers.*

*The study highlighted potential constraints in NU's infrastructure, expertise, curriculum, and funding but emphasized that motivation from NU authorities and college principals could address these issues. The work ethic and commitment of NU*

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*students in embracing freelancing were considered crucial. The findings aim to guide NU authorities, decision-makers, and college administrators in supporting students in the freelancing field, ultimately addressing unemployment concerns.*

Key Words: Gig, Marketplace, PESTLE, SWOT, and Unemployment

## 1. Introduction

The introduction of this study discusses the rising unemployment rate in Bangladesh, particularly among National University (NU) graduates. Despite the constitutional provision for the "right to work," NU graduates face a high unemployment rate of 65.77%, attributed to both inner incapability and adverse external situations. In this context, self-employment through freelancing emerges as a potential solution. Freelancing, classified as "digital labor" or "gig work," offers individuals the opportunity to work independently on project-based assignments with flexible hours and global clients.

The article highlights the increasing demand for freelancing in Bangladesh and its potential to address the unemployment issue. While the country ranks third globally in freelancing supply, there are challenges faced by independent contractors, including low payment rates and limited payment gateways like PayPal. However, alternatives like Payoneer and bKash are used by some freelancers.

The study aims to explore the extent to which freelancing contributes to self-employment among NU graduates and the factors influencing their decision to pursue freelancing as a career option. The research investigates the current state of self-employment through freelancing among NU graduates, identifies challenges they face, and proposes potential solutions to improve their freelance careers. The findings of this study can provide valuable insights into the role of freelancing in creating self-employment opportunities for NU graduates and improving their employment prospects in Bangladesh.

The rationale for this article is to address the persistent challenge of unemployment in Bangladesh, particularly among recent graduates from National University (NU). Unemployment rates among NU graduates have reached alarming levels, making them a significant concern for the country's future. Considering the Sustainable Development Goals (SDGs), which set targets for youth skills development and self-employment, freelancing emerges as a potential solution to tackle unemployment and meet SDG goals.

The Fourth Industrial Revolution (4IR) demands specific skills that align with the attributes required for successful freelancing. Given the transitional period from a Least Developed Country (LDC) to a developing country, Bangladesh faces critical unemployment issues, making it essential to explore the impact of freelancing in increasing self-employment opportunities for NU graduates.

Freelancing presents an alternative employment option that can benefit graduates with limited access to formal job opportunities. It offers flexibility, the ability to work from home, and opportunities to gain work experience and new skills. As freelancing gains popularity in Bangladesh, understanding its potential to create self-employment opportunities and the factors influencing graduates' decisions to pursue freelancing is vital.

The study aims to fill the knowledge gap regarding freelancing's impact on self-employment among NU graduates. The findings can inform policymakers and stakeholders in developing programs that support freelancing to address unemployment and promote self-employment. By providing valuable insights, this article aims to contribute to the development of a more inclusive and dynamic virtual job market in Bangladesh.

Exploring the role of freelancing on NU graduates in self-employment was the primary purpose of this study. In satisfying this aim, it engaged to-

A. demonstrate the present scenario of freelancing in Bangladesh.

B. discover the impact of freelancing on NU graduates' employment.

C. enquire about the challenges faced by freelancers' graduates from NU.

D. exploring the prospects before NU graduated freelancers regarding future activities.

The study focused solely on NU graduates involved in freelancing, limiting the representation of the entire freelancing population in the country. The sample size was relatively small, comprising only sixty participants, three case studies, and one focus group discussion. Limited access to data and a lack of previous related studies might have impacted the comprehensiveness of the findings. Although multiple data collection methods were employed, there may still be inherent limitations in the research design. Time constraints posed challenges in data collection, potentially affecting the depth and scope of the study. Relying on voluntary participation could have introduced selection bias and limited the availability of participants. There might have been difficulties in finding adequate newspaper writings or study reports for guidance. The researchers made diligent efforts to contact NU graduates involved in freelancing despite challenges. Various data collection methods, including interviews, case studies, FGD, KII, and content analysis, were used to gather diverse perspectives. The study sought information from key stakeholders such as college principals, BASIS and BFDS representatives, and a registered organization. Guidance from experienced advisors and expert group members, along with the use of digital tools and established rules, aimed to mitigate limitations. The absence of significant cultural or personal issues in the study contributed to a smoother research process.

## 2. Literature Review

Freelancing refers to "Working as independent contractors rather than being employed by someone else hired by other companies on a part-time or short-term basis" (Clouse, 2021). Here people are free to determine their own schedules and decide which projects to work on thanks to this working paradigm. Freelancing is the phrase used to describe the practice of working with several clients and accepting different projects without committing to a single employer or being hired by a company that permits working from home.

Freelancing had been sublimely opted for twice as a long-term career in the USA from 2014 to 2019, contributing approximately 5% of their total GDP (Ozimek, n. d.). According to Clayton (2023), between 2021 and 2022, wages for independent contractors rose by 3% annually in the US. The US Independence Workforce Report claimed that 60 million Americans

(39% of the workforce), are independent contractors in 2022, adding $1.35 trillion to the US economy.

O'Neill (2021) states that only 2.8% of Japanese are jobless. In contrast, about two-thirds of NU graduates are jobless in Bangladesh due to a flawed education system and scarcity of vacancies (Ahmmed, 2021, BIDS 2021).

There are about seventy-three areas of this digital work (freelancers.gov.bd). According to the Oxford Internet Institute (OII), a concern of the University of Oxford-UK, 60% of our freelancers work in the creative and multimedia industries, and the second-highest number of freelancers, 16%, are engaged in software development. In the clerical and data entry sectors, as well as writing and translation about 9% of people work. 0.2% work in the professional services industry, and just 6% support sales and marketing. However, Harry (2022) enlisted only four areas (e. g. content writing, digital marketing, graphics design, and web design & development) that are suitable for Bangladeshi freelancers. Over here, doing these activities are selected as freelancing in this study.

By quoting the Chairman of the Bangladesh Freelancer Development Society (BFDS) Islam reported that, according to calculations made by online marketplaces (websites for offering and receiving outsourcing labor), there are currently about 10,50,000 freelancers working in Bangladesh, 37% of them regularly accept and finish work from international clients. However, the Bangladesh Association of Software and Information Services (BASIS) said that other groups gathered information on freelancers from the major freelancing websites worldwide. Other than this, many independent contractors deal directly with clients (Afrin, 2021). Alam (2021), and Tabassum (2000) enlisted the top sites from where most Bangladeshi freelancers receive their work: 99designs, Designhill, Elance, Fiverr, Freelancer, Guru, oDesk, PeoplePerHour, SimplyHired, Toptal, Truelancer, and Upwork among available 253 online marketplaces.

Alam (2021) and Rahman (n. d.) enlisted some platforms reliable for freelancing learning. Such as Advance IT Center, BITM (BASIS Institute of Technology & Management), Creative IT Institute, Daffodil International Professional Training Institute, Digital AGency BD, DUSRA Soft, Freepik zero to Hero, Instructory, ITSORS, Learn with Shohagh, Prime IT, SoftNetBD, UY Lab, and Xvect Intern.

The Daily Star (Sep 2021) mentioned psycho-socioeconomic difficulties as challenges before the freelancer. That report claimed that, despite the growth of freelancing, Bangladesh has lower freelancer hourly wages than many other nations in the world. After the Philippines, India, and Pakistan, Bangladesh was the eighth-fastest-growing freelancing market in the world, according to the 2019 Global Gig-Economy Index. According to a story from Japan's Nikkei Asia in July of 2020, workers from developing nations use online marketplaces at a lesser rate than workers from industrialized economies, according to sources at the University of Oxford. US-based freelancers make the most money at $30 per hour. On the other hand, Bangladesh, the second-largest source of freelancers in the world, pays less per hour than $10, less than India, Pakistan, and the Philippines.

Bangladesh targeted to upend unemployment through freelancing by increasing its earnings from $1.1b to $5.0b in 2025. NU graduates may one of the parts of the gain. To ensure the gain, the government lured 100% tax exemption from freelancers amid 2018 - 2024, along with 10% cashback on remittances for the IT companies registered with BASIS that export software and software services earned in the legal channel (Oaisharjo & Afssar, 2020). According to Star Business Report on January 30, 2022, Bangladesh Bank circulated that the non-member of BASIS will get a 4% incentive on remittance by freelancing, but they need a Smart ID. That is why, the state has started registering individual freelancers via the freelancers.gov.bd website in collaboration with the ICT division and Bangladesh Freelancer Development Society (BFDS). Until now, about 41,000 freelancers are registered with them, targeted at about 1,30,000.

Rahaman (2020) alleged that the biggest issue for freelancers in Bangladesh is that most of the credit and debit cards issued in our territory are not widely recognized and accepted by freelancing marketplaces. As a result, Bangladesh, for example, had issues with the freelance marketplace's payment system. Due to the intense competition in the market, many bright freelancers who had been promised jobs were unable to register.

Additionally, the government offers no comprehensive skill development training program for new freelancers. Besides freelancers must have strong verbal and written communication skills in English. This language proficiency is a loophole of our young people. Additionally, uninterrupted power and high-speed internet are not offered in most Bangladeshi localities, and independent contractors lack social acceptance. In contrast, the top freelancing nation’s offer a favorable freelancer environment, high demand, supportive policies, and easy access to payment solutions. The top freelancing countries include the United States, the United Kingdom, Brazil, Pakistan, Ukraine, the Philippines, and India, which are ahead of Bangladesh for these opportunities.

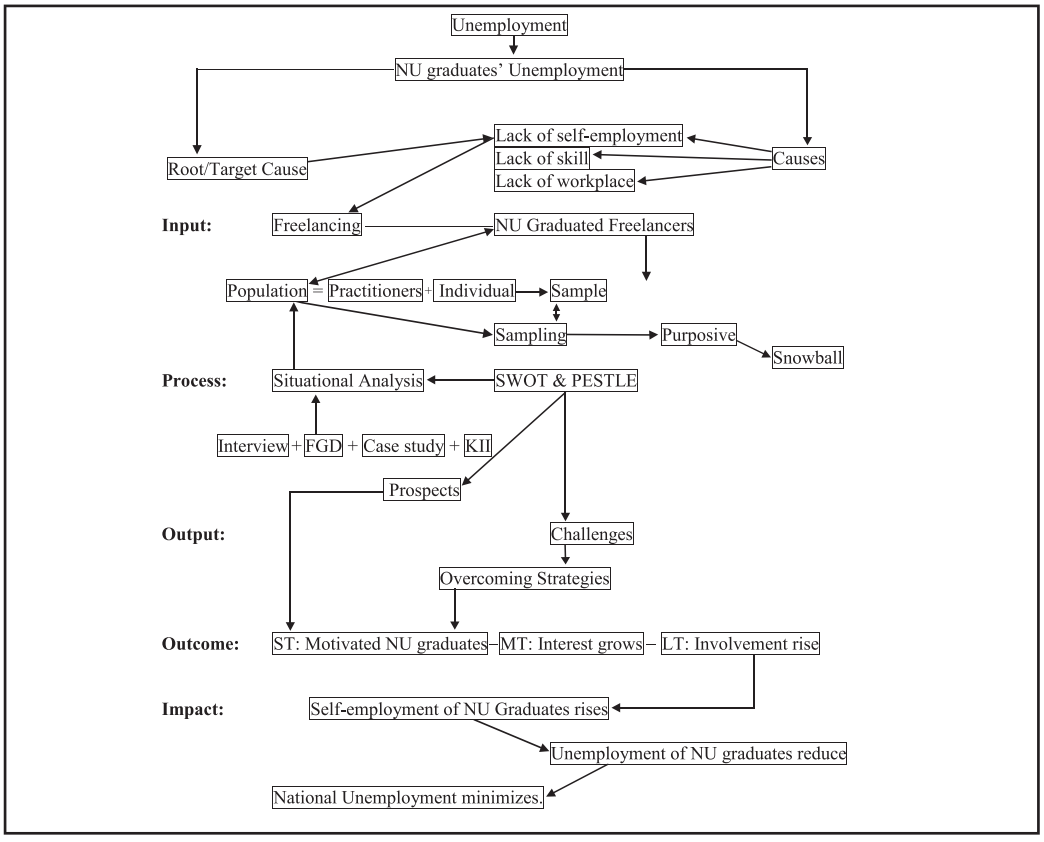
The existing literature lacks empirical or exploratory studies specifically focusing on Bangladeshi freelancers, especially those who are NU graduates. Limited research has been conducted on the impact of freelancing on unemployment in Bangladesh or the challenges faced by NU graduates, who have a high rate of unemployment. There is a need for comprehensive information on key aspects such as earnings, satisfaction, social standing, and livelihood management of Bangladeshi freelancers.

This study aims to address these literature gaps by examining the experiences, challenges, opportunities, income patterns, and satisfaction levels of NU graduates engaged in freelancing. It also aims to explore the correlation between their educational background and freelancing pursuits. By filling this gap, the research will provide valuable insights for policymakers, educational institutions, and freelancers to develop effective strategies, support systems, and policies to enhance the freelancing ecosystem and empower NU graduates in the field of freelancing.

## 2.1 Conceptual Framework

Over here (Chart 1), unemployment is our main concern, especially the worklessness of NU graduates. This situation has different causes: lack of skills among graduates, shortage of workplaces, and lack of self-employment. Then we selected the last cause as the root because only 1.5% of NU graduates are self-employed. After consulting the literature, we are satisfied that freelancing can be a robust solution for this issue. For our study, we choose freelancers who have passed from colleges affiliated with NU as a population. Sixty-Seven individuals (Sixty for Interviews, Four for FGD, and three for Case Study) were purposively assigned as a sample through snowballing. Besides, we also studied a principal of a government college, a BASIS representative, a BFDS representative, and an organization having BASIS membership.

After getting data from the samples, we analyzed the actual situation through cross SWOT & PESTLE analysis. These data came from interviews, FGD, KIIs, and case studies. From this, we explored ground reality: prospects, challenges, and their overcoming strategies. As a result, in the short term, well will get motivated NU graduates, then they will be interested in freelancing, and at last, involved in freelancing. Finally, a self-employed NU graduate group




will be created by reducing unemployment, ultimately minimizing the national unemployment scenario will be changed.

Chart1:ConceptualFramework

## 3. Methodology

This study utilized a mixed-methods approach, combining quantitative and qualitative analysis, to investigate the challenges and opportunities of freelancing among NU graduates in four sectors. Purposive sampling was used to select participants, with 60 NU graduates selected for individual interviews, four participating in a Focus Group Discussion (FGD), and three separate case studies on three graduates. Key Informant Interviews (KII) were conducted with stakeholders, including college principals, representatives from the Bangladesh Freelancer Development Society (BFDS), and members of the Bangladesh Association of Software and Information Services (BASIS). A Focus Group Discussion (FGD) was conducted to generate new findings on potential changes within the target group of NU graduates and their impact on freelancing. Sample selection was done using methods such as social media searching, snowball sampling, and contacting relevant associations. Case studies examined the topic from multiple perspectives, demonstrating how subjectivity and objectivity interacted in real-world situations. Interview guidelines, FGD checklists, case study guidelines, and KII guidelines were developed to ensure consistency and structure during data collection. Secondary data was gathered through a comprehensive review of documents, and thematic analysis was conducted using SPSS-22 software. A cross-sectional analysis was performed using SWOT and PESTLE frameworks, facilitating the identification and discussion of vital qualitative data points. The findings were presented in graphical, chart, and tabular formats. Overall, this mixed-methods approach provided valuable insights into the challenges and opportunities of freelancing among NU graduates, providing valuable insights for the research report.

## 4. Major Findings & Discussion

**Objective-1: State of freelancing in Bangladesh**

The investigation uncovers some significant observations regarding the freelancing environment among the participants. Significantly, 45% of participants depend on freelancing as their primary source of income, highlighting its importance as a method of generating revenue. Furthermore, an equivalent proportion (45%) of freelancers sustain a blend of stable and variable income, demonstrating a varied strategy for earning. Roughly half of the individuals surveyed indicate that they are able to maintain their livelihood at an "average" level, which is the highest percentage in terms of financial stability. Approximately 40% of the freelancing population consists of individuals who graduated in 2019, indicating a significant representation of recent graduates in this profession.

Moreover, a notable 20% of members are currently registered in educational institutions, indicating a keenness for freelancing alongside their academic pursuits. Public college freelancers make up 55% of the total, while private college freelancers make up 45%, demonstrating inclusivity across diverse educational backgrounds. Approximately half of freelancers achieve financial self-sufficiency, indicating a level of success and consistency. Freelancers indicate equal satisfaction with their wages, suggesting a generally favorable opinion of the cash they receive from freelancing. Approximately 30% of individuals have completed a training program lasting between 1 and 3 months, during which they have acquired

essential skills necessary for their freelancing work. The participants possess an average of 2-3 years of freelancing experience, demonstrating their proficiency in the area. Social connections and internet platforms, such as relatives, Facebook, friends, and YouTube, serve as valuable sources of inspiration and information for freelancers. When it comes to monetary satisfaction and societal recognition, 40% of freelancers have a neutral opinion.

In comparison, a large majority (85%) believe that society appreciates their labor, indicating a good perception of freelancing as a valid professional option. The findings offer a thorough perspective on freelancing, encompassing revenue streams, income stability, educational attainment, financial independence, training background, and sources of motivation. The insights provided are significant for policymakers, educators, and industry stakeholders. These insights can help in developing policies and support mechanisms that promote the growth and success of freelancers. This, in turn, contributes to the advancement of the freelancing ecosystem in Bangladesh and abroad.

Objective-2: Impact of freelancing on NU self-employment

The study reveals that the field of study does not significantly impact the length of unemployment students experience during their transition to the job market. Graduates face similar challenges regardless of their academic discipline, and the potential for income generation through freelance work is consistent across various fields of study. This suggests that the type of academic discipline chosen by students is independent of their freelancing income and opportunities.

Similarly, the distinction between public and private colleges shows minimal influence on student unemployment levels. Students face comparable unemployment rates regardless of whether they attend public or private institutions, indicating that the type of college has little effect on employment outcomes. Moreover, the likelihood of engaging in freelance work is relatively equal across different academic disciplines, making freelancing a viable option for students from diverse fields.

The study also finds that the income ratio has negligible effects on individuals' satisfaction with their freelancing income. However, more extended periods of unemployment tend to diminish income satisfaction, underscoring the importance of timely employment and income generation. Furthermore, the type of college attended does not significantly impact freelancing income levels, suggesting that the kind of institution does not notably influence income potential.

Training duration also has a minimal impact on an individual's ability to earn through freelancing. The study highlights that employment status among students is more closely related to the type of college attended, pointing to the role of college type in shaping employment opportunities. Overall, the study provides valuable insights into how academic background, college type, training duration, and unemployment length influence freelancers' experiences and outcomes. These findings can guide policymakers, educators, and students in making informed decisions and developing strategies to enhance employment prospects and income generation in the freelancing sector.

**Objective- 3: Barriers before freelancers graduated from NU**

The study emphasizes the significant obstacles encountered by self-employed individuals in the freelancing industry. Roughly 15% of freelance workers work at night, typically while seated at a desk, and face challenges in effectively managing their time, resulting in a detrimental effect on their work-life balance. Moreover, almost 30% of freelancers perceive themselves as needing to be more appreciated in comparison to individuals in conventional employment, encountering a lower social standing and fierce competition in the market. Significant obstacles within the freelance sector accompany this perspective.

When it comes to IT support, one-fourth of freelancers indicate a requirement for more investment in various IT devices and request more help from clients or buyers to acquire the essential equipment for their work. Income volatility is a significant concern, as half of the freelancers receive irregular income, resulting in financial insecurity. Furthermore, a substantial portion of the participants, namely 20%, express concerns regarding the potential loss of clients, emphasizing the importance of implementing solid strategies for both acquiring and retaining clients.

Concerns persist regarding protection against contract failure, as just 15% of respondents felt sufficiently safeguarded against disputes or contract concerns. This indicates weaknesses in the legal system that governs freelancing. Northwestern University students encounter many obstacles that impede their success in freelancing, including difficulties relating to the curriculum, language barriers, insufficient infrastructure, and a need for more specialized experience.

Political affiliation can occasionally influence the procedures involved in starting a business or building relationships within the local community. However, freelancers typically do not have a clear-cut political perspective. Freelancers face a multitude of obstacles, encompassing political, economic, social, technological, legal, and environmental challenges. These limitations include challenges related to networking and political connections, fluctuating income, societal attitudes, technology requirements, contract safeguards, and the consequences of prolonged screen time and sedentary labor. To tackle these difficulties, policymakers, buyers, and freelancers themselves must collaborate and establish a more conducive atmosphere for freelancing.

**Objective- 4: Prospect before freelancers graduated from NU**

The study also reveals several optimistic trends and critical factors shaping the future of freelancing. A notable portion of independent contractors (15%) anticipates opportunities for tax exemptions until 2024 and believes that the necessity of maintaining a physical office may diminish over time. Furthermore, 10% of freelancers are optimistic about the future availability of environmentally friendly and health-conscious furniture and equipment.

Skill development is a significant motivation for many freelancers, with approximately 45% viewing freelancing as a means to enhance their skills. Furthermore, 20% recognize the supportive role of social networking, applications, and handy information in their work, appreciating the benefits of app development in their freelancing careers. There is a strong

positive correlation (Pearson correlation: 0.913) between experience and income, indicating that NU students who gain experience are more likely to succeed in freelancing compared to those from other educational backgrounds.

With support from NU and college administrations, overcoming barriers such as curriculum-related issues, language barriers, inadequate infrastructure, and a lack of specialized expertise can be effectively addressed. Such efforts can create a more conducive environment for freelancing success. Additionally, one-fourth of freelancers feel they are treated equally, and 10% believe that freelancing has enhanced their sense of global citizenship, reflecting inclusivity and global connectedness in the industry.

Freelancing is seen as a viable path to job opportunities, with 75% of freelancers believing it leads to career growth and 30% noting an increased client willingness to pay higher rates for quality work. The sector is gaining recognition and support from politicians, who now prioritize ICT and acknowledge freelancing as a critical driver of economic growth. Technological advancements, legal considerations like tax exemptions, and a focus on ecological sustainability further contribute to a positive outlook for freelancing. Overall, the future of freelancing is promising, driven by favorable political, economic, social, technological, and legal factors that support skill development, job prospects, higher payments, and greater societal recognition.

## 5. Conclusion

This study explores the landscape of freelancing among National University (NU) graduates in Bangladesh, highlighting its implications for self-employment and economic empowerment. The findings underscore freelancing's role as a significant income source for a substantial number of NU graduates, with diverse specializations attracting freelancers. Despite variations in income levels and challenges in livelihood management, freelancers generally experience a degree of social recognition for their contributions. The study finds that factors such as field of study, type of college, and departmental specialization have minimal impact on unemployment rates or income generation potential for freelancers. However, freelancing work experience is associated with higher income satisfaction. This suggests that freelancing enables NU graduates to leverage their skills effectively and make meaningful contributions to the workforce.

Challenges faced by NU freelancers include curriculum limitations, language barriers, infrastructure deficiencies, and gaps in specialized expertise. Additionally, issues such as income fluctuation, client retention difficulties, the need for multiple IT devices, and limited contract protection pose significant obstacles. Addressing these barriers necessitates collaborative efforts from policymakers, clients, and freelancers to create a supportive environment conducive to growth and success. Despite these challenges, the future of freelancing in Bangladesh appears promising. Anticipated benefits include potential tax exemptions, the flexibility of remote work, and advancements in technology and equipment that promote environmentally friendly and health-conscious practices.

Freelancers are increasingly recognizing the value of skill development, leveraging social networks, and engaging in application development, reflecting a solid commitment

to professional growth. The study also highlights the growing recognition of freelancing as a critical driver of economic growth and job creation. Policymakers and politicians are beginning to acknowledge freelancing's positive impact, while clients are showing a greater willingness to invest in high-quality work. This, coupled with favorable political climates, economic opportunities, societal acceptance, technological advancements, and evolving legal frameworks, contributes to an optimistic outlook for the freelance sector in Bangladesh.

Overall, freelancing presents valuable opportunities for self-employment and economic empowerment for NU graduates. By addressing existing challenges and fostering an enabling environment through targeted policy interventions, infrastructure investments, and specialized training programs, stakeholders can unlock the full potential of freelancing as a catalyst for individual success and broader economic development.

## 6. Policy Implications

This study explores the landscape of freelancing among National University (NU) graduates in Bangladesh, highlighting its implications for self-employment and economic empowerment. The findings underscore freelancing's role as a significant income source for a substantial number of NU graduates, with diverse specializations attracting freelancers. Despite variations in income levels and challenges in livelihood management, freelancers generally experience a degree of social recognition for their contributions. The study finds that factors such as field of study, type of college, and departmental specialization have minimal impact on unemployment rates or income generation potential for freelancers. However, freelancing work experience is associated with higher income satisfaction. This suggests that freelancing enables NU graduates to leverage their skills effectively and make meaningful contributions to the workforce.

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The study also highlights the growing recognition of freelancing as a critical driver of economic growth and job creation. Policymakers and politicians are beginning to acknowledge: Firstly, enhancing access to technology and necessary resources is crucial. The NU authorities

and college principals should work towards providing greater access to technology, especially for freelancers facing infrastructure-related challenges. This can be achieved by establishing technology hubs or centers within colleges where freelancers can access high-quality equipment and software. Secondly, improving training and skill development is essential to equipping freelancers with the necessary expertise. Comprehensive training programs tailored to the needs of freelancers, including content writing, digital marketing, graphics design, and web design and development, should be integrated into the compulsory English course and the ICT course. Collaborating with industry experts and experienced freelancers to offer practical training and mentoring opportunities within the college can further enhance their skills. Additionally, promoting lifelong learning initiatives will help freelancers stay updated with emerging trends and technologies. Addressing curriculum and language-related barriers is equally essential. Collaborating with educational institutions to update curricula to align with freelancing market demands can ensure graduates possess the relevant skills. Providing language and communication courses to improve English proficiency is crucial, as effective communication is vital for engaging with international clients.

Creating a supportive policy environment is another crucial aspect. Introducing policies that protect freelancers' rights and offer legal recourse in case of contract failures or disputes will provide them with greater security. Offering tax exemptions or incentives for freelancers can encourage self-employment and contribute to economic growth. Moreover, fostering an environment that recognizes freelancing as a legitimate and valuable career path will help combat societal perceptions that undermine their work.

To facilitate collaboration and networking, it is critical to organize networking events and platforms where freelancers can connect with potential clients, share experiences, and collaborate on projects. Encouraging the formation of freelancers' associations and supporting their efforts to advocate for their rights and interests will strengthen the freelance community.

Promoting entrepreneurship and job opportunities for freelancers is equally beneficial. Providing entrepreneurship training and support for those interested in starting their businesses can foster innovation. Offering incentives and support services and encouraging the creation of startups and small companies will diversify the freelance market. Additionally, fostering collaborations between freelancers and established companies can create more job opportunities.

Lastly, a continuous monitoring and evaluation mechanism should be established to assess the effectiveness of policies and initiatives targeting freelancers. Collecting data on the freelancing landscape will inform evidence-based policymaking and ensure that interventions are targeted and yield positive results. Implementing these policy implications will play a pivotal role in nurturing a thriving freelance ecosystem in Bangladesh and enabling graduates from the National University to excel in the dynamic world of freelancing

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## References

Afrin, S. (2021, September 25). Bangladesh advances in freelancing, falls behind in hourly wages. The Daily Prothom Alo.

Ahmmed, S. (2021, July 14). Bangladesh needs extensive measures to address its rising youth unemployment. The Daily Star. https://www.thedailystar.net/views/opinion/news/bangladesh-needs-extensive-measures-address-its-rising-youth-unemployment-2129311. Retrieved on 19.05.2023.

Alam, R. (2021, March 12). Freelancing: Successes are there, problems too. The Business Standard.

BIDS- Bangladesh Institute of Development Studies. (2021, June 30). Tracer Study on Graduates of Tertiary-Level Colleges. College Education Development Project (CEDP), National University, Ministry of Education. https://bids.org.bd/uploads/research/completed_research/Final%20Report__CEDP%20Tracer%20Study_BIDS_Exec_Summary_with_TOC.pdf. Retrieved on 19.05.2023.

Clouse, J. (2021). 4.4 million youths face unemployment in Bangladesh. Freelancing School. What is Freelancing & What Does it Mean to Freelance? Retrieved from https://freelancingschool.com/blog/what-is-freelancing/. Retrieved on 19.05.2023.

Harry, A. (2022). How to become a freelancer in Bangladesh with no experience. Retrieved from https://mybangla24.com/how-to-become-a-freelancer. Retrieved on 19.05.2023.

O'Neill, A. (2021, August 31). Number of unemployed persons worldwide from 1991 to 2021 and projections until 2022. Statista. Retrieved from https://www.statista.com/statistics/276787/monthly-unemployment-rate-in-japan/. Retrieved on 19.05.2023.

Oaisharjo, I., J., & Afssar S., B. (2020, February 29). Rise and growth of freelancing in the economy of Bangladesh. The Independent. Retrieved from http://m.theindependentbd.com/printversion/details/238823. Retrieved on 19.05.2023.

Ozimek, A. (n.d.). Report: Freelancing and the Economy in 2019. Upwork. Retrieved from https://www.upwork.com/press/releases/freelancing-and-the-economy-in-2019. Retrieved on 19.05.2023.

Rahaman, Z. (2020, October 06). Freelancing Challenges in Bangladesh. The New Nation.

Rahman, S. (n.d.). Top 10 Freelancing Institute in Bangladesh. Retrieved from https://sayudurrahman.com/top-10-freelancing-institute-in-bangladesh/. Retrieved on 19.05.2023.

Tabassum, R. (2000, February 17). Work from home, Earn and be Your Boss: Make money online from Bangladesh. United News of Bangladesh (UNB). Retrieved from https://unb.com.bd/category/Tech/work-from-home-earn-and-be-your-own-boss/44492. Retrieved on 19.05.2023.

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# Status of Knowledge Management in Universities in Bangladesh: An Assessment of Four Selected Universities

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## Abstract

*The study explores the current state of knowledge management, its challenges, and potential solutions to improve the country's educational landscape. A mixed-method approach was used, including interviews and questionnaires in four universities. Despite the emergence of a knowledge society, Bangladesh's education system faces various structural and operational issues that hinder its transition to a knowledge-based society. The curriculum primarily focuses on academic knowledge, neglecting practical skills and real-world applications. As a result, students need help to apply their learning in practical settings. The study's main findings point out several areas for improvement in the educational system, including traditional and inflexible curriculum design and assessment practices, lack of support services for students, inadequate resources for research, and insufficient training and development opportunities for faculty and staff. To address these challenges, the study offers key recommendations. Implementing technology, such as online platforms and learning management systems, can provide flexible learning options and promote innovation in teaching and assessment methods. Collaboration with businesses, non-profit organisations, and community groups can provide students with extracurricular activities and real-world exposure. The study concludes that these proposed solutions are valuable for university administrators, faculty, and staff who aim to drive positive change in the educational system. The study highlights the significance of knowledge management in academic development and emphasises the need for reform initiatives to overcome Bangladesh's educational system's challenges. The country can harness its abundant human capital and knowledge base by implementing the suggested solutions, ultimately progressing towards a knowledge-based society.*

Key Words: knowledge management, education, public university, private university.

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## Introduction

Education is crucial to development because it has the power to improve human capacities. It causes a shift in people's consciousness and understanding, developing the knowledge of how to make life more purposeful by sharing crucial intellectual and creative resources. Academia has a vital role in transforming Bangladesh society into a knowledge-based society. To achieve this goal, academia must become more involved in knowledge creation (Andaleeb, 2011). When people receive an education, they are equipped with particular qualities that enable them to contribute to their country's social and economic development. Development economists believe that when human capital is strengthened, productivity increases (Khan et al., 2014). The effectiveness of a country's educational system can enhance its competitive strength (Superman & Tahir, 2018). Like some other nations, Bangladeshi endeavours to adapt to global change by transforming its educational system. As a result, a practical commitment to knowledge management methods at the universities and among university professors is essential as a framework for transforming the education systems in tandem with globalisation. However, this study aims to determine the efficacy of Bangladesh's current higher education system in providing high-quality education and to consider the possibility of developing a knowledge-based society in the country.

Higher education institutions must engage more thoroughly in knowledge generation to play a critical role in changing Bangladesh into a knowledge-based society (research). Indeed, one of academia's main goals is to conceptualise, develop, communicate, use, and develop a body of knowledge by creating knowledge zones, knowledge businesses, and learning communities, creating a better and more contextual society (Andaleeb, 2011). Knowledge management supports today's complex businesses in making better choices and solving challenges more efficiently. Universities must establish information infrastructure and cultivate an atmosphere that permits teaching and non-teaching staff, researchers, patrons, students, and other stakeholders to engage in various knowledge management activities (Hoq & Akter, 2012). As a result, it is critical to ensure high-quality education throughout society, which enriches society's human capital and, as a result, fosters innovation and the development of a knowledge economy (Olssen & Peters, 2005). To move toward a knowledge-based society, these shortcomings must be addressed quickly through reform measures that rejuvenate the educational system and contribute to Bangladesh's vast knowledge base and abundant human capital. The objective of the study includes:

- To assess the present status of knowledge management at higher educational institutions in Bangladesh.
- To identify the key challenges to constructing a knowledge-based society.
- To recommend measures to create practical knowledge management at the institutional level.

This study focuses on the impact of certain factors on university standards and is limited to four universities in Bangladesh. It explores the nature of problems rather than providing

solutions, examining operating procedures and knowledge management in inclusive quality institutions. However, there are drawbacks: only three public institutions are considered, potentially limiting generalisations, and the analysis mainly pertains to recent years, possibly introducing bias. The researcher's extensive fieldwork prevented a comprehensive focus on past issues. Additionally, time constraints and the COVID-19 outbreak affected the pre-testing of questionnaires, potentially rendering some questions obsolete. The Daffodil University, Bangladesh Army International University of Science and Technology (BAIUST), the Jahangir Nagar University, and Comilla University were chosen based on the study area's coverage and the researcher's convenience. According to the study, generalisations regarding universities and the higher education landscape in Bangladesh are impossible.

## Literature review

Knowledge management (KM) is essential for organisations to leverage their knowledge assets effectively. It involves gathering, storing, retrieving, and applying information to support organisational activities. KM creates a learning environment and can facilitate organisational change and development. Knowledge, encompassing various elements like principles, concepts, and skills, is the basis of KM (Tracey, 2004). KM starts with analysing an organisation's culture, values, and systems, followed by information mapping to identify the knowledge required to support its objectives. Knowledge assessment evaluates employees' existing knowledge in light of the business's needs. Using these assessments' outcomes, strategies are designed and implemented to enhance individual and organisational performance (Tracey, 2004). There are three distinct perspectives on knowledge management within businesses. The business viewpoint assesses the reasons, locations, and extent of knowledge investments and usage in strategies, products, acquisitions, partnerships, and divestments. The management viewpoint focuses on facilitating, organising, guiding, and analysing knowledge-related actions to achieve company strategies and goals (Ahammad, 2018). Newell et al. (2002) identified two perspectives on knowledge comprehension in organisations: the structuralism viewpoint, considering knowledge as a property, and the process perspective, viewing knowledge as socially interactive 'knowing' and 'acting'. While some knowledge is explicit, most is tacit and may not be articulated. Ahammad (2018) highlighted diverse methods for information exchange, emphasising the importance of establishing a positive attitude towards sharing knowledge and fostering knowledge management skills to achieve individual and organisational goals, such as enhanced performance and strategic advantage. Knowledge management involves acquiring, sharing, storing, and effectively managing individuals' knowledge to enhance workforce knowledge (Starmind, 2020). It applies prior decision-making experiences to improve organisational effectiveness (Jennex, 2005) and adapts existing knowledge to address current challenges and develop new solutions (McAdam, 2000).

Knowledge is crucial for an organisation's success, just as captured information is. While technology plays a role, knowledge management primarily relies on managing people and relationships. Emphasising wisdom over data is vital. Knowledge management is linked to self-assessment in higher education, supporting quality assurance in Bangladesh (Ali et

al., 2018b). According to Hoq and Akter (2012), while participants showed high knowledge management awareness, performance management is not widely practised in institutions. The lack of strategies, policies, and dedicated departments hinders knowledge management. The research proposed success criteria to promote knowledge management implementation in Zambian higher education institutions. According to Andaleeb (2021), urgent regional issues include youth unemployment, poverty, underdeveloped infrastructure, and undiversified industrialisation. To address these challenges, the education industry requires significant transformation. By incorporating modern teaching techniques, digital innovation, and efficient data systems, education can empower the country's youth to contribute to a knowledge-based economy. A study by Hoque et al. (2013) highlighted dimensions influencing the quality of business education: faculty qualifications, intake selection, evaluation system, campus infrastructure, research environment, university administration, market orientation, and commercial connection. It recommends academics and university founders consider these elements to ensure long-term survival and meet employers' and country's needs.

A country must possess fundamental pillars like structural and human capital to become a knowledge-based society (Bontis, 2001). Structural capital encompasses infrastructure and governance, while human capital emphasises the development of a skilled, educated, and productive populace (Khan et al., 2014). These forms of capital provide a competitive edge over other cultures in establishing a knowledge-based society (Olssen & Peters, 2005).

Table 1: Analytical Framework

| Independent Variable | Measuring Indicators | Measuring Techniques | Dependent Variable |
|---|---|---|---|
| **Structural & Governance Capital** | • Curriculum: Content, Design and Review<br>• Physical Facilities<br>• Teaching- Learning<br>• Assessment of Student Performance<br>• Student Support Services | KII, Questionnaire Survey, FGD | Knowledge Management at Higher Educational Institutions |
| **Human Capital** | • Recruitment<br>• Training and Development<br>• Career Development<br>• Research Facilities | KII, Questionnaire Survey, FGD | |

Source: Developed by authors based on Ali et al., 2018a, Ali et al., 2018b; Ali et al., 2017; Khan et al., 2015; Hoque et al., 2013. Knowledge gained through business activities and customer interactions is vital to competitive advantage (Barbery & Torres, 2019).

## Methodology

A mixed-method approach was employed to achieve the study's objectives. In addition, if surprising outcomes are discovered in quantitative research, a qualitative technique can be used to settle the quantitative study's findings and explain those (Maxwell & Loomis, 2003).

Four universities (two public and two private) were selected for this study to ensure comprehensive coverage. A reasonable sample size of respondents, including faculty and students, completed structured questionnaires using a 5-point Likert scale to assess knowledge management practices. Triangulation methods were employed to enhance research credibility, including key informant interviews and focused group discussions in each institution.

The investigation will be conducted using primary and secondary data. In addition to the output of the field visits, secondary data from various papers, journals, books, dialogues at conference classes, curricula, and websites of the selected universities were used for this study.

The study collected data from four universities using various tools. It aimed for a reasonable sample size by conducting interviews and questionnaire surveys with 240 respondents in total. The questionnaire survey included 160 students and 40 teachers from each institution, covering aspects like gender, faculty, duration spent in the institution, and institutional affiliation. Additionally, 40 key informant interviews were conducted with faculty members, department heads, and deans. These multiple data sources were utilised to validate the survey findings.

With a significant emphasis on the qualitative, the data and information acquired were quantitative and descriptive. The qualitative data in the study were presented using computer tools such as the Microsoft Office package. A considerable deal of effort has been made to eliminate data entry errors. While the study is qualitative, some graphical presentation would aid comprehension and reduce the number of descriptive statements.

## Findings and Discussion

**Structural & Governance Capital**

| Criteria | Name | Excellent | Very Good | Good | Average | Little | Not satisfactory |
|---|---|---|---|---|---|---|---|
| Curriculum: Content, Design and Review | **Private University** | (33%) | (33%) | (28%) | (6%) | (0%) | (0%) |
| | **Public University** | (6%) | (20%) | (37%) | (21%) | (7%) | (9%) |
| Physical Facilities | **Private University** | (23%) | (30%) | (27%) | (13%) | (4%) | (3%) |
| | **Public University** | (4%) | (6%) | (28%) | (22%) | (23%) | (17%) |
| Teaching-Learning | **Private University** | (31%) | (32%) | (24%) | (11%) | (1%) | (1%) |
| | **Public University** | (8%) | (17%) | (33%) | (30%) | (4%) | (8%) |
| Assessment of Student Performance | **Private University** | (23%) | (34%) | (28%) | (13%) | (2%) | (0%) |
| | **Public University** | (8%) | (18%) | (28%) | (28%) | (7%) | (11%) |
| Student Support Services | **Private University** | (23%) | (27%) | (31%) | (15%) | (2%) | (2%) |
| | **Public University** | (3%) | (15%) | (27%) | (30%) | (11%) | (14%) |

Source: Field Survey-2022

## Curriculum: Content, Design and Review

For Private Universities, 33% of the Curriculum was rated "Excellent," while another 33% was rated "Very Good." 28% of the Curriculum was rated "Good," and only 6% was rated "Average." No part of the Curriculum was rated "Little" or "Not satisfactory." The university creates the curriculum for courses and reviews it regularly. The university administration tries to tailor all departments' curricula to the changing world and job market demand. They provide valuable handouts and an appraisal of the course to students. It's a haven for them because of their teachers, who teach them to read, write, and serve others, and because this university prepares them for a bright future in every field. They are so satisfied with the extent to which their university conducts a curriculum design for every course and reviews it every year. The university follows the OBE format for every course, and one class is held for review after the procedure is complete. The university curriculum is getting better day by day. Curriculum development in higher education should follow a formal process. One of the teachers said, "By the OBE curriculum, in every semester, we try to develop our curriculum so that it is consistent with the contemporary demand."

**For Public Universities,** only 6% of the Curriculum was rated "Excellent," and 20% was rated "Very Good." The most significant portion of the Curriculum was rated "Good," at 37%. Another 21% was rated "Average," and 7% was rated "Little." The lowest rating of "Not Satisfactory" was given to 9% of the Curriculum. They said that their department completed its semester within due time. They also said their curriculum is reviewed every semester according to industry requirements, mainly by the course teacher, who may include or exclude topics or content according to their desire. Their curriculum design is perfect. Every two years, it was designed. A student said, " Comilla University is doing very well in every sector on account of the teachers' encouragement."

**Physical Facilities**

**For Private Universities,** 23% of the Physical Facilities were rated "Excellent," and another 30% were rated "Very Good." 27% of the Facilities were rated "Good," while 13% were rated "Average." 4% of the Facilities were rated "Little," and only 3% were rated "Not Satisfactory." Adequate classrooms, seating arrangements, labs, digital classrooms, etc. They have a permanent campus, hostel facilities, a transport service (they plan to have more transport), dining, laundry, and so on. Students will benefit from improved physical facilities as they transition to a permanent campus. They think they have that kind of physical support, such as academic buildings, administration buildings, libraries, transportation, etc. Physical facilities mainly evolve a spacious infrastructure, which BAIUST has in its conventional capacity. Different extracurricular activities, sports, medical facilities, fresh water with food, and an excellent hygienic environment grow them properly, which is the best part of their university. There are enough medical centres on campus, but emergency transport could be better. DIU's physical facilities are excellent.

**For Public Universities,** only 4% of the Physical Facilities were rated "Excellent," and 6% were rated "Very Good." The most significant portion of the Facilities was rated "Good," at 28%. Another 22% were rated "Average," while 23% were rated "Little." The lowest rating of "Not Satisfactory" was given to 17% of the Facilities. Their university provides quite good physical facilities for students. The facilities include furnishings, materials and supplies, equipment, information technology, and various aspects of the building grounds, namely, athletic fields, playgrounds, areas for outdoor learning, vehicular access, and parking. But it needs to improve more.

More laboratory facilities, including a computer lab, a student's standard room, separate washroom facilities, etc. Despite several shortages and limitations, their teacher meets their classroom expectations. They also arrange seminars, symposiums, and workshops that help them improve their skills, knowledge, and learning. They also think their university needs to meet students' expectations regarding physical facilities. Aside from numerous barriers, students encounter physical facilities that assist them. There were transportation options and a verbal conference from their university. They think that there are many facilities at their university. Most of the facilities are related to their health. There are transportation facilities, a canteen, accommodations, and courses at a meagre tuition fee. They also said that transportation systems need to improve.

**Teaching- Learning**

**For Private Universities**, 31% of the Teaching-Learning was rated "Excellent," and another 32% were rated "Very Good." 24% of the Teaching-Learning was rated "Good," while 11% were rated "Average." Only 1% of the Teaching-Learning was rated as "Little" or "Not Satisfactory." They said their university greatly emphasises assessing and evaluating student learning outcomes. Their university has adopted the latest technology in its assessment processes, such as online exams, digital grading, and automated feedback systems. Their university employs various assessment methods, including exams, projects, assignments, case studies, presentations, and practical exams, to assess multiple skills and abilities. Their university follows a standardised evaluation process that is fair, transparent, and reliable.

**For Public Universities**, 8% of the Teaching-Learning was rated "Excellent," and 17% were rated "Very Good." The most significant portion of the Teaching-Learning was rated "Good," at 33%. Another 30% were rated "Average," while 4% were rated "Little." The lowest rating of "Not Satisfactory" was given to 8% of the Teaching-Learning. In 40% of assessments, students can ask faculty to check their manuscripts. Teachers influence some assessments, and there is no challenging option for them. Teaching is good, but more innovation is needed. In their university, their teachers effectively teach and provide sound advice. They think teaching, learning, and assessment in their university should be higher quality. Teachers always try to learn new things to help students understand their learning. The teaching and learning process is good because the teacher maintains it properly. Their university's teaching, learning, and assessment levels are naturally good. Their university's IQAC plays an influential role. Traditional assessment methods can be more accurate and different.

**Assessment of Student Performance**

For Private Universities, 23% of the Assessment of Student Performance was rated "Excellent," and another 34% were rated "Very Good." 28% of the Assessment was rated "Good," while 13% were rated "Average." Only 2% of the Assessment was rated as "Little," and none were rated as "Not Satisfactory." They believed their university was known for its excellent student performance assessment process. There are some reasons why their university's assessment is considered excellent. Their university conducts regular and comprehensive evaluations of students' performance, both formative and summative, to ensure that students are making progress toward their learning outcomes. The university strongly emphasises the development of practical skills and hands-on learning experiences. This helps ensure that students receive assessments relevant to their future careers. Their university continually evaluates its assessment process and makes improvements based on feedback from students, faculty, and industry experts. Assessments of student performance are of high quality and contribute significantly to the overall assessment mark. The evaluations of student performance at their university are of good quality because their teachers maintain them strictly.

For Public Universities, 8% of the Assessment of Student Performance was rated "Excellent," and 18% were rated "Very Good." The most significant portion of the Assessment was rated "Good," at 28%. Another 28% were rated "Average," while 7% were rated "Little."

The lowest rating of "Not Satisfactory" was given to 11% of the Assessment. The percentage of student participation demonstrates how committed the assignment is to the student's performance. The performance of the students is excellent because they give their best. They outperformed the competition. The assessment procedure is rigorous but fair. Students get what they deserve. Their tutors check their assignments and research papers for plagiarism as part of their performance evaluation.

**Student Support Services**

For Private Universities, 23% of the Student Support Services were rated "Excellent," and another 27% were rated "Very Good." 31% of the Student Support Services were rated "Good," while 15% were rated "Average." 2% of the Student Support Services were rated as "Little," and another 2% were rated "Not Satisfactory." They said there is some lack of authority, and they think there needs to be more service regarding knowledge management and higher education. Their university can exceptionally provide student support services regarding knowledge management in higher education, as their university is new. Therefore, there are some things that could be improved in this regard. They said that "Inshallah," it will improve very soon. They need their effort along with the varsity effort. If they perform well, it will represent their university to the world.

For Public Universities, only 3% of the Student Support Services were rated "Excellent," while 15% were rated "Very Good." The most significant portion of the Student Support Services were rated "Good," at 27%. Another 30% were rated "Average," while 11% were rated "Little." The lowest rating of "Not Satisfactory" was given to 14% of the Student Support Services. There is an updated curriculum for guiding the students. They felt that their university environment was suitable for teaching and research. They are trying to provide good things for the students. They think their university provides study materials with precious lectures that can guide them to achieve their higher education. For quality education, students take advantage of different types of facilities. Their university authority and department try to provide all types of support for the student. Their university level plays a role in ensuring the quality of higher education is good by nature. Their courses are well-designed in the context of the current world. Numerous facilities at the university assist students in obtaining a higher education. Through assignments, presentations, and other curriculum activities, the teachers help them prepare themselves. The syllabus and the curriculum are subject-oriented, and the teaching and learning methods are also according to the specific subject's needs.

| Criteria | Name | Excellent | Very Good | Good | Average | Little | Not satisfactory |
|---|---|---|---|---|---|---|---|
| Recruitment | **Private University** | (34%) | (29%) | (28%) | (5%) | (2%) | (2%) |
| | **Public University** | (6%) | (13%) | (21%) | (24%) | (22%) | (14%) |
| Training and Development | **Private University** | (33%) | (21%) | (30%) | (9%) | (2%) | (5%) |
| | **Public University** | (7%) | (11%) | (33%) | (27%) | (12%) | (10%) |
| Career Development | **Private University** | (30%) | (24%) | (29%) | (10%) | (3%) | (4%) |
| | **Public University** | (4%) | (14%) | (20%) | (10%) | (27%) | (25%) |
| Research Facilities | **Private University** | (4%) | (12%) | (22%) | (12%) | (26%) | (24%) |
| | **Public University** | (8%) | (14%) | (25%) | (22%) | (19%) | (12%) |

Source: Field Survey-2022

## Recruitment

In the case of Private Universities, 34% of the respondents rated the recruitment process as Excellent, 29% rated it as Very Good, 28% rated it as Good, 5% rated it as Average, 2% rated it as Little, and 2% rated it as Not Satisfactory. The recruitment system in these universities may have some similarities and differences. Still, a recruitment system in any organisation typically follows these steps: These universities post job openings on their official websites, social media platforms, or job portals. Interested candidates apply for the job by submitting their resumes and cover letters. The HR departments of both organisations review the applications and shortlist the most suitable candidates for further evaluation. Shortlisted candidates are invited to interview with the HR department and the hiring manager. These may also conduct assessments such as written tests, skills tests, and background checks to determine the candidate's suitability for the job. If the candidate is deemed suitable, the organisation will make a job offer, and the candidate must accept the offer to join the organisation. This recruitment process is very transparent. The university tries hard to recruit the most qualified teachers.

**In the case of Public Universities,** 6% of the respondents rated the recruitment process as Excellent, 13% rated it as Very Good, 21% rated it as Good, 24% rated it as Average, 22% rated it as Little, and 14% rated it as Not Satisfactory. The university should have conducted the recruitment procedure fairly. Nepotism and favouritism are also seen in teacher recruitment. Some respondents stated that the hiring process was fair. Through the admissions test, students are admitted. Employees are recruited using quality assurance to ensure that related abilities

are met. Some respondents also said that they had no idea about this. They constantly believe that they are being mistreated. The recruitment is going well, but the recruiters should work harder to find more dedicated candidates. Sometimes, there are allegations of corruption. Recruitment procedures are free from bias. Except for a few instances, recruitment appears to be fair. Some biased scenarios have been shown at times. Although recruitment is usually done relatively, this is only sometimes the case.

## Training and Development

**I**n the case of Private Universities, 33% of the respondents rated the Training and Development programs as Excellent, 21% rated it as Very Good, 30% rated it as Good, 9% rated it as Average, 2% rated it as Little, and 5% rated it as Not Satisfactory. The students at their university conduct training and development activities regularly. They have a lot of lab facilities where they can easily do training and development activities. Their university students participate in training and development activities. Their university arranges moot court competitions and other seminars for other departments and also arranges internal competitions. Their university arranges international training and development programs. A member of their faculty recently organised a training program in international maritime law. They learn many things from such training programs. Students from their university participate in training and development activities with students from many other countries. Students can also join in the training program via the Zoom app, Google Meet, and other platforms.

In the case of Public Universities, 7% of the respondents rated the Training and Development programs as Excellent, 11% rated it as Very Good, 33% rated it as Good, 27% rated it as Average, 12% rated it as Little, and 10% rated it as Not Satisfactory. They said that every year, students go to BARD to gain practical knowledge to ensure their training and development. It is true that the university conducts the management of training and development and that various organisations arrange training and workshops to develop skills. The IQAC of their university held multiple training sessions and hired external resources.

## Career Development

In the case of Private Universities, 30% of the respondents rated the Career Development opportunities as Excellent, 24% rated it as Very Good, 29% rated it as Good, 10% rated it as Average, 3% rated it as Little, and 4% rated it as Not Satisfactory. Their university has made some efforts to ensure the continuous education of the students for their future career management after graduation. For example, Every year, a beautiful job fair is held at their university where students can get many jobs. Their university has already continued some international courses, so they can get a certificate, which is helpful for their higher education. Their faculty members always guide and instruct future career management after graduation. Their teachers are always there to guide and give instruction for future career management after graduation. They have seen their seniors get jobs after graduation, and their university helps them as needed.

**In the case of Public Universities**, 4% of the respondents rated the Career Development opportunities as Excellent, 14% rated it as Very Good, 20% rated it as Good, 10% rated it as Average, 27% rated it as Little, and 25% rated it as Not Satisfactory. There has yet to be an initiative they've ever seen about career development. University needs to make more effort to maintain one's education. Their university only provides facilities after graduation. It needs to make more efforts to ensure students' continued education for future career management after graduation. However, this is available at world-class universities. Their university places little emphasis on students' ongoing education for future career management after graduation. Some respondents stated that their university makes limited efforts to ensure students' ongoing education for future career management after graduation. There is little emphasis on future career-related subconscious here.

## Research Facilities

In the case of Private Universities, only 4% of the respondents rated the Research Facilities as Excellent, 12% rated it as Very Good, 22% rated it as Good, 12% rated it as Average, 26% rated it as Little, and 24% rated it as Not Satisfactory. They think that they value little interest in research. They are more interested in getting a good job after completing graduation. They also said there are university stabiles a few years ago they carried their academic activity on a temporary campus. They hoped that when their university shifted its permanent campus, they would get more facilities regarding research. They also feel that their teacher is not interested in research. One of the teachers expressed that the university doesn't provide any funds to the students for academic research. Secondly, the university gives a small number of funds to the teachers for conducting their research only once a year. There is an inadequate research facility for students and teachers. University authorities promote that culture to engage students and teachers in research activities, but the teachers are not interested in working with the students. Another shocking news is that few teachers see the student as a competitor.

In the case of Public Universities, 8% of the respondents rated the Research Facilities as Excellent, 14% rated it as Very Good, 25% rated it as Good, 22% rated it as Average, 19% rated it as Little, and 12% rated it as Not Satisfactory. Comilla University students said there is only one research institute after creating this university around 17 years ago. There are no research facilities on the premises. Recently, they formed a volunteer research society here. But after becoming the new vice chancellor, he has taken some initiative to increase research facilities, and he started an award for researchers that is the vice chancellor award. He already said that, without research, no institution can take its place in the world rankings. They provide guidance and technical support. Their teachers encourage the students to research. Their university and teachers encourage students to use research facilities and explain why research is essential for their future careers. Research facilities are increasing for students and teachers, but the budget for this sector needs to be improved. Their university provides research facilities for students and teachers.

## Recommendations

For universities, knowledge management initiation involves stages, structure, and implementation insights. Emphasising its significance over the term, institutions may adopt alternative phrases like change, reform, or transformation (Agarwal & Marouf, 2014). Integrated education encourages students to study locally while expanding their horizons. Quality education shapes the future of individuals and society, and product quality impacts industry viability.

## Curriculum Design and Review

Universities should embrace flexibility and innovation in Teaching, Learning, and Assessment. Strategies like real-world experiences, technology integration, interdisciplinary learning, stakeholder involvement, and curriculum updates can address evolving student needs and job market demands.

## Teaching Learning and Assessment

Promote flexible learning with technology, online platforms, and self-paced options. Foster collaboration through group projects and peer assessments. Personalise learning to suit individual needs. Incorporate alternative assessments like portfolios and offer continuous feedback. Embrace innovation for a dynamic learning experience.

## Enhance Student Performance

Utilise diverse assessments (projects, group work, self-reflection, oral presentations) for a holistic perspective. Encourage self-assessment and focus on the learning process over grades. Cater to varied learning styles and consider non-academic factors. Collaborate with students and families for personalised learning plans. Communicate clear assessment criteria consistently.

## Student Support Services

We empower students to organise extracurricular activities by collaborating with local businesses, nonprofits, and community groups. We use digital platforms to offer virtual clubs and online competitions, fostering student involvement. We value and support student participation and consider resource reallocation to bolster extracurricular programs.

## Recruitment Procedure

Ensure clear, transparent recruitment policies, followed consistently by stakeholders. Use impartial selection committees, objective criteria, and ethical standards for hiring. Train all involved to uphold best practices. Implement a system to report and investigate corruption and nepotism allegations. Enhance transparency by posting job ads, criteria, and outcomes publicly.

## Training and Development Facilities

Empower faculty, students, and staff through engaging training programs. Foster a culture of continuous learning with accessible online courses and workshops. Collaborate with local businesses for relevant industry-based development. Allocate resources and evaluate programs regularly for improvement, catering to the diverse needs of students, faculty, and staff.

## Career Development

Conduct needs assessments to identify the career goals of students, alumni, and university members. Engage local and national employers to inform career development program designs. Offer counselling, workshops, and job search support. Provide internships, co-op programs, and networking opportunities. Regularly evaluate and improve programs based on feedback from students, alumni, and employers.

## Research Facilities

Enhance the university's research capabilities: Identify research strengths, hire experienced faculty, allocate ample funding for equipment and staff, foster interdisciplinary collaboration, engage with external partners for financing, promote technology transfer, and invest in research infrastructure. Continuously evaluate and improve programs based on feedback from stakeholders.

## Conclusion

The study aimed to assist colleges in assessing their knowledge management processes and recommended measures to reduce inefficiencies. It investigated Knowledge Management techniques in Bangladesh's higher education institutions, emphasising the importance of knowledge management for sustained market development and societal growth. The research proposed a framework for implementing knowledge management practices at the university level. It is valuable for university leadership, faculty, and staff seeking to drive positive changes. The study's framework can be adapted for other educational contexts and organisations beyond academia. Future research will explore larger samples from various higher education institutions to guide the implementation of knowledge management. To excel in higher education, institutions should prioritise global inclusivity, competent leadership, and responsiveness to stakeholders' expectations. Enhancing support systems for students and promoting innovative thinking is vital for achieving excellence in higher education.

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## Reference


Agarwal, N. K., & Marouf, L. N. (2014). Initiating knowledge management in colleges and universities: A template. *International Journal of Knowledge Content Development & Technology*, *4*(2), 67-95.

Ahammad, T. (2018, April 04). Overview on knowledge management. *The Independent,* Retrieved from: https://m.theindependentbd.com/printversion/details/144359 [accessed on 11.9.2022]

Ali, M. M., Rattanawiboonsom, V., & Hassan, F. (2018b). Knowledge Management at Higher Educational Institutes in Bangladesh: The Case Study of Self-assessed Processes of Two Educational Institutions. *International Journal of Trade & Commerce-IIARTC,* 7(2), pp. 514-535.

Andaleeb, S. S. (2021, February 19). The future contours of education in Bangladesh. *The Daily Star,* Retrieved from: https://www.thedailystar.net/supplements/30th-anniversary-supplements/aspirations-the-next-50-years/news/the-future-contours-education-bangladesh-2047569

Andaleeb, S. S. (2011). Building Knowledge Enterprises and Learning Communities. In S. S. Andaleeb, H.R. Khan, & M. Ahmed (Eds.) *Education and National Development* (pp. 49-70). Dhaka: The University Press Limited.

Barbery, D. C., & Torres, C. L. (2019). The importance of leadership, corporate climate, use of resources, and strategic planning in family business. In *Handbook of Research on Entrepreneurial Leadership and Competitive Strategy in Family Business* (pp. 212-230). IGI Global.

Bontis, N. (2001). Assessing knowledge assets: a review of the models used to measure intellectual capital. *International Journal of Management Reviews*, 3(1), 41-60

.Khan, M., Uddin, N., Rana, E. A., & Haque, M. (2014). Reforming the education system in Bangladesh: Reckoning a knowledge-based society. *World Journal of Education, 4*(4), 1-11

.Supermane, S. & Tahir, L.M. (2018). An overview of knowledge management practice among lecturers. *Global Knowledge, Memory and Communication,* 67(8/9), 616- 631.

Hoq, K. M. G., & Akter, R. (2012). Knowledge management in universities: Role of knowledge workers. *Bangladesh Journal of Library and Information Science,* 2(1), 92-102

Jennex, M. (2005). What is Knowledge Management? *International Journal of Knowledge Management*, 1(4), i-i.

Maxwell, J. and Loomis, D. (2003). Mixed method design: An alternative approach. In A. Tashakkori and C. Teddle (Eds.), *Handbook of mixed methods in social and behavioral research* (pp. 241-272). Thousand Oaks, CA: Sage.

McAdam, R. (2000). Knowledge management as a catalyst for innovation within organizations: a qualitative study. Wiley Periodicals Inc., 233.

Newell, S., Robertson, M., Scarbrough, H. & Swan, J. (2002). *Managing Knowledge Work*. Basingstoke: Palgrave.

Olssen, M., & Peters, M. A. (2005). Neoliberalism, higher education and the knowledge economy: From the free market to knowledge capitalism. *Journal of Education Policy,* 20(3), 313-345.

Starmind (2020, June 17). What Is Knowledge Management and Why Is It So Important? Retrieved from: https://www.starmind.ai/resources/what-is-knowledge-management-and-why-is-it-so-important [accessed on 9.4.2022]

Tracey, W. R. (Ed.) (2004). *The Human Resources Glossary.* Boca Raton, Florida: CRC Press LLC.

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# Present Status of Science Laboratories in Secondary Schools for Better Implementation of Experiential Learning

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## Abstract

*This research tried to discover the existing situation of science laboratories in secondary schools; analyze the mindset of teachers and students in using science laboratories; identify the challenges to keeping science laboratories functioning; and find ways to keep science laboratories operational for better implementation of experiential learning approach which has been introduced to classes 6 and 7 in 2023. In this qualitative study, the researchers employed observation, a semi-structure interviews methods to collect data from six head teachers of six different secondary schools; six Focus Group Discussions (FGDs) with 60 students of class 10; FGD with six groups of science teachers from the six secondary schools. The observation and the FGD data were developed over time and the interview data were transcribed. Then the transcribed data were coded and categorized based on the themes of the research objectives. The major findings revealed that the existing situation of science laboratories in secondary schools was not satisfactory; the required number of apparatus and amount of reagents were not there in the laboratories; apparently,* the overall mindset of teachers and students was found positive regarding the use of the science laboratory and practical classes; the challenges included *shortage of science teachers, theory-focused science textbooks, lack of training on organizing practical classes, no practical classes set in the routine, and no monitoring and supervision from any corner; the possible ways to overcome the stated challenges included: laboratories needed to be modernized with apparatuses and chemicals, there needed a post of a Laboratory Manager with science background who would provide support to the teachers as well as the students in practical activities and manage the laboratory resources. Monitoring the practical activities and filling out the vacant posts of the science teachers was deemed necessary.*

**Keywords:** science laboratory, secondary schools, experiential learning, apparatus, chemicals

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## Introduction

The paradigm shift in the secondary education system in Bangladesh is underway. Instead of a learning-outcomes-based curriculum, National Curriculum and Textbook Board (NCTB) launched a competency-based curriculum by introducing an experiential learning approach from 2023 academic year. NCTB formulated *the National Curriculum Framework 2021* (NFC 2021), and the philosophies in the NFC 2021 have started to be implemented from January 2023 in the 6th and the 7th grades of secondary level of education on an experimental basis. The same approach to teaching and learning is going to be introduced in other grades of secondary level from academic year 2024.

In the experiential learning approach, teaching-learning techniques such as hands-on learning, project and problem-based learning, cooperative learning, inquiry-based learning, and self-and-motivated learning strategies are used as per the need and context. In the experiential learning approach, a teacher plays the role of a facilitator, and the students play the role of proactive problem solvers. In other words, experiential learning is a learning strategy where a learner has to go through an experience, and going through experiences, learners reconstruct their previous knowledge based on the experiences they go through. David Kolb, an American Psychologist, introduced experiential learning theory in 1984 where he mentioned four stages for better learning to happen. Kolb's four stages are Concrete Experience, Reflective Observation of the new experience, Abstract Conceptualization, and Active Experimentation. According to him, learning is the process in which knowledge is constructed and reconstructed through the transformation of experience (Kolb, 1984).

Experiential learning can be best implemented in science subjects which occupies an important place in the education system of almost all the countries of the world (Abrahams and Reiss, 2012). Through science education, a student can gain in-depth knowledge of the world around them. It is through learning science that a student can accurately explain the causes and effects of various complex methods, processes, systems, etc., starting from the human body to everyday activities (TLRP, 2006).

As a practical-based subject, the key to science education is recurrent experimentation for better learning, achieving skills, and creating new knowledge. This learning through experimentation is a good example of experiential learning. Experimentation in science education consists of experimentation itself, observation, classification, inference, communicating (reporting the findings), scientific thinking, predicting, etc. (Millar & Driver, 1987). One of the major purposes of teaching science is to provide the learners with the ability to adapt to the rapidly changing and growing age and to benefit themselves and the nation from the latest technological innovations (Hancer et al., 2003; Duban et al., 2019). To adapt individuals to the rapid changes in societies and the environment, it is necessary to acquire practical knowledge of science (Woodley, 2009).

When science education is imparted in a descriptive way ignoring the practical activities, usually, the students' curiosity does not develop that much and they begin to think that science education, like all other subjects, is memorizing some pieces of information (NCTB, 1990). When science is taught using laboratory equipment, students can attain direct

experience with the contents by conducting experiments in the laboratories (Osborne, 1998; Duban et al., 2019). Practical activities in and outside laboratories play a key role in bridging the gap between theory and practice (Cullin et al., 2017).

Although science education is so important, Hussain (2021) and BANBEIS (2015) reported that science laboratories in secondary schools were deplorable; and the number of students in science education in Bangladesh was decreasing day by day (Kabir, 2017). In this context, the current research intended to examine the status of science laboratories, the mindset of science teachers and students in using science laboratories, the challenges of keeping science laboratories functional, and the possible ways to overcome the challenges for better implementation of experiential learning in secondary schools as functional science laboratories are important to implement philosophies of the experiential learning approach.

## Rationale of the Study

Bangladesh National Education Policy 2010 (NEP 2010) stated that science education should be provided to students so that they can understand the close relationship between technology and humanity, and regular practical classes in science subjects and Mathematics should be arranged. NEP 2010 emphasizes the assessment of science subjects based on the practical knowledge and skills of students.

Experiential learning in science subjects require science laboratories in the educational institutions. However, it was reported that the overall scenario of science laboratories in secondary schools in Bangladesh is disappointing (Hussain, 2021; BANBEIS, 2015). At the advent of introducing experiential learning in all subjects at secondary level institutions, this research attempted to explore the present status of science laboratories in the secondary schools of Bangladesh; science teachers' mindset towards practical activities in the laboratories; challenges of keeping science laboratories operational; and find ways for better implementation of experiential learning through the best use of the school laboratories.

## Objectives of the Study

The followings are the objectives of the study:

- to discover the existing situation of science laboratories in secondary schools;
- to explore the mindset of teachers and students in using science laboratories;
- to identify the challenges to keeping science laboratories functioning;
- to find ways to keep science laboratories operational for better implementation of experiential learning.

## Scope and Limitation of the Study

As teacher educators and teacher trainers working at different Teachers' Training Colleges and National Academy for Educational Management (NAEM), the researchers have to deal

with secondary teachers. They had a positive and supportive relationship with the teachers. Therefore, the researchers were able to get easy access to research sites and the participants. Because of the reliable relationships between the researchers and the participants, it was possible on the part of the researchers to access the schools and the participants easily; and it was possible to delve deep into the research problem.

There were some limitations which included a small number of participants from secondary schools, and no secondary-level madrasahs and English medium schools were included in the study. Moreover, there was little literature related to the research problem in the Bangladesh context. Despite all these limitations, the study findings are expected to be reliable because of the rigorous nature of the study.

## Review of Literature

The purpose of science education at the secondary level of education in Bangladesh is to develop students' knowledge of natural phenomena by increasing their power of observation (NCTB, 2012). Through learning science practically, students can acquire the ability to solve different problems in their lives as well as they can become more interested in different elements of the environment. NCTB (2012) asserts that rather than analyzing the theories and formulas of science in the classrooms, its use in everyday life to solve social issues is important.

Students can relate science to life through experimentation (NCTB, 2012). Therefore, experimentation in science laboratories is essential as appropriate laboratory activities or practical work can help students construct science knowledge better (Tobin, 1990; Gunstone, 1991). Science teaching devoid of worthwhile practical activities cannot be meaningful (Hofstein & Mamlok-Naaman, 2007). There is an attempt to change science teaching from traditional board and paper processes to practical-based ones. Practical-based learning is called experiential learning and experiential learning is gathering direct experience through doing (Bayineni, 2020; Gorghiu and Santi, 2016). Learning by doing provides students with knowledge and skills; they can reflect on those experiences to develop new skills, new perspectives, and new ways of thinking allowing them to develop a better understanding of the ideas at hand.

Although practical activities are important for science subjects, different reports reveal that laboratory work, project work, and other participatory activities are, in most cases, absent from secondary schools in Bangladesh (Jahan, Azim, & Ahmed, 2011). Babu (2016) claims from a mixed-method study with secondary teachers and students that learning by doing, demonstrating experiments, scientific inquiry, and analyzing cause-effect relationships are noticeably absent from science classrooms. Teachers teach science using a lecture method because of excessive workload and lack of apparatuses and reagents in school laboratories (Babu, 2016).

Science subjects are difficult to teach in the absence of well-equipped science laboratories (Nyanda, 2011). Choudhury (2009) reports that many students do not choose science subjects in the absence of qualified science teachers and well-equipped science laboratories in schools. According to Chaudhury (2009), the teaching approach and teachers' poor inspiring power contribute to the gradual decline in enrolment.

The alarming situation in schools is that most of the teachers are not aware of the curriculum expectations. A research report by BANBEIS (2015) reveals that very few head teachers and science teachers of secondary schools and madrasahs have studied the curriculum report 2012. According to BANBEIS (2015) report, on average about 15% of schools and 31% of madrasahs have no science laboratory though there is a small store of a little amount of equipment in a self or drawers of the headmasters/principals; 13.5% rural and 20.3% urban high schools and 23.1% and 13.6% urban madrasahs purchase equipment and reagents regularly more than 50% schools and madrasahs have no budget for laboratories.

Different studies (Babu. 2016; BANBEIS, 2015) reveal that science teaching-learning has never been satisfactory in Bangladesh and other countries (Kamba, Libata, and Usman, 2019; Zengele and Alemayehu, 2016).

## Methodology of the Study

The current study employed qualitative research methodology as it is possible to delve deep into the research problem. The study used observation, FGD, and Semi-structure interview methods to collect data.

Six secondary schools were selected conveniently from Dhaka and Khulna divisions including government, non-government, and private schools. The researchers carefully chose the schools so that they comprised rural, urban, boys, girls, and co-education schools. 19 science teachers from six schools participated in this study. A total of 19 science teachers and 60 students participated in six FGDs. That is, the number of FGDs were 12, six with the students and six with the teachers. Six headteachers of the selected schools were interviewed with a semi-structured interview schedule. FGD guides were used for holding FGDs with students and the science teachers.

Data collected through different tools were developed, transcribed, coded, and then categorized based on the themes of the objectives of the research. Similar data were put together and they were logically organized. Findings of the study emerged during the transcription of the interviews, FGDs, and tabulation of the observation data.

The findings were presented descriptively and were supported with the excerpts from the participants. Data collected from different sources were triangulated for validating the findings. Again, the findings were interpreted in the light of existing literature.

## Findings and Discussion

The findings of the study are presented under the heads such as the status of science laboratories in secondary schools; the mindset of teachers and students in using science laboratories; challenges to keeping science laboratories functioning; and ways to keep science laboratory functional for better implementation of experiential learning. The findings of the study have been presented below:

## Status of Science Laboratories in Secondary Schools

The visits to the laboratories, FGDs with students and teachers, and interviews with head teachers revealed that the existing situation of science laboratories in secondary schools is not satisfactory. The visits to the laboratories revealed that there was a dearth of apparatuses and chemicals in the laboratories. The furniture and the space were insufficient; only one or two chairs and a table were there; the equipment and the chemicals were preserved in the almira and in two laboratories, they are seen in intact sealed boxes. It indicates that these laboratories and the equipment are not usually used for a longer period. One of the students in FGD-1 claimed:

Our science lab is smaller than any other typical classroom. There is not enough space to sit and work together. Moreover, the cupboards are very old and colorless. Our equipment is also less in number and they are quite old.

The science teachers in different FGDs claimed that there are not sufficient equipment and chemicals in the laboratory. One of the teachers in FGD-2 alleged:

The available space in the laboratory is not enough for the students; all the students having science cannot work together in the laboratory. When we take a class in the laboratory, some students have to keep standing.

The science teachers confessed that they teach science mainly through lecture method; there is little or no scope for engaging students in practical activities. One of the science teachers in FGD-4 claimed:

We usually do not take the students to the laboratory for practical work regularly throughout the year; so far as I know, almost no teacher does it throughout the country. We do not also take them for a field visit for practical purposes. Even though we conduct some classes in the laboratory, the mode of teaching is a lecture.

The opinion of a teacher in FGD-6 discloses that facilities for group work and practical activities in their science laboratories is limited; all the science students could not be accommodated in the laboratory. One of the teachers claimed:

Despite my willingness, I cannot put all the students together in our science lab for practical science exercises because the space is so small that there is no situation to accommodate the required number of students.

The science teachers in all the study schools have claimed that some practical classes are organized just before the SSC examinations; the students write laboratory reports just before the SSC examinations; practical classes are not held throughout the year. One of the teachers in FGD-5 claimed:

Our laboratories have never received attention of the authorities for a long time. We experienced the similar practice when we were students in secondary schools. There were still fewer science teachers; we had less access to science laboratories; and it is our culture not to use the science laboratories even though we have facilities.

The data placed above show that school science laboratories are not used properly because of dearth of facilities. The data above says that it is a nationwide culture to use the laboratories just before the SSC examinations.

The researchers got a checklist for each subject prepared by two prominent science teachers of two secondary schools. The schools have been given pseudonyms as school 1, school 2, school 3, etc. respectively. The data regarding the subject-wise existing apparatuses and chemicals in each school are given below:

## Subject: Physics

| Name of the device/ material | School name current number of students in classes 9 and 10 | | | | | |
|---|---|---|---|---|---|---|
| | School 1 Nine: 60 Ten: 62 | School 2 Nine: 37 Ten: 34 | School 3 Nine: 114 Ten: 99 | School 4 Nine: 80 Ten: 77 | School 5 Nine: 165 Ten: 172 | School 6 Nine: 45 Ten: 42 |
| Slide calipers | 01 | 01 | 01 | 01 | 01 | 01 |
| Screw yar | 12 | 03 | 01 | 02 | 02 | 01 |
| Convex lens | 12 | 05 | 08 | 05 | 08 | 09 |
| Concave lens | 12 | O7 | 08 | 04 | 05 | 07 |
| Convex mirror | 08 set | 04 set | 08 | 06 | 06 | 09 |
| Geometric Box | 12 | 07 | 00 | 04 set | 04 set | 04 set |
| Concave mirror | 00 | 00 | 08 | 00 | 08 | 07 |
| Spring personality | 10 | 06 | 00 | 03 | 04 | 02 |
| Thermometer | 04 | 03 | 08 | 05 | 09 | 20 |
| Stopwatch | 00 | 01 | 02 | 00 | 04 | 05 |
| Magnetic compass | 00 | 01 | 01 | 03 | 05 | 05 |
| Prism | 04 | 01 | 01 | 03 | 04 | 06 |
| Magnet | 00 | 01 | 08 | 04 | 05 | 04 |
| Electronic scale | 04 | 03 | 01 | 03 | 03 | 00 |
| Ammeter | 02 | 03 | 06 | 01 | 02 | 04 |
| volt meter | 01 | 01 | 02 | 01 | 01 | 01 |
| tuning fork | 00 | 00 | 01 set | 01 set | 00 | 1 set |
| Magnifying glass | 00 | 02 | 01 | 01 | 01 | 04 03 |
| Screwdriver | 00 | 01 | 01 | 01 | 01) | 03 |
| Panel meter | 00 | 00 | 01 | 00 | 01 | 00 |
| Barometer | 00 | 00 | 00 | 00 | 00 | 00 |

| | | | | | | |
|---|---|---|---|---|---|---|
| Electroscope | 00 | 00 | 00 | 00 | 00 | 01 |
| The liver | 00 | 00 | 00 | 00 | 04 | 04 |

## Subject: Biology

| Name of the device/ material | School name current number of students in classes 9 and 10 | | | | | |
|---|---|---|---|---|---|---|
| | School 1<br>Nine: 165<br>Ten: 172 | School 2<br>Nine: 37<br>Ten: 34 | School 3<br>Nine: 114<br>Ten: 99 | School 4<br>Nine: 80<br>Ten: 77 | School 5<br>Nine: 165<br>Ten: 172 | School 6<br>Nine: 45<br>Ten: 42 |
| Microscope (small) | 01 | 01 | 00 | 01 | 01 | 00 |
| Microscope (General)) | 02 | 01 | 00 | 01 | 01 | 01 |
| Binocular compound | 00 | 00 | 00 | 01 | 01 | 01 |
| Microscope | 02 | 01 | 02 | 01 | 02 | 01 |
| Human skeleton model | 01 | 01 | 01 | 01 | 01 | 01 |
| Atomic model | 00 | 04 | 01 | 02 | 06 | 10 |
| RNA model | 01 | 01 | 01 | 01 | 01 | 01 |
| DNA model | 01 | 01 | 01 | 01 | 01 | 01 |
| NOSE model | 00 | 00 | 01 | 00 | 01 | 00 |
| PLANT CELL model | 02 | 01 | 01 | 01 | 01 | 01 |
| Animal cell model | 02 | 01 | 01 | 01 | 01 | 01 |
| The nucleus model | 01 | 01 | 01 | 00 | 01 | 01 |
| Mitochondria model | 01 | 01 | 01 | 01 | 01 | 01 |
| Plastid model | 01 | 01 | 01 | 01 | 01 | 01 |
| Chromosome model | 01 | 01 | 01 | 01 | 01 | 01 |
| Brain model | 01 | 01 | 01 | 01 | 01 | 01 |
| Eye model | 01 | 01 | 01 | 01 | 01 | 01 |
| Ear model | 01 | 01 | 01 | 01 | 01 | 01 |
| Sphygmomanometer<br>Glass Slides | 01 | 01 | 01 | 01 | 01 | 01 |
| Stethoscope | 01 | 00 | 01 | 00 | 01 | 01 |
| Six types of slides | 00 | 01 | 01 | 01 | 05 | 04 |
| Dissecting tray | 00 | 01 | 01 | 01 | 01 | 01 |
| Glass coverslips | 10 | 05 | 01 | 04 | 06 | 00 |
| Dissecting box | 01 set | 01 set | 01 set | 01 set | 01 set | 01 set |
| Magnifying glass | 00 | 01 | 01 | 01 | 03 | 03 |
| Petridis | 00 | 00 | 01 | 01 | 01 | 00 |
| Small human skeleton | 01 | 01 | 01 | 01 | 01 | 01 |
| Oxide | 00 | 01 | 00 | 02 | 04 | 03 |
| Sodium Hydro- | 00 | 01 | 01 | 02 | 03 | 03 |

| | | | | | | |
|---|---|---|---|---|---|---|
| Coper-sulphate | 00 | 01 | 01 | 01 | 04 | 03 |
| Naphthalene ball | 00 | 01 box | 01 box | 00 | 03 box | 02 box |
| Filter Paper | 00 | 00 | 00 | 00 | 01 Box | 03 Box |
| Hydro Caloric acid | 00 | 01 | 00 | 00 | 04 | 03 |

## Subject: Chemistry

| **Name of the device/material** | **School name current number of students in classes 9 and 10** | | | | | |
|---|---|---|---|---|---|---|
| | School 1<br>Nine: 60<br>Ten: 62 | School 2<br>Nine: 37<br>Ten: 34 | School 3<br>Nine: 114<br>Ten: 99 | School 4<br>Nine: 80<br>Ten: 77 | School 5<br>Nine: 165<br>Ten: 172 | School 6<br>Nine: 45<br>Ten: 42 |
| Dissector with Plate | 01 | 01 | 00 | 00 | 01 | 01 |
| Stand and clamp | 04 | 05 | 10 | 06 | 09 | 02 |
| Woulf Bottle 500 ml | 02 | 04 | 05 | 03 | 05 | 02 |
| Filter Paper | 10 | 05 | 10 | 04 | 05 | 05 |
| Test tube stand | 08 | 07 | 10 | 08 | 10 | 05 |
| Three-foot stand | 00 | 04 | 06 | 06 | 08 | 05 |
| Wash Bottle | 06 | 05 | 10 | 04 | 06 | 04 |
| Regent bottle | 08 | 04 | 08 | 03 | 06 | 05 |
| Mesh | 00 | 01 | 00 | 00 | 04 | 03 |
| Cylinder 250 ml | 00 | 01 | 08 | 03 | 04 | 04 |
| Safe stove | 00 | 00 | 00 | 01 | 01 | 00 |
| PH paper | 20 | 10 | 00 | 08 | 15 | 13 |
| Wash glass 70 ml | 00 | 01 | 00 | 00 | 03 | 05 |
| The stopper | 30 | 06 | 00 | 01 | 01 | 01 |
| Pipette - plastic | 30 | 04 | 00 | 00 | 01 | 01 |
| Test tube holder | 10 | 03 | 10 | 09 | 20 | 15 |
| Red litmus paper | 10 box | 03 box | 00 | 01 box | 07 box | 06 box |
| Blue litmus paper | 02 box | 03 box | 00 | 00 box | 05 box | 06 box |
| Gas jar | 00 | 01 | 30 | 01 | 05) | 02 |
| Cylinder 250 ml | 00 | 03 | 10 | 00 | 04 | 03 |
| Mortar and Pestle | 10 | 04 | 02 | 00 | 06 | 00 |
| Glass rod/tube | 10 | 05 | 02 | 02 | 09 | 16 |
| Pipet 25 ml | 15 | 08 | 06 | 08 | 10 | 06 |
| Beaker 250, 500 ml | 00 | 04 | 05 | 06 | 13 | 17 |
| Safety goggles | 00 | 00 | 01 | 01 | 00 | 00 |
| Calcium Carbonate | 00 | 00 | 00 | 01 | 02 | 03 |

| | | | | | | |
|---|---|---|---|---|---|---|
| Calcium Hydroxide | 00 | 00 | 00 | 02 | 06 | 04 |
| Sodium Chloride | 00 | 01 | 00 | 02 | 04 | 05 |
| Sodium Sulphate | 00 | 01 | 00 | 01 | 04 | 03 |
| Calcium Carbonate | 00 | 02 | 00 | 02 | 04 | 03 |
| Calcium Hydroxide | 00 | 03 | 00 | 00 | 00 | 02 |
| Sodium Chloride | 00 | 00 | 00 | 02 | 04 | 03 |
| Sodium Sulphate | 00 | 00 | 00 | 00 | 04 | 05 |
| Ammonium Chloride | 00 | 02 | 00 | 00 | 01 | 03 |
| Calcium Oxide | 00 | 01 | 00 | 01 | 04 | 02 |
| Sodium Carbonate | 00 | 01 | 00 | 01 | 04 | 04 |

The above tables reveal the existing situation of laboratory apparatuses and reagents. It is worth mentioning that the available equipment and chemicals are not used properly in most schools. The tables have been used to show the present status of the laboratories in the study schools, not to quantify the number of equipment and the amount of chemicals.

## The Mindset of Teachers and Students in Using Science Laboratory

Both teachers and students were found positive toward the use of laboratories and doing practical activities. Students and teachers in the FGDs expressed their interest in using science laboratories and doing practical activities. Students claimed that they learned better when something was taught practically. Both the teachers and the learners in the study believe that using a science laboratory makes learning more interesting and fruitful. However, the frequency of laboratory use was small.

One of the students claimed in FGD-1:

Whenever we attend classes in the science laboratory, I feel like a science student. I can distinguish myself from others. If I can do a practical successfully, I feel confident inside.

Regarding the importance of using a science laboratory, a teacher in FGD-2 maintained:

Due to various issues including workload of teachers, students do not get enough hands-on activities in the science laboratory. However, I feel that the use of the science laboratory is essential for effective science learning. Again, there are some topics in science for which there is no alternative to using the science lab for teaching and learning.

One of the teachers in FGD-3 claimed:

We feel the necessity of practical work in science laboratories but we cannot organize it regularly because of workload. However, we organize some practical classes some days before the SSC examinations so that students can remember things better and answer questions in the viva voice examination.

One head teacher claimed that their science laboratories were used properly but they

could not show the practical classes in the routine. However, he claimed that although the laboratory work is not shown in the routine classes are held in the afternoon.

However, a teacher in FGD-4 expressed:

Despite the willingness to conduct classes using laboratories, we are not always able to conduct laboratory-based practical classes because we have to teach subjects other than the science subjects. As a result, it is not possible to organize practical classes using the laboratory. Sometimes, our head teacher asks us to organize practical classes after the school hours but we cannot do that as we become exhausted after the school hours.

One of the head teachers claimed in his interview that it is a longstanding cultural issue to organize practical classes only just before the SSC examinations.

The data placed above reveals that secondary science teachers should be given motivation so that they enjoy working in the laboratories and their workload can be minimized so that they can concentrate on science practical classes. Moreover, they need continuous monitoring and mentoring from the education authority to change their mindset and to change the longstanding and useless laboratory-use culture in the schools.

## Challenges to Keeping Science Laboratories Functioning

According to data provided by the respondents, keeping the science laboratories functional in the schools is a big challenge for various reasons. One of the reasons is the shortage of science teachers. Moreover, there is no post of a Laboratory Assistant who can constantly and regularly provide support to the students alongside the teachers. Additionally, the current textbooks do not encourage teachers and learners to use science laboratories to learn a particular topic; most of the science books are theoretical, not practical-based. The science teachers in FGD-1 claimed:

There is no arrangement for the students to sit in the laboratory; there is a lack of apparatuses and chemicals in the laboratory. Load of classes each day and a lack of necessary resources in the laboratory discourage us from hands-on activities.

In this regard the teacher participants also informed the researchers that each science subject has three classes a week, which is insufficient for science subjects; and on the other hand, there is no practical class set in the routine. As a result, no teacher is interested to organize practical classes in the laboratories. The support of the stated data can be seen in the following excerpt stated by a teacher in FGD-3:

The number of classes for science subjects is not sufficient; there are usually three classes per week for each science subject, which is not sufficient. And there are no practical classes set in the daily class routine. There is no time for practical work in the laboratory.

Regarding the science theoretical and practical classes, a teacher in FGD-5 maintained:

Our science theoretical classes are mostly held in the 3rd, 4th, and 5th periods. Some

classes are also held in the sixth period. As a result, the chances of making those classes enjoyable are reduced due to tiredness of both teachers and students. And it is not possible on our part to organize practical classes after school hours.

Another teacher in FGD-5 claimed:

The biggest obstacle in our school is the limitation of classrooms. The room we are currently using as a science lab is now also being used as a library. The main reason for this is the limitation of our classroom. Therefore, no matter how much we are interested in conducting practical activities as teachers, we cannot use the laboratory due to a lack of required apparatuses.

The science teachers in FGD-6 have alleged that there is a lack of science teachers in their school; part-time teachers teach science; sometimes, teachers other than science background have to teach science. According to them, students are interested in taking part in practical activities but they cannot do that as required apparatuses and chemicals are not available.

The headteacher of school-1 opined that most of the students are demotivated and are not interested in taking part in practical activities; they look for the easiest way to get the pass marks in any examinations including the SSC examinations. A group of guardians are not interested in the practical classes and they discourage their children not to join the practical classes as they consider practical classes a waste of time.

The head teacher in school-3 mentioned:

It is my bitter experience that no one willingly agrees to take the responsibility to maintain the laboratory. They are quite demotivated as they claim they are loaded with classes every day.

The data placed above show that there are different kinds of challenges in the schools that hamper science practical activities. The major challenges include the inadequacy of the required number of science teachers, equipment, and reagents. The other challenges explored from the study comprise lack of motivation on the part of the teachers, monitoring and mentoring.

## Keeping Science Laboratories Functional

The science teachers, and the head teachers maintained that the education authority should provide the schools with money to enrich the laboratories with apparatuses, reagents, and necessary furniture. There should be a post of a Demonstrator or a Lab Assistant to support the students alongside and in absence of the science teachers. They demanded training on how to organize practical classes and how to engage students in practical activities in a fun way.

Moreover, the science teachers in FGD-3 suggested reforming the present culture of practical examinations. According to them, “There should be enough time for each student to conduct a practical activity independently in the laboratory. And there should be all the required apparatuses and chemicals.”

A teacher in FGD-4 mentioned:

The way of present practical test of the SSC examination should be changed. I am sorry to say that the present practical test is nothing but mockery. Every student gets 24/25 out of 25 in practical tests without performing better in the practical work.

Teachers in FGD-5 claimed that guidelines for the use of science laboratories should be given centrally and the laboratories should be equipped with modern apparatuses, chemicals, and furniture. Moreover, a science teacher or a Laboratory Assistant can be recruited to look after the laboratory there should be a science teacher who will always help the students in doing practical activities in the laboratories.

A head teacher believes that the filling out the vacant posts of the science teachers in the schools can improve the situation. According to him, all the teachers should also be familiarized with the intention of the new curriculum; how to conduct practical classes inside-and-outside the classrooms in a joyful way; and how to take the learners through experiences.

Based on the data placed above, it can be said that the following steps can make the science laboratories functional: funding by authorities to schools to equip laboratories with the necessary apparatuses, reagents, and necessary furniture; creating the post of a Laboratory Assistant or Demonstrator; organizing training on laboratory management and effective practical classes in the laboratory; changing the final practical examination procedure and allocating sufficient time for each student to demonstrate practical skills; identifying skills for practice and assessing the students based on the pre-set skills; and increase monitoring and mentoring by the competent authorities.

## Recommendation

Based on laboratory observations and data provided by the students, the science teachers, and the head teachers, the following measures are recommended:

- Apparatuses and chemicals in the laboratories must be provided in plenty and the use of the laboratories must be ensured.
- The laboratories should be rearranged with furniture, equipment, and chemicals so that the teachers and the students can work there comfortably.
- Provision should be made to use the laboratories from class six.
- As the integrated science education curriculum is being introduced, the demand of the facilities for practical activities is at rise. Therefore, the existing laboratories should be renovated and enriched with required resources and if necessary, new laboratories can be set up.
- There is no specific person for laboratory management. This is one of the reasons why the laboratories are not functional. Therefore, it is necessary to appoint a Laboratory Manager/Assistant or a Demonstrator to keep the laboratory functional.
- Practical classes should be there in the routine like the regular classes.
- Higher education authority should look after the science laboratory-related matters and take necessary measures to solve the existing problems.

## Conclusion

It is evident from the study that the school science laboratories are not functional. Insufficient number of science teachers, laboratory resources; low motivation level of the teachers, and lack of monitoring and mentoring of the teachers made the science laboratory situation worse. The longstanding culture of practical work just before the SSC examinations need to be stopped and practical activities need to be throughout the year. If the authority provides the schools with necessary resources and people, and take necessary steps to overcome the challenges, the situation is expected to be better. By keeping the laboratories functioning, it would contribute to the smooth implementation of the experiential learning approach.


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## References


Abrahams, I., and Reiss, M., J. (2012). Practical Work: Its Effectiveness in Primary and Secondary Schools in England. *Journal of Research in Teaching Science,* Virginia. 49(8):1035-1055

Babu, R. (2016). Teaching science in Bangladesh: Expectations versus reality, *Journal of Education and Learning,* 10(3), 245-255.

BANBEIS. (2015). Present situation of science education in secondary schools, Dhaka, Bangladesh.http://banbeis.portal.gov.bd/sites/default/files/files/banbeis.portal.gov.bd/page/bf60bc17_7f35_45aa_a082_8aedd460dd8a/2015.Present%20situation%20of%2

Bayineni, V. K. (2020). What is Experiential Learning of Science? https://www.prayoga.org.in/post/what-is-experiential-learning-of-science

Choudhury, S. K. (2009). Problems and Prospects of Science Education in Bangladesh *AIP Conference Proceedings* 19 April 2009; 1119 (1): 83–84. https://doi.org/10.1063/1.3137919

Cullin, M., Hailu, G., Kupilik, M. & Petersen, T. (2017). The Effect of an Open-Ended Design Experience on Student Achievement in an Engineering Laboratory Course. International *Journal of Engineering Pedagogy,* 7(4), 102-116.

Duban, N., Aydoğdu, B., Yüksel, A. (2019). Classroom Teachers' Opinions on Science Laboratory Practices. *Universal Journal of Educational Research* 7(3), 772-780.

Gunstone, R. F. (1991). Reconstructing theory from practical experience. In Woolnough, B. E. (ed.), Practical Science, pp. 67-77. Milton Keynes: Open University Press.

Hançer, A. H., Şensoy, Ö., &Yıldırım, H. İ. (2003). An Evaluation of the Importance o f Contemporary Science Education at Elementary Schools and How This Kind of Science Teaching Must Be. *Pamukkale University Journal of Education,* 13(13), 80-88.

Hofstein, A. and Mamlok-Naaman, R. (2007). The laboratory in science education: the state of the art. *Chemistry Education Research and Practice,* 8(2), 105-107.

Hossain, S. and Islam, H. (October 21, 2021). School Laboratories Under the Microscope, *The Daily Star.* https://www.thedailystar.net/shout/cover-story/news/school- laboratories- under-the- microscope-2197731

Hossen, M. L. (2020). *Biggan Shiksha Keno promotion* [Why science education is needed], *The Doinik Shiksha*, 02 June 2020. https://www.dainikshiksha.com/%E0%A6%AC%E0%A6%BF%E0%A6%9C%E0%A7%8D%E0%A6%9E%E0%A6%BE%E0%A6%A8-com/%E0%A6%AC%E0%A6%BF%E0%A6%9C%E0%A7%8D%E0%A6%9E%E0%A6%BE%E0%A6%A8

Jahan, I., Azim, F., and Ahmed, S. S. (2011). Biology teaching-learning practices in secondary schools in Bangladesh. *NAEM Journal*, 6(12), 108-117.

Kabir, M., H. (27 April, 2017). Declining of science students in Bangladesh. *The Daily Observer.* https://observerbd.com/details.php?id=70774

Kamba, A. H., Libata I. A, Usman A. (2019). Lack of Availability of Science Teaching Facilities on Students Teaching and Learning Science in Some Selected Secondary Schools in Kebbi State. Journal of Advances in Education and Philosophy

Kolb, D. A. (1984). *Experiential learning: Experience as the source of learning and development* (Vol. 1). Englewood Cliffs: Prentice-Hall.

Millar, R. and Driver, R. (1987). Beyond process. *Studies in Science Education,* 14, 33-62.

NCTB. (1990). National Curriculum, Dhaka: Ministry of Education, Bangladesh.

NCTB. (2012). Secondary Curriculum, Dhaka: Ministry of Education, Bangladesh.

NCTB. (2020). Curriculum framework. Dhaka: Ministry of Education, Bangladesh.

Nyanda, F. (2011). Effects of Teaching Science subject in absence of Science Laboratory: A Case Study of Community Secondary School Morogoro Municipal. *https://www.researchgate.net/profile/Frank-*

Osborne, J. (1998). Science education without a laboratory? In J. Wellington (Ed.), Practical work in school: which way we now? (pp.156-173). London: Routledge.

TLRP (2006). Science education in schools Issues, evidence, and proposals, Institute of Education, University of London. http://www.tlrp.org/pub/documents/TLRP_Science_Commentary_FINAL.pdf

Tobin, K. G. (1990). Research on science laboratory activities: In pursuit of better questions and answers to improve learning. School of Science and Mathematics, 90, 403-418. https://onlinelibrary.wiley.com/doi/epdf/10.1111/j.1949- 8594.1990.tb17229.x

Woodley, U. (2009). Practical work in school science–why is it important. School Science Review. UK: Hatfield http://www.gettingpractical.org.uk/documents/EmmaWoodleyarticle.pdf

Zengele, A. G. and Alemayehu, B. (2016). The Status of Secondary School Science Laboratory Activities for Quality Education in Case of Wolaita Zone. *Southern Ethiopia Journal of Education and Practice,* 7(31). www.iiste.org -1735

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# Practice of Career-related Lifelong Learning among High School Teachers: An Exploratory Study

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## Abstract

*By career-related lifelong learning, it refers to continuous learning from any sources aimed at enhancing professional competency. This research focuses on career-related lifelong learning among high school teachers in Bangladesh, examining the extent of these activities, influencing factors, and challenges. Following mixed method strategy, data was collected from eight high schools and analyzed using a conceptual framework. Findings indicate a significant lack of engagement in learning activities, which is influenced by factors such as age, working experience, and societal attitudes towards learning. Older teachers and those with extensive experience perceive reduced learning needs, affecting their motivation, perseverance, curiosity, and regulation of learning. Work pressure and institutional restrictions in professional learning activities hinder teachers' intentions for continuous learning, particularly influencing non-compulsory activities. Access and participation in learning activities are more limited in rural districts compared to urban areas. The inadequate presence of lifelong learning initiatives in the policy framework has a long-term impact on creating a learning culture among teachers. To overcome these challenges and foster continuing learning activities, the study suggests systematic training sessions, required incentives, and institutional heads' role in supporting teachers' professional development. It also recommends establishing mentoring programs for personalized support. Ensuring equitable access to technology, and addressing barriers like internet access and workload are crucial for enhancing educational outcomes. Overall, this research provides valuable insights into existing issues of learning activities and ways of promoting lifelong learning among high school teachers in Bangladesh, aiming to improve teacher professional development, student achievements, and the overall education system.*

**Keywords:** Career-related Lifelong Learning, High School Teachers, Professional Development, Bangladesh

## Introduction

Lifelong learning is a dynamic process (London, 2011). Lifelong learning is crucial for the United Nations' SDG 4 (UN, 2016) and Bangladesh's transitional society. The Fourth Industrial Revolution (4iR) and socio-economic dynamics have brought challenges for professionals, including teachers (World Economic Forum, 2018). To address these challenges, the Bangladesh

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government has prioritized lifelong learning, including adult education and training facilities (Bangladesh Planning Commission, 2020). Lifelong learning opportunities were introduced in Bangladesh through starting non-formal education in 2006 when this way of learning was for those who have special needs or those who have not formal education (Ahmed, 2014). This study particularly prefers teachers' engagement in career-related lifelong learning activities since teachers are key stakeholders in preparing students to be lifelong learners. Teachers need continuous professional development. However, a holistic understanding of career-related lifelong learning among teachers is underrepresented. Recent changes in education structure and the COVID-19 pandemic have highlighted the importance of continuous learning in every stage of professional life. Additionally, many countries are concerned to have a significant proportion of older teachers in their workforce (OECD, 2019) which may be true for Bangladesh. In consequence, it becomes more difficult for teachers to cope with changes. Teachers face pressure to implement reforms and address diverse needs in the classroom, and the need for competent teachers to prepare students for a changing world is evident. Despite government initiatives and NGO collaborations there is still a lack of comprehensive planning for lifelong learning, leading to issues with quality, efficiency, and sustainability (Ahmed, 2014). Recently, studies have reported lifelong learning in Bangladesh from various points of analysis. For example, the following studies can be mentioned: Lifelong learning at the age of 4iR (Abdin, 2020); lessons learnt from community learning centres in Bangladesh; problems of adult education for women in Bangladesh (Sarker, 2014). This study asked two questions throughout the process: firstly, what are the key factors influencing the extent of career-related lifelong learning among high school teachers in Bangladesh? And secondly, what strategies and interventions can be implemented to promote and support lifelong learning activities among high school teachers in Bangladesh? The key objective of this study is to investigate the state of lifelong learning among high school teachers in Bangladesh and its implications for professional development. The specific objectives are to examine the extent of engagement in career-related lifelong learning activities among high school teachers; to identify the factors that influence teachers' behaviours and attitudes towards continuous learning and; to examine the challenges and barriers that hinder teachers' professional competencies.

## Literature Review

Understanding Lifelong Learning: The central idea of lifelong learning is that all skills and knowledge are not possible to learn in a student's life and hence, people have to improve their capacities through lifelong learning for professional growth (London, 2011). The concept of Lifelong Learning came into play as a system of organized activities that support the learning of individuals of all ages on any topic (Uslu, 2016). Lifelong learning activities can be listed as follows: Formal learning (planned, organized, structured and carried out in educational institutions); Non-formal learning as planned and aim to gain some skills and qualifications (pieces of training); And informal learning (random, unplanned daily life learning events and especially acquired by experience). Lifelong learning as a concept has been defined as an age-independent continuous learning opportunity for individuals to develop more skills.

Lifelong learning and its significance in professional development: SDG 4 prioritizes inclusive and equitable quality education and lifelong learning opportunities for all (UNESCO

Institute for Lifelong Learning, 2019). Lifelong learning is crucial for social justice, sustainable development (Webb et al.,2019), and global citizenship. It is central to employment and education policy discourse (Lavrijsen & Nicaise, 2017). Following London & Smither (1999) and Elfert (2019), career-related continuous learning is essential for professional growth and has become a blessing for vulnerable individuals to job insecurity. It is a human rights-based approach to adult education that can solve global issues. Beairsto et al. (2003) claimed that professionals should continue learning throughout their lifetime for increasing competency, but organizations need support to empower them.

Lifelong learning among teachers: Sahin et al. (2010) found differences in pre-service teachers' communication and mathematics competencies and urged need for lifelong learning as solution, while Duţă & Rafailă (2014) emphasized the importance of lifelong learning for university teachers' professional development. Chivers (2006) found face-to-face training more effective than distance learning, and suggested a combined strategy. Kolenc Kolnik (2010) studied Slovenia's geography teachers, finding declining enthusiasm for continuing professional development and lifelong learning after university. The main obstacles to formal Continuous Professional Development (CPD) are heavy workloads and associated costs, leading to informal and opportunistic learning. To encourage and incentivize teachers to enhance their professional skills through further learning, schools should foster a culture that encourages and incentivizes them.

Factors influencing lifelong learning: Lifelong learning is influenced by various factors, including society characteristics, gender differences, and the presence of social capital. Jarvis (2007) claimed that industrialized societies have more sophisticated learning opportunities, while non-industrialized countries have more to learn. However, working-class women's participation in lifelong learning is often neglected, leading to low-paying and low-status jobs (Jackson, 2003). Rogers (2006) proposes a transformative approach, while Riddel et al. (2001) suggest increasing social capital can reduce learning difficulties for women. Medel-Anonuevo et al. (2001) suggest creating a culture of lifelong learning that supports society's values and develops human maturity. Kind & Evans (2015) highlighted the role of social media in lifelong learning, with online platforms being a significant source of knowledge. Öz (2022) found factors affecting lifelong learning tendencies include age, education, and occupation. One limitation of the paper is that it only focuses on studies conducted in Turkey, and the findings may not be generalizable to other contexts. Based on this literature review, it is evident that lifelong learning is a crucial aspect of professional development, particularly for teachers. Factors influencing lifelong learning outcomes in society, particularly teachers, can hinder their progress.Considering these issues from literature The study aims to examine career-related lifelong learning in Bangladesh, identify factors influencing learning behaviors, and estimate challenges faced by teachers, potentially affecting learning culture and reducing competencies.

## Conceptual Framework

Lifelong Learning is the central construct of the study, which refers to the continuous acquisition of knowledge, skills, and attitudes throughout a person's life. This construct can

be further divided into categories: formal, non-formal and informal learning. From a broader view of lifelong learning, this study chose it, particularly for explaining career-related lifelong learning and teachers as subjects of analysis. This construct represents the learning activities that teachers engage in to enhance their professional competence, meet the demands of their job, and advance their career prospects. Coşkun & DemiRel (2012) underline motivation, perseverance, curiosity, and regulation of learning as the sub-dimensions of lifelong learning tendencies. For this study, these sub-dimensions were integrated as the effects of some primary factors as shown in the figure. Underlined by different studies, these sub-dimensions are interlinked in many cases (Crick et al., 2004; Gorges & Kandler, 2012; Öz & Şen, 2021). As a form of energy, motivational factors direct decisions to have access to learning opportunities. And, it is difficult to have curiosity and desire without motivation. Perseverance focuses on maintaining learning in a stable and determined manner and accepting learning as a continuous process. And curiosity reflects the desire for exploratory behaviour such as observing, consulting and thinking. Another dimension is to regulate learning. It shows the interrelationship between constructive and active self- regulated learning and lifelong learning (Öz & Şen, 2021). The proposed study be analyzed by the framework which is to assess the quality of lifelong learning situations. This framework is designed based on the studies and asssumptions of European Commission Report (2002), Coşkun & DemiRel (2012) and Drewery et al. (2020).

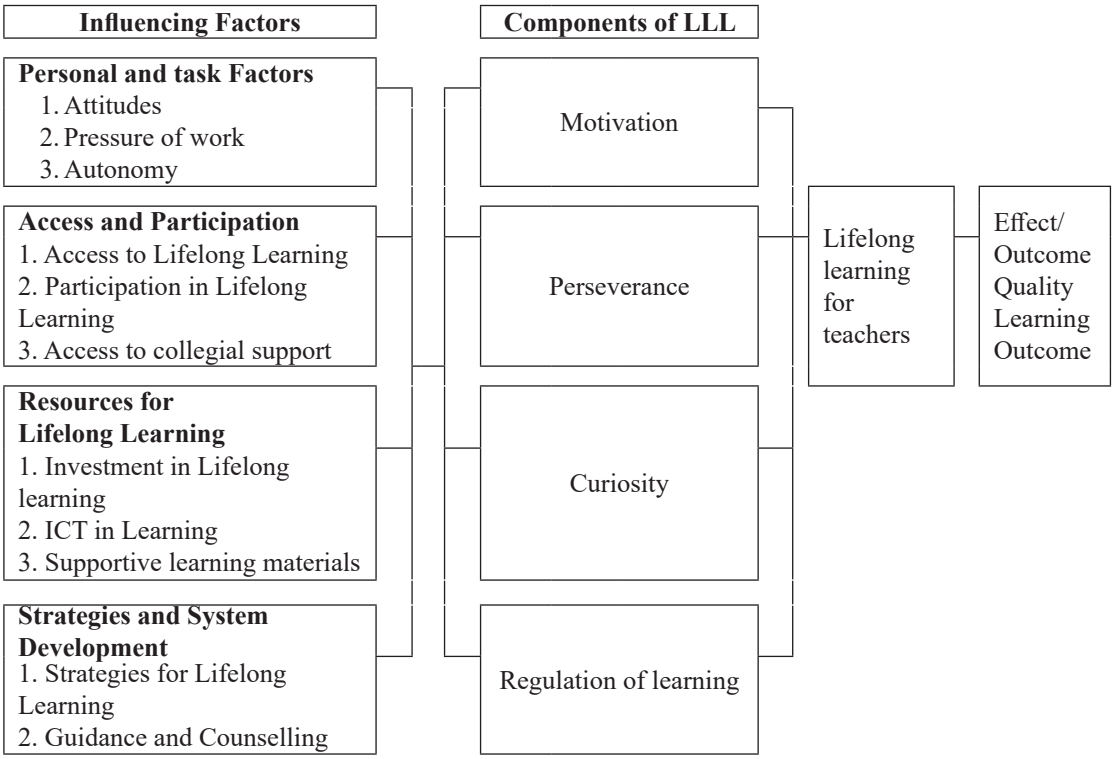


*Figure 1.* Conceptual framework.

The conceptual framework outlines the various sub-dimensions of lifelong learning and their relationship with career-related learning among high school teachers. It highlights the primary factors influencing motivation, perseverance, curiosity, and regulation of learning, ultimately impacting the learning outcomes of both teachers and students. The framework guides the research process by defining the sub-dimensions of lifelong learning critical for teachers' professional development and identifying influencing factors that may enhance or reduce teachers' learning behavior. An imbalance between current competencies and required competencies may perpetuate learning gaps and discontinuation of learning activities.

## Methods for Data Collection and Analysis

The guiding concern for the study is discovering to what extent lifelong learning is relevant for the teachers of high schools. A mixed-method approach was used to conduct the study. Researchers employ mixed method design because it helps to expand understanding from one method to another and confirm findings from different data sources (Creswell & Creswell, 2018). Since this study is education research, there are many valid claims that mixed method research adds "extra value" to studies seeking to better describe differences in educational effectiveness (Sammons, 2010). Considering these issues, the study chose mixed method approach.

**Table 1**

Methodology at A Glance

| Participants Group | Sample size | Selection criteria | Data collection technique | Instrument |
|---|---|---|---|---|
| Teachers of the secondary level school (Both male and Female) | 62 from eight schools | Duration of continuing present work | survey | semi-structured questionnaire |
| Female Teachers | 15 from eight school | | Interview | interview checklist |
| Along with mentioned groups, employers/heads of the educational institutions those who are in leading positions, and trainers of TTCs. | 4 (8-10 participants for each FGD) | | FGD | FGD guidelines |

This study uses probability and non-probability sampling to gather data from 62 high school teachers, head teachers, and trainers of teachers. Participants were categorized based on government and non-government schools, areas, age, and gender. The study was conducted using primary data sources and methods, including interviews and focus group discussions (FGDs).

**Table 2**

Teachers' Background Information

| Category | Groups | Number of Participants |
|---|---|---|
| Age | 20-30 | 11 |
| | 31-40 | 24 |
| | 41-50 | 21 |
| | 51+ | 6 |
| Gender | Male | 34 |
| | Female | 28 |
| Teaching experience | 1-10 | 27 |
| | 11-25 | 35 |

Data was collected through in-depth interviews using semi-structured questionnaires and interview checklists, and participant-specific interview checklists to explore gender-based analysis of occupation-related learning activities and lifelong learning perspectives. The study aims to understand teachers' learning intentions and their perspectives on occupation-related learning activities.

**Table 3**

Detailed Research Tools and Indicators to Fulfill the Objectives

| **Objectives and tools** | **Indicators to fulfil objectives** |
|---|---|
| 1. To examine the existence of career-related lifelong learning among teaching professionals (semi-structured questionnaire) | sources of learning activities,<br>the extent of spent time,<br>perception about continuous learning and work development,<br>motivations to learn (self-initiated), Attitude towards change and adaptability, socio-economic background |
| 2. To identify factors that influence learning opportunities and learning behaviours (Semi-structured questionnaire, Interview checklist, FGD) | nature of Organization<br>social factors<br>occupation status<br>Job preference<br>Technological<br>Available ways of learning |
| 3. To estimate the challenges and problems of career-related learning gaps that reduce competencies in work. (Semistructured questionnaire, Interview checklist, FGD, Document Review) | Individual Level,<br>Social Level (norms towards learning and work performance)<br>Policy Challenge,<br>Gender perspectives |

Data collection, compilation, cleansing, data analysis, and interpretation are all part of the data management process. The data cleaning technique entails separating relevant data from all

data sources once the data is compiled from various sources. The next step is to use Microsoft Excel to analyze the data and interpret it based on theory and previous research. However, a data-driven thematic analysis was followed for the study. To validate claims, data triangulation is important (Flick, 2000). Thus, findings from both the qualitative and quantitative parts of the study were triangulated. After the collection of necessary data, emphasis was given to organizing all sorts of data. For quantitative analysis, close-ended questions were transformed into computer-readable data (coding). Simple descriptive statistical analysis was followed. Regarding the analysis of qualitative data, it is emergent rather than prefigured (Creswell, 2018). Then descriptive findings from the qualitative study was brought under some thematic concepts. In many parts of quantitative data analysis, qualitative data was analyzed to supplement the findings of quantitative analysis.

## Findings

### Sources of learning activities

The sources of learning were categorized into two parts: learning as acquisition and learning as participation. A key finding is how teachers evaluate various learning sources regarding their contribution to improving work capabilities (Table 4). The measuring scale and categories of sources of learning support for enhancing work capabilities of teachers were directly chosen from literature (Felstead et al., 2004). Out of all respondents, 51.6% stated that their biggest source of learning about improvement was through actually watching others carry out the job in the schools and 46.8% through performing their job duties. This indicates that the majority of the participants agreed that they had mostly developed their abilities through hands-on job experiences.

**Table 4**

Sources of Learning Support for Enhancing Work Capabilities of Teachers

| Source of learning | Percentage in each category | | | | |
|---|---|---|---|---|---|
| | A great deal of help | Quite a lot of help | Of some help | A little help | Of no help at all |
| | % | % | % | % | % |
| ***Learning as acquisition*** | | | | | |
| Paid training courses by your employer or yourself | 27.4 | 41.9 | 11.3 | 14.5 | 4.8 |
| Skills picked up while studying for a qualification | 37.1 | 33.9 | 12.9 | 8.1 | 8.1 |
| Reading books, manuals and work-related magazines | 6.5 | 21.0 | 35.5 | 29.0 | 8.1 |
| Using the Internet | 38.7 | 30.6 | 19.4 | 8.1 | 3.2 |
| ***Learning as participation*** | | | | | |
| Doing your job regularly | 46.8 | 38.7 | 14.5 | 0.0 | 0.0 |
| Being shown by others how to do certain activities or tasks | 16.1 | 43.5 | 33.9 | 6.5 | 0.0 |
| Reflecting on your performance | 37.1 | 50.0 | 12.9 | 0.0 | 0.0 |
| Watching and listening to others while they carry out their work | 51.6 | 30.6 | 17.7 | 0.0 | 0.0 |

The study found that learning as acquisition is less helpful than learning as participation in improving work performance. Activities related to the workplace, such as job-related activities, hands-on training, and self-reflection, were considered more helpful. Teachers' time-use for learning activities was examined, and 54.84% of them were devoted to learning activities for seven hours or less (Figure 2). 'Learning by doing' was considered more important for improvement.

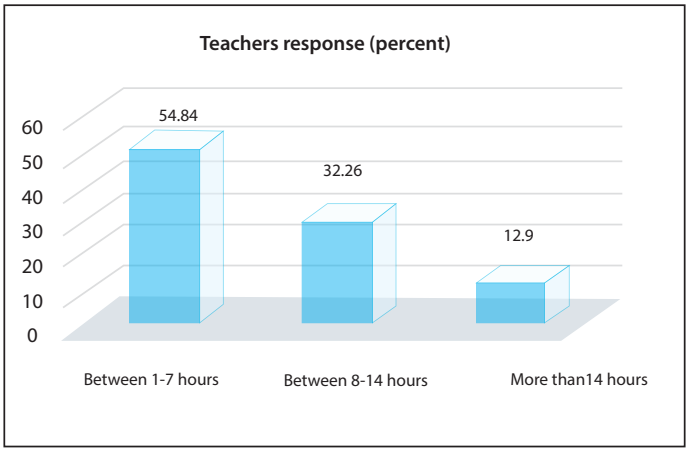


Figure 2. Weekly hours devoted to learning activities.

## Perceptions about continuous learning: Effects of Career Phases and Age

The study reveals that teachers' learning efforts peak during the six to ten-year teaching career (Figure 3). However, teachers may experience a lack of motivation and job instability at the beginning of their careers, potentially due to a lack of awareness about professional self-development. As their career progresses, perceived learning efforts may decre

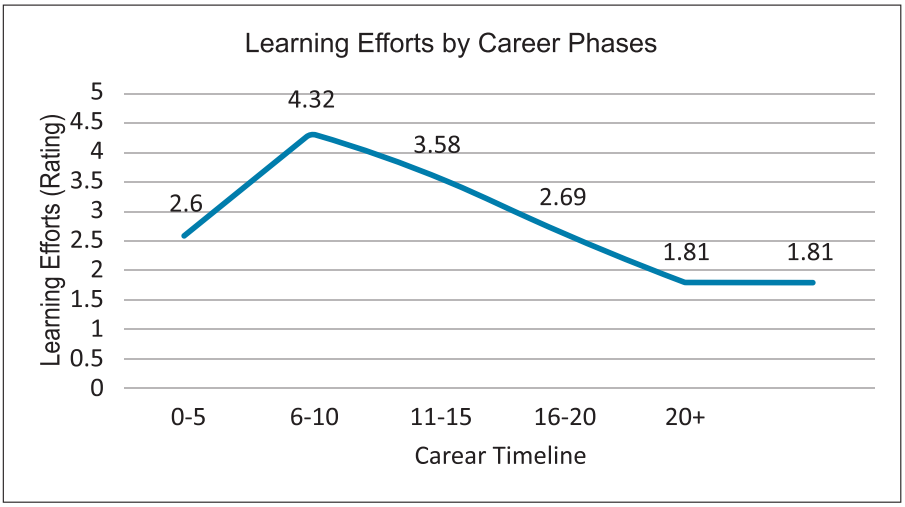


Figure 3. Perception ratings (1-5) of learning efforts across teachers' career span.

Young and old teachers have different perceptions about continuing professional learning, with higher-age and extensive working experience showing a notably indifferent attitude towards it. Over 20 years of experience, 50% of teachers disagree that continuous learning is not essential, attributed to experience-led learning and family involvement.

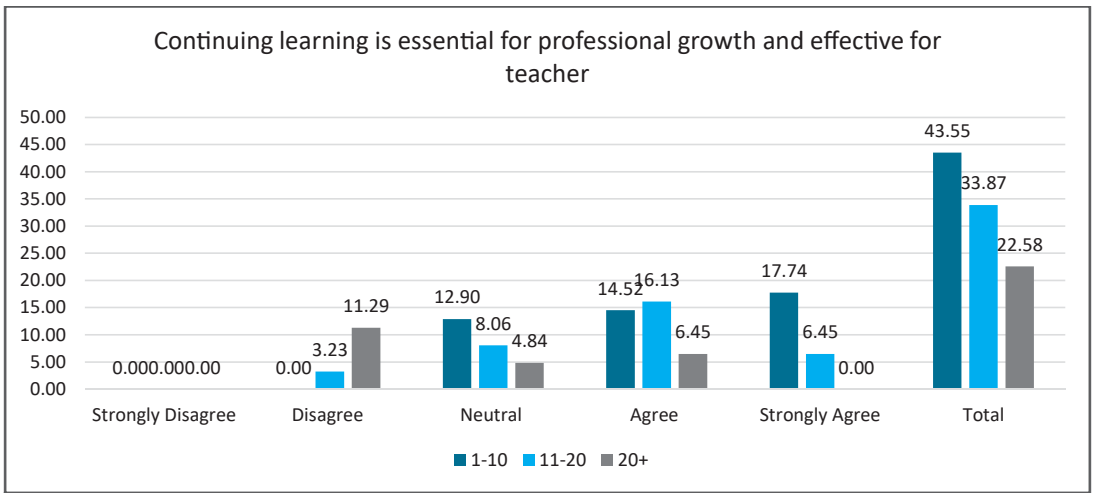


Figure 4. Perceptions about the need for continuous learning in terms of working experience.

## Motivations in Continuing Professional Learning among Teachers

Appraisal and promotion are key motivators for teachers to continue learning and engaging in professional development activities (Table 5). Earning additional qualifications and receiving positive feedback are powerful motivators. Demotivation factors include lack of incentives, perceived career prospects, and lack of leave options for training or degree programs. Social psychology suggests implicit beliefs about age and responsibility may influence teachers' perceptions of their ability to continue learning and growing in their roles.

**Table 5**

**Factors Influencing Motivations to Learn and Barriers to Continuing Professional Development among Teachers**

| What motivates | What demotivates |
|---|---|
| Appraisal | no incentive/opportunity for more competency |
| Promotion (B.ED), M.ED (Headship) | "No career"- no leave options for training/degree/resource |
| satisfaction based on incentives/ money | social psychology: learning limits to job entry age and responsibility |
| Applicability of re-learning | unavailability of learning institutions |
| | legal/institutional barrier/ restricted opportunity |

## Factors Influencing Learning Behaviors of Teachers

Characteristics of school: To identify the impact of characteristics of school on continuing learning behaviour of teachers, four factors were considered: supportive leadership, celebrating success, access to resources and the nature of ownership by government and non-govt. ownership.

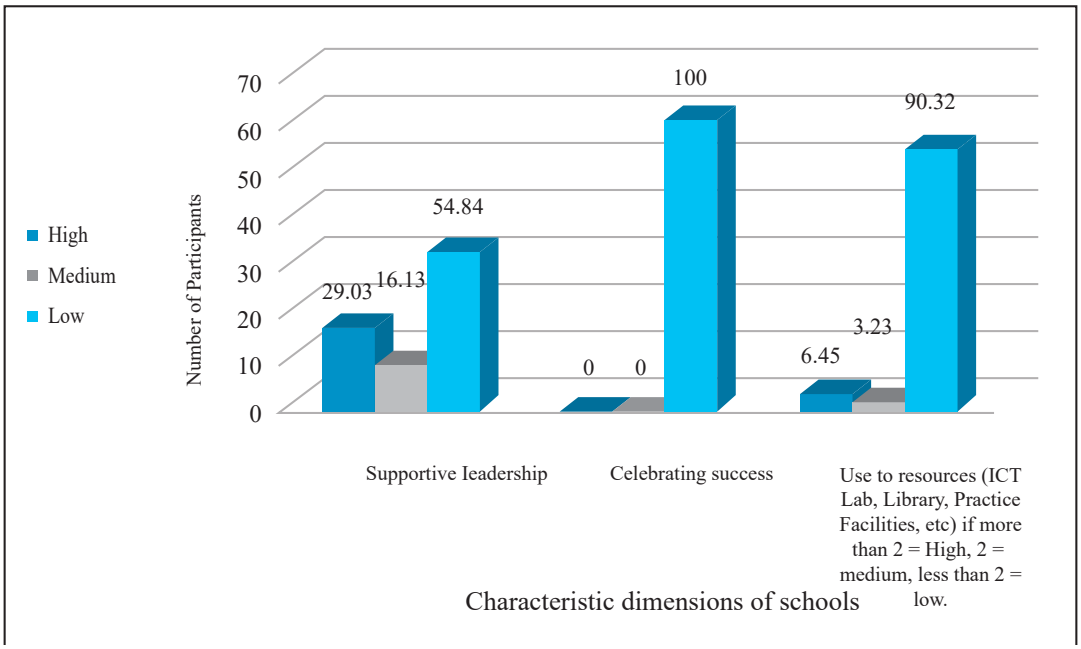


Figure 5. Measurement of supportive characteristics in schools using high, medium, and low scale.

This study examines the role of headmasters in schools, focusing on their value for professional growth and development. The study found that heads who provide proactive guidance on job improvements, manage stress, recognize teachers' limitations, and offer job counseling encourage teachers to continue learning and utilize their learnings. Rewarding the successes and achievements of teachers for continued learning and professional growth were asked of teachers. One teacher (Mithapukur, 28 January 2023) stated that

> "*Schools that recognize and reward teachers for their achievements can create a culture of learning and growth. At the last time, many of us completed B.Ed. and the students along with other colleagues organized a program. This encouraged me to get admitted to the next opportunity, M.Ed which is not related to my promotion."*

Non-government school teachers face limited and underfunded professional development opportunities, placing a higher value on it than government schools. They are bounded to develop their capacity based on school demands, and government job responsibility is not emphasized. Figure 6 shows that government school teachers have higher job satisfaction (48.39%) than non-government high school teachers (9.68%). Job satisfaction varies in terms of salary, ability utilization, promotion facilities, cooperation, freedom for work, job security, social status, working conditions, and achievement.

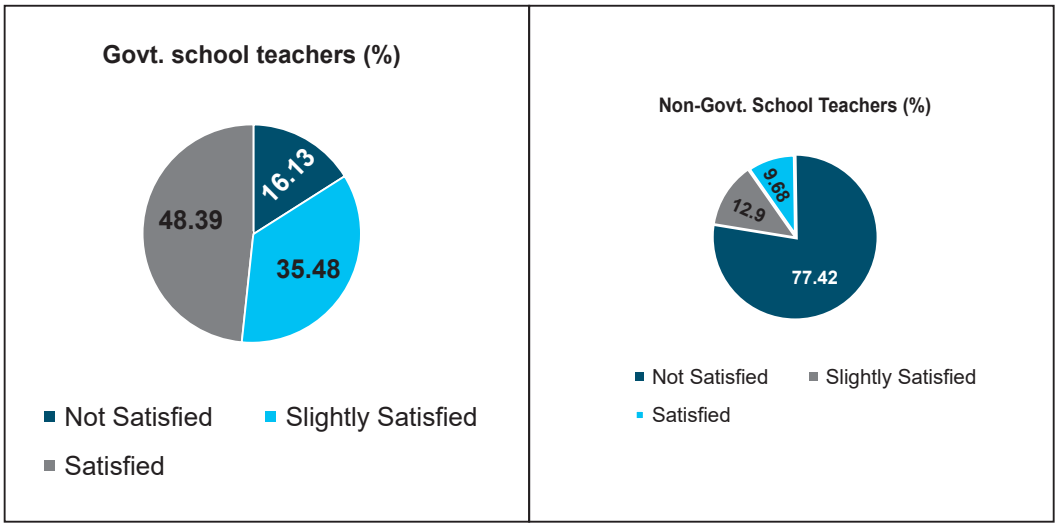


Figure 6. Distribution of respondents in terms of the overall level of job satisfaction.

## Practices that influence learning: age stereotype, social loafing, burnout

In this section, teachers were asked about their perception of some of the key statements to understand the societal beliefs that influence the teacher communities.

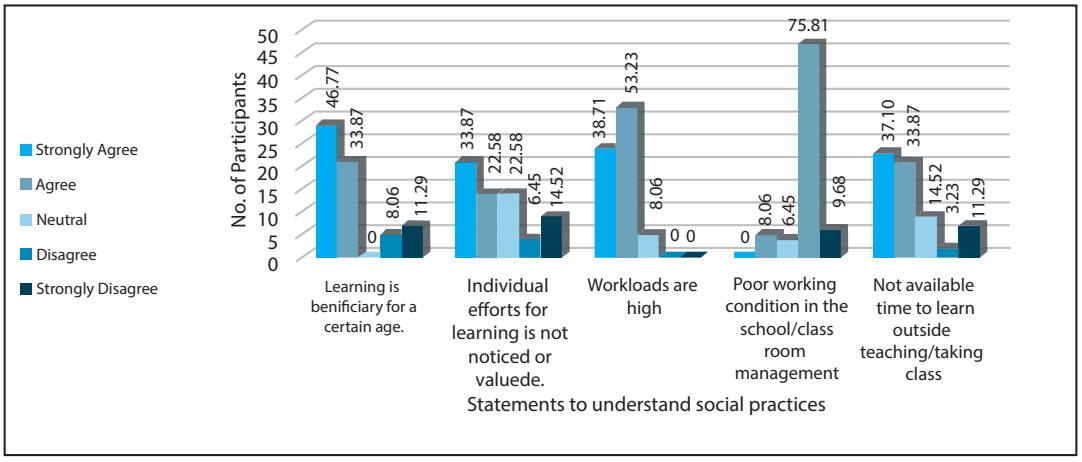


Figure 7. Measuring social influence on the learning behaviours of teachers using an agree-disagree scale.

Age limits learning behavior, with 46.77% of respondents strongly agreeing and 33.87% agreeing that age-related stereotypes negatively impact teachers' willingness to continue professional development. This belief can lead to decreased motivation to engage in professional development opportunities, as older teachers are more reluctant to learn. Social loafing, where individual efforts for learning are not valued, is another issue that affects teachers' motivation. Teachers who experience more workload are less likely to engage in professional development

opportunities, as they may feel overwhelmed and lacking in energy. This can result from high workloads, lack of autonomy, and poor working conditions. The majority of participants agreed that not having time to learn outside of teaching/taking class indicates more workloads. Overall, these factors contribute to a decrease in motivation and engagement in professional development opportunities for teachers.

## Gender Differences in Lifelong Learning Tendencies among Teachers:

Through data, this study searched for the question, "are gender differences a factor in lifelong learning tendencies among teachers?" In the context of gender, self-regulated learnings are more prevalent among male teachers (53%) than female teachers (32%). It is caused by socio-cultural factors and demographic factors. In terms of compulsory and non-compulsory learning activities, female teachers show a tendency to participate in compulsory activities, which are typically mandated by educational institutions or professional requirements.

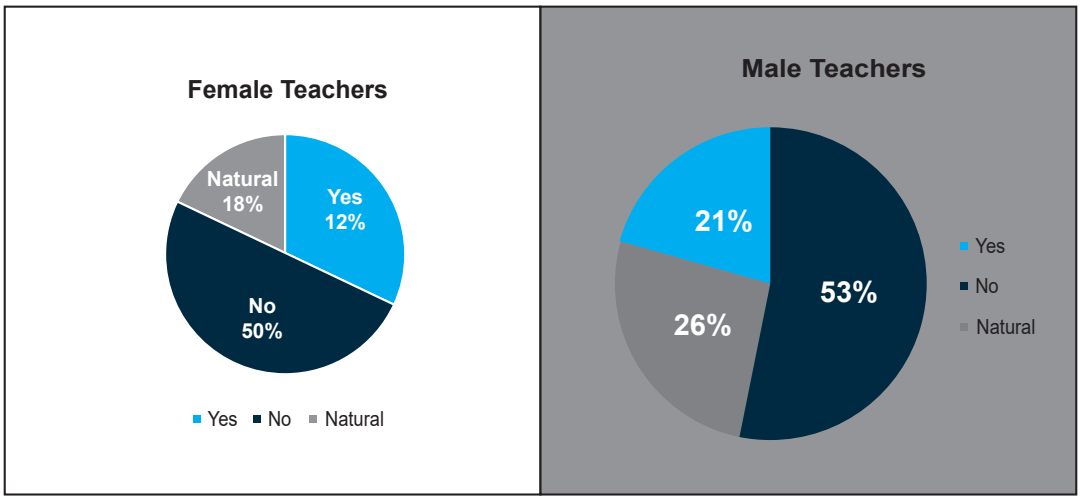


Figure 8. Gender-based responses to intentions to participate in self-regulated learning activities.

## Influence of school location on teachers' learning opportunities:

The study found a significant difference in self-actualization priorities between teachers in Dhaka city and those in the rural district of Rangpur. Dhaka city teachers prioritize self-actualization due to the greater availability of learning opportunities, proximity to central offices and educational institutions, and the abundance of facilities. The competitive educational landscape in Dhaka city motivates teachers to continuously improve their skills and knowledge, while Rangpur teachers face limited access to learning resources and professional development programs due to geographical distance. This competitive environment encourages teachers to actively seek out learning opportunities and engage in professional development activities to stay at the forefront of their profession.

Teachers in Dhaka city are facilitated by the opportunities compared to teachers in rural district schools

Funded workshops, seminars and pieces of training
Communication facilities

Access to promotional/advertisement-based training
Institution initiated opportunities

## Challenges in continuing learning for professional development

Despite the emphasis on attending training courses and obtaining qualifications, they were rated as having a limited impact on enhancing job performance. The structured knowledge in training or degree is useful in gaining initial competence at their workplace, but its benefits decline as a way of improving performance in the long run. This problem is rooted in haphazard training, lack of follow-up training, and lack of sessions for discussing teacher-specific problems. Teachers have very little involvement in deciding about the units taught in the courses of the training.

The study identified a significant challenge in the learning tendencies of the teachers, which involves hands-on experiences and observational learning. This can lead to a decrease in overall performance, particularly if the teachers are not aware of whether they are performing a task correctly or observing someone who is not performing the task effectively. As a result, their teachers may continue to reinforce errors, which can ultimately decrease the individuals' competency at work. These individuals may be unaware of the faulty guidance they are receiving, which further creates the problem.

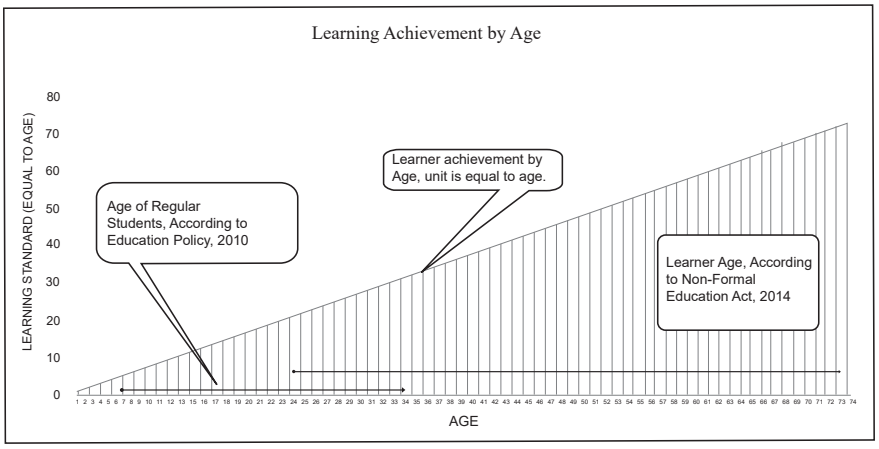


Figure 9. Scenario of learning conditions by age.

Teachers need to avoid age-related stereotypes and recognize that learning is a lifelong process that does not have an age limit. In Bangladesh, there is a limit to formal education (Figure 9).

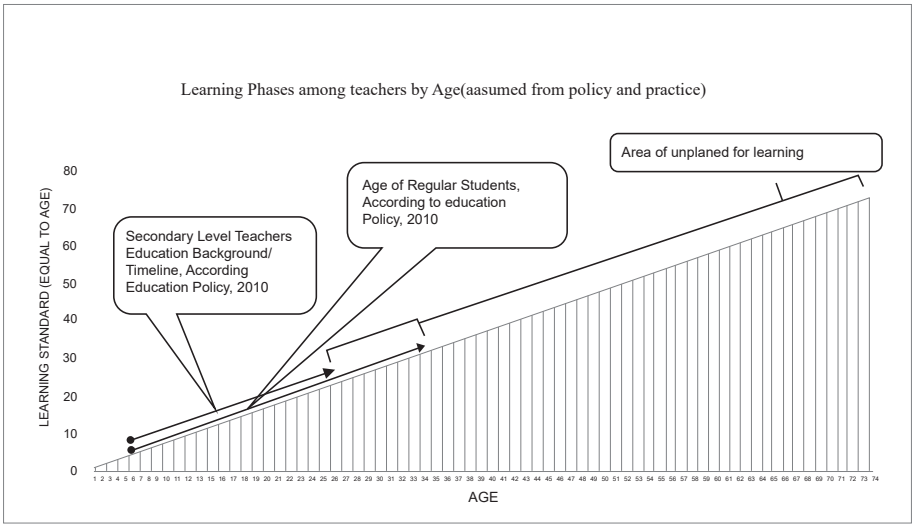


Figure 10. Age-based learning level (each year is equal to one learning level) and unplanned phases in learning.

One major challenge in education policy arises from an emphasis on formal education, not lifelong learning. To become lifetime learners, young people need to leave school being motivated towards further learning. However, the traditional view of education typically involves limited opportunities for students to be involved in setting their objectives or engaging in self-directed learning. Courses and continuing education programs for teachers rarely address LLL topics in a way that is relevant to high school teachers. High school teachers may not be aware of the importance of LLL or the resources available to them.

Education policy changes frequently for students, but what about the teachers? This is a frequently asked question by the teachers during conducting the research. This question reflects on the initiatives to be taken for developing the qualities of teachers besides changing the qualities of students. One respondent stated as

> "*As a teacher, I believe it's essential to keep learning and growing, not just for myself but for my students. Education policies frequently change, but our role as educators remains constant. To effectively support our students, we need ongoing opportunities for professional development, collaboration, and mentorship. Investing in the development of teachers is investing in the future of education. And there are no incentives for adopting these changes*"

## Discussion

To summarize, the sources of the learning activities are mainly learning by participation which indicates that learning by doing, experimenting, and getting ideas from colleagues are more possible options of learning for teachers. Secondly, an opinion partially disagreed by the teachers is that there is a need of continuing learning till the end of the career. However, the teachers do not continue learning effectively as their career timeline increases. At the starting

of the teaching career, the teachers' learning intentions were high. It remarkably declined as the career duration extended.Thirdly, teachers accept changes in teaching/learning activities as they have less autonomy in decision-making on what and when they need to learn. Fourthly, compensation or incentives factors have a significant influence on teachers' job satisfaction that reflects the interest in continuing need-based learning. Along with these findings, the study explored key challenges in continuing teachers' learning.

Now let's see what these findings reflect. The findings of the study indicate that the existence of career-related lifelong learning among teachers is alarming. There are very little effort and intention in continuing learnings for professional development if those learnings are not rewarded by incentives. Furthermore, several individual, institutional and policy-level challenges hinder teachers' ability to continue learning throughout their careers. However, the findings of the study are explainable with the conceptual framework, providing a comprehensive analysis of the various dimensions and influencing factors of lifelong learning among high school teachers. In terms of personal and task factors, the results show that attitudes towards continuous learning are influenced by age, duration of working experience and both individual and collegial practice of social attitudes that impedes teachers from continuing learning. Age and extensive working experience can lead to a perception of reduced learning needs, which affects teachers' motivation, perseverance, curiosity, and regulation of learning. The framework suggests that attitudes, as influenced by factors such as age and experience, significantly shape teachers' engagement in lifelong learning. Besides, the pressure of work and lack of autonomy (institutional restrictions) in learning activities negatively influence the intentions of continuous learning, particularly non-compulsory learning activities. The finding indicated that teachers spend very little time engaging in learning activities. The pressure to meet various responsibilities and requirements can reduce their motivation and perseverance to actively pursue learning opportunities.

Rural district schools have less access to learning facilities compared to urban-based schools, which aligns with the conceptual framework's access component. Urban areas, like Dhaka, have better resources, learning opportunities, and professional development programs. The presence of educational institutions, training centers, and professional networks creates a supportive environment for teachers to engage in lifelong learning. In terms of resources for lifelong learning, the study can connect job satisfaction of teachers. The study reveals that government school teachers have higher job satisfaction compared to non-government high school teachers, influenced by factors like salary, promotion facilities, and working conditions. Job satisfaction impacts teachers' engagement in lifelong learning, as perceived lack of resources negatively affects motivation, perseverance, curiosity, and learning regulation. Insufficient ICT support in rural schools hinders online learning, and adult education is initiated as part of lifelong learning in Bangladesh.

## Recommendations

- Teachers' professional learning and reflection are crucial for school development, as they can improve students' attitudes and teaching processes. To achieve this, the school environment should be resourceful and useful for learning. Dhaka-based non-government schools should recruit contractual trainers for in-house workshops and training, and schools in rural districts can be included in such initiatives. Creating a culture of using the library among teachers can enhance learning.
- Teachers spend less time on learning activities, and financial cost, distance from training opportunities, and workload are important inhibitors of access to learning intentions. Lifelong learning needs effective marketing and dissemination within schools, and later career-stage teachers should be made more aware of available learning possibilities.
- Personalized support for teachers' professional development is recommended, with experienced educators guiding and inspiring young teachers. Digital technology integration is crucial for enhancing educational outcomes, but challenges like access, family barriers, workload, and inadequate choice-based content can hinder access.
- Feasible competition among schools and teachers can be a catalyst for self-development and institutional growth. National education policies lack provisions for lifelong learning, hindering personal, professional, and national development. Integrating lifelong learning into Bangladesh's education policy could create a learning society.
- To ensure lifelong learning, the Ministry of Education can diversify funding sources by investing in teachers' learning competency frameworks, research, and incentives. UNESCO's Institute of Lifelong Learning can provide advice on policy development and implementation strategies.

## Conclusion

Learning at work has got priority as a major source of national and global policy debates. Analytically speaking, the recognition of the importance of lifelong learning is crucial in a society that is undergoing rapid changes. Being such a society, Bangladesh must prioritize the cultivation of continuous learning among its citizens. By prioritizing career-related lifelong learning among teachers, this research seeks to uncover the factors that influence their motivation and engagement in their ongoing learning activities. Understanding these factors can help identify strategies and policies that foster a culture of lifelong learning within the teaching profession. Additionally, exploring the experiences and perspectives of teachers regarding their professional development can provide valuable insights into the effectiveness of existing training programs and identify areas for improvement. In terms of validity and generalization, the rsults of the paper are possibly adequate to understand scenarios of career-related lifelong learning of teachers in high schools in Bangladesh. Since the topic is underexplored or inadequately investigated in the academic field, this study can play a key role in enhancing food for thought for researchers. Thus, this study catalyzes advancing scholarly discourse and understanding in the area of lifelong learning within the teaching profession

in Bangladesh. However, the study has some limitations. Firstly, since this is an exploratory study, it was difficult to find a sound theoretical rationale to explain the specific findings of the study. If more research is done on teachers and lifelong learning, then a more structured and well-explainable framework might be built. Secondly, the sample size is barely adequate for generalizability. Studies with national-level data can be more effective to reconsider the results of this study.

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## References

Abdin, Md. J. (2020). Lifelong learning in the age of fourth IR. *Theindependentbd.Com.* https://m.theindependentbd.com/printversion/details/237172

Ahmed, M. (2014). Lifelong Learning in a Learning Society: Are Community Learning Centres the Vehicle? In *Education, learning, training: Critical issues for development* (Vol. 5). Brill Nijhoff.Abdin, Md. J. (2020). Lifelong learning in the age of fourth IR. Theindependentbd.Com. https://m.theindependentbd.com/printversion/details/237172

Bangladesh Planning Commision. (2020, December). *Eighth Five Year Plan (July2020-June2025)*. http://plancomm.gov.bd/site/files/8ec347dc-4926-4802-a839-7569897e1a7a/8th-Five-Year-Plan

Beairsto, B., Ruohotie, P., Beairsto, I. B., & Klein, M. (2003). *Empowering Professionals as Lifelong Learners.*

Chivers, G. (2006). The training of university lifelong learning professionals as researchers. *Journal of European Industrial Training*, *30*(5), 330–348. https://doi.org/10.1108/03090590610677908

Coşkun, Y. D., & DemiRel, M. (2012). *Üniversite Öğrencilerinin Yaşam Boyu Öğrenme Eğilimleri * Lifelong Learning Tendencies Of University Students.*

Creswell, J. W., & Creswell, J. D. (2018). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches* (5th edition). SAGE Publications, Inc.

Crick, R. D., Broadfoot, P., & Claxton, G. (2004). Developing an Effective Lifelong Learning Inventory: The ELLI Project. *Assessment in Education: Principles, Policy & Practice,* 11(3), 247–272. https://doi.org/10.1080/0969594042000304582

Drewery, D. W., Sproule, R., & Pretti, T. J. (2020). Lifelong learning mindset and career success: Evidence from the field of accounting and finance. *Higher Education, Skills and Work-Based Learning,* 10(3), 567–580. https://doi.org/10.1108/HESWBL-03-2019-0041

Duţă, N., & Rafailă, E. (2014). Importance of the Lifelong Learning for Professional Development of University Teachers – Needs and Practical Implications. *Procedia - Social and Behavioral Sciences*, *127*, 801–806. https://doi.org/10.1016/j.sbspro.2014.03.358

Elfert, M. (2019). Lifelong learning in Sustainable Development Goal 4: What does it mean for UNESCO's rights-based approach to adult learning and education? *International Review of Education*, 65(4), 537–556. https://doi.org/10.1007/s11159-019-09788-z

Felstead, A., Fuller, A., Unwin, L., Ashton, D., Butler, P., & Lee, T. (2004). *Better learning, better performance: Evidence from the 2004 Learning at Work survey* [Monograph]. National Institute of Adult Continuing Education. https://eprints.soton.ac.uk/63871/

Flick, U. (2000). *Triangulation in Qualitative Research.* Sage Publications.

Gorges, J., & Kandler, C. (2012). Adults' learning motivation: Expectancy of success, value, and the role of affective memories. *Learning and Individual Differences,* 22(5), 610–617. https://doi.org/10.1016/j.lindif.2011.09.016

Jackson, S. (2003). Lifelong Earning: Working-class women and lifelong learning. *Gender and Education,* 15(4), 365–376. https://doi.org/10.1080/0954025031000161057l

Jarvis, P. (2007). *Globalization, Lifelong Learning and the Learning Society: Sociological Perspectives.* Routledge & CRC Press. https://www.routledge.com/Globalization-Lifelong-Learning-and-the-Learning-Society-Sociological/Jarvis/p/book/9780415355438

Kind, T., & Evans, Y. (2015). Social media for lifelong learning. *International Review of Psychiatry*, *27*(2), 124–132. https://doi.org/10.3109/09540261.2014.990421

Kolenc Kolnik, K. (2010). Lifelong Learning and the Professional Development of Geography Teachers: A View from Slovenia. *Journal of Geography in Higher Education*, *34*(1), 53–58. https://doi.org/10.1080/03098260902982542

Lavrijsen, J., & Nicaise, I. (2017). Systemic obstacles to lifelong learning: The influence of the educational system design on learning attitudes. Studies in Continuing Education, 39(2), 176–196. https://doi.org/10.1080/0158037X.2016.1275540

London, M. (2011). *Lifelong Learning: Introduction.* The Oxford Handbook of Lifelong Learning. https://doi.org/10.1093/oxfordhb/9780195390483.013.0013

London, M., & Smither, J. W. (1999). Career-related continuous learning: Defining the construct and mapping the process. In *Research in human resources management,* Vol. 17 (pp. 81–121). Elsevier Science/JAI Press.

Medel-Anonuevo, C., Ohsako, T., & Mauch, W. (2001). *Revisiting Lifelong Learning for the 21st Century*. https://eric.ed.gov/?id=ED469790

OECD. (2019). *Education at a Glance 2019: OECD Indicators.* OECD. https://doi.org/10.1787/f8d7880d-en

Öz, E., & Şen, H. Ş. (2021). The Effect Of Self-Regulated Learning On Students' Lifelong Learning And Critical Thinking Tendencies. *Elektronik Sosyal Bilimler Dergisi, 20*(78), Article 78.

Öz, E. (2022). The Impact of Gender Differences on Lifelong Learning Tendencies in Turkey: A Meta-Analysis. *SAGE Open*, *12*(2), 21582440221099530. https://doi.org/10.1177/21582440221099528

Riddel, S., Wilson, A., & Baron, S. (2001). Gender, social capital and lifelong learning for people with learning difficulties. *International Studies in Sociology of Education*, *11*(1), 3–24. https://doi.org/10.1080/09620210100200069

Rogers, A. (2006). Lifelong learning and the absence of gender. *International Journal of Educational Development*, *26*(2), 189–208. https://doi.org/10.1016/j.ijedudev.2005.07.025

Sahin, M., Akbasli, S., & Yelken, T. Y. (2010). *Key competencies for lifelong learning: The case of prospective teachers*. 12.

Sammons, P. (2010). *SAGE Handbook of Mixed Methods in Social & Behavioral Research.* SAGE Publications, Inc. https://doi.org/10.4135/9781506335193

Sarker, D. R. (2014). *Adult Education for Women in Bangladesh: Problems and Prospects.* A H Development Publishing House.

UN. (2016). *Goal 4 | Department of Economic and Social Affairs* [Dedicated website]. https://sdgs.un.org/goals/goal4

UNESCO Institute for Lifelong Learning. (2019). *UNESCO Institute for Lifelong Learning: Promoting lifelong learning for all*. https://unesdoc.unesco.org/ark:/48223/pf0000368557

Uslu, N. C. (2016). *Attending Lifelong Learning Activities.* 40.

Webb, S., Holford, J., Hodge, S., Milana, M., & Waller, R. (2019). Conceptualising lifelong learning for sustainable development and education 2030. *International Journal of Lifelong Education,* 38(3), 237–240. https://doi.org/10.1080/02601370.2019.1635353

World Economic Forum. (2018). *The Fourth Industrial Revolution could smash gender inequality – or deepen it.* World Economic Forum. https://www.weforum.org/agenda/2018/03/the-fourth-industrial-revolution-could-smash-gender-inequality-or-reinforce-it/

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# Entrepreneurial intention and potentiality of the students in grades xi and xii: background and required steps

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## Abstract

*Research on entrepreneurial intention among secondary school students has become more important for the past two decades. The government of Bangladesh considered entrepreneurship as an important career option and source of national prosperity. This paper reports a small research study on entrepreneurial intention and competencies of the students of grade xi and xii in two selected government colleges. The study intended to explore the background context of the colleges in relation to entrepreneurship and teachers' views about what could be the required steps for promoting entrepreneurial intentions based on the Theory of Planned Behavior. The findings indicated that although very few participants want to be an entrepreneur, they have 73.70% strong and 15.80% highly strong level of competencies. Interestingly those who don't want to be an entrepreneur, if they get financial, legal, social & administrative support from the government, they also have a strong intention to be an entrepreneur. It is explored that reasons behind some of the negative attitudes include a lack of social status, lack of adequate funding, uncertainty, lack of courage, lack of legal, social & administrative support and inadequate government support are main hindrances to be an entrepreneur. Ways to resolve these challenges over time are discussed and include i) developed teachers' agency, ii) ensuring social status, iii) motivational seminars, iv) training initiative & v) support from BANK and NGO. Also it is observed that there is no significant difference on the level of entrepreneurial intentions between male and female students.*

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## Introduction

Developing countries like Bangladesh have been passing through a very difficult time with unemployment problem. About 165.55 million people live here. Its 20% people's age is from 15 to 24 years. According to World Bank, (2019, December), overall unemployment rate is 4.29% in Bangladesh. According to Bangladesh Bureau of Statistics (BBS) (2017, July), the unemployment rate here is 4.37% which is equivalent to America's. According to Latest Labor Force Survey (LFS) by BBS (2019, Neazy), the rate of unemployment among people with tertiary level education has considerably risen up. About 46% of the total unemployed youth are university graduates. Without looking for job, young people have to think about self-employment as a way of being self-employed (nieuwenhuizen & groenewald.2008:128).

Now, all countries throughout the world are thinking that self-employment can be used as tools to eradicate the unemployment problem. Entrepreneurship basically deals with such thinking where human do not think to be a job seeker rather, they will be job giver along with their selfemployment. Henry (2006) stated that entrepreneurial education needs to be started as all students get the message of entrepreneurial opportunities and Wilson (2007) remarked that when students even study in secondary level in this time their entrepreneurial intentions grow and, in such way, it impacts to choose career in future. Entrepreneurial thinking refers to the readiness and expectations to be an entrepreneur. Willingness to become an entrepreneur sometimes depends on the entrepreneurial education that makes students confident, self-reliant, risk taker, potentials finder and, knowledge seeker. Learning about entrepreneurship not only enhance the ontology for an organization but also significantly impact on the eagerness of individual to think entrepreneurship as his career (Luncas,2004 as cited in Akmaliah, 2009). Entrepreneurial intention sometimes affected by some factors such as attitude, family background and peer influence. If there is no entrepreneurial intention, it's impossible to bring it by spending money creating infrastructure or providing technical support. For getting real scenario, it's necessary to study on it.

Since the independence of Bangladesh (1971), it has made positive progress, but still faces many challenges like poverty, high level of inequalities and unemployment. Unemployment is perceived to be directly responsible for the high level of socio-economic problems, such as crime, violence and poverty (Beeka & Rimmington, 2011;146; Barker,2003:3).

A survey was conducted with 76 higher secondary students, from two government colleges as respondents. We have selected these two colleges from Sylhet division. The main purpose of our data collection was to find the students' intention in becoming entrepreneurs. We collected data through questionnaire from the students of both colleges and organized a focus group discussion with teachers of one college because we got enough numbers of participants from different departments. At the same time, we also collected data from local entrepreneurs through semistructured interviews.

This research looks at the thinking and intentions of higher secondary students regarding entrepreneurship as a career. Moreover, not much research has been done to explore entrepreneurial intentions of higher secondary level student in Bangladesh. Thus, this research could make a significant contribution to bring change in policy and practice of entrepreneurial education in Bangladesh.

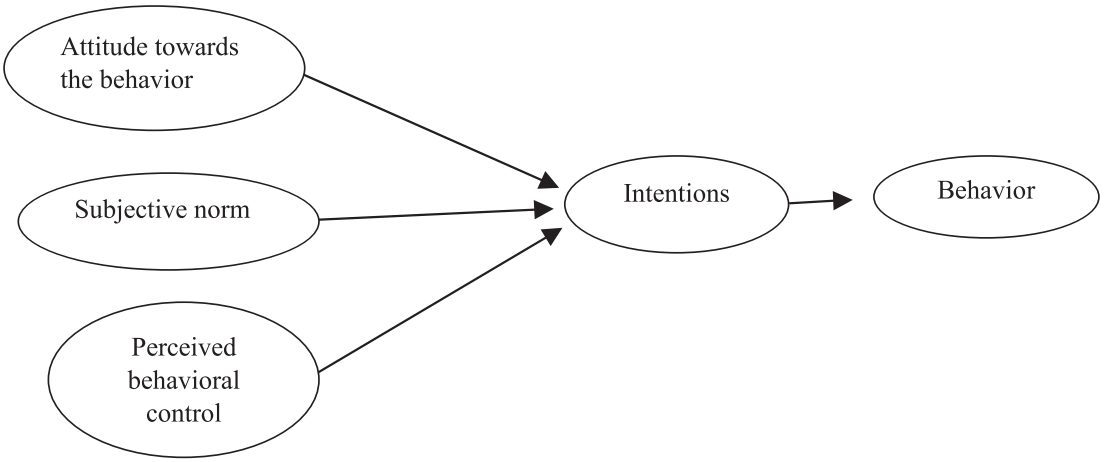
## Entrepreneurial Intention:

Entrepreneurial intention has emerged as a foremost construct within the entrepreneurship literature over the last few decades (Drennan, Kennedy, & Renfrow,2005). Sexton and Karsede (1991) said that entrepreneurship education develops student's aspiration as well as readiness for self-employment and he said that the success of entrepreneurship training programs is driven by the learners' belief in the relevance of the program for his or her survival.

Frank (2005) reported that pupils' development orientations were affected by the entrepreneurship orientation of their school.

Entrepreneurial activities in fact do not arise abruptly rather it is derived from the entrepreneurial intention. It can be said that a perception of a person can direct attention and action toward selfemployment apart from institutional career (Souitaris, Zerbinati, & Lahman, 2007). Planned behavior is the base of this study because intention can be assumed from the attitudes and subjective norms that are strongly related to this theory.

**Figur-1: Model of theory of Planned Behavior:**




Source: Theory of planned behavior model (Ajzen & Fishbein,1980)

The theory indicates that behavior is forecasted by behavioral intention (Ajxen & Fishbein, 1980). This theory "provides useful conceptual framework for dealing with complexities of human behavior" (Ajxen, 1991, P.206). According to Azan (2012), the stronger the intention, the more likely to the action is.

Another important theory on entrepreneurial intention is Shapero's model of Entrepreneurial Event. Where Azen (1991) emphases individual attitudes toward behavior, subjective norms and the perception of behavioral control, Shapero and sokol (1982) gave focus on the perception of desirability, on the propensity to act and on perception of feasibility. There is a Bandura's Social learning theory on self-efficacy. Bandura's theory has made an

effective conceptual framework on entrepreneurial intention. He added who wants to be an entrepreneur need to be aware of his ability to complete his task related to entrepreneurship (Krueger, Reily & carsrud, 2000; Betz & Hackett, 1981).

Various variable are involved in this studies. Those are as follows - Attitude towards selfemployment are the distinction between perception of personal eagerness in becoming selfemployed and employed in other institution (Akmaliah, 2009). Hence much thinking toward selfemployment indicates that the respondent is too passionate toward self-employment than organizational employment (Kolverid, 1996). Subjective norm basically refers to social norm which have social pressure to show or not to show a desired behavior (Ajzen, 1991) in fact it comes from family, friends and environment.

According to Boughan (2006), community support refers to the thinking of a community regarding an individual to start business venture and to cope up with the community's expectation. Entrepreneurial interest refers to the thinking of respondents whether he likes or not to be an entrepreneur (Wang, wong & Lu, 2002) whereas the term self-efficacy defines the thinking of a respondent about his ability to perform a specific job (Jung.2001).Entrepreneurial education acts as the skill that enable persons or individuals to make new things and shows their innovation, at the same time basically it let them concentrate on gaining efficiency to commercialize a business opportunity (Jomes and English, 2004).

## Methodology

This section provides a description of the nature of educational research and presents the research design and methodology used in this study. Traditionally, researchers use three approaches for educational research, namely quantitative, qualitative and mixed- method designs. This methodology chapter describes the mixed-method design. By using such a design, the researcher can use the strengths of both approaches and effectively use the data obtained by combining the two approaches. This chapter also describes the data collection procedures, the research procedure, and the method of sampling that was used to select the research participants. The chapter also discusses the survey questionnaire and semi-structured interview and focus group discussions (FGD) which was used to collect quantitative and qualitative data respectively.

## Research Design and Data Sources

This research is conducted through mixed method approach. The goal of mixed-method research is not to replace either of these approaches but rather to draw from the strengths and minimize the weakness of both (quantitative and qualitative) in single research studies and across studies. An amalgamation of quantitative and qualitative methodologies is often an excellent choice of method because this approach mixes the rigor and precision of experimental designs and quantitative data with the depth of understanding of qualitative methods and data. Over the past decades, many studies (quantitative, qualitative, and mixed-method) have been undertaken to know the intention to be entrepreneur. Some researchers have tried to measure society views or attitudes by using quantitative methods whereas others tried to

find out required knowledge and skill of entrepreneur by using qualitative methodologies. Moreover, most researchers tried to find out about both student's intention and knowledge & skill within a single, mixed –methodology study. That is why the researcher of this study wants to explore both intention and required knowledge and skill to be entrepreneurs using a Mixed-methodology design.

## Design for quantitative part

Quantitative research, according to Creswell (2008), is defined as investigation process that can be used for exploring the trends and explaining the relationship among different variables. A quantitative research approach depends on quantitative data such as survey questionnaires or focuses on testing a hypothesis confirmation (Johnson & Christensen, 2000; Wiersma & Jurs, 2009). Here, the focus of the quantitative research was determining entrepreneurial intentions of the students at grade 11 & 12.

## Variables-operational definitions

In our research intention to be an entrepreneur is dependent variable and other variable is independent variable. The intention to be entrepreneur will dependent on other independent variable such as risk taking, independent profession, industrious, communication, leadership, problem facing ability, and inspiration ability. The intention to be an entrepreneur means the eagerness to be self-employed. Risk taking ability means the capacity to take probable loss in future. Independent profession means where the professional can work according to his or her wish or self-control is main thing here. Industrious means the ability to do hard work. Communication skill means the ability to make network among people. Leadership means the action of leading a group of people or an organization. Problem facing ability means the problem-solving skill or the ability to handle difficult or unexpected situations in the workplace as well as complex business challenges. Inspirational ability means the capacity to motivate others.

## Population

Population is the entire set of individuals or objects having some common characteristics selected for a research study. A research population are generally a large collection of individuals or objects that is the main focus of a scientific query. This is the reason why researchers rely on sampling techniques. A research population is also known as a well-defined collection of individuals or objects known to have similar characteristics. Our population was the higher secondary students of two renowned government college of Sylhet districts.

## Sample and Sampling

Sample may be defined as representative unit of target population which is to be worked upon by researchers during their study. A sampling technique is the name or other identification of the specific process by which the entities of the sample have been selected.

Sampling is a method that allows researchers to infer information about a population based on results from a subset of the population without having to investigate every individual. In this study the researcher used two common sampling strategies, namely random sampling and purposive sampling. A small number of participants (n=76) was selected for this study from three group (Science, Arts and Business Studies) from two Colleges of Sylhet. The participants were selected on the basis of two criteria: having intention to be entrepreneur and having not intention to be entrepreneur. The researcher went to the Colleges and selected participants with the help of the College teachers. Out of the available students who met the criteria of these two colleges seventy-six (76) participants were selected using random sampling. Although it was intended to balance the male- female ratio, this was not possible as female students were less available than males when the researcher visited the Colleges. The researchers also conducted interview from five entrepreneurs. Moreover, a focus group discussion (FGD) was arranged with eight teachers of one college.

The following table (Table 1) presents the demographic distribution of the participants of this study.

| **Characteristics of the Participants** | **Number of Participants(*n*=76)** |
|---|---|
| Male | 59 |
| Female | 17 |
| Academic background | |
| 1. Science | Male= 31, Female=02 |
| 2. Humanities | Male= 18, Female=07 |
| 3. Business Studies | Male= 10, Female=08 |

## Data collection tools, Instruments

Quantitative data was gathered from the students at grade xi and xii by survey questionnaires on entrepreneurial intentions. Appointment times were scheduled by the researchers by contacting with the principal of the colleges. Before going to the colleges, the researchers received permission to collect data from the National Academy for Educational Management (NAEM), Ministry of Education, Bangladesh. Data collection was organized into some phases.

Firstly, the research team provided information about the purpose of the research to the principals and took informed consent to use their colleges as research setting. Secondly, the researchers organized the student sample in a single classroom. Thirdly, the researchers talked with the student samples and gave them ideas about the research and what should be their role in the research. After that the researchers gave the student sample the information sheets and consent forms. The students gave consent to work as respondents of this research. Fifthly, the student's respondents were asked to fill out the first part of their questionnaire with their demographic information and then mark the specific boxes in the questionnaire according to their preference or choice. The research team was always present to give instructional support to the respondents.

The procedures used to collect data by the questionnaire from the research settings are illustrated below (Figure 1).

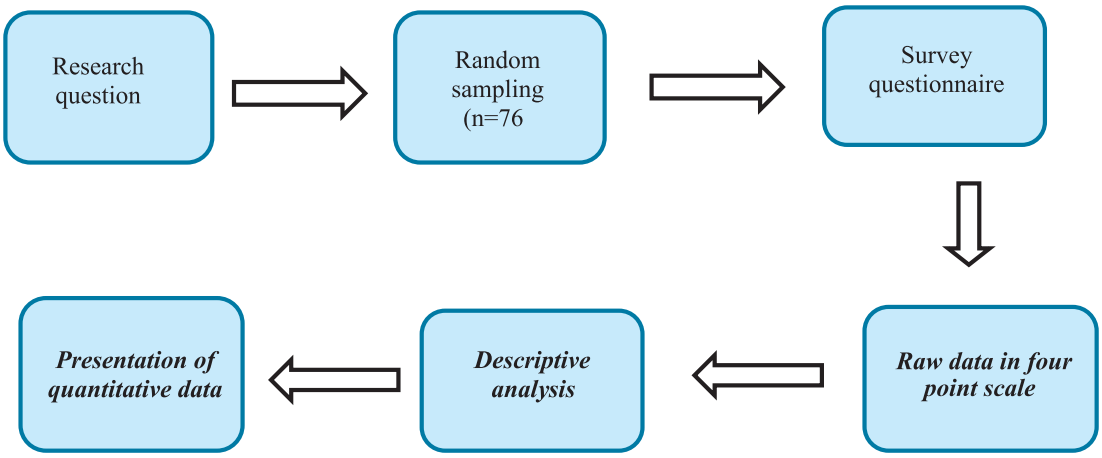



Figure: Quantitative procedure

## Design for qualitative part

Qualitative research is an umbrella term for several research strategies (Bogdan & Biklen, 2007). It refers to collection, analysis and interpretation of comprehensive narrative and visual data in order to gain insights into a particular phenomenon of interest (Springer, 2010). As the purpose of this study is to understand the Entrepreneurial intentions of the students of grade xi and xii, the teachers view on entrepreneurial education and entrepreneurs' practical experiences, the qualitative approach seems to be appropriate as a part of this mixed-methods research.

## Case study

We selected Sylhet district for our case study analysis. From Sylhet district we purposely selected two Government Colleges and some entrepreneur to find answer to the research questions.

## Research participants and selections process

We purposely selected our participants for collecting qualitative data for our research. For Focus Group Discussion (FGD) we purposely selected teacher participants from one of the two colleges because we got sufficient numbers of participants who covered all disciplines. For semi-structured interview we purposely selected the entrepreneur participants from small, medium and large businesses. To select entrepreneurs from different types of business we utilized our professional contacts in Sylhet.

## Data collection methods and tools

We arranged Focus Group Discussion (FGD) and semi-structured interview for collecting qualitative data for our research. We used open ended questions and audio recorder for collecting our qualitative data from the participants.

## Different phases of data collection

The researchers selected the entrepreneur participants purposely for semi-structured interview. The researchers selected four participants (three male and one female) according to their experience, availability, willingness and other factors. The research information sheets were given to the entrepreneurs to get informed consent. Before starting the interview, the entrepreneurs gave written consent to work as participants this research. The researchers interviewed the participants with an interview schedule, which included seven questions relating to their background and necessary steps to be an entrepreneur. Interview sessions ranged from 15-40 minutes. Participants gave their opinion in Bengali because they felt comfortable to express their thoughts and opinions better in their native language. The interviews were recorded by the researchers. In case of focus group discussion (FGD) we captured the teacher's opinion about the present and future possibility of developing entrepreneur and the barriers in the way of development entrepreneur. We observed and recorded their opinion during the FGD.The following figure show the data collection and analysis process of qualitative part:

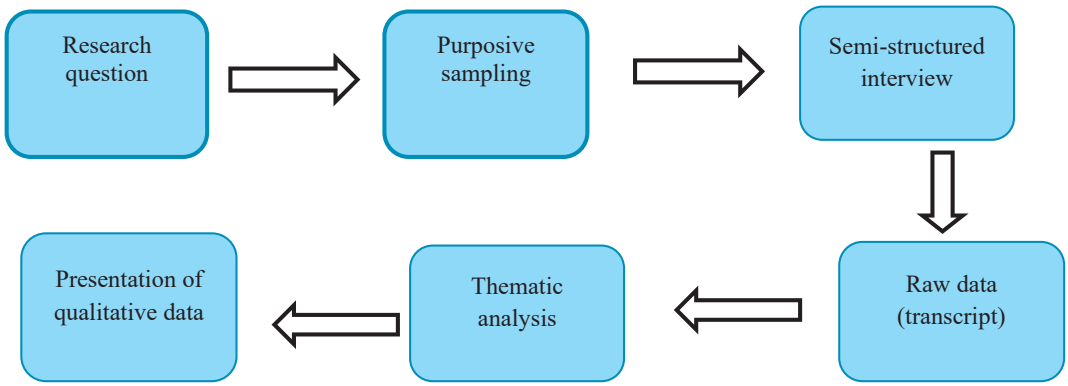



Figure-2: Quantitative

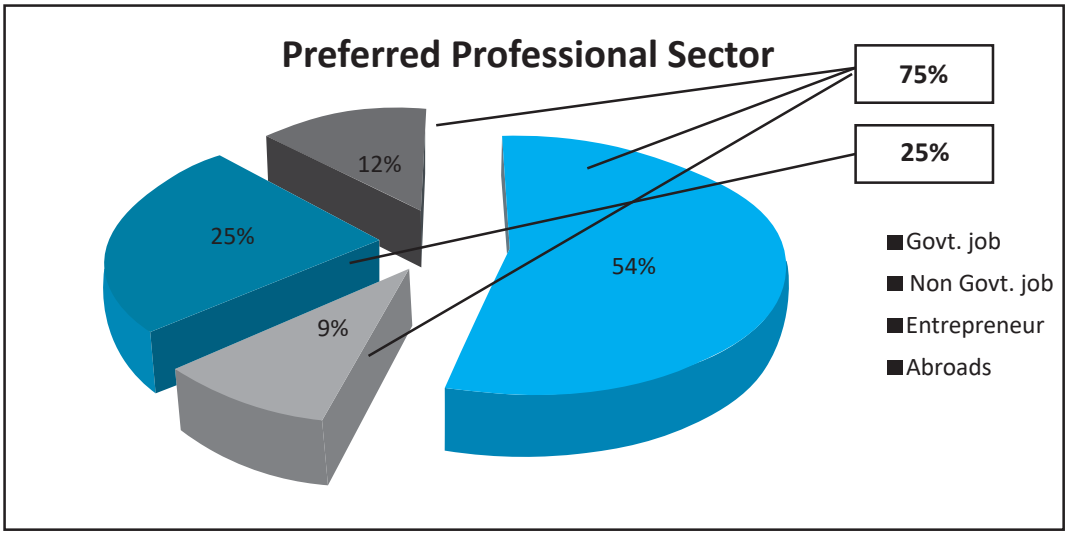
## Data and Discussion Chapter

This section presents the findings of this study. The study findings are presented in three sections. In Section One, students' intentions are presented. In second section the data collected from focus group discussion are analyzed. The FGD data are categorized by different themes. The semi-structured interview data are presented in section three and data are categorized by different themes. Finally, the findings of the quantitative and qualitative part are synthesized.

## Section one: Findings from survey questionnaire

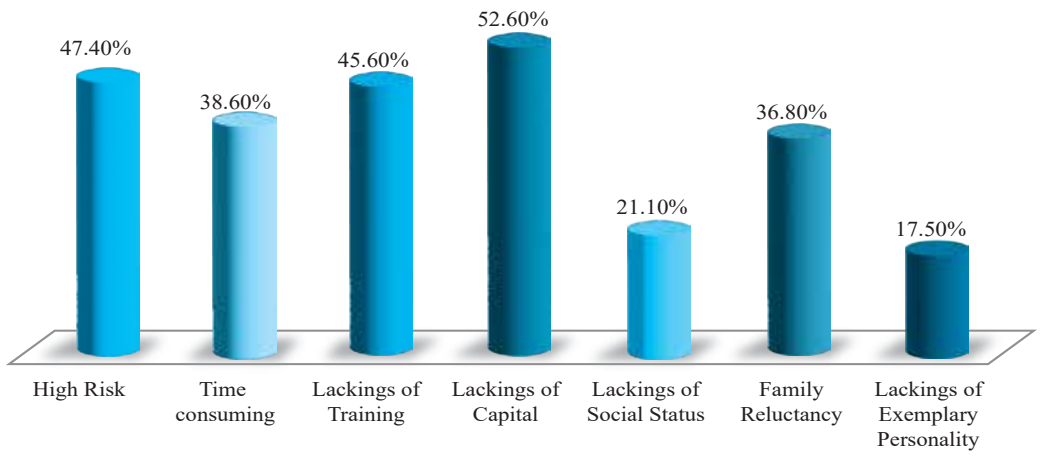
Questionnaire data was coded according to the 4-point scale, with a data range of 14. Questionnaire findings were presented according to item and according to aspect. Item-based information is presented through tables, charts and diagram. The mean score was 28.

**Chart 1**




To find out the entrepreneurial intention, we conducted a survey. 54% student wants to build their career in Govt. Job. 12% wants to be immigrant. Only 9% student has desire to get any Non-Govt. job. Second highest intention is entrepreneur, which is 25%. It is a matter of concern that more than 50 % students have intention to get Government Job, whereas, only ¼th of the total sample students wants to be self employed. Therefore, the students who do not have entrepreneurial intention are 75%.

**Chart 2.1**




The 75% students, who don't want to be entrepreneur, mentioned some causes behind their negative intention. Among the causes the highest ranked cause is Lack of Capital which is approximately 52.60%.

The second biggest cause is High Risk which is 38.60%. The lowest ranked cause is lack of exemplary personality, which is only 17.50 %.

**Chart 2.2**

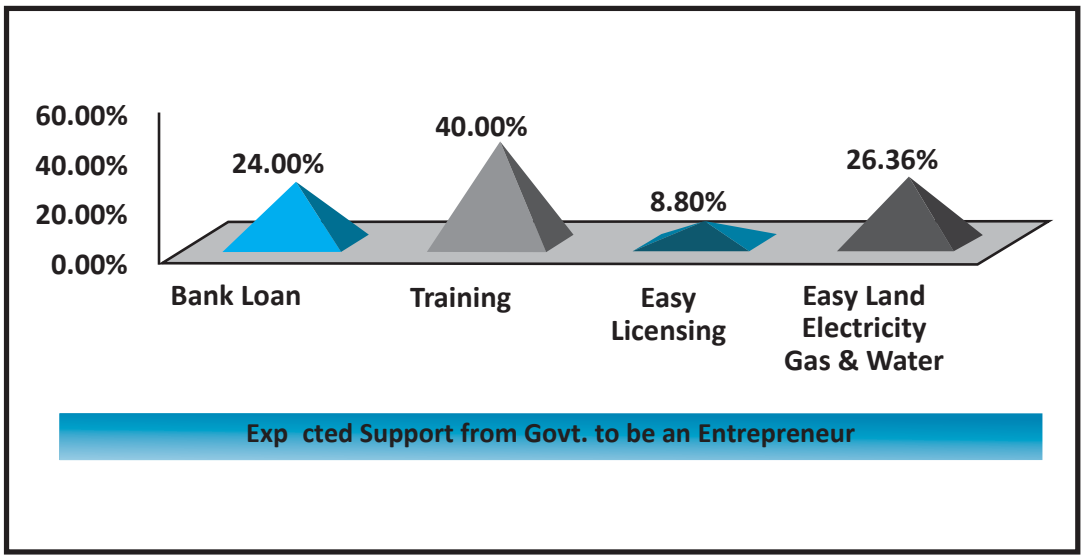


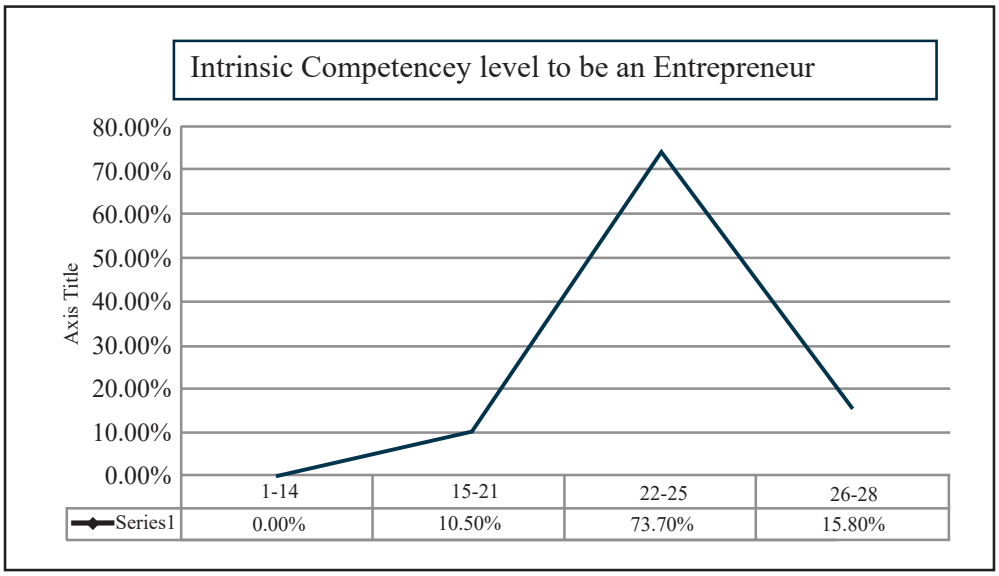
**Table 3.1: Intrinsic Competency to be an Entrepreneur**

| Item | Strongly Disagree | Disagree | Agree | Strongly Agree |
|---|---|---|---|---|
| Risk Taking | 0 | 5.2 | 47.4 | 47.4 |
| Independent Profession | 0 | 0 | 31.6 | 68.4 |
| Hardship | 5.3 | 0 | 42.1 | 52.6 |
| Communication | 0 | 5.3 | 52.6 | 42.1 |
| Leadership | 5.3 | 0 | 26.3 | 68.4 |
| Problem Facing Ability | 0 | 10.5 | 31.6 | 57.9 |
| Inspiration Ability | 0 | 15.8 | 36.8 | 47.4 |

| Score | Competence level | Frequency | Percentage |
|---|---|---|---|
| 7-14 | Low (1) | 0 | 0.00% |
| 15-21 | Moderate (2) | 2 | 10.50% |
| 22-25 | Strong (3) | 14 | 73.70% |
| 26-28 | Highly Strong (4) | 3 | 15.80% |

egarding competency level, there is no low scorer. Strong and highly strong scorer is (73.70+15. 80) %=89.50%. This means, most of the students have the required competency to be an entrepreneur. So, problem is not the competency level to be an entrepreneur, Problem is originating from systemic support mechanism.

**Table 3.2: Descriptive Statistics of required Intrinsic Competency**



| Competency Factors | N | Minimum | Minimum | Mean | Std. Deviation |
|---|---|---|---|---|---|
| Risk Taking capacity | 19 | 2 | 4 | 3.42 | .607 |
| Independent Profession Desire | 19 | 3 | 4 | 3.68 | .478 |
| Eagerness to take hardship | 19 | 1 | 4 | 3.42 | .769 |
| Communication Ability | 19 | 2 | 4 | 3.37 | .597 |
| Leadership Capability | 19 | 1 | 4 | 3.58 | .769 |
| Problem Confronting capability | 19 | 2 | 4 | 3.32 | .749 |
| Motivational Capacity | 19 | 2 | 4 | 3.47 | .697 |

From this table, it is shown that various factors of student's competency have a very strong mean. That means, students competency level to be an entrepreneur is very high

**Table 3.3: T-Test- Intrinsic Competency to be an Entrepreneur based on Gender**

| Group Statistics | | | | | |
|---|---|---|---|---|---|
| | Gender | N | Mean | Std. Deviation | Std. Error Mean |
| Score N | Male | 17 | 3.0000 | .50000 | .12127 |
| | Female | 2 | 3.5000 | .70711 | .50000 |

| Independent Sample Test | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | | |
| | | F | Sig. | t | df | **Sig. (2tailed)** | Mean Difference | Std. Error Difference | 95% Confidence Interval of the Difference | |
| | | | | | | | | | Lower | Upper |
| Score-N | Equal variances assumed | .697 | .415 | 1.300 | 17 | **.211** | -.50000 | .38461 | -1.31145 | .31145 |
| | Equal variances not assumed | | | -.972 | 1.121 | **.495** | -.50000 | .51450 | -5.58570 | 4.58570 |

Through Independent T-Test, as null hypothesis, it is assumed that Intrinsic competency to be an entrepreneur is same in both Male and Female. That means, there is no difference between the intrinsic competency of Male and Female. The observed significance in both cases of equal and unequal variances (0.211 & 0.495) is greater than 0.05. Therefore, we can accept null hypothesis. That means, the intrinsic competency to be an entrepreneur is not varied based on Male & Female. Both Mal and Female has the equal competency to be an entrepreneur.

**Table-3.3: Gender Preferring Career After Study-Cross tabulation**

| | | Preferring Career After Study | | | | Total |
|---|---|---|---|---|---|---|
| | | Govt. Job | Non govt. job | Entrepreneur | Abroad | |
| Gender | Male | 28 | 7 | 17 | 7 | 59 |
| | Female | 13 | 0 | 2 | 2 | 17 |
| **Total** | | **41** | **7** | **19** | **9** | **76** |

**Table 3.4: Correlation between Group (Science, Business & Humanities and Career Preference as Entrepreneur**

| | | Group | Preferring Career After Study |
|---|---|---|---|
| Group | **Pearson Correlation** | 1 | **-.262*** |
| | Sig. (2-tailed) | | .022 |
| | N | 76 | 76 |
| Preferring Career After Study | **Pearson Correlation** | **-.262*** | 1 |
| | Sig. (2-tailed) | .022 | |
| | N | 76 | 76 |
| *. Correlation is significant at the 0.05 level (2-tailed). | | | |

There is general perception that Business background student's entrepreneurial intention is higher than Science and Humanities background student.

To find out the answer, we tried to know, is there any correlation among different group's student entrepreneurial intention. In this test, the null hypothesis is there is no correlation among different group's student entrepreneurial intention. The significance of P value 0.022 is higher than 0.001. Therefore, the null hypothesis is accepted. That means, there is no correlation among different group student's entrepreneurial intention. So, it is not significant to explain the strength of correlation coefficient. As there is no correlation. **So, we can say, Entrepreneurial intention of student is not varied based on Science, Business or Humanities background.**

**We have collected our data by using three types of tools and methods. Through quantitative approach we got the following findings:**

- Among all respondents about 75% are unwilling to be entrepreneur and rest of the 25% has intention.
- 25% respondents who have intention, their competencies level is above 89%.
- Lack of capital is 52.6% liable of not to be an entrepreneur solely along with some others causes like high risk, time consuming, lack of training and so on.
- To create entrepreneurial intentions 63.2% students prioritized industrial attachment than discussion by teachers at class room, success story telling of entrepreneurs and entrepreneur's biography in text book.
- Respondents of FGD opine to change social outlook.
- To enhance entrepreneurial intentions syllabus and curriculum need to be changed and fruitful assessment system need to be initiated. Analysis and interpretation of Qualitative data

## Section two: Findings from Focus Group Discussion

Qualitative data was analyzed using a thematic approach. After getting all the information, we examined FGD records and field notes. As it was a face to face discussion, it was not possible to transcript instantly. Before formal analysis, we translated all interviews from Bengali to English, and read each transcript multiple times in order to check the ideas match between English and Bengali. Formal analysis involved firstly categorizing the data, next coding it on the basis of the categories, and finally identifying themes. The Focus Group Discussion (FGD) was designed to answer the following research question.

- **How can an educational institution boost up entrepreneurial intention to the students?**

Results from FGD are presented in this section by identifying some themes related to entrepreneurial intention and the liability of educational institution. The following is an explanation of the themes and sub-themes predetermined from FGD data:

## Students prefer getting jobs after completing educational life

According to the FGD, different respondents provide different opinion but all are converged in a way that most of the students are passionate to get a job. Teachers' responses in the FGD can be expressed using the following sub themes:

**Preference to profession with higher economic opportunity:** In the FGD the teachers have been asked to respond to the question: what kind of profession can give a student secured earning? Most of the teachers' response on the question was generally the students want to be rich in an easy way or without doing hard work. Teachers also mentioned that generally the students prefer to be a doctor, engineer and BCS cadre officer.

One of the participants Mr. Shuja, assistant professor of chemistry, stated, "From HSC level a student dreams of a profession which has much economic opportunity. Generally, they prefer medical science and engineering, although they have no much awareness about which trade should be chosen in engineering" (FGD, Date: 12-11-2019). Another participants Mr. Joshim Uddin has told that students do not want to face any uncertainty, what they know from their tradition and family, they would like to do so.

**Confining role as housewives:** One of the female respondents Mrs. Rokya Begum, assistant professor of chemistry, talked about two different thinking that our women belong. She mentioned that a small portion of higher educated women think them as part of main stream society. She also stressed that, in our society, to a larger extent female think that after marriage their wellbeing will be taken care off by their husbands and they confined their role as housewives. Another respondent Mrs. Pinki, assistant professor of history reinforced Mrs. Rokya Begum's points.

**Theme 2: Dominance of bookish knowledge is a barrier to be entrepreneur**

In relation to understanding what should be the support from the educational institutions for cultivating the students attitude to be a entrepreneur. The teachers invoked with different responses. Mr. Md Golam, lecturer of Bengali told, "There is nothing to learn about entrepreneurship in existing curriculum."(FGD, Date: 12-11-2019). Some participants opined that basically students of higher secondary did not get practical learning. They stressed that, rather the students are heavily infused by bookish knowledge. Mr. Nurul Amin, an assistant profession in chemistry opined that in sciences our students are forced to acquire theoretical knowledge with very little opportunity to test knowledge in laboratory. He also mentioned that for entrepreneurial intention to grow students must be exposed to more pragmatic innovative and practice-oriented learning activities. Mr. Shofiul Khondoker, a professor of English, emphasized,

"Teachers should teach that job is not only an earning source but also there are different other options to earn". (FGD, Date: 12-11-2019).

**Theme 3: Necessary program for student's inspiration to be an entrepreneur.**

Inducing students toward entrepreneurship, different program is inevitable from educational institution. In this study the participants acknowledged the importance of implementing inspirational program for students. Mr. Md Rakib Uddin, assistant professor, stated,

"Government, education institution and social institution need to work together to on different entrepreneurship program so that students can get inspired" (FGD, Date: 12-11-2019).

## Developing teachers' agency

In Higher Secondary level, students have a reactive mind. During the focus group discussion one of the respondents Mr. Shusil Kumar, associate professor of economics said "firstly teachers should ask themselves how they understand entrepreneurship and what could be their possible role to inspire students. After that we teachers can start thinking how we can inspire the students about the possibility of entrepreneurship" (FGD, Date: 12-11-2019).

## Co-ordinated support system

In this study some of the teachers raised voice about the necessity of co-ordinated support system. What Mr. Md Rakib Uddin, assistant professor, Mr. Mr. Nurul Amin, an assistant profession in chemistry and Mrs. Pinki, assistant professor of history were stressed in the FGD are summarized as follows:

> We are working in field level and some time we can recommend something that could be useful for the student's career. It should be addressed. For example, developing curriculum according to the changing need of Bangladesh and the world. And if we send any students anywhere, he or she should get access. It may be in case of getting utility service for establishing entrepreneurial actions (FGD, Date: 12-11-2019).

## Family and Institutional Motivations

In the FGD, the teachers mentioned that sometimes motivational speech based on career, arranging seminar on career and trying to involve student's act as inspiration.

Mr. Kobir Uddin, assistant professor of chemistry, told "self-employed person is not less important by any means than a service holder, such image should be upheld". This kind of expression can motivate students to be an entrepreneur.

But Mr. Rakub, assistant professor, Math explained, "Motivation will not work because students ultimately accept or choose their profession or career what they learn from family."(FGD, Date: 12-11-2019).

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**Theme 4: Governmental initiative.**

Teachers also mentioned about various government initiatives that should be ensured and implemented. It is expected that government has a major role to play so that students can get confidence to take entrepreneurship as a goal of their life.

## Relevant curriculum assessment system for entrepreneurship

With regard to present curriculum, one of the participants Ali Majid, assistant professor, explained, "Present curriculum is not providing knowledge and competences required for 21st century's world not fully meeting the demand of job sectors".

Participants were adding different opinion regarding this issue. Among them one of the respondents Mr Babul, associate professor, said, "We need curriculum which is responsive to the changing world, needs of life. We need vocational based curriculum and effective assessment system which are relevant to entrepreneurship" (FGD, Date:12/11/2019).

One of the participants, Mr Johir, associate professor of chemistry, stated, "A subject on entrepreneurship should be included in HSC level for science, arts and humanities, and business studies group and its assigned marks might be 200" (FGD, Date:12/11/2019).

## Social awareness for self-esteem

There was a debate among the respondents that government need to take initiative to enhance a awareness that becoming a job holder is not a credit for a student. In the debate it is argue that if he or she starts a new business and by this he or she can create self-employment opportunities for others. One participant concluded that this brings much more esteem in mind than seeking a job.

## Financial support

In the focus group discussion, all participants were very positive and given similar opinion about governmental and non-governmental financial support. In this case, one participant, Mr. Susil

Roy, associate professor, stated, "For entrepreneurship financial support system must be in place and it must be financially benefitted" (FGD, Date:12/11/2019).

Another respondent, Md. Rofik, associate professor, added, "Government is giving scholarship, but students having passion with entrepreneurship need to be patronized" (FGD, Date:12/11/2019).

## Students' unwillingness to be an entrepreneur

The study has identified different reasons behind student's reluctance for not wanting to be an entrepreneur. One of the participants, Mr. Sushil Kumar, associate professor of economics explained, "There is a lack of social value for self-employment. People of Bangladesh indeed are flourishing under the shadow of a feudal social system. Our students are part of it. Change in political culture and wisdom can play a vital role for social evolution towards entrepreneurial intentions. For changing political well education related institutions and personality can play an important role" (FGD, Date:12/11/2019).

Another two participants, Mr. Riaj Morshed, assistant professor, and Mr. Susil Roy, associate professor, drew attention and argued, "Financial weakness, lack of governmental patronization and lack of social status are the main reasons for the part of the students not to desire to be an entrepreneur" (FGD, date:12/11/2019)

## Section two: Findings from the semi-structured interviews

Data from semi-structured interview was also analyzed using thematic approach. We used recorder for recording the interviews. After returning from field, we have listened to the records several times for grasping the real meaning. We translated all interview scripts from Bangali to English and read several times to ensure that the meaning has been clearly portrayed. We did the analysis by following several steps such as: categorizing the data, coding the data for different category and determining themes. The semi-structured interview was designed to answer the following research questions.

- **What are the necessary entrepreneurial attributes and existing pitfall to be an entrepreneur from entrepreneur's point of view?**
- **How can an educational institution boost up entrepreneurial intention to the students?**

### Theme 1: Entrepreneurial qualities

According to the interview data, successful entrepreneurs told different features to be an entrepreneur that has been discussed below.

One of the respondents, Mr. Majed, A House Building entrepreneur, stated, "Hard work and time consciousness are the precondition to be an entrepreneur." He also added, "he is disappointed observing unskilled features workers" (Semi-structured Interview, Date:12/11/2019).

Another respondent, Mr Kasnson said, "An entrepreneur will have commitment, prioritize others interest and ethics". Mr Aftab Uddin, fisheries-based entrepreneur, stated, "For being entrepreneur a student has to be strongly determined, he or she need to set up mind and should work by their heart" (Semi-structured Interview, Date:12/11/2019)

## Social Benefits to be an entrepreneur

In the semi-structured interview, most of the participants talked about the benefits of entrepreneurship. One of the respondents, Mr Kanson, business sector, stated, "The main positive side of an entrepreneur is that he or she can do his or her job by herself or himself. Society, nation can get the greater benefit and thus socio-economic condition of a country could be developed" (Semi-structured Interview, Date12/11/2019).

**Theme 2: Role and initiatives of educational institutions**

All of the entrepreneurs, we interviewed, gave similar opinion in considering educational institutions role as catalyst to boost up entrepreneurial thinking in students mind. They recognized that in Bangladesh from the childhood family try to impose (in most of cases) or motivate (in few cases) children to accept familial preference for profession or job.

One of the participants, Mr Atikur Rahman, Chairman of a agro-based manufacturing company, asserted, "Students should be nurtured based on their fascinating area and that should be ensured by educational institutions."

Similarly, Mr Lotifur Rahman, mention his business name, stated, "before entering into the university, a student needs to be assigned subjects for study according to his or her passion and expertise."

Mr. Majed, mention his business area, shared his experience about Dubai based educational institution and mentioned the necessity that this could be adapted in Bangladesh. He stated:

> My son was a student of 2nd year. Before going to vacation, university authority told them to join in a part time job and gave an experience certificate after vacation. I want to see such type of direction from government and educational institutions. During study students can be given opportunity to be acquainted with real field (Semi-structured Interview, Date:14-11-2019).

**Another respondent Mr. Kanson said:**

> A student must learn commitment, prioritizing others interest and ethics from educational institution. Teachers can help student to choose subjects or discipline for study according to their ability or intention. A teacher can help student to understand the positive side of entrepreneurship. They can encourage the students that achieving the ability to create job for people is better than searching job. (Semi-structured Interview, Date: 14-11-2019).

**Mr. Aftab Uddin, mention his business area, talked about role of educational institutions to inspire students towards entrepreneurship. He stated:**

> Teachers can motivate in class, arrange seminars, can inspire by saying that business can sustain for generations to come, but job is only for once. School can bring real entrepreneur in front of the students to share experience and give guideline. (Semistructured Interview, Date: 14-11-2019).

**Theme 3: Governmental responsibilities and curriculum change.**

During interview different entrepreneur talked about the diversified responsibilities of government and non-governmental institution. One of the respondents, Mr. Atikur Rahman who is the Chairman of an agro-based manufacturing company stated, "Practical know-how must be in HSC curriculum".

Mr. Lotifur Rahman had shared his experience and said:

> Government has to find out gap in different sectors where suitable manpower is not growing. After identifying the gaps suitable subjects should be included in curriculum. More important is that business curriculum need to be revised as per the need of changing world."

Another respondent Mr. Majed, a real estate businessman, suggested that government has to enhance social support. Mr. Kanson, an agro machinery manufacturer, emphasized that the amalgamation of general and madrasha education curriculum is the present demand and vocational subject has to be introduced in both stream of education.

## Sub-theme 1: Obstacles to be entrepreneur

Mr. Majed, a real estate businessman, told that there are huge obstacles before entrepreneurs. He gave an example and said that it is time consuming in taking legal permission for opening a new business. He affirmed that in Bangladesh it takes several months for getting a trade license where as in Dubai it takes only an hour.

In the interviews all the participants raised their concern about extortion and mall practice in business. One of the respondents Mr, Kanson, an agro machinery manufacturer, mentioned that lack of security, giving money to meet illegal demand before starting business and extortion are the reasons acting as barriers for entrepreneurship.

**Theme 4: Other institutions responsibilities**

Ensuring the enhancement of entrepreneurial intentions some respondents has shaded light to the responsibilities of Bank, NGO's. Mr. Atikur Rahman, a hotel owner, added, "Government, Bank and NGO will not only give money to promote entrepreneurship but give training and guidance to the new entrepreneurs."

Mr. Lotifur Rahman, a hotel owner as well also added that bank and other institutions have to take responsibility of specific sectors and try to make the students skilled by establishing business training and promotion institutions.

One of the respondents, Mr. Aftab Uddin, fisheries entrepreneur, stated that bank should provide loan with less interest rate and electricity department should provide incessant electricity.

## Implications for policy & practice

The findings of this research will ignite the policy making figure to take necessary steps to enhance intention to be an entrepreneur at higher secondary level to push such thinking that considering facts of reducing unemployment.

## Recommendations

- To lessen negative Socio-Cultural perception
- Awareness Development Program for Parents and students to set career goals or Aim in life
- Providing Young Emerging Entrepreneur Card-Within 30 years & 30 years above
- Seminar, Workshop with New Emerging Entrepreneurs and recognizing their achievement through organizing Celebration Program of successful entrepreneurial activities in Educational Institution
- Ensuring social status for entrepreneur.
- Government should develop teacher's agency (Empowerment).
- To instigate entrepreneurship through Curriculum
- in Science & Humanities of SSC & HSC level-Incorporating
- Entrepreneurship Development Module with Practical
- In Business Studies of SSC & HSC Vocational Curriculum could be SSC & HSC General Curriculum with latest business concept
- Adding Mathematics Subject in HSC Business Studies & Humanities
- Emphasizing on Applied & Practical Knowledge of every subject through assessment system in all groups
- Educational institutions should take initiatives to build risk taking mentality and increase self-confidence.
- Government will find out gap in different sectors and ensure module in text.
- Motivational initiatives and arranging seminars are necessary by educational institutions.
- Bank & Financial NGO will provide regular Training services along with loan services.

- Long Term planning to develop Teachers Agency to create entrepreneur.
- Visualize and Branding of Successful Women Entrepreneurs Program through MOWCA to lessen negative Social Cultural Capital
- Creating a Special Momentum to the youth for entrepreneurship with the coordinated programs from MOYS, a2i, MOEDU and Cabinet Division.

## Conclusion

The study concludes that higher secondary students are interested in becoming self-employed but most of them don't have enough confidence to be an entrepreneur considering the socioeconomic factors and institutional and infrastructural supports. The students have a high perception regarding the attitudes towards self-employment, but they still have low intention on entrepreneurial self-efficacy and interest. This may indicate that higher secondary students prefer other career since they perceived entrepreneurship is not stable profession. This is because the implementation of entrepreneurship education in reality is not enough to make entrepreneurship as a favorite profession among students. It is proved by the data which indicate about 75% of the students surveyed do not have positive entrepreneurial aspirations. This study also concludes that training, bank loan and utility service have a profound influence towards entrepreneurship as a career choice. This means that the more favorable the training and bank loan the stronger the students' intention to become self-employed. Finally, societal positive outlook to young entrepreneurs will increase stronger intention to be self-employed.

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## References

Ajzen, I (1991) The Theory of Planned Behavior. Organizational Behavior and Decision Procesess, Vol. 50, p. 179-211

Ajzen, I & Fishbein, M (1980) Implementing Attitudes and Predicting Social Behavior. Prentice Hall: Englewoods Cliffs.

Ajzen, I. (2012) „Theory of Planned Behaviour", in Van Lange, et al (Eds.), Handbook of Theories of Social Psychology: Volume One, Sage Publications, London, pp. 438-459.

Ajzen, I. Theory of planned behaviour. Organ. Behav. Hum. Dec. Process. 1991, 50, 179–211. [CrossRef]

Akmaliah, L. P. Z., & Hisyamuddin, H. (2009). Choice of self-employment intentions among secondary school students. *Journal of International Social Research*, *2*(9).

Barnard, J. M. (2012). *An assessment of entrepreneurial intentions of secondary school learners in selected areas* (Doctoral dissertation, North-West University). BBS Report-2017 retrieved from https://www.macrotrends.net/

Betz, N. E., & Hackett, G. (1981). The relationship of career-related self-efficacy expectations to perceived career options in college women and men. Journal of Counseling Psychology, 28, 399-410.

Beeka, B.H. & Rimmington, M. 2011. Entrepreneurship as a career option for African youths. *Journal of Developmental Entrepreneurship*, 16(1):145-164

Drennan, J., Kennedy, J., & Renfrow, P. 2005. Impact of childhood experiences on the development of entrepreneurial intentions. *Entrepreneurship and Innovation* (November): 231-238

Jung L. D., Ehrlich S.B., and Noble A.E.D. and Baih R.B. (2001), "Entrepreneurial Self-Efficacy and Its Relationship to Entrepreneurial Division: A Comparative Study between the U.S and Korean", Management International, Vol. 6, No. 1, pp.41-53

Jones, C. and J. English, (2004) „A contemporary approach to entrepreneurship education", Education+ Training, Vol. 6 No. 8/9, pp. 416 - 423.

Krueger, N.F., Reilly, M.D, and Carsud, A.L. (2000), "Competing Models of Entrepreneurial Intention", Journal of Business Venturing, Vol. 15, pp.411-432

Neazy, S. (2019, December 28). Rise of the educated unemployed. *Dhaka Trubune.* Retrieved from https://www.dhakatribune.com/

Souitaris, V; Zerbinati, S; Al-Lahman, A,"Do entrepreneurship programmes raise entrepreneurial intention of science and engineering students? The effect of learning, inspiration and resources", Journal of Business Venturing, Volume 22, pp. 566-591, 2007.

Shapero, A.; Sokol, L. The social dimension of entrepreneurship. In The Encyclopedia of Entrepreneurship; Kent, C.A., Sexton, D.L., Vesper, K.H., Eds.; Prentice-Hall: Englewood Cliffs, NJ, USA, 1982.

Shapero, A. and Sokol, L. 1982. Social dimensions of entrepreneurship. DalamThe Encyclopedia of Entrepreneurship. (72-90) Prentice Hall, Englewood Cliffs.

Sexton, D. L. & Karsede, J. D. (1991) The state of the art of entrepreneurship. Boston, M.A: Kent Publishing.

Wang, C., Wong, P., and Lu, Q. (2002), "Tertiary Education and Entrepreneurial Intentions", (in P.Phan-(Ed.), Technological Entrepreneurship, ( pp.55-82 Greenwich) CT: Information Age Publishing

World Bank Report-2019 retrieved from https://www.ceicdata.com/

Wilson, F., Kickul, J. & Maulins, D (2007) Gender, entrepreneurial self-efficacy and entrepreneurial career intentions. Implications for entrepreneurship education.

Implication for entrepreneurship education. Entrepreneurship Theory and Practice 31(3), 387-40

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# Extent of Bullying at Secondary-Level Educational Institutions in Bangladesh

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## Abstract

*Bullying at schools is considered the most contemptible anti-social behavior for students. In recent days, after COVID-19, the prevalence of this offense has been observed as very common among students at the secondary level. The present study aims to investigate the prevalence of bullying experienced by Bangladeshi school students and understand the relative consequences. The study follows a mixed research approach and collected both primary and secondary data. Some pseudo-case studies, semi-structured interviews, KIIs, and surveys were conducted. Implementing the Social Cognitive Theory (1986), Social Order Theory (1912), and Iacovou et al Model (1995) as the theoretical lens and bullying literature as a supportive theoretical background, a preliminary research model was formed. Utilizing a semi-structured interview schedule, the pseudo case study was conducted purposively as well as conveniently selected eight bullying victim students at secondary-level schools in Bangladesh. Based on the content analysis of case findings and KIIs, a structured questionnaire was formed for the survey. The survey was carried out on 320 students reading in classes nine and ten of secondary schools located in eight administrative divisions of Bangladesh. Using a stratified sampling technique, two schools were selected from each of the eight divisions, from which 20 students were chosen. Convenience and snowball sampling techniques were used to identify the sample respondents. Afterward, the survey data were analyzed using SPSS 20.0, and SmartPLS 3.3.3 software packages. The study reveals that about 67% of secondary school students were the victims of bullying over the last year. 'Verbal Bullying' dominates bullying functions calling with mean names such as "Mofiz, Motu, Bolda" and teasing with words in verbal bullying. Cyber Bullying stands as the second and Physical Bullying such as pushing or shoving stands as the third. Psychological Bullying and Sexual Harassment also were seen to some extent. Boys from public schools and living in urban areas had significantly higher bullying victimization experiences. The bullies' jealousy, the bullies' revenge-seeking, the bullies' aggressive attitude, the bullies' power exercise, and the victim's deviance*

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*acted as the causing factors of bullying. The aftermath of the Bullying was seen in the health hazards and the weak academic performance of the victims. The findings of this study would be helpful for the policymakers and other stakeholders to reform anti-bullying policies.*

***Keywords:*** *Bullying, Causes of Bullying, Consequences of Bullying, Health hazards, Academic performance.*

## 1.0 Introduction

Bullying has emerged as a significant concern in educational institutions throughout the world. Bullying is a word bearing the negative psychological situation of the human mind which expresses the irritating behavior done by someone with someone. Like many other stages of human life, in academic institutions, it has emerged as a serious issue that can have long-lasting effects on students. Bullying can be of many forms such as physical, verbal, sexual, and emotional abuse that can occur in a variety of settings, including the classrooms, the playgrounds and online. Some of the common types of bullying that occur in academic institutions include verbal bullying, physical bullying, emotional bullying, sexual and cyber bullying. Verbal bullying involves the use of words to intimidate, belittle, or insult another person. Examples include mean name-calling, teasing, and spreading rumors. Physical bullying involves using physical force to harm or intimidate another person. Examples include hitting, kicking and pushing. Emotional bullying encompasses manipulating or controlling another person's emotions to intimidate or control them. Examples include exclusion, social isolation, and blackmail. Sexual bullying means sexual harassment to the victim. Cyber bullying comprises bullying using digital technology, such as social media or texting, to harass or intimidate another person. There remain several factors that influence bullying. Lack of morality, lack of empathy, uneven power distribution, peer influence, and poor childhood development are significant among them. Bullying can have a wide range of negative effects on those who experience it. Victims of bullying may suffer from depression, anxiety, low self-esteem, and other mental health problems (Leymann, 1990)**.** They may also experience physical health hazards, such as headaches and stomachaches and may struggle academically. There remain lots of studies observed regarding the prevalence and bullying, causes, and consequences of Bullying at primary, secondary, and higher educational institutions around the globe. However, there remains a scarcity of research in quest of identifying bullying, the causes and effects of bullying among students exclusively secondary level education in Bangladesh. This study intended to fill the vacuum of literature.

### 1.1 Objectives of the study

The general objective of this study is to investigate the prevalence of bullying occurring at secondary-level academic institutions in Bangladesh. The specific objectives can be outlined as:

a. To identify the prevalence of bullying at secondary-level educational institutions in Bangladesh;
b. To find the causes for which bullying occurs among young learners at secondary-level educational institutions in Bangladesh;
c. To analyze the impacts of bullying on students of secondary-level educational institutions in Bangladesh

## 2.0 Literature Review

### 2.1 School Bullying in Bangladesh

Mahmood and Islam (2017) and Ahmed et al. (2021) portrayed school bullying in Bangladesh. Among primary and high school students, nearly half of the school students (44.4%) have experienced bullying victimization (Ahmed et al. 2021). This rate was 35%, three years ago, reported by UNICEF (bdnews24.com, 2018). These statistics inform the increasing bullying scenario in Bangladeshi schools.

### 2.2 Causes of School Bullying in Bangladesh

Several studies identified several reasons for bullying. Mahmood (2016) found that rumor is the common forms of bullying in the case of females and physical assault was of a male. Mahmood & Islam (2017) **identified that a**ttention-seeking is the major cause of bullying in this study. **Also, this study found that macho male boys bully others.**

### 2.3 Consequences of School Bullying on Students

Many studies mentioned various aftermath of bullying. Al-Raqqad et al., (2017; Boulton & Underwood (992) and Oliveira et al., (2018).showed that victims are often unhappy and have fewer friends. Kumpulainen et al., (2001) identified that victims are more prone to develop psychiatric disorders, such as anxiety, and depression, and isolate themselves from others. Mahmood (2016) found that health hazards among bullied students. Mahmood & Islam (2017) found that bullied suffer from hopelessness, anger, anxiety, depression and even thinking of suicide. Weak academic performance among bullied students is another result of bullying. Ahmed et al. (2021) identified that health hazards and poor academic performance are two significant negative consequences of Bullying among school students in Bangladesh.

### 3.0 Conceptual Framework of the Study

To achieve the objectives of the study, this research has adopted two theories and one model. Albert Bandura's Social Cognitive Theory (1986), David Émile Durkheim's Social Order Theory (1912) and Iacovou et al. Model (1995) has been chosen as a relevant underpinning theory and model for the study. Based on the literature review and theories as well as the model, this study attempted to form a primary research model that is the following:

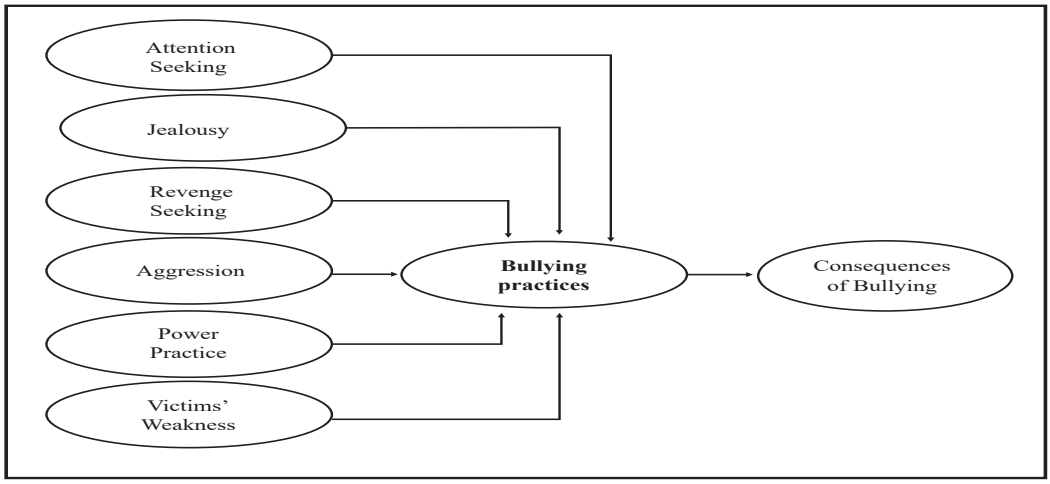


**Figure 1:** Primary Research Model

## 4.0 Research Methodology

### 4.1 Mixed Methodology adopted in the Study

The sequential mixed research method as per Creswell (2009), the combination of both qualitative and quantitative nature, was employed as the research method of the study.

### 4.2 Sample and Sampling plan

Using strata sampling, from eight administrative divisions of Bangladesh total 16 secondary schools were selected. Sampling has been formed as per the following schedule:

Table 1: Sample Determination

| Types of Respondents | Number of Respondents (16 secondary level schools) |
|---|---|
| Students (20x16) (Case and survey) | 320 |
| Teachers (4x16) (FGD) | 64 |
| Chief of institution (KII) | 16 |
| Parents (5x16) (FGD) | 80 |
| **Total =** | **480** |

Source: Created by the researchers

### 4.3 Sources of Data and Procedure of Data Collection

Both primary and secondary data have been gathered for analysis. The respondents were both of the students and teachers at secondary level schools. The secondary source of secondary information were the related Books, journal articles, published and unpublished documents, government publications, textbooks, curriculum reports. The primary data collection procedures in case study and survey have been presented below:

### 4.3.1 The Procedure of Data Collection for Interviews

Eight bullied students reading at class nine or ten in secondary schools located in eight administrative divisions of Bangladesh were chosen for pseudo case studies. Face to face conversation was held between the researcher and respondents.

### 4.3.2 Procedure of Data Collection for Survey

The survey questionnaires were distributed to 441 students by researcher and through researcher friends and active research assistants. Among them 320 responses were deemed to be valid for analysis of the study.

### 4.4. Research Tools used in the Study

This study applied pseudo case study, semi structured interviews, KIIs and survey method in collecting data from the students, teachers, head teachers and parents of selected schools. For accomplishing this study, various research tools have been administered.

1. Semi Structured Questionnaires for Student (Pseudo Case with Victim student)
2. Semi Structured Questionnaires for Teachers as KII.
3. Semi Structured Questionnaires for Head masters' as KII.
4. Semi Structured Questionnaires for Parents KII
5. A structured questionnaire for survey among students.

### 4.5 Data Analysis

The qualitative data that were collected using interview were analyzed using content analysis. Then for hypothesis testing survey data have been analyzed using Structural Equation Modelling (SEM) with the use of second-generation statistical software Smart PLS 3.3.3.

## Qualitative Data Analysis

### 5.1 Presentation of Pseudo Case study and KIIs' Qualitative Data

The received data represent the responses of participants in the context of bullying occurrence (Table 2). When it was identified the respondents was bullied, then few another questions were asked about in-depth bullying practice. The responses were as follows:

Table 2: Extent of Bullying in Case Students

| S.N | Questions | Respondents | | | | | |
|---|---|---|---|---|---|---|---|
| | | 01 | 02 | 03 | 04 | 05 | 06 |
| 01 | Called mean names | √ | √ | √ | √ | √ | √ |
| 02 | Was teased | √ | √ | √ | √ | √ | √ |
| 04 | Made fun me | √ | √ | √ | √ | √ | √ |
| 05 | Spread rumors about me | √ | √ | √ | √ | √ | √ |
| 07 | My Objects damaged | √ | √ | √ | X | √ | X |
| 08 | Peers curse me | X | √ | √ | √ | √ | X |

Source: Case Study 2023-2024

After scrutinizing and attaching constructs and items those were of analogous in nature, the final outcomes were acquired which are exhibited in Table 3.

Table 3: Case Students Opinion Analysis in form of Constructs

| Constructs | Variables /Items | Respondents (Case Students) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Attention Seeking | Want to be a macho man among peers | √ | √ | X | X | X | √ | √ | √ |
| | Want to draw attention of girls/boys | √ | √ | X | X | X | √ | √ | √ |
| | Want to be prestigious to younger | √ | X | X | X | X | √ | √ | √ |
| Jealousy | Not tolerating others success | √ | X | X | X | X | √ | √ | √ |
| | Like to Ignore other students | √ | √ | X | X | X | √ | √ | √ |
| | Like to spread rumor about others | √ | √ | X | X | X | √ | √ | √ |
| Revenge Seeking | Fight back after being bullied | √ | √ | X | X | X | √ | √ | √ |
| | Take revenge if one tease me | √ | √ | X | X | X | √ | X | √ |
| | Take revenge if one tease youngers | √ | √ | √ | √ | √ | √ | X | √ |
| Aggression | Always Fight for right in school | √ | X | X | X | X | X | √ | X |
| | Aggression brings easier solution | √ | √ | X | X | X | X | √ | X |
| | I enjoy others to make afraid | √ | √ | X | X | X | X | √ | √ |
| Power Practice | Like to rule others in school | √ | √ | X | X | X | X | X | √ |
| | Enjoy snatching others money | √ | X | X | X | X | X | X | √ |
| | Encourage others to bullying | √ | X | X | X | X | X | √ | X |
| | Pleasure to tease Juniors or girls | √ | √ | X | X | X | X | √ | X |
| Victims Weakness | Like to disturb physically weak students | √ | √ | X | X | X | X | √ | √ |
| | Like to disturb poor students | √ | √ | X | X | X | √ | X | √ |
| | Not like another student of race / disable | √ | X | x | x | √ | √ | X | √ |
| Bullying Practice | Being Irritated through words and shout | X | X | √ | √ | √ | √ | √ | √ |
| | Physically assaulted by someone | X | √ | √ | √ | X | X | √ | √ |
| | Ignored by group of students | √ | √ | √ | √ | √ | √ | √ | √ |
| | Sexually harassed by bullies | X | X | X | √ | √ | X | √ | √ |
| | Irritated using online platform | √ | √ | √ | √ | √ | √ | √ | X |
| Health Hazards | Feel headache after being irritated | X | √ | √ | X | √ | √ | √ | √ |
| | Feel feverish after being bullied | X | X | √ | √ | √ | √ | √ | √ |
| | Caught cold after being bullied | X | √ | √ | X | √ | √ | √ | √ |
| | Thought for suicide after being bullied | X | X | √ | √ | √ | X | √ | √ |
| Academic Performance | Have no interest to go to class | √ | √ | √ | √ | √ | √ | √ | √ |
| | GPA is in downward trend after being irritated by someone at somewhere | X | √ | √ | √ | √ | X | √ | √ |

Source: Compiled by the Researcher based on literatures and case study

### 5.2 Extent of Bullying along with its Causes

The information got from the interviews taken with students (pseudo case), teachers, Head Teacher and parents (KIIs), depict five major themes of Bullying which are called as the forms of bullying practiced at secondary schools of Bangladesh. In the interviews both bullies and bullied, bystanders, their teachers and parents were existed.

Their opinion states about the 'picture of bullying', location of bullying, number of students involved in bullying. Figure 2 shows these pictures.

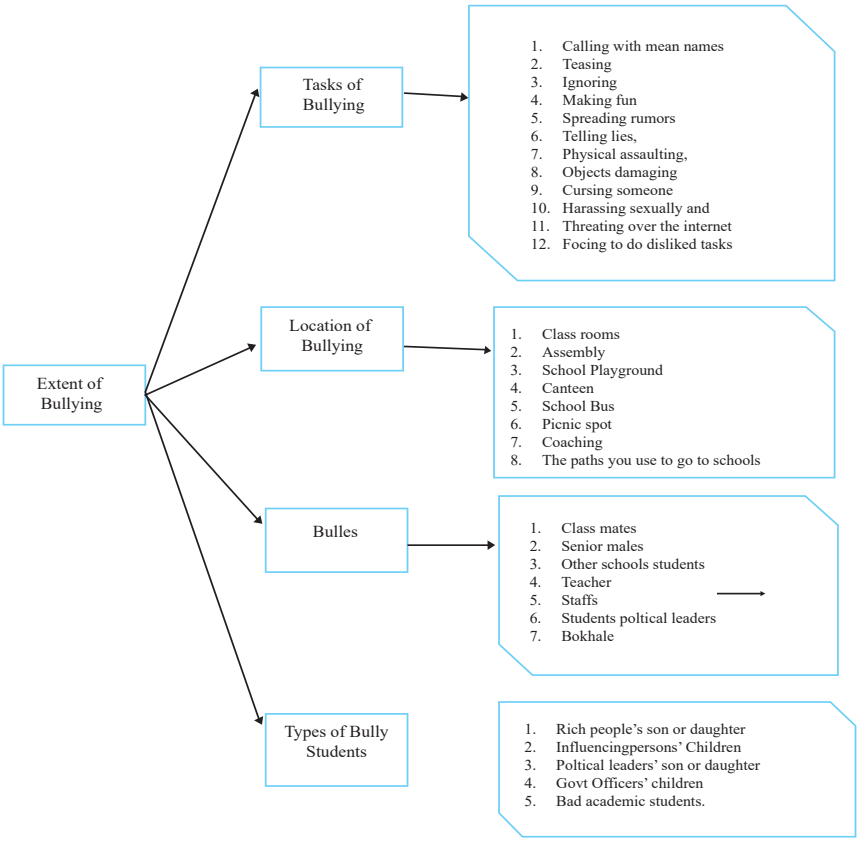


**Figure 2: Extent of Bullying**

Source: Compiled by the Researcher based on case study

### 5.3 Formation of the Final Research Model

At the final stage, the ultimate decisive research model was constructed adjoining the constructs originated in qualitative studies. The formation of the decisive research model was indeed the depuration or purge of the primary model after occurrence of case study. In this utmost model, nine number of constructs having 30 numbers of items were considered.

The accepted links among those constructs have been are presented below in Figure 3.

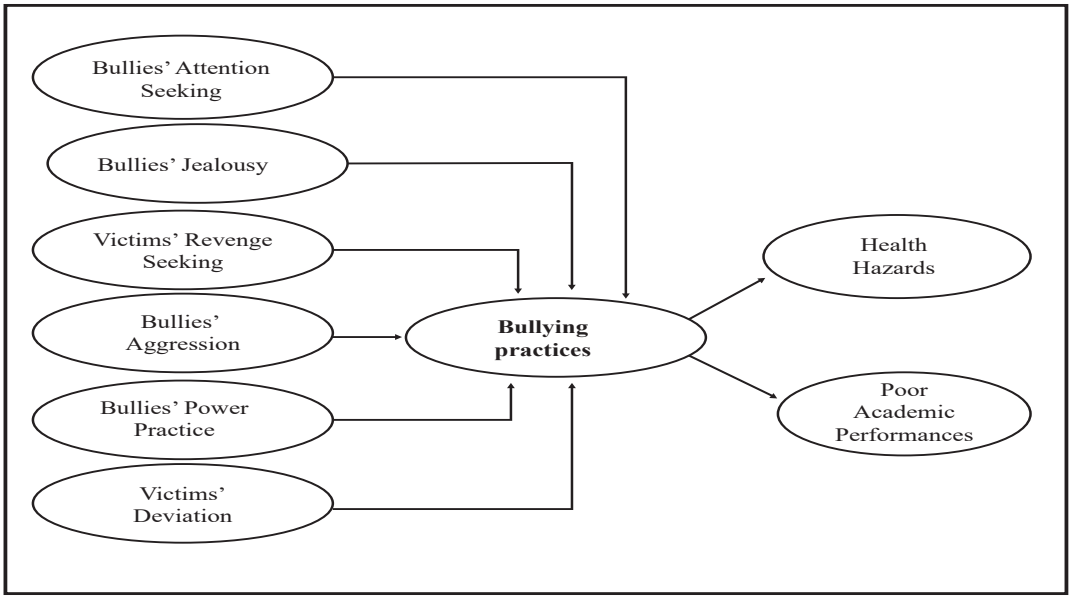


Figure 3: Bullying's Cause-Effect Model (Final Research Model)

### 5.4 Formulation of Hypotheses

Concentrating the conclusive research model exhibited in Figure 3, the hypotheses were formulated. Here, the relationships were verified with the findings of prevailed literature with high confirmation. From the research model, it is observed that, there remains two type of relationship among the constructs: direct relationship and indirect relationship. The direct relationships, implying the relationships between the causes of bullying and bullying practices which is further progressed to the bullying consequences (viz., health hazards, and poor academic performances) formulates some direct hypotheses. Moreover, the observed relationships between the bullying causes and bullying consequences mediated through the bullying practice explaining some sort of indirect relationships which are by turn, formulate a number of indirect hypotheses.

## 6.0 Survey Conducting and Quantitative Data Analysis

Survey was conducted in 320 students. The descriptive results are the followings:

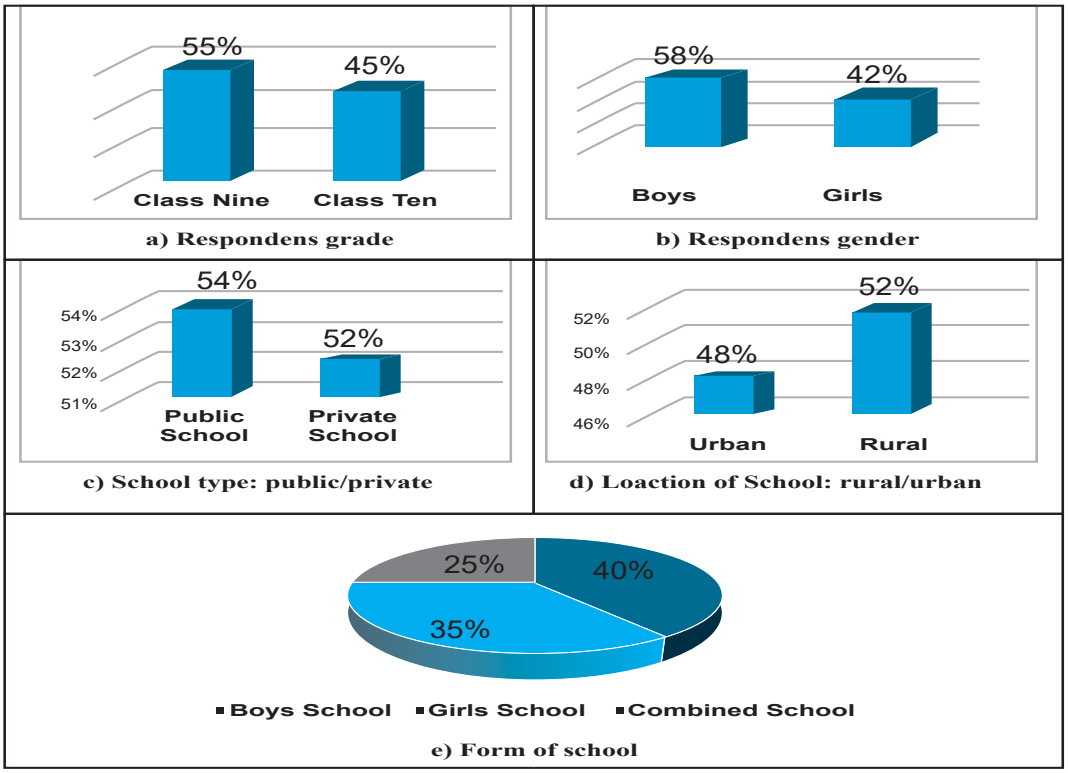


Figure 4: Picturesque Exploration of Sample

Source: Survey 2023-2024

Figure 4 depicts the profile of sample respondents. It is evident that sample respondents are mostly the students reading in class nine (55%) and boys (58%). Majority of sample schools are boys school (40%), located in rural areas (52%), and public (government) schools (54%).

### 6.1 Extent of Bullying

The survey data presents that 67% of participants were bullied. Among them, boys were 61.86% and females were 37.67%. In all categories, male students are being bullied more than females. The results also shows that students of public (Govt) high school students were bullied more (53.02%) than that of private high school students (46.97%). The statistics also informs that students of urban-located schools were bullied more (58.14%) than those of rurally located high Schools (41.85%).

Table 4: Severity of Occurrence of Bullying by Gender

(More than two times a month)

| Tasks of Bullying | | Male | Female | Total |
|---|---|---|---|---|
| I was called mean names (Mofiz, Motu, Bolda) | Count | 93 | 62 | 155 |
| | % of total | 43.25% | 28.84% | 72.09% |
| I was teased (bumped into me, yelled at me pronouncing 'vua', 'vua' ) | Count | **112** | **81** | 193 |
| | % of total | **62.32%** | **37.67%** | **90%** |
| Other students ignore me (excluded me from their group) | Count | 81 | 101 | 182 |
| | % of total | 41.63% | 53.02% | 84.65% |
| Other students make fun of me (about my size, weight, height) | Count | 109 | 54 | 163 |
| | % of total | 51% | 25% | 76% |
| Other students spread rumors about me (tell lies) | Count | 92 | 52 | 144 |
| | % of total | 42.80% | 24.18% | 66.69% |
| I was physically assaulted by schoolmates (Hitting, pushing) | Count | 124 | 24 | 148 |
| | % of total | 57.67% | 11.16% | 68.83% |
| My objects (pen, khata) were damaged by someone | Count | 91 | 24 | 115 |
| | % of total | 42.23% | 11.16% | 53.39% |
| My classmates curse me (telling words) | Count | 85 | 15 | 100 |
| | % of total | 39.53% | 6.90% | 46.43% |
| I was harassed sexually (sexually irritating gestures and posture) | Count | 41 | 25 | 66 |
| | % of total | 19.69% | 11.62% | 31.31% |
| I was threatened by the smartphone or virtual world. | Count | 93 | 61 | 154 |
| | % of total | **43.25%** | **28.37%** | **71.62%** |

Source: Survey 2023-2024

The results in table 4 show that the teasing bullying remains at the apex. About 90% of students become under this disease. The second one is social ignoring, avoidance by which nearly 85% of students are the victim. The 3rd is spreading rumors that 76% of students were the victims of it. Cyber threatening and calling with means names remain at the fourth-ranking. Physically assault was 68% of students. Sexual harassment was the lowest among all types of bullying. 54% of bullied students lose their objects students by bully.

### 6.2 Determination of Causes and Consequence of Bullying through SEM

The PLS-SEM redacts the assessing functions in the following two consecutive parts, such as: (a) Measurement Model Assessment (b) Structural Model Assessment

Table 5: Measurement of Construct Validity

| Name of Constructs | Items | Loadings | Cronbach's Alpha | CR | AVE |
|---|---|---|---|---|---|
| Bullies Jealousy | BJ1 | 0.878 | 0.704 | 0.864 | 0.761 |
| | BJ2 | 0.775 | | | |
| Bullies Attention Seeking | BAS1 | 0.712 | 0.899 | 0.930 | 0.816 |
| | BAS2 | 0.711 | | | |
| | BAS3 | 0.889 | | | |
| Bullies Aggressive Attitude | BAA1 | 0.878 | 0.841 | 0.903 | 0.757 |
| | BAA2 | 0.906 | | | |
| | BAA3 | 0.806 | | | |
| Bullies Power Practice | BPP1 | 0.867 | 0.769 | 0.863 | 0.678 |
| | BPP2 | 0.813 | | | |
| | BPP3 | 0.777 | | | |
| Bullies Revenge Seeking | BRS1 | 0.878 | 0.843 | 0.927 | 0.864 |
| | BRS2 | 0.767 | | | |
| Victims Deviance | VD1 | 0.867 | 0.702 | 0.830 | 0.620 |
| | VD2 | 0.840 | | | |
| | VD3 | 0.740 | | | |
| Bullying Practice | BP1 | 0.811 | 0.905 | 0.928 | 0.721 |
| | BP2 | 0.852 | | | |
| | BP3 | 0.782 | | | |
| | BP4 | 0.891 | | | |
| | BP5 | 0.85 | | | |
| Health Hazards | HH1 | 0.865 | 0.833 | 0.888 | 0.667 |
| | HH3 | 0.940 | | | |
| | HH4 | 0.904 | | | |
| | HH5 | 0.767 | | | |
| Poor Academic Performance | PAP1 | 0.732 | 0.855 | 0.932 | 0.872 |
| | PAP2 | 0.791 | | | |

Source: Analysis of Survey Data using Smart PLS.

### 6.3. Structural Model Assessment

Table 6: Coefficient of Determination ($R^2$)

| | R Square |
|---|---|
| Bullying Practice (BP) | 0.839 |
| Health Hazards (HH) | 0.259 |
| Poor Academic Performance (PAP) | 0.405 |

Source: Analysis of Survey Data using Smart PLS

Table 7: Effect Size ($f^2$)

| | Bullying Practice | Health Hazards | Poor Academic Performance |
|---|---|---|---|
| Bully's Aggressive Attitude | 0.145 | | |
| Bully's Attention Seeking | 0.049 | | |
| Bully's Jealousy | 0.075 | | |
| Bully's Power Practice | 0.068 | | |
| Bullying Practice | | 0.350 | 0.680 |
| Health Hazards | | | |
| Poor Academic Performance | | | |
| Victims Revenge Seeking | 0.155 | | |
| Victims' Deviation | 0.046 | | |

Source: Analysis of Survey Data using Smart PLS

Table 8: Results of the Direct Hypotheses Testing

| S.N | Direct Hypotheses | Beta | SD | t values | P Values | Comment |
|---|---|---|---|---|---|---|
| Ha.1 | Bully's Jealousy -> Bullying Practice | 0.267 | 0.088 | 3.042 | 0.001 | Supported |
| Ha.2 | Bully's Attention Seeking -> Bullying Practice | -0.282 | 0.063 | 4.491 | 0.000 | Not Supported |
| Ha.3 | Bully's Aggressive Attitude -> Bullying Practice | 0.312 | 0.030 | 10.393 | 0.000 | Supported |
| Ha.4 | Bully's Power Practice -> Bullying Practice | 0.412 | 0.115 | 3.569 | 0.000 | Supported |
| Ha.5 | Bullies' Revenge Seeking -> Bullying Practice | 0.292 | 0.024 | 12.302 | 0.000 | Supported |
| Ha.6 | Victims' Deviation -> Bullying Practice | 0.123 | 0.037 | 3.293 | 0.001 | Supported |
| Ha.7 | Bullying Practice -> Health Hazards | 0.509 | 0.051 | 10.015 | 0.000 | Supported |
| Ha.8 | Bullying Practice -> Poor Academic Performance | 0.636 | 0.040 | 15.964 | 0.000 | Supported |

Source: Analysis of Survey Data using Smart PLS

The above table presents' that "t" values of all relationships of the path mode are within expected direction, which were statistically significant (at $p<0.01$). But in hypothesis 02, 'Bully's Attention Seeking (BAS)' presents the beta co-efficient in negative values and so hypothesis 02 has been rejected. The study used Preacher & Hayes (2008) bootstrapping method for testing the indirect relationship. The indirect relationships have been portrayed in Table 09:

Table 9: Results of Indirect Hypotheses Testing

| Indirect Hypotheses | Beta | SD | t vales | P Values | Comment |
|---|---|---|---|---|---|
| Bully's Jealousy -> Bullying Practice -> Health Hazards | 0.136 | 0.048 | 2.805 | 0.003 | Supported |
| Bully's Jealousy -> Bullying Practice -> Poor Academic Performance | 0.170 | 0.061 | 2.774 | 0.003 | Supported |
| Bully's Attention Seeking -> Bullying Practice -> Health Hazards | -0.144 | 0.030 | 4.785 | 0.000 | Not Supported |
| Bully's Attention Seeking -> Bullying Practice -> Poor Academic Performance | -0.179 | 0.033 | 5.394 | 0.000 | Not Supported |
| Bully's Aggressive Attitude -> Bullying Practice -> Poor Academic Performance | 0.199 | 0.018 | 10.758 | 0.000 | Supported |
| Bully's Aggressive Attitude -> Bullying Practice -> Health Hazards | 0.159 | 0.015 | 10.921 | 0.000 | Supported |
| Bully's Power Practice -> Bullying Practice -> Health Hazards | 0.210 | 0.059 | 3.538 | 0.000 | Supported |
| Bully's Power Practice -> Bullying Practice -> Poor Academic Performance | 0.262 | 0.066 | 3.970 | 0.000 | Supported |
| Victims Revenge Seeking -> Bullying Practice -> Health Hazards | 0.149 | 0.020 | 7.374 | 0.000 | Supported |
| Victims Revenge Seeking -> Bullying Practice -> Poor Academic Performance | 0.186 | 0.021 | 8.850 | 0.000 | Supported |
| Victims' Deviation -> Bullying Practice -> Health Hazards | 0.062 | 0.019 | 3.319 | 0.000 | Supported |
| Victims' Deviation -> Bullying Practice -> Poor Academic Performance | 0.078 | 0.023 | 3.468 | 0.000 | Supported |

Source: Analysis of Survey Data using Smart PLS

The above table expresses that all beta path coefficients except the Bully's Attention Seeking (BAS) were in the expected direction, which were statistically significant (at $p<0.01$). It means that 'Bullies Jealousy (BJ)', Bullies Aggressive Attitude (BAA), Bully's Power Practice (BPP), Bully's Revenge Seeking (BRS) and Victims' Deviance (VD) have positive relationships with Health hazards and Poor academic Performance mediated by Bullying Practice. It also indicates that if 'Bullies Jealousy (BJ)', Bullies Aggressive Attitude (BAA), Bully's Power Practice (BPP), Bully's Revenge Seeking (BRS) and Victims' Deviance (VD) increase, the school students Health Hazards and Poor Academic Performance will be increased.

## Discussion of Findings

### 7.1 Discussion on the Prevalence of Bullying Occurrence

**a. The scenario of being bullied**: Through the survey, it was found that 67% of students face the bullying experience. The severe attack of bullying touches 3% of students i.e. every week several times. 30% of students face bullying experience twice or more in one month,

i. **Male students faces more Bullying:** Male 35.01% and females 31.25%.

ii. **Urban Schools Bullying is high:** Urban 39.02% and rural 28.12%.

iii. **Govt. School bullying rate is high:** Govt School 53.02% and Private High School 46.97%.

iv. **Grade Nine reading students are more bullied:** The students reading in class nine become more victims (37.50%) than those of class ten (29.70%).

v. **Combined School Bullying rate is higher:** In combined schools, students face more bullying (31.87%) than boys' (19.06%) and girls school (16.25%).

**b. The scenario of Bully:** 67% of students are being bullied by 21% bully students.

**c. The extent of Bullying:** Among the 10 natures of bullying functions the scenario of bullying is as follows:

**i.** Calling with mean names nearly 93%

**ii.** Teasing (bump into, yell at me pronouncing 'vua', 'vua' 73% )

**iii.** Ignoring 90%.

**iv.** Making fun 85%

**v.** Spread rumors are 67%

**vi.** Physically assault 69%

**vii.** Damage objects 54%

**viii.** Cursing Others is 47%

**ix.** Sexually harassed 32%'

**x.** Threatened over the smartphone rate is 72%

**d. The picture of bullying practices are as follows:**

i. Males facing and doing all types of bullying is higher than that of females.

ii. All types of bullying are rate is higher in urban schools than in rural schools.

iii. The prevalence of verbal, physical psychological bullying was higher among students from public schools and in private schools sexual and cyber bullying rates are higher than that of public schools.

iv. All forms of bullying practice are higher in combined Schools than in boys' and girls' schools.

### 7.2 Causes for Bullying in Secondary School of Bangladesh

By using PLS 3.3.3, all causes such as Bully's Jealousy, Bully's Aggressive Attitude, Bully's Power Practice, Bully's Revenge Seeking, and Victims Deviance were proved statistically significant except the Bully's Attention Seeking. The direct hypotheses and indirect hypotheses both of these relationships were proved as statistically significant.

Among the causes power practice remains the high and victim's deviance is the lowest.

### 7.3 Consequences of Bullying

Hopelessness, fear, anger, anxiety, depression even thinking for suicide among bullied are the main consequences of bullying. Bullying victims catch a cold, feel a strong fever, strong headache and even think of doing suicide sometimes. It is a very alarming sign. Another bad consequence is poor academic performance. After being bullied, many students' class absenteeism becomes higher, accordingly, poor GPAs are being observed. Ultimately many lives are demolished for the causes of bullying at school. This finding is consistent with Ahmed et al (2021) and Kamplainen & Rusanen (2000) studies.

### 7.4 Implications of the Study

Lots of studies are being observed regarding school bulling, but still, no specific model was provided by research. This research has provided a model of bullying along with its causes and effects (Figure 2). Additionally, this study's findings provide guidelines to the policyholder of the country to form policy for the future nation in case of building a sound society in physical body, mind, and soul.

## 8.0 Limitations of the study

There were several relevant limitations to this study. The following are limitations relevant to the interpretation of the findings from this study:

i. The data were collected from only sixteen schools via the strata and then convenience sampling technique. The results from these sampling cannot be regarded as representative of the views of the wider population and therefore the findings of the current study cannot be generalized. In line with this, it is recommended that future studies use a more representative of the school to better understand the wider range of approaches to school bullying

ii. Only students' engagement as another limitation, but in bullying, there remain many stakeholders such as schools, society and govt, which were not addressed.

iii. The small number of interviews makes the results of this study difficult to generalize.

iv. Other data collection methods like in-depth interviews and FGD were not used.

## 9.0 Recommendations of the Study

Based on the findings and considering the reality of the context of Bangladesh, followings may be recommended to address the existing situation.

### 9.1 In case of future study

it may be recommended to develop a bully identification scale. For further study sample should be selected from a wider range of the population to cover more diversity which is needed to ensure representation and for generalization.

### 9.2 In case of initiating anti-bullying functions

i. A country-wide sensitive campaign program may be recommended for all high schools and communities showing the importance of friendly relationships with peers for the success of a child's life.

ii. This study recommends appointing school psychologists who would be able to ensure positive behavior to safeguard victims and disunite the repeated perpetration. Besides, schools should arrange effective psycho-education programs and training.

iii. Different types of bullying intervention programs are needed to be developed all over the country of Bangladesh.

iv. NGO can run a nationwide series of awareness workshops to build a strong healthy physical and mental life for students of Bangladesh.

v. To prevent bullying, peaceful interventions combining guardians should be implemented. From the legal and policy perspective, school psychologists could develop a comprehensive model to amplify the interventions. Mass campaigns and social skill development could help students combat bullying. School psychologists also could conduct a socio-emotional assessment for both the victims and perpetrators through an elimination module. Moreover, all schools must set up anti-bullying policies merged with the statutory laws and evidence bases to create more bias-free judgment.

vi. Under DSHE (Directorate of Secondary and Higher Education) of Ministry of Education, a framework for anti-bullying policy should be installed for schools of Bangladesh. Under the framework, the district education officer can visit secondary schools exclusively for observing the bullying scenario and anti-bullying functions done by the schools. The inspection should be done quarterly a year. A formal report should be recorded. Accordingly annual and semiannual plans for anti-bullying activities should be prescribed by the DSHE to the schools. All bulling and anti-bullying scenarios should be monitored the DSHE. Accordingly the schools should be ranked yearly.

If these recommendations are implemented, secondary level educational institutions would be bullying fee arena and a psychologically healthy environment would be ensued and hence a bright and sound future would be possible in Bangladesh.

## 10.0 Conclusion

The study was aimed to investigate the prevalence of bullying with identifying the causes and consequences. The study followed a mixed research approach and collected both primary and secondary data of qualitative and quantitative nature. The analysis of case and survey data reveals that about 67% of secondary school students were the victims of bullying. 'Verbal Bullying' dominates bullying functions. Cyber Bullying stands as the second and Physical Bullying stands as the third. The bullies' jealousy, the bullies' revenge-seeking, the bullies' aggressive attitude, the bullies' power exercise, and the victim's deviance acted as the causing factors of bullying. The aftermath of the Bullying was seen in the health hazards and the weak academic performance of the victims.

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## References

Abdulsalam, A.J., Al Daihani, A.E., Francis, K., 2017. Prevalence and associated factors of peer victimization (bullying) among grades 7 and 8 middle school students in Kuwait. Int. J. Pediatr. 2017, 1–8.

Akter, S., Khatun, F., 2020. Bullying behaviour and mental health of secondary school students. Bang. Psychol. Stud. 30, 67–74.

Al-Raqqad, H.K., Al-Bourini, E.S., Talahin, F.M., Aranki, R.M.E., 2017. The impact of school bullying on 'students' academic achievement from teachers' point of view. Int. Educ. Stud. 10 (6), 44–50.

Athanasiades &Kouimtzis, 2010).The experience of Bullying among secondary school children. Psychology in the school.Volume 47, Issue 4 April 2010 ,Pages 328–341

Bandura, A., 1973. Aggression: A Social Learning Analysis. Prentice Hall. Baron, R.A., 1977. Human Aggression. Plenum. bdnews24.com, 2018. 35% of School Students Experience Bullying in Bangladesh:

Boulton, M.J., Underwood, K., 1992. Bully/victim problems among middle school children. Br. J. Educ. Psychol. 62 (1), 73–87.

Carbone-Lopez, K., Esbensen, F.-A., Brick, B.T., 2010. Correlates and consequences of peer victimization: gender differences in direct and indirect forms of bullying. Youth Violence JuvJustice 8 (4), 332–350.

Chin, W. W. (1998). The Partial Least Squares Approach to Structural Equation Modeling. *Modern Methods for Business Research*, *295*(2), pp. 295-336.

Chin, W.W. (2010). How to Write up and Report PLS Analyses. In: V. Esposito. Vinzi. W.W. Chin, J. Henseler and H. Wang, eds., *Handbook of Partial Least Squares Concepts, Methods and Applications*. Berlin, Germany: Springer, pp. 655–690.

Chin, W.W. and Newsted, P. R. (1999). Structural Equation Modeling Analysis with Small Samples Using Partial Least Squares. In: Rick. H. Hoyle, eds., *Statistical Strategies for Small Sample Research*, 1st ed. London: Sage Publications Inc. pp. 307-341.

Creswell, J.W. (2009). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*. 3rd ed. California, USA: Sage Publications.

Creswell, J. W. (2008). Mixed methods research. In L. M. Given (Ed.), The SAGE encyclopedia of qualitative research methods (Vol. 1 & 2, pp. 526-529). Thousand Oaks, CA: Sage Publications.

Creswell, J. W. (2009). Research design: Qualitative, quantitative, and mixed methods approaches (3rd ed.). Thousand Oaks, CA: Sage Publications, Incorporated

Davies, P., 2016. What Is Psychological Bullying? Retrieved June 06, 2021, from. https://www.pearldavies.com/post/2016-1-22-what-is-psychological-bullying.

Dawkins J. Bullying in schools: doctors' responsibilities. BMJ 1995; 310: 274–27.

Dombeck, M., 2015. The Long Term Effects of Bullying. Mental Help. Retrieved from. https://www.mentalhelp.net/articles/the-long-term-effects-of-bullying/

Dulmus, C.N., Theriot, M.T., Sowers, K.M., Blackburn, J.A., 2004. Student reports of peer bullying victimization in a rural school. Stress Trauma Crisis 7, 1–16.

Espelage, D. L., & Swearer, S. M. (2003). Research on school bullying and victimization: What have we learned and where do we go from here? School Psychology Review, 32(3), 365-383.

Gordon, S., 2019. Do Girls and Boys Bully Differently? Very Well Family. Retrieved from. https://www.verywellfamily.com/do-girls-and-boys-bully-differently-460494.

Guba, E. G., Lincoln, Y. S. and Denzin, N. K., (1994). *Handbook of Qualitative Research*. Califónia, USA: Sage Publications Inc. pp.105-117.

Hair, J. F., Risher, J. J., Sarstedt, M. and Ringle, C. M. (2019). When to Use and How to Report the Results of PLS-SEM. *European Business Review*, 31(1), pp.2-24.

Harbin, S.M., Kelley, M.L., Piscitello, J., Walker, S.J., 2019. Multidimensional bullying victimization scale: development and validation. J. Sch. Violence 18 (1), 146–161.

Henseler, J., Ringle, C. M. and Sinkovics. R. R. (2009). The Use of Partial Least Square Path Modelling in International Marketing. *Advances in International Marketing,* vol. 20: pp. 277-319.

Kumpulainen, K., R€as€anen, E., Puura, K., 2001. Psychiatric disorders and the use of mental health services among children involved in bullying. Aggress. Behav. 27 (2), 102–110.

Livesey, G.E., McAleavy, G.J., Donegan, H.A., Duffy, J., O'Hagan, C., Adamson, G. and White, R. (2007). The nature and Extent of Bullying.

Lai, S.-L., Ye, R., Chang, K.-P., 2008. Bullying in middle schools: an Asian-pacific regional study. Asia Pac. Educ. Rev. 9 (4), 503–515.

Machimbarrena, J.M., Garaigordobil, M., 2017. Bullying/Cyberbullying in 5th and 6th grade: differences between public and private schools. An. Psicolog. 33 (2), 319–326.

Neto, A.A.L., 2005. Bullying: comportamento agressivo entre estudantes. J. Pediatr. 81 (5). Oliveira, F.R., de Menezes, T.A., Irffi, G., Oliveira, G.R., 2018. Bullying effect on student's performance. Economia 19 (1), 57–73.

Nuruzzaman, M. (2013). Improving Competitiveness of Readymade Garment (RMG) Industry of Bangladesh - Analysis of Supply Chains. [PhD Study] Curtin University. Perth. Available at: https://espace.curtin.edu.au/bitstream/handle/20.500.11937/876/199987_Nuruzzaman%202014.pdf?sequence=2&isAllowed=y [Accessed 20 Jan. 2022].

Olweus, D. (1993). Bullying at School: what We Know and what We Can Do. Wiley-Blackwell.

Ouellet-Morin, I., Odgers, C.L., Danese, A., Bowes, L., Shakoor, S., Papadopoulos, A.S., Moffitt, T.E., Arseneault, L., 2011. Blunted cortisol responses to stress signal social and behavioral problems among maltreated/bullied 12-year-old children. Biol. Psychiatr. 70 (11), 1016–1023.

Preacher, K. J. and Hayes, A. F. (2008). Asymptotic and Resampling Strategies for Assessing and Comparing Indirect Effects in Multiple Mediator Models. *Behavior Research Methods*, 40(3), pp.879-891.

Rashid, H.U., 2019. Anti-bullying Policy Dearth 'fails' Schools. The Independent. Retrieved from. http://www.theindependentbd.com/.Saini, V., Balda, S., 2019. Bullying, victimization and fighting in secondary school: gender-based differences. Int. J. Curr. Microbiol. Appl. Sci. 8 (6), 1759–1764.

UNICEF. Retrieved from. https://bdnews24.com/education/2018/09/06/35-of-sch ool-students-experience-bullying-in-bangladesh-unicef.

Yin, R. K. (2003). *Case Study Research Design and Methods*. 3rd ed. California: Sage Publications, Inc., pp. 01-179.


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