

# Unpacking Students' Socio-cognitive Dynamics in Online Learning: A Qualitative Study on Business Schools of Private Universities in Bangladesh

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Jayanta Fakir<sup>1</sup> , Rumpa Mittro<sup>1</sup> , Rawkatun Nur<sup>2</sup> and Md Karimul Alam<sup>2</sup> 

## Abstract

The socio-cognitive dynamics of online learning among Bangladeshi business students are explored in this qualitative study. To better understand how private university students perceive, experience and make the most of this online learning space, we administered semi-structured interviews to them. The results show that students' online learning experiences are impacted by personal factors (such as their experiences, perceptions and attitudes) and external factors (such as their opportunities and challenges). Students value flexibility, yet face challenges in technology, intrinsic drive and social interaction. Findings from the study highlight the need for robust technical infrastructure, professional development opportunities for teachers, and student support systems to improve the efficiency of online learning in Bangladesh.

## Keywords

Online learning, business education, socio-cognitive dynamics, higher education, qualitative research

## Introduction

### *Overview of Online Learning*

Online learning, which refers to education delivery primarily through electronic methods, has experienced a significant increase in popularity in recent years (Anderson & Dron, 2011). Improvements have influenced the shift in teaching

<sup>1</sup>University of South Asia, Savar, Dhaka, Bangladesh

<sup>2</sup>Department of Business Administration, University of South Asia, Savar, Dhaka, Bangladesh

### Corresponding author:

Jayanta Fakir, University of South Asia, Amin Bazar, Savar, Dhaka 1348, Bangladesh.

E-mail: jayantamktju@gmail.com



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methods in technology, globalisation and the growing need for adaptable learning choices (Siemens, 2004). Incorporating digital platforms and resources has revolutionised the educational environment, providing learners with unparalleled access to information and customised learning possibilities (Dziuban et al., 2018).

### *Contextualisation of the Study in Bangladesh*

Bangladesh, similar to numerous emerging nations, has undergone swift expansion in higher education, specifically in the domain of private universities (Islam, 2015). An increasing focus has accompanied the expansion on technology-mediated education to meet the needs of the expanding number of students (Hossain & Islam, 2018). Nevertheless, implementing online learning in higher education in Bangladesh is still in its early stages, facing obstacles such as infrastructural limitations, faculty training and student readiness (Ahmed & Islam, 2016). The COVID-19 epidemic expedited the acceptance of online learning as the primary teaching method, interrupting traditional in-person education and requiring a rapid shift to digital platforms (UNESCO, 2020).

### *Research Gap*

Although there is an increasing amount of research on online learning in many settings, studies need to explicitly examine the experiences of business students from Bangladesh. Previous studies frequently need to consider the distinct sociocultural and economic influences that impact students' views and attitudes towards online learning in this particular setting (Rahman & Islam, 2019). As a result, more factual evidence is needed to guide the creation and execution of successful online business education programmes in Bangladesh.

### *Research Objectives*

This study seeks to fill this research void by examining the socio-cognitive dynamics of Bangladeshi business students participating in online learning. More precisely, the study aims to:

- To comprehend the students' encounters and perspectives on online learning in contrast to traditional in-person learning.
- To ascertain the primary obstacles and advantages linked to online business education as students perceive.
- To assess the influence of the COVID-19 epidemic on students' perceptions of online education.
- Examine the consequences of these discoveries for the future of business education in Bangladesh.

## *Research Questions*

The study will be guided by the following research questions in order to accomplish these objectives:

- What is Bangladeshi business students' perception of online learning compared to traditional face-to-face learning?
- What are the primary obstacles and advantages of online learning as viewed by business students?
- How has the COVID-19 pandemic impacted students' perceptions of online learning?
- What are the future ramifications for business education in Bangladesh?

## *Significance of the Study*

The results of this study will add to the expanding information base on online education, specifically in poor nations. This research can enhance the development of efficient online learning strategies and policies by offering valuable insights into the experiences and viewpoints of Bangladeshi business students. Moreover, the study's results might bolster teacher development activities and improve the overall calibre of online business education in Bangladesh.

## **Literature Review**

### *Theoretical Framework*

This study utilises multiple theoretical viewpoints to comprehend the intricacies of students' encounters with online learning. Bandura's socio-cognitive theory, proposed in 1977, offers a framework for studying the interplay of individuals' cognition, emotions and actions in relation to their surroundings and how this interplay affects the learning process. This theory highlights the significance of self-efficacy, observational learning and reciprocal determinism in influencing educational results.

Zimmerman's self-regulated learning theory, proposed in 2002, enhances socio-cognitive theory by emphasising students' capacity to manage their own learning processes. This viewpoint emphasises the significance of metacognitive processes, self-monitoring and goal setting in attaining academic achievement.

In addition, the technology acceptance model (TAM) (Davis, 1989) is used to investigate students' views and uptake of online learning tools. This model highlights how individuals perceive the usefulness and simplicity of the use of technology in determining their adoption of it.

### *Empirical Studies on Online Learning*

In recent years, there has been a significant increase in research on online learning, explicitly examining student involvement, academic achievement and satisfaction (Means et al., 2010). Research has continuously shown that online learning can

increase access to education and offer flexible learning options (Bonk & Graham, 2006). Nevertheless, Rovai (2002) has also found difficulties related to student motivation, interaction and technical issues.

### ***Socio-cognitive Factors Influencing Learning Outcomes***

Socio-cognitive factors are highly influential in determining the nature of students' learning experiences. Studies have demonstrated that students' pre-existing knowledge, beliefs and attitudes towards learning substantially influence their academic achievement (Schunk, 2012). In addition, self-efficacy, which refers to an individual's confidence in their capability to achieve success, has been associated with favourable learning results (Bandura, 1997).

### ***Gap Identification***

Although there is a vast amount of literature on online learning and socio-cognitive aspects, studies should explicitly examine Bangladeshi business students' experiences. Many existing studies make broad conclusions based on research conducted in Western settings. However, these findings may not be immediately relevant or applicable to Bangladesh's specific sociocultural and economic situations. Moreover, the extent to which the COVID-19 epidemic has affected students' views and encounters with online education in this particular situation has yet to be thoroughly investigated.

## **Methodology**

### ***Research Design***

This study utilised a qualitative research approach to thoroughly investigate the experiences and perspectives of Bangladeshi business students regarding online learning. Qualitative research is well-suited for comprehending intricate phenomena and producing detailed, descriptive data (Creswell, 2014). The researchers performed semi-structured interviews to provide freedom in exploring participants' responses while ensuring a consistent emphasis on the research topics (Kvale & Brinkmann, 2009).

### ***Participant Selection***

Purposive sampling was employed to choose participants from different private universities in Bangladesh to guarantee a wide array of viewpoints. This sampling method facilitated the incorporation of students with diverse academic backgrounds, programme levels and demographic factors (Patton, 2002). The inclusion criterion comprised two factors: current enrolment in a business programme at a private university in Bangladesh and prior experience with online learning.

### *Data Collection*

Participants were engaged in semi-structured interviews to collect comprehensive insights into their experiences with online learning. A comprehensive interview guide was created using the research questions as a foundation. This guide offers a well-organised structure while allowing adaptability in investigating developing issues. Interviews were conducted face to face or online, based on the participants' preferences.

### *Data Analysis*

The researchers used thematic analysis to detect and analyse patterns in the interview data (Braun & Clarke, 2006). This approach encompasses multiple phases, which include becoming acquainted with the data, creating preliminary codes, identifying themes, examining themes, and establishing and labelling themes. Thematic analysis facilitated the identification of significant topics about students' perspectives, difficulties, prospects and the influence of the COVID-19 pandemic on online education.

### *Rigour and Trustworthiness*

In order to strengthen the reliability and accuracy of the research, various methods were implemented to guarantee thoroughness and dependability. Member checking entailed presenting initial findings to participants to validate the interpretations' accuracy. Triangulation enhanced the findings by cross-referencing data from several sources, including interview transcripts and field notes. In addition, the researcher engaged in reflexivity to recognise their biases and viewpoints, and measures were implemented to reduce their impact on data analysis (Lincoln & Guba, 1985).

## **Results**

### *Demographic Profile of Participants*

The study included a cohort of business students at both the undergraduate and graduate levels who were primarily enrolled in BBA, MBM and MBA programmes at several private universities in Dhaka, Bangladesh. Data were gathered via interviews.

The interview had 24 participants, a heterogeneous mix of students enrolled in different programmes at various private universities in Dhaka. Most participants are undergraduate students pursuing a Bachelor of Business Administration (BBA) degree. They come from all academic levels, ranging from first year to final year. Additionally, numerous participants were explicitly from the Amin Bazar, Savar neighbourhood of Dhaka. Farzana Akter, Arafat Rahman and Abu Ahamed Shibly Hasan are enrolled in separate academic years

of their BBA programme. Several participants, such as Monirul Islam and B. M. Bappy Anwar, are currently enrolled in the Master's of Bank Management (MBM) programme and are in their second semester. The participants are from various parts of Bangladesh, encompassing urban hubs like Dhaka and Gazipur and rural communities like Thakurgaon and Madaripur. The demographic composition comprises a combination of undergraduate and graduate students, predominantly in the first phases of their academic pursuit at a private university. Their residence sites range from metropolitan areas like Mohammadpur and Tejgaon in Dhaka to rural areas like Rajoir and Madaripur, demonstrating a vast geographical diversity.

### *Students' Perceptions of Online Learning*

#### *Strengths:*

- The advantages of learning at one's own pace include flexibility and convenience.
- Increased access to a broader array of resources and content.
- Potential for achieving a high level of cost-effectiveness.

#### *Weaknesses:*

- The presence of in-person engagement helps the growth of interpersonal and communication abilities.
- Challenges in sustaining motivation and involvement in online educational settings.
- Obstacles related to technology and problems with internet connection.
- Apprehensions over the efficacy of online learning in cultivating hands-on abilities.

*Comparisons to traditional learning:* Although participants acknowledged the adaptability and convenience provided by online learning, they typically favoured a hybrid learning strategy that integrates both online and in-person elements. Traditional learning was highly regarded for promoting direct interpersonal communication, cooperation and the acquisition of practical skills.

### *Challenges Faced in Online Learning*

- *Technical issues:* Internet connectivity problems, platform difficulties and access to technology.
- *Time management:* Balancing online studies with other commitments.
- *Motivation:* Maintaining focus and engagement in online learning environments.
- *Social interaction:* Lack of opportunities for face-to-face interaction with peers and instructors.

### *Opportunities Offered by Online Learning*

- *Flexibility*: Learn at one's own pace and accommodate different learning styles.
- *Accessibility*: Access to a broader range of resources and courses.
- *Development of digital skills*: Enhance proficiency in technology and online tools.
- *Cost-effectiveness*: Potential for reduced educational expenses.

### *Socio-cognitive Factors Influencing Online Learning*

- *Self-regulation*: Students' ability to manage their time effectively, stay motivated and prioritise learning tasks.
- *Motivation*: Intrinsic and extrinsic factors influencing engagement in online learning.
- *Learning styles*: Individual preferences for visual, auditory or kinaesthetic learning, impacting online learning experiences.
- *Prior knowledge*: Previous exposure to online learning and technology influencing adaptation to online environments.

## **Discussion**

### *In-depth Analysis of Findings*

This study's findings offer valuable insights into the socio-cognitive dynamics of Bangladeshi business students participating in online learning. The findings suggest that students like the convenience and availability of online learning but also voice reservations over the absence of in-person communication, technological obstacles and struggles in staying motivated. These findings are consistent with other research emphasising the significance of social contact and technical assistance in online learning settings (Garrison et al., 2000; Swan, 2003).

Furthermore, the study highlights the substantial influence of the COVID-19 epidemic on students' perspectives towards online education. The epidemic expedited the acceptance of online education in Bangladesh, but it also intensified pre-existing difficulties and revealed the disparity in digital access among students. These findings align with other research that has demonstrated the difficulties and possibilities of emergency remote instruction during the pandemic (Dhawan, 2020; Howard et al., 2020).

### *Comparison with Previous Studies*

The findings of this study add to the expanding body of research on online education in poor nations. This research offers a distinct viewpoint on the experiences of Bangladeshi business students, which is different from other studies that have examined the difficulties and advantages of online learning in different situations

(Al-Dmour, 2011; Sankey & Lucassen, 2013). The findings expand upon prior research by emphasising the distinct sociocultural and economic elements that impact students' views and attitudes towards online learning in this particular setting.

### *Implications for Business Education*

The results of this study have several consequences for the field of business education in Bangladesh. Prioritising the allocation of resources towards the development of a robust technical infrastructure and the provision of comprehensive training to both teachers and students is essential in order to facilitate successful online learning. Furthermore, universities should contemplate implementing a blended learning methodology that amalgamates the advantages of online and in-person training to overcome the constraints of each modality. Furthermore, it is imperative to establish a conducive learning atmosphere that cultivates student involvement, drive and cooperation. This can be accomplished by utilising interactive online technologies, engaging in peer-to-peer learning activities, and maintaining regular communication between students and instructors.

### *Limitations and Suggestions for Future Research*

The outcomes of this study should be interpreted with caution due to various inherent limitations. The study had a comparatively small sample size and only targeted students from private universities in Dhaka, which could restrict the applicability of the findings to a broader population. Furthermore, the study depended on data reported by the participants themselves, which could be influenced by a tendency to present oneself in a socially desirable manner. In order to overcome these constraints, future research might be conducted with more extensive and more diverse groups, adding quantitative data and applying triangulation approaches to strengthen the validity of the findings.

Additionally, it is imperative to conduct longitudinal research in order to examine the enduring effects of online learning on students' academic achievements, professional prospects and marketability. Moreover, doing research that examines explicitly the viewpoints and firsthand encounters of faculty members on online teaching might yield valuable insights into the difficulties and possibilities encountered by educators in this particular setting.

By acknowledging and overcoming these constraints and undertaking additional research, we can gain a more profound comprehension of the intricacies of online learning in Bangladesh. This will enable us to formulate plans based on empirical evidence to improve the country's business education quality.

### *Developing a Socio-cognitive Model for the Study*

#### *Understanding the Framework.*

The suggested matrix offers a robust framework for examining the interaction between individual and environmental elements. Nevertheless, to construct a more all-encompassing socio-cognitive model, it is imperative to enhance the

interconnections among these components and consider the ever-changing nature of these associations (Figure 1).

**Proposed Socio-cognitive Model. Model name:**

Socio-cognitive Dynamics of Online Learning for Bangladeshi Business Students (Figure 2)

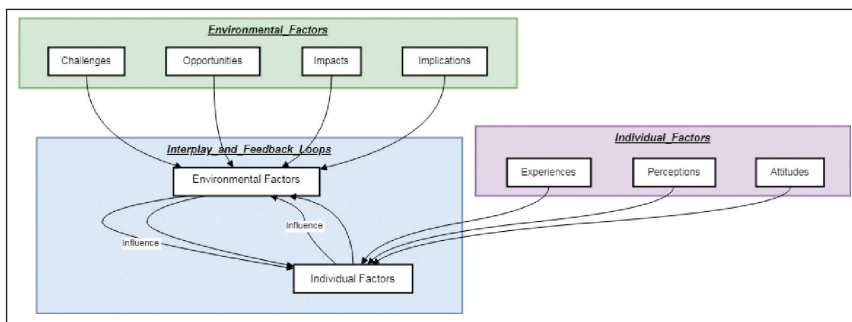
*Core components:*

1. *Individual factors:*
  - a. *Experiences:* Previous educational experiences, technology exposure, socio-economic background.
  - b. *Perceptions:* Beliefs about online learning, self-efficacy, learning styles.
  - c. *Attitudes:* Motivation, interest, value placed on education.
2. *Environmental factors:*
  - a. *Challenges:* Technical issues, time management, lack of social interaction.
  - b. *Opportunities:* Flexibility, access to resources, development of digital skills.
  - c. *Impacts:* Academic performance, skill development, career prospects.
  - d. *Implications:* For educational policies, institutional practices, future research.

*Interplay and feedback loops:*

1. *Individual factors influencing environmental factors:* Students' perceptions and attitudes can influence their engagement with challenges and opportunities, impacting outcomes.
2. *Environmental factors influencing individual factors:* Challenges and opportunities can shape students' experiences, perceptions and attitudes, creating a feedback loop.

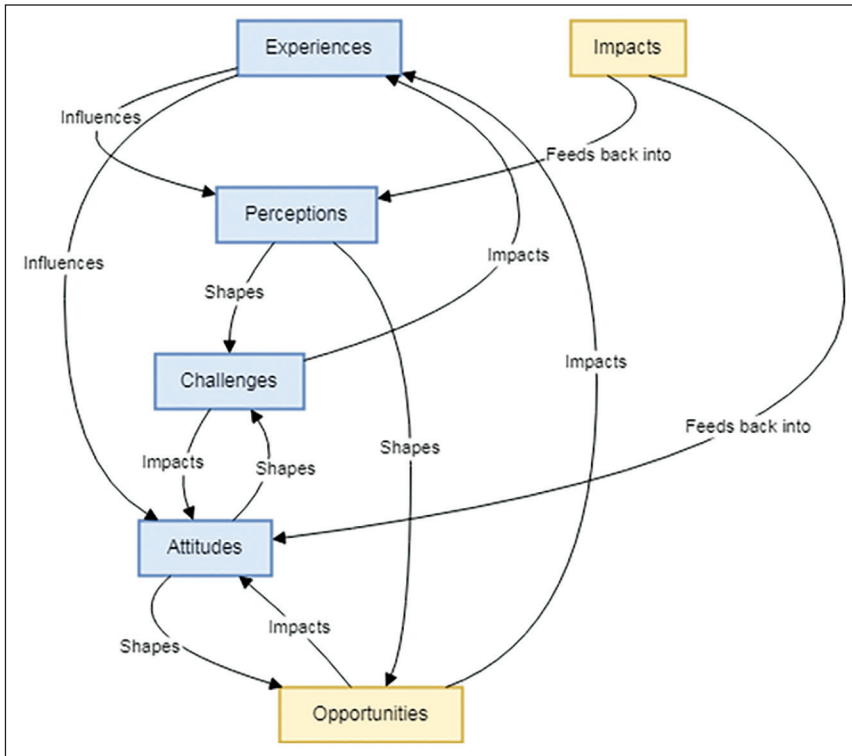
**Visual Representation**



**Figure 1.** Socio-cognitive Dynamics of Online Learning.

**Key Relationships**

1. *Experiences* influence *perceptions* and *attitudes* towards online learning.
2. *Perceptions* and *attitudes* shape how students approach *challenges* and leverage *opportunities*.
3. *Challenges* and *opportunities* impact students' *experiences* and *attitudes*.



**Figure 2.** Categorical Students’ Socio-cognitive Dynamics in Online Learning.

4. *Impacts* on academic performance, skill development and career prospects feed back into *perceptions* and *attitudes*.

*Core concept:* The model explores how individual factors (experiences, perceptions, attitudes and learning styles) interact with environmental factors (challenges and opportunities) to shape students’ online learning experiences and outcomes.

*Matrix Structure and Explanation*

*Matrix Structure*

**Table I.** Matrix Structure for Students’ Socio-cognitive Dynamics in Online Learning.

Individual Factors	Environmental Factors	Outcomes
Prior experiences	Challenges (technical, access, support)	Learning engagement
Perceptions (strengths, weaknesses)	Opportunities (flexibility, resources)	Learning satisfaction
Attitudes (motivation, self-efficacy)		Academic performance
		Learning styles
		Information seeking behaviour

*Matrix for Students' Socio-cognitive Dynamics in Online Learning*

**Table 2.** Matrix for Students' Socio-cognitive Dynamics in Online Learning.

Individual Factors	Challenges	Opportunities	Outcomes
Prior experiences	• Technical difficulties due to lack of familiarity	• Flexible learning options based on past knowledge	• <i>Learning engagement:</i> Active participation in discussions, assignments and collaborative work
	• Limited access to technology or resources	• Abundant resources for skill enhancement	• <i>Learning satisfaction:</i> Overall contentment with the learning experience
	• Socio-economic barriers affecting access	• Opportunities for skill development	• <i>Academic performance:</i> Grades, test scores and overall achievements
Perceptions	• Negative beliefs about online learning	• Positive perceptions of flexibility and convenience	• <i>Learning styles:</i> Preferences for visual, auditory or kinaesthetic learning
	• Low self-confidence impacting engagement	• Encouragement through supportive environments	• <i>Information seeking behaviour:</i> Effectiveness in searching for and utilising resources
Attitudes	• Motivation affected by challenges	• Motivation boosted by supportive resources	• <i>Learning engagement:</i> Willingness to engage actively
	• Interest hindered by access issues	• Increased interest due to the availability of diverse materials	• <i>Learning satisfaction:</i> Fulfilment and happiness with the learning process

This matrix examines the interaction between human and environmental elements in influencing students' online learning experiences (Table 1).

*Interplay Analysis*

- *Prior experiences* shape *perceptions*, which influence *attitudes* towards challenges and opportunities.
- *Challenges* (like technical difficulties) can negatively impact *attitudes* and *motivation*, affecting *learning engagement* and *satisfaction*.
- Conversely, *opportunities* (such as skill development) can enhance *prior experiences* and improve *perceptions*, leading to better *academic performance*.

*Explanation of the Model:* This matrix offers a systematic approach to examining the intricate interaction between human and environmental elements that influence students' experiences with online learning (Table 2).

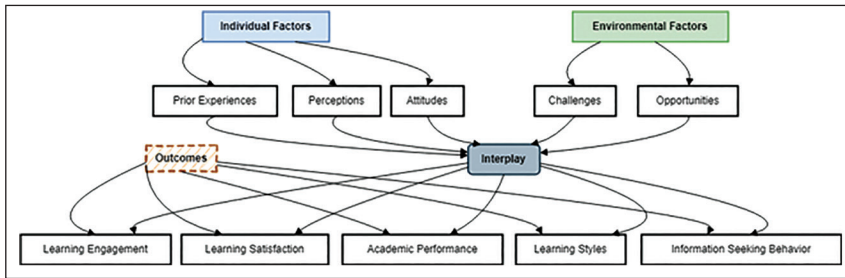
1. *Individual factors:* These are student-centric elements that influence their learning process.
  - a. *Prior experiences:* Previous educational background, technology familiarity and socio-economic status shape students' expectations and abilities.
  - b. *Perceptions:* Students' beliefs about online learning, self-confidence and learning preferences impact their engagement.
  - c. *Attitudes:* Motivation, interest and self-belief influence learning efforts and outcomes.
2. *Environmental factors:* These are external elements that impact the learning environment.
  - a. *Challenges:* Technical difficulties, access issues, and inadequate support hinder learning progress.
  - b. *Opportunities:* Factors like flexible learning options, abundant resources, and opportunities for skill development enhance learning experiences.
3. *Outcomes* are the results or consequences of the interaction between individual and environmental factors.
  - a. *Learning engagement:* Students' active involvement and participation in the learning process.
  - b. *Learning satisfaction:* Students' overall contentment and fulfilment with their learning experience.
  - c. *Academic performance:* Measurable outcomes such as grades or test scores.
  - d. *Learning styles:* Students' preferred ways of learning and processing information.
  - e. *Information seeking behaviour:* How students actively search for and utilise information.

*Interplay:* The matrix emphasises the dynamic link between these components. For example, perceptions are shaped by past experiences, and perceptions affect how pupils respond to challenges and opportunities. Similar to how contextual elements like obstacles can impact students' motivation and attitudes, they can also impact learning outcomes.

This matrix is used as a basis for analysing qualitative data and finding important patterns and interactions between the variables (Figure 3). It can also be utilised to create research hypotheses and guide designing interventions that improve the quality of online learning opportunities.

*Applying the Model to the Research Findings.*

Based on the findings of the study, we can input the model with concrete instances:



**Figure 3.** Students' Socio-cognitive Dynamics in Online Learning.

1. *Individual factors:*

- a. *Experiences:* Many students needed more prior experience with online learning.
- b. *Perceptions:* Students perceived online learning as flexible but needed more confidence in learning independently.
- c. *Attitudes:* Students were motivated by career prospects but lacked intrinsic motivation for learning.

2. *Environmental Factors:*

- a. *Challenges:* Poor internet connectivity, lack of technical support and difficulty in time management were standard.
- b. *Opportunities:* Access to various online resources and the potential for flexible learning were valued.
- c. *Impacts:* Some students experienced decreased academic performance due to challenges, while others excelled due to increased motivation.
- d. *Implications:* There is a need for improved infrastructure, faculty training and student support services.

We can identify key patterns and relationships by mapping the findings onto the model. For instance, we can see how students' lack of experience with online learning (individual factor) influenced their perceptions of challenges (environmental factor), which in turn impacted their motivation (individual factor).

*Further Analysis.*

Using this model, research questions like: How do students' perceptions of the difficulties of online learning relate to their past academic performance? Can be developed.

What connection exists between students' chosen online learning activities and their learning styles?

What is the effect of institutional support for online learning on student outcomes?

By iteratively improving the model based on new data, we can better comprehend the various elements impacting students' online learning experiences.

## Conclusion

### Summary of Key Findings and Contributions to the Field

This study examined the socio-cognitive dynamics of online learning among Bangladeshi business students. Significant findings show that although students like the adaptability and accessibility of online learning, they also voice concerns about the absence of in-person interactions, technological issues and trouble staying motivated. These difficulties were made worse by the COVID-19 pandemic, which also brought attention to the advantages of online learning.

This study adds to the limited knowledge about online education in Bangladesh by shedding light on the students’ viewpoints and experiences. It provides a comprehensive grasp of the elements affecting their learning, which is essential for creating successful online business education courses.

### Implications for Educational Practice and Policy

Several suggestions are made to improve the virtual education that Bangladeshi business students receive. First and foremost, educational institutions must invest significantly in a robust technology infrastructure and offer teachers and students extensive training. Second, a mixed learning strategy that combines the best aspects of in-person and virtual learning may be investigated. Third, it is crucial to provide a friendly online learning environment through peer-to-peer exchanges, interactive tools and frequent faculty–student communication.

To guarantee fair access to online education, policymakers should prioritise broadband access and the development of digital infrastructure. Policies that encourage faculty growth and online pedagogy research are also significant.

### Final Thoughts on the Importance of Understanding Students’ Socio-cognitive Dynamics in Online Learning

Gaining a deep understanding of the social and cognitive dynamics of students is crucial for creating online learning experiences that are both successful and

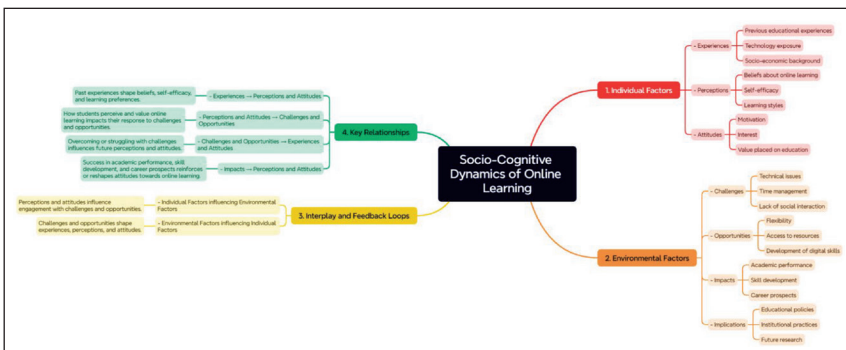


Figure 4. Mind Map of Students’ Socio-cognitive Dynamics in Online Learning.

inclusive. By examining students' perspectives, difficulties and possibilities, educators and policymakers can provide a learning environment that accommodates various requirements and optimises student achievement. This study emphasises the significance of ongoing research and adjustment in the changing realm of online learning (Figure 4).

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### ORCID iDs

Jayanta Fakir  <https://orcid.org/0000-0002-9377-9513>

Rumpa Mittro  <https://orcid.org/0000-0002-3948-6971>

Md. Karimul Alam  <https://orcid.org/0009-0001-7934-3115>

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