Use of Facebook in Support of Collaborative Learning to Enhance Learning Outcomes in 'R' Government College, Bangladesh

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ABSTRACT

In different research studies, the benefits and limitations of the Collaborative learning strategy has been examined for long years, and thereby it has drawn sufficient interest of educational policy makers. The present study on the topic of "Use of Facebook in Support of Collaborative Learning" would add at least a little value on the burning issue which attempted to investigate the influences and benefits of diversified social media tools, particularly Facebook, for making collaborative learning effective and beneficial for achieving students' enhanced learning outcomes. This research study aimed to point out the vital factors that mostly have influence on the fruitfulness of collaborative learning. Thus, it addressed the paramount collaborating practices together with hurdles and challenges of these practices. Consequently, the study progressed on identifying the influential factors of Facebook in this connection. Perceptions of teachers as well as students at a Bangladeshi government college was the basis of the investigations of this study. The nature of the study was qualitative. The study used the research methods of individual semi-structured interview for deriving teachers' perceptions and FGD for revealing students' views regarding the research questions. Facebook use was perceived to yield significant influences on the proper organization of collaborative learning. Facebook use was found to uplift the effectiveness and benefits of collaborative learning. At the same time, it was found to reduce the disruptions and overcome the challenges of practicing this learning approach. Teachers perceived that Facebook could yield influences on their instructional practices and teaching experiences, and on students' learning experiences as well. Students also perceived that Facebook could be a highly supportive tool for collaborative learning by intensifying interaction level and patterns with their teachers and peers. They pointed out that Facebook use assisted to build their inherent aptitudes such as verbal presentation and communication skill, time management adroitness, computer literacy and familiarity with technology, reflective thinking and writing skill, social adaptability adeptness, etc. Hence, this research study would build the consciousness about Facebook's beneficial influences in collaborative learning and recommend the pathways by which Facebook can enhance students' learning outcomes in Bangladeshi colleges. Furthermore, by pointing out some vital findings about Facebook use as an adept tool of collaborative learning support, the study provided guidelines for future notable reforms of national education policy regarding technology incorporation in learning and the adoption of 'social constructivist' learning approaches.

INTRODUCTION

Background

In Bangladesh, the government colleges are carrying through the responsibilities of providing a big portion of country's higher education. These colleges are observed to follow traditional instructional delivery mode. The tendency of practicing modern pedagogical changes and technological progress in learning are very limited here (Mannan, 2016; Monem & Muhammad, 2010). The colleges are facing some crucial problems that include large class size, limited class time, high drop-out and very low attendance rate. Teachers have to

operate a huge number of students at a time and students are habituated to learn their lessons individually. In this scenario, to ensure students' engagement and achieve desirable learning outcomes are very challenging tasks (Alam, Mishra, & Shahjamal, 2014; Monem & Muhammad, 2010). It is, therefore, tremendously necessary of such a learning strategy that could bear the vital potential to deal with large class size and to achieve the desired learning outcomes at the same time (Yang, 2015). For guiding the educational institutes in delivering quality education, it is necessary to examine the usability of modern pedagogy and rearrange our mode of instructional delivery accordingly (Alam, Mishra, & Shahjamal, 2014). Thereby, it would be judicious to implement collaborative learning here which is considered as one of the paramount modern pedagogical innovations (Scager et al., 2016). In addition, it can be considered to evaluate the influence and usability of social media, particularly Facebook, to make the system more efficient. The usability of Facebook as an assisting instrument of adept collaborative learning can put forth novel pathways to gain students' learning-satisfaction and enhance their learning outcomes in these educational institutions (Al-Rahmi, Othman, & Musa, 2014).

Statement of the Problem

'Collaborative Learning' has been established as a widespread strategic method of teachers' instructional delivery that stimulate students to engage in combined learning in groups for achieving targeted learning aims by sharing each other's knowledge, skills, and experiences (Scager et al., 2016). However, making collaborative learning effective is a challenging task (Zheng, Niiya & Warschauer, 2015). On the other hand, being the mostly used and popular social networking site, Facebook carries the vital prospect to establish connection and communication with present and upcoming students. In delivering instructional content, its prospect is also very high. Thus, for the purpose of uplifting students' academic achievements, Facebook can be used as an ingenious and effective pedagogical instrument (Al-Rahmi, Othman, & Musa, 2014). However, frequently social media, in particular Facebook, is popularized as such a technological innovation which has only disruptive influences and effects (Rambe, 2012; Conley, 2011). Again, in literature, there remains scarce articulation about how to utilize the positive features of such so-called disruptive technological instruments in learning aids in higher education. I, therefore, feel the necessity of conducting a research study aiming to have an inquiry into the possibility of the usefulness of Facebook in bringing positive contributions in the attitude and behavior of collaborative learning, and thereby enhancing the learning outcomes and experiences of the students.

Rationale

For establishing an interactive learning environment, education providers have to embrace a number of hurdles (Alam, Mishra & Shahjamal, 2014). Facebook provides the opportunity to its users to make interaction and collaboration within a priorly-defined virtual community (Espinosa, 2015). In several studies, it has been investigated the effectiveness of such sorts of social networking sites like Facebook for uplifting academic performances of students and for facilitating desirable learning achievements in classroom arrangements (Al-Rahmi & Zeki, 2017; Gikas & Grant, 2013; Greenhow, Peppler, & Solomou, 2011). This platform's usability scope can be utilized by the educators as a vital medium of connectivity and interaction (Al-Rahmi & Zeki, 2017). Nevertheless, on the other hand, the users of Facebook are using some features of Facebook in such ways that are causing mind wandering and thereby distracting students' engagement in learning (Hollis & Was, 2016). As for the scenario that students are observed to pass a big portion of their valuable times in it wastefully, it demands further investigative research so as to use it in beneficial ways that can enlarge the scopes it can engender towards students' learning.

Hence, this research study aims to conduct an exploration of the rationale of Facebook-use in collaborative learning aids. Necessarily, the study aims to evaluate Facebook as a benevolent educational tool for ensuring the enhancement of the instructions of collaborative learning pedagogy for future educators' considerationof incorporating it in different learning environments.

Objectives of the Study

The aim of this research study was to point out the vital factors that mostly have influence on the fruitfulness of collaborative learning. Thus, it would address the paramount collaborating practices together with hurdles and challenges of these practices. Consequently, the study progressed on identifying the influential factors of Facebook in this connection. Additionally, this study aimed to have an exploration of teachers' perceptions and attitudes about the use of Facebook such that whether Facebook brings any positive influence in teachers' teaching practices together with students' learning experiences regarding learning outcome, academic performance, gaining of knowledge, motivation to learning, collaborative behavior and so on.

Furthermore, the study aimed to judge students' perceptions and attitudes about the usability of Facebook in collaborative learning by examining whether the use of Facebook can bring any change in the interaction and feedback of teachers, the interaction and conversation of peers and the enthusiasm and capabilities of learners in collaborative learning.

Research Questions

The study was guided and carried through by highlighting the following subsequent research questions (RQs)-

1. **RQ 1**: How has Facebook influenced Collaborative learning?'
2. **RQ 2**: How do teachers perceive and make use of Facebook as a collaborative learning tool?
3. **RQ 3**: How do students view on the strengths/weaknesses, etc. of Facebook as a collaborative learning tool?

Significance of the Study

The significance of this research study lies mostly in ensuring the possibility and potentiality of challenging or at least reconsidering about the adversary and detrimental effects of Facebook among student-community. Another significance lies in diminishing the adverse effects, shortcomings, and challenges of the mode of collaborative learning and consequently in providing further suggestions to ensure the effectiveness of the collaborative learning approach.

It would familiarize students with the usability of the different Facebook features in collaborative learning process and thereby would move forward to the students in the horizon of the collaborative learning process which would be technologically enriched. Furthermore, it would enrich their essential collaborative skills, uplift learning outcomes, sharpen their enthusiasm and motivation, and broaden the horizon of the learning scope beyond time and space. As well as these, teachers would be sensible of the possible advantages of the blended system of collaborative learning and Facebook.

Most prominently, this research study's findings and recommendations would provide benefits for the teachers, other academicians, practitioners, and faculty members of the educational and other types of institutions to broaden the scope of practicing in diversified fields of teaching and learning. By providing vital instructions for pedagogical advancement, the study would make vital contributions to the national education policy of any country, particularly of Bangladesh where this research study was carried out.

Finally, this study's findings and recommendations would make valuable contributions in providing guidance for the researchers who would be enthusiastic in carrying through further investigative research in diversified educational arenas and teaching-learning practices.

Definition of Terms

The two key terms: 'Facebook' and 'Collaborative Learning' have been focused foremostly in this research study. The term 'Facebook' denotes as a 'Virtual Social Networking Platform' that has the vital features of allowing its users in exchanging any sort of message and information, sharing photos and videos among themselves (Soomro, Kale, & Yousuf Zai, 2014). Particularly for this research project, the terminology of 'Facebook' has been delineated the activities that the students engage in any 'Facebook Learning Group'.

On the other hand, the term 'Collaborative Learning' has been represented as an 'Instructional Method' in which differentiated merit and performance-bearing students engage themselves altogether in various small groups for the purpose of achieving targeted and shared-interested learning outcomes (Scager et al., 2016).

Organization of the Dissertation

This dissertation paper is organized in six different detailed chapters. These are: (1) Introduction, (2) Literature Review, (3) Research Methodology, (4) Findings, (5) Discussion, Limitations, Implications, Recommendations, and (6) Conclusion. The remaining chapters of this study are organized in the following consecutive ways. In Chapter 2, a detailed literature review is presented. This chapter begins with the depiction of the research topic's conceptualization and theoretical underpinnings. Afterwards, the relevant literatures that match with the present study's research questions are reviewed. Furthermore, the relevant and available empirical evidence covering the present study's research area are critically analyzed. Lastly, the chapter concludes the 'Literature Review' by demonstrating the gaps that prevail in the literature concerning the present study's topic. Additionally, this chapter presents the methodological justification of this research study. In Chapter 3, the 'Research Methodology' with the exploration of research design, research context, research instruments, data collection and data analysis are discussed in detail in separate sub-sections. In Chapter 4, all the findings of this study are presented in a thematic format. Chapter 5 presents the discussion, limitations, implications, and recommendations of this study. Finally, in chapter 5, this study is concluded with conclusive remarks.

LITERATURE REVIEW

In literature, there remains a vast number of research studies covering collaborative learning. Facebook, however, has attracted the attention of researchers very recently as a tech-based pedagogical tool. But there prevails very limited number of studies covering the use of Facebook in collaborative learning. Till to date, it has been found a few numbers of studies that have tried to evaluate the issue of using Facebook as a pedagogical tool of collaborative learning support straightforwardly.

I attempted to carry through the 'Literature Review' section by dividing that into six subsections as follows. Section 2.1 intended to 'conceptualize the idea of collaborative learning' and then section 2.2 attempted to make an exploration of the 'theoretical underpinnings of collaborative learning' and 'use of Facebook as a tool of collaborative learning support'. Section 2.3 tried to carry through a review of the potential factors of collaborative learning which can be influential in making the learning strategy effective. Moreover, section covered some good evidence of using Facebook in collaborative learning. Consequently, section 2.4 covered a 'critical evaluation of Facebook as a tool of collaborative learning support'. Finally, section 2.5and 2.6 explored the 'perceptions and attitudes of students as well as teachers' regarding this area of interest.

Conceptualizing Collaborative Learning

While some schoolteachers of UK attempted to use the conception of 'Collaborative Learning'during 1950s and 1960s, it, however, attracted sufficient interest of the college teachers of USA in 1980s, i.e., two decades after its first introducing (Bruffee, 1984). From then on in professional literature, it was studied

vastly and inquired on its usability and fruitfulness (Molinillo et al., 2018). It came forth as such a tool of pedagogical use that bears the potentiality of keeping the learners kinetic and engaged in their learning journey. It also bears the vital potency of facing the prevailing challenges that arise from the classrooms' direct delivery of instruction (Ravinder Kumar, 2017).

In this learning approach, first the assigned teacher places a particular problem-solving task and then organizes a collaborative learning environment so that learners can work it out collaboratively (Molinillo et al., 2018). This collaborative learning arrangement utilizes some vital aspects of learning that are ignored in case of traditional learning setting, one of which is peer influence- the enormous educative force (Al-Rahmi, Othman, & Yusuf, 2015;Molinillo et al., 2018). Furthermore, it incorporates peer conversation's social context into the process of learning and allows the learners to make use of their insightful and reflective thinking powers (Molinillo et al., 2018). In this learning environment, other than sharing and disseminating information directly to the learners, the assigned teacher performs the role of scaffolding as a facilitator. Moreover, here the assigned teacher evaluates the collaborative conversation of the students and stimulates their reflective thinking towards solving practical problems (Al-Rahmi, Othman, & Yusuf, 2015).

Theoretical perspectives behind 'use of Facebook in support of collaborative learning'

The theory of the 'Zone of Proximal Development (ZPD)' formulated by Lev Vygotsky (a Russian psychologist) embeds the inherent theoretical perspective of collaborative learning (Vygotsky, 1978). The idea of ZPD explains that individual learner can be hoped for achieving cognitive gain beyond their self-capability if they are provided with the opportunity of interacting with more progressive peers (Blake & Pope, 2008; Vygotsky, 1978). The communities who engage in diversified virtual learning platforms can get the opportunity of utilizing Vygotsky's idea of ZPD to a higher degree (Northey, Bucic, Chylinski, & Govind, 2015). 'Asynchronous Online Learning', according to Northey et al. (2015), is a highly productive and dynamic opportunity to set the proper conditions for the fruitfulness of ZPD. However, there remains a sparse number of research studies that explore the actual association between online-based learning opportunity and Vygotsky's idea of ZPD. The construction of the famous 'Social-constructivist Theory of Learning' is facilitated by the idea of ZPD of Vygotsky which states that knowledge and skills are jointly developed by the means of socio-cultural interactions among learners when they share the necessary academic ideas and concepts with each other (Gamble & Wilkins, 2014; Kozan & Richardson, 2014).

In addition to Vygotsky's ZPD theory, another pioneer theory of 'Scaffolding' developed by another famous social-constructivist, Jerome Bruner, corroborates the theoretical perspective of collaborative learning. According to Jerome Bruner (1958) and some other theorists such as Woods, Bruner, & Ross (1976), Mariani (1997) and Wilson (2014), 'Scaffolding' is a highly effective 'Learning Supporting Tool' when learners face high challenges in accomplishing their tasks. The idea of 'Scaffolding' is invigorated by Lev Vygotsky's concept of ZPD. In accordance with Lev Vygotsky's delineation, scaffolding facilitates the learners with proper guidance of 'More Capable Others (MKO)' of whom could be the teachers or the more capable peers through their 'Zone of Proximal Development (ZPD)' that the learners are incapable of achieving with their independent efforts (Vygotsky, 1978).

The incorporation of various technological tools in learning can broaden the scope of utilizing the theories of 'Social-constructivism' by incorporating collaborative learning with the newly innovated technological tools (Northey, Bucic, Chylinski, & Govind, 2015). In this process, the novel idea of 'Computer-Supported Collaborative Learning (CSCL)' has been introduced. It was observed pessimistic outcomes from the incorporation of computer in learning support initially because educators perceived it with skeptic attitudes and they considered it as dull and anti-social (Stahl, Koschmann, & Suthers, 2006). Ultimately,

nevertheless, this approach started to act as a potential cognitive stimulator by ensuring communication with many individuals at a time, establishing social dynamics whose essence lies in ensuring equal participation to the most possible, and assisting educators to 'zoom in' collaboration beyond the scope of social demand (Kozan & Richardson, 2014). Therefore, I have attempted to investigate the usability and influence of the popular social media tool- Facebook as a tool of collaborative learning support, and the perceptions and attitudes of the teachers and the students of Facebook's usability in this regard.

Influences of Facebook on Collaborative Learning: Considering paramount effectiveness factors

In different studies covering collaborative learning, it has been identified some paramount effectiveness factors of collaborative learning (Kirschner, Paas, & Kirschner, 2008; Scager et al., 2016). In congruent with these studies, this present study has attempted to examine the case that whether integration of Facebook supports or negates these effectiveness factors in advancing with collaborative learning strategy.

For achieving effective outcomes from this learning approach, some of the crucial factors are 'learners' heterogeneity', 'enhanced degree of participation' and 'high quality interactions' (Scager et al., 2016). Another vital factor that has remarkable influence in making collaborative practice effective is 'complexity of the task'. As per the pointing out of the 'cognitive load theory of learning', it can be achieved more fruitful outcomes from collaborative learning in comparison with solitary approach of learning when there have to deal with higher cognitive load (because of high complexity of the task) that the cognitive load of each involved individual learners can be broken down across an enlarged pool of cognitive capacity (Kirschner, Paas, & Kirschner, 2008; Vuopala, Hyvönen, & Järvelä, 2016).

It is not only the participation and interaction through which the desired learning outcomes can be achieved in collaborative learning approach, but teachers' scaffolding intervention in the process of collaboration via optimum feedback needs to be operated.In an online collaborative learning approach, teachers can elaborate and verify their feedback regarding three different dimensions of learning which are 'learning content', 'academic task' and 'social participation' (Coll, Rochera & Gichpert, 2014). In this present research study, I have attempted to explore the case that whether incorporation of Facebook in collaborative learning purposes can assure any positive changes in the quality of teachers' feedback. Besides teachers' feedback, some other paramount influential factors for ensuring the effectiveness of collaborative learning strategy are 'individual accountability', 'potential ability' and 'social skills' (Coll, Rochera & Gichpert, 2014). It is not frequently observed such research studies that directly address the afore-mentioned issues from the consideration of using Facebook in collaborative learning. I have, therefore, felt the necessity of carrying through this research study aiming to explore the ways by which Facebook can effectively utilize these influential factors for supporting collaborative learning to the most.

Critical evaluation of using Facebook as a Collaborative Learning tool: Positive and negative impacts and challenges

Exploring positive evidence of using Facebook for Collaborative Learning

Being an essential instrument for collaborative learning aids, Facebook bears the scope of stimulating learners' motivation, and thereby can ensure their participation in their learning journey and enhance their depth of knowledge(Johansson, 2016).To deal with introvert students is one of the crucial areas of collaborative learning that sometimes emerges as a big challenge to handle. In some instances, the dominating voice of introvert students brings poor performance for the whole group in case of any sort of group work, particularly collaborative group work (Cain, 2013; Jacobs, 2014). But obviously it would not be a good solution to extract introvert learners from the collaborative arrangement and to leave them to sole solitary learning, or to leave the collaborative setting altogether (Chan, 2013; Jacobs, 2014). Introvert

learners might bear potentially insightful ideas that might have high value like the other involved learners in the group (Scager et al., 2016). The collaborative group can be benefited a lot if the potentials of introverts can be explored in a good way (Scager et al., 2016). For this, it is necessary to assist introvert learners to be habituated with the artistic skills of collaboration and collaborative behaviors which will help them to be adapted to diversified situations. In this regard, involving in 'Facebook Collaborative Group' can help the introverts in expressing their opinions and thereby leaving their shyness (Razali, Shahbodin, Ahmad, & Noor, 2017).

Linh & Suppasetseree (2016) carried out a research study by devising a 'model of instructions' for assisting the learners of a university to sharpen their English writing skills having involved in collaborative learning using Facebook groups. They found highly positive changes in students' English writing skills. The collaboration in Facebook also enhanced the interactions between the assigned teacher and students. The findings reported above calls for more research in this area for the purpose of having a deep insight into the process which this present research study intended to cover.

Sarwar, Zulfiqar, Aziz, & Chandia (2019) advocated for the potential utilization of diversified social media tools as paramount sources of information for getting involved in collaborative learning. In accordance with their views, social media tools are viable options for collaborative learning because these are easily accessible, having direct interface and having some other useful features. They claimed that the involving opportunities and beneficiary facilities construct collaborative traits that essentially promote interpersonal skills and creative ideas such as cooperation, adherence of social responsibilities and nourishment of progressive relationships. Furthermore, these opportunities are useful for enhancing communicative cooperation among learners which ultimately stimulate learners' positive attitudes towards learning and thereby learners' academic and extra-curricular performances will be enhanced. They identified some vital benefits of using social media like Facebook, such as, they are highly useful, they are easy to use, and they are enjoyable. Therefore, further investigative research covering 'the incorporation of Facebook in collaborative learning process' would serve the purpose of getting further findings in this area that the present study attempted.

Exploring negative evidence of using Facebook for Collaborative Learning

For using 'Facebook Group' in the management of learning, Wang et al. (2012) pointed out several limitations. In terms of privacy issues, they opined that discussions on Facebook's platforms did not operate in an organized manner and learners did not perceive those as safe and comfortable to be involved.

Facebook gives the provision of sharing a vast amount of information without maintaining its quality, standard and usability from the point of view of learning and academic use (Kirschner & Karpinski, 2010). The feature of easy and uncontrolled accessibility of social media tools provokes learners to treat them as only a relaxation and entertainment medium, and necessarily to build unnecessary fascination towards getting involved in its domain which ultimately create barriers for the execution of collaborative learning in an effectual fashion (Sarwar et al., 2019).

According to learning theorists, for developing learners' own ideas with their own efforts, the guidance should have to be minimal. But in the domain of Facebook, there is every possibility that learners have to be overburdened with rules and a vast amount of information. By this way, involvement in Facebook's domain can make obstacles to self-preparation for developing better ideas (Judele, Tsovaltzi, Puhl, & Weinbe, 2014).

'Media multitasking' is another issue that Facebook allows for its users. It is evident that 'media multitasking' exerts conflicting impacts on students' learning and attention. It has been robustly ascertained that 'media multitasking' results in diminished academic performances, but otherwise stimulates monotony and depression (Cain, Leonard, Gabrieli & Finn, 2016). However, the research studies regarding

'multitasking with collaborative learning' are not sure enough about its possible outcomes, whether positive or negative. Therefore, there is opportunity of utilizing multitasking successfully through controlling attention in new academic arena like online collaborative learning using Facebook that this present study suggests.

While using social media tools like Facebook in collaborative learning, 'Cyberbullying' arises as a damaging factor (Sarwar et al., 2019). 'Cyberbullying' creates the detrimental effects by means of insulting, teasing, abusing, intimidating, or threating the comparatively incompetent or self-defenseless learners (Lacey & Cornell, 2013). When the learners suffer from online bullying, they get upset, feel helpless and vulnerable, get unconcentrated to their studies, which ultimately bring lower learning achievement for them (Ponzo, 2013; Raskauskas & Stoltz, 2007). For the reason of having the above-mentioned harmful effects in using Facebook in Collaborative Learning, further investigative studies regarding these issues from the views of the genuine stakeholders of learning- the teachers and the students, are essential which should target to find the ways of minimizing the detrimental effects and to use the system in benevolent manner that were the fundamental aims of this present study.

Challenges

In accordance with the identification of Johansson (2016), shortcomings in learners' motivation, enthusiasm, experience, location, and internet access are some of the crucial challenges of using Facebook in collaborative learning with its full potentials. One vital pre-condition of using Facebook in collaborative learning is having intermittent internet access among learners and teachers. Another vital pre-condition is gaining the know-how of properly using the social media tools like Facebook (Muuro, Wagacha, Oboko & Kihoro, 2014; Soomroet al., 2014). However, in all sorts of educational institutions in Bangladesh, it is still cumbersome to provide intermittent internet access for all teachers and students so that they can remain active in internet-domains for utilizing its varied features in learning. The necessary skills and enthusiasm of the students and teachers are not still up to the mark in the context of Bangladeshi educational institutions. Moreover, it has been found some of the teachers and educators as hesitant of using social media tools like Facebook for educational purposes in Bangladeshi educational institutes (Johansson, 2016; Mannan, 2016). These sorts of prevailing challenges call for carrying through further research so that the challenges can be overcome for getting the best use of the platform in making collaborative learning mostly effective.

Teachers' perceptions and attitudes toward using Facebook for Collaborative Learning

Teachers' positive perceptions and attitudes

I have found very limited studies that investigated teachers' perceptions and attitudes towards using Facebook as collaborative learning support. But it is optimistic that most researchers in those fewer studies discovered teachers' positive perceptions and attitudes towards using Facebook in support of collaborative learning (John, 2017; Tozer, 2017).

The positive and favorable perceptions and attitudes that the pre-service teachers and teacher-educators held towards the usability of Facebook as collaborative learning-aids were identified by Soomroa et al. (2014) in their study. Soulaymani & Alem (2019) revealed in a survey on Moroccan English teachers that teachers generally bear the tendency of using the features of Facebook for pedagogical purposes and find thispractice as helpful in achieving professional skills which ultimately put out positive influences on theprocess of teaching and learning. According to the exploration of Tozer (2017), it was evidenced that, intheir teaching practice, generally teachers were not habituated with applying diversified social media tools.They, however, bear more or less positive attitudes towards using those.

In the explorative study of Saborit et al. (2016), they investigated teachers' perceptions and attitudes towards collaborative learning regarding their age, gender, teaching-involvement periods, educational qualification, and areas of intertest. They revealed teachers' positive attitudes towards collaborative learning regardless of those considerations. Moreover, teachers' training-involvement was observed to have encouraged them to use collaborative approach more extensively.

Teachers' negative perceptions and attitudes

On the other hand, for analyzing the underlying issues critically, I am citing here some converse evidence from the literature. Manca & Ranieri (2016) revealed that "Social Media use is still rather limited and restricted and that academics are not much inclined to integrate these devices into their practices for several reasons, such as cultural resistance, pedagogical issues or institutional constraints" (p. 1).

Although Facebook is the mostly used social media platform among the teachers, majority of the teachers are inclined to use this tool for serving their social purposes and getting connected with their family members and friends. Very few teachers have the tendency of using this platform for educational purposes. Pre-service teachers, however, are observed to hold more positive attitudes towards the usability of Facebook in collaborative learning than the other teachers. They, however, were not observed to have preparedness of using this platform for collaborative instructional purposes (Soomroa et al., 2014).

Based on Tozer (2017)'s explorative study, the worst thing in this setting is to allow the learners to use this platform only for chatting and posting without any observatory supervision, teachers perceived. Failure to limit its usage imposing regulations also bring negative outcomes. Frustration arose for teachers using this platform when they experienced the scarcity of technology and insufficient infrastructural facilities in students' captures (Tozer, 2017).

Students' perceptions and attitudes toward using Facebook for Collaborative Learning

Students' positive perceptions and attitudes

In his study, McCarthy (2012) identified that Facebook was tremendously fruitful in making bonds between two collaborating international learners' cohorts through e-mentoring scheme, where learners were facilitated by Facebook features for the purpose of communicating with their international peers.

For examining students' attitudes towards Facebook's usability in learning, Chou (2012) discovered that students were tremendously optimistic in getting the usability of Facebook in learning. Students found the opportunity of sharing information and accomplishing the embedded tasks in Facebook's domain as enjoyable experiences. They considered that the opportunity of using Facebook helped them to learn their physical and virtual learning behaviors in a better way. They also considered the usability of 'Facebook Group' as the best class website for its easy accessibility and easy to use features. In his study, McCarthy (2012) elicited students' perceptions and attitudes towards Facebook use, as such, it is easy to use, easily accessible, has intuitive interface, synchronous and asynchronous mentoring facility, etc.

In their evaluative study on the topic of 'Facebook as a collaborative and communicative tool', Raman, Sani, & Kaur (2014) carried out an examination on the ways of users' intentions and behaviors regarding a technology were determined by factors such as "performance expectancy, effort expectancy, social influence and facilitating condition" (p. 145). They discovered the fact that, "Social influence and facilitating conditions have a significant positive effect on behavioral intention and behavioral intention could predict the use of Facebook applications for learning and communication purposes" (p.145). In another study carried out by Sanchez, Cortijo, & Javed (2014), it was also discovered the 'social influence'

as the most influential element to lead students adopting Facebook as an effective learning-supportive tool which builds learners' actions and attitudes towards using it.

Students' negative perceptions and attitudes

In his inquisitive study, Layman (2006) identified several negative perceptions and attitudes of learners towards collaborative learning setting. He pointed out the reasons of bearing the negative perceptions and attitudes towards collaborative task as the partner's lack of confidence, tendency of keeping him/her aloof of participating and difficulty in setting time of collaborative engagement outside of the classroom.

Challenges from students' views

From students' views, two potential challenges were identified by Layman (2006) in creating the collaboration fruitful among introvert (or reflective, confident) learners. Identifying the potential incompatibility among partners and providing essential guidance for overcoming that was the first challenge. Arranging collaborative work at a mutually preferred time and place outside of the classroom keeping pace with other learning activities was the second challenge.

Summary of Literature Review and Rationale

At the time of reviewing the literature for the purpose of addressing the aims of this present research study, I have come across with mixed evidence about whether Facebook can be corroborative in making collaborative learning practice efficacious. This means that some of the research studies highlighted mostly on Facebook's distractive influences, while some others pointed out its beneficial aspects. While conducting this present study, I have also experienced the inadequacy of research studies that addressed and focused on this issue directly. In literature, I have found plenty of individual research covering collaborative approach of learning and a plethora of individual research covering the usability of Facebook in learning as well. I have, however, found very limited number of studies that addressed Facebook's usability as a tool of collaborative learning support. I have also observed a gap in literature about the perceptions and attitudes of the teachers and students jointly covering this topic. Finally, a limited number of studies attempted to conduct in-depth investigation covering this area of interest. Therefore, reviewing the literature thoroughly, I have realized the necessity of conducting a research study that could cover the gap in literature by making some beneficial contributions in this regard.

Here, once again, I am stating the research questions of the study to luminously follow the forthcoming chapters of this paper-

1. How has Facebook influenced Collaborative learning?'
2. How do teachers perceive and make use of Facebook as a collaborative learningtool?
3. How do students view on the strengths/weaknesses, etc. of Facebook as a collaborative LEARNING TOOL?

RESEARCH METHODOLOGY

Research Paradigm

In this study, the research paradigm of 'Interpretivism' was followed to find the answers to the research questions. Relying on participants' personal experience and interpretation other than an outsider, interpretivism concentrates on gaining the comprehension of more significant phenomena contextually other than as a general idea (Creswell & Creswell, 2018;Thanh & Thanh, 2015). On the other hand, the nature of positivist paradigm is quantitative whose understanding is measured and supported by using appropriate evidence (Leavy, 2017).

For understanding a common issue properly, researchers inquire the views of people or groups in qualitative research for gaining better insight to take further action (Cresswell & Poth, 2016; Leavy, 2017). On the flip side, in quantitative analysis, a good amount of data needs to be gathered to derive a general outcome. Therefore, the researchers find it problematic to apply the gained understanding in a local context (Johnson & Onwuegbuzie, 2004). Hence, it can be claimed that qualitative research is mostly appropriate where it is needed to get a deep insight into the underlying phenomenon and thereby apply the insight in the context that the present study considered (Cohen et al., 2018; Creswell & Creswell, 2018).

Approach to Data Collection

Rather than generalizing the whole population, the objectives of this present research project was to pursue for in-depth realization covering the issues of the three research questions. Moreover, the aim of this study was to explore the teachers' and students' present beliefs, attitudes, and perceptions on the usability of Facebook as an effective tool of collaborative learning support for enhancing learning outcomes of the students. Therefore, I utilized a qualitative research approach to data collection (Cohen et al., 2018; Creswell & Creswell, 2018).

The Research Setting

For conducting this research project, I was constrained with limited time and cost. Therefore, for conveniently conducting the research having constrained with time and cost limitation, I chose my own working institution ('Economics Department' of 'R College') as the research context and sample source (Creswell & Creswell, 2018; Leavy, 2018). The intervened 'Economics Department' of 'R College' have been providing education in four-year honors and one year master's program. The institution is running its operation with the limitations in supportive infrastructural facilities and technology-incorporation in education. In this study, I arranged a convenient setting of sample for the purpose of collecting primary data from the participant students and teachers of the 'Economics Department' of this college (Creswell & Creswell, 2018; Leavy, 2018).

Methods

In this present study, I used two research methods- 'Semi-structured Interview' and 'Focus Groups' from the interpretivist perspective targeting to produce best possible information having constrained with limited time and cost (Creswell & Creswell, 2018; Leavy, 2018).

Interviews

For exploring and assessing teachers' perceptions, attitudes, and experiences on research questions 1 & 2 (Facebook's influences- RQ 1, and teachers' views- RQ 2, regarding the research topic), this study utilized interviews as the data collection method (Cohen et al., 2018; Creswell & Creswell, 2018). Interview means careful questioning, listening, and recording to search for a comprehensive knowledge that is not possible in an everyday conversation (Creswell & Creswell, 2018; Kvale & Brinkmann, 2009).

Justification of Interviews

When it is necessary to gather information and derive in-depth understanding on group(s) of people's perspectives, beliefs, and evaluations on predetermined topic(s) like the present study context, a research interview can serve the purpose very efficiently which other tools like observation fail to perform in most cases (Creswell & Creswell, 2018; Yin,2011).

The Interview Tool/Research Instrument

I selected 'Interview Protocol' with some semi-structured open-ended questions to elicit respondent teachers' perceptions regarding RQ-1 and RQ-2 as the 'Interview Tool/Research Instrument' (see Appendix H). According to Creswell & Creswell (2018) and Jacob & Furgerson (2012), a well-designed interview protocol can gather useful data very effectively where the target is to elicit research respondents' viewpoints on particular area(s) of interest.

Sample

I invited all the 5 (five) employed teachers of the 'Economics Department' of 'R College' to take part in the individual interview sessions. The selected teachers have been serving in different hierarchical positions (Lecturer, Assistant Professor, and Associate Professor), and thereby I was facilitated with gathering consistent, inclusive, and saturated (exhaustive) data regarding RQ-1 and RQ-2 (Creswell & Creswell, 2018; Leavy, 2017).

Sampling technique

I selected all the 5 employed teachers of the 'Economics Department' purposefully for getting their perceptions and attitudes regarding the research questions from all of them, and thereby I facilitated with getting their diversified and inclusive perceptions and attitudes which were very helpful to obtain reliable and practical findings of this study. I set a convenient time-schedule for each of the 5 teachers as per their consent and wish so as to get interviewed all of them. Thereby, my sampling method of teachers' interviews was a combination of convenience, purposive and exhaustive (Creswell & Creswell, 2018; Leavy, 2017; Sharma, 2017).

Procedure

For conducting individual interview sessions with the teachers of the 'Economics Department' of 'R Government College', at first, I took a formal informed ethical approval from the 'Principal' of that institution (see Appendix B and Appendix C). Then I urged the informed consent of the participant teachers in getting involved in this research project as respondents for expressing their perceptions on the research topic and research questions (Creswell & Creswell, 2018) (see Appendix D and Appendix E). I invited them to participate in an individual interview session with me consisting of nine questions (five questions covering RQ 1, and four questions covering RQ 2) to get satisfactory responses for the first two Research Questions. I incorporated two exit questions in the individual interview schedules for capturing respondents' saturated (exhaustive) perceptions (see Appendix H). I gathered interview data face to face from the respondent teachers and recorded the conversation and took notes so as to restore them in my memory in detail.

Focus Groups

For exploring and assessing students' perceptions, attitudes, and experiences on the overall research topic (Facebook's usability in Collaborative Learning) and research questions 1 & 3 (Facebook's influences- RQ 1, and students' views- RQ 2, on the research topic), this study utilized Focus Groups as the data collection method. Focus Group is a sort of in-depth interview accomplished in a group, where the key focus is the interaction that occurs inside the group (Cohen et al., 2018; Creswell & Creswell, 2018).

Justification of Focus Groups

When it is needed to generate information on combined views, beliefs and experiences, and the interpretations that lie behind those views like the present study, Focus Groups are used there as the data collection method (Cohen et al., 2018; Creswell & Creswell, 2018). In the data collection process, Focus Groups allow a rich and flexible environment which is beyond the capacity when applying a data collection method individually. As well as this, Focus Groups permit the research respondents to be spontaneous during the time of interactions (Cohen et al., 2018; Creswell & Creswell, 2018).

The Focus Group Schedule/Research Instrument

I selected 'Interview Protocol' with some semi-structured open-ended FGD (Focus Group Discussion) questions to elicit respondent students' perceptions regarding RQ-1 and RQ-3 as the 'Interview Tool/Research Instrument' (Creswell & Creswell, 2018; Merriam, 2012). (See Appendix I)

For setting a Focus Group Schedule successfully, understanding the difference between an overall research question and a question to be posed during a focus group discussion is crucial (Creswell & Creswell, 2018). In my focus group sessions, I avoided asking participants to make their responses covering the overall research question. Other than this, I formulated target-oriented, concrete, and articulate questions (often: sub-question, probe question or discussion question) for collecting participants' responses, compare and evaluate them and eventually interpret them in a way such it was possible to answer the overarching research question (Creswell & Creswell, 2018; Merriam, 2012).

Sample

The second respondent group of this study was the second-year undergraduate students of my 'Economics Department'. 170 students are presently enrolled in the second year of the undergraduate programme. Of them, the number of students who attend to their class sessions regularly is 40 to 50 students. I have selected this regular class attendees as the target student population. I requested all these regular students to participate to my designed collaborative class over the period of this research. I have invited only 8 students from my designed collaborative class for 4 FGDs in two phases having invited 4 students in each of the 4 FGDs (Cohen et al., 2018; Creswell & Creswell, 2018).

Sampling technique

In qualitative research, it has become a common practice of selecting the research participants on the basis of translucent criteria, such as their life-experience, knowledge, specific characteristics or role in a group or community (Creswell & Creswell, 2018; Khan & Manderson, 1992).

Having prioritized these criteria, I have selected those 8 students out of 40 to 50 students from my designed collaborative classes purposefully who were found thoughtful and perceptive regarding the research questions, and thereby I was facilitated with getting their diversified and inclusive perceptions and attitudes which were very helpful to obtain reliable and practical findings of this study. I have set a convenient time-schedule for each of the 4 FGDs with students as per their consent and wish so that they can feel comfortable during the FGD sessions and express their varied and all-round perceptions and attitudes. Thereby, my sampling method of students' FGDs was a combination of convenience and purposive (Creswell & Creswell, 2018; Merriam, 2012; Sharma, 2017).

Procedure

After getting involved with the students in a good number of classes in my designed collaborative class, I invited the pre-selected 8 students to take part in two FGDs at the onset (Phase 1) having 4 students in each of the two FGDs. They took part in the two FGDs in two groups. Before arranging the FGDs, I took the

informed consent of the respondent students (Creswell & Creswell, 2018). (See Appendix F and Appendix G)

I have selected five questions for each of the two focus groups at the onset (Phase 1). Afterwards, I invited all the students of the designed class to join in a 'Facebook Group' that was created by me. After the involvements in the Facebook group for some satisfactory time periods, I again conducted two FGDs towards the end (Phase 2) with the same two groups of students. Here I utilized 3 probe questions, 3 follow-up questions covering RQ-1 (influences of Facebook for Collaborative Learning) and 5 follow-up questions covering RQ-3 (students' views on Facebook's usability in Collaborative Learning) to elicit their all-round and exhaustive or saturated perceptions (Carlsen & Glenton, 2011) regarding the Research Topic and two Research Questions (Research Question 1 & 3). I incorporated two exit questions in the FGD schedules for capturing respondents' saturated (exhaustive) perceptions (see Appendix I).For analyzing the data later, I took notes and kept record of the discussion (Creswell & Creswell, 2018; Silverman 2006).

Validity, Reliability, Triangulation

Validity

"Validity relates to the techniques' integrity and applicability and the accuracy with which the findings represent the data accurately" (Creswell & Creswell, 2018; Long & Johnson, 2000). To construct validity, I used peer debriefing techniques in this study. "Peer debriefing improves the validity of any study by working with one or more expert peers who are qualified, unbiased and have no personal stake in the topic to analyse and critique the transcripts, methods, and conclusions" (Creswell & Creswell, 2018; Creswell & Miller, 2000). As a peer debriefer, I received assistance from an experienced Assistant Professor of my Economics Department. I discussed with the debriefer about the research project, its aims, the primarily formulated research questions, and interviews' and focus groups' questions. The debriefer meticulously examined all and validated them with his experienced observation and expertise. According to his suggestions, I revised the research questions, the interviews' and focus groups' questions. Then I sent them to my honourable supervisor for further feedback. I amended them again as per the precious feedback of my supervisor and finalized them for utilizing in this study

Reliability

"Reliability refers to the consistency of analytical processes" (Creswell & Creswell, 2018; Long & Johnson, 2000). To increase reliability in this investigation, I followed the following procedures based on the guidelines of Cohen et al. (2018) and Cresswell & Poth (2016):

- For the research respondents' plausibility of each stage of the questions, I meticulously planned the interview protocols.
- I ensured freedom for the respondents in responding to their own way and pace.
- I removed the hesitation, doubts, and ambiguity of the respondents with proper explanation.
- I attentively listened to the respondents' responses, and I was aware of their attitudes and recommendations.
- To improve the Reliability, I conducted the interviews and focus groups using appropriate recording equipment and accurately transcribes the digital data.
- I followed a common data coding system to improve the reliability, and I created a preliminary coding to improve the dependability.
- I showed my transcription to the peer debriefer to validate consistency.

Triangulation

In this study, I utilized the vastly used and effective two types of triangulations- (1) Data Triangulation, and (2) Methodological Triangulation (Carter, DiCenso, Blythe, & Neville, 2014; Creswell & Creswell, 2018).

Data triangulation refers to the uses of two or more methods for the verification of the findings and results (Carter, DiCenso, Blythe, & Neville, 2014; Turner & Turner, 2009). In this study, I utilized the data triangulation approach to enhance the credibility and validity of the findings by arriving at a saturated and accurate situation under investigation having arranged a comparative analysis of the outcomes of the two methods- interview and FGD (Altrichter et al. 1996; Cohen et al., 2018).

On the other hand, Methodological triangulation refers to combining a mixture of research methods to increase the validity of a study (Carter, Bryant-Lukosius, Blythe, & Neville, 2014; Turner & Turner, 2009). In this study, I utilized the methodological triangulation approach for making room forgathering more comprehensive data and a greater insight into the research topic than adopting just one method (Altrichter et al. 1996; Creswell & Creswell, 2018).

Ethical Considerations

This research project maintained the following 'Ethical Considerations':

Informed Consent

Before collecting data, all the research respondents were provided with an information sheet outlining the summary of the project, and an ethical consent form clarifying the commitments and expectations pertinent to the project, such as, commitments regarding anonymity and confidentiality, data using arrangements, etc. (see Appendix D, Appendix E, Appendix F and Appendix G). Before involving the research respondents (teachers and students) of 'R' College in the data generating process, the head of the institution's (Principal) informed consent was also taken (Cohen et al., 2018; Creswell & Creswell, 2018). (See Appendix B and Appendix C)

For mitigating the feeling of difficulty in taking part, I briefed the research respondents about the research project, its aims, and the questions of the interviews and FGDs prior to start the conversation with them. Their doubts and unclarity were resolved, and their questions were answered with explanation and proper clarification (Cohen et al., 2018; Creswell & Creswell, 2018).

Right of withdrawal

Having conducted each interview and FGD session, I as the researcher notified all respondents of getting freedom to amend or withdraw their expressed perceptions at any time up until data was analyzed (Cohen et al., 2018; Creswell & Creswell, 2018).

Data Protection

The documented attitudes and perceptions of the respondents were stored securely on password protected computers in a way of making it non-traceable like using codes for individuals (Cohen et al., 2018; Creswell & Creswell, 2018).

Assurance of anonymity, confidentiality, and non-traceability of research participants

The provision of anonymity, confidentiality and non-identifiability of individuals and institutions was maintained in the writing up of the research project, and any derivative reports, presentations, and publications of this study (Cohen et al., 2018; Creswell & Creswell, 2018).

Risks to participants:

The setting and arrangements of this research project were organized in such a way that the participants had to face no more than standard risks. Sensitive issues were avoided to be included in the subject matter and commonly understood data collection methods were utilized. Having no negative consequences in case of non-participation was assured for the participants (Cohen et al., 2018; Creswell & Creswell, 2018).

I discussed with the participants that when they were conveniently available without feeling any discomfort or anxiety in taking part in the interviews and FGDs and I arranged the time-schedule of the interviews and FGDs accordingly.

The duration of the interviews and FGDs was set in the way that the participants did not find to take part as tiring. The conversation was guided in the way that the participants considered taking part as an enjoyable experience (Cohen et al., 2018 Creswell & Creswell, 2018).

Data Analysis

This study followed the 'Thematic Analysis' approach for analyzing the collected data. "Thematic analysis is a method of analyzing qualitative data and it is a good approach to research where the researchers try to find out something about people's views, opinions, knowledge, experiences or values from a set of qualitative data – for example, interview and FGD transcripts, social media profiles, or survey responses"(Vaismoradi, Turunen & Bondas, 2013). In this present study, as I adopted a qualitative research method to derive findings on Facebook's usability in collaborative learning from the opinions, perceptions and experiences of the respondent teachers and students, I decided to utilize thematic analysis as the best choice for analyzing my collected qualitative data (Braun & Clarke, 2006; Halcomb & Davidson,2006; Vaismoradi, Turunen & Bondas, 2013).

From the various approaches to conducting thematic analysis, I adopted the most common form of a six-step process developed by Braun & Clarke (2006; 2014) (as cited in Halcomb & Davidson,2006 and Vaismoradi et al., 2013) as follows:

Step 1: Familiarization

At the very beginning of analyzing data, I thoroughly overviewed all my collected data that involves reading through the 'notes' and 'memos' and transcribing the audio recordings for getting familiar with the data.

Step 2: Coding

After initial familiarization of the data, I highlighted the relevant transcripts of every interview and FGD. Then I used some 'codes' for gaining a terse overview of the important points of the data.

Here, I am giving an example of generating 'codes' from an extract of one of the interviews as follows:

Interview Extract	Codes
We consider that it is nearly impossible to conduct a full-fledged collaborative class within our scheduled class time of only forty minutes. The students have to sit in a long bench up to 4-5 students altogether, and therefore the modern class for arranging group-work is not possible with this traditional sitting arrangement. Facebook collaboration can be emerged as a solution for this limitation as it is not necessary such sorts of physical organization in Facebook.	- Class duration - Sitting arrangement - Group-work arrangement Facebook collaboration's easy arrangement

Step 3: Generating themes

At this stage, I generated some 'themes' by identifying patterns among the codes and combining several codes under a single theme.

I am giving here an example how I combined several codes under a single theme as follows:

Codes	Theme
• Class duration • Sitting arrangement • Group-work arrangement • Facebook collaboration's easy arrangement	Setting of physical and Facebook collaboration
• Peer interaction in Facebook collaboration • Interdependence among learners • Social and academic consensus	Differentiated interaction with the peers

Step 4: Reviewing themes

Here I reviewed my created themes by closely observing the data set repeatedly so as to assure that the created themes can represent the data set accurately.

Step 5: Defining and naming themes

Here I gave succinct and plausible 'names' of all the generated themes. I defined each theme exactly with its meaning and figured out how it assists in understanding the data.

Step 6: Writing up

Finally, I wrote up the data analysis proceedings for answering this study's three research questions and illustrating and justifying the aims of this study.

In the findings section of this study, I addressed each theme in turn.

FINDINGS

This section was designed in such a manner so that it could derive findings from the collected data of teachers' interviews and students' FGDs regarding the three research questions. Each sub-section of this chapter was designed to deal with one of the three research questions separately. The discussion was carried through with using 'Thematic Content Analysis' under different themes. Some of the principal themes were divided into some other sub-themes according to the research requirement.

Influences of 'Facebook' as a tool of 'Collaborative Learning' support (Covering Research Question 1)

While investigating on the research respondents' perceptions regarding the first research question-'How has Facebook influenced Collaborative learning?', I guided the conversation with both types of the research respondents (teachers and students) targeting to derive their perceptions regarding Facebook's influences on the three crucial areas (on my generated three principal themes), which are- 'setting of physical and Facebook collaboration, and relevancy of it on social-constructivist learning theories', 'the

fruitfulness of the arrangements of Facebook collaboration', and 'the ways to overcome the disturbances and challenges of Facebook collaboration'. Under these three principal themes, I identified fourteen diversified sub-themes while analyzing the data.

Theme: Setting of collaborative learning and relevancy of it on 'social-constructivist' learning theories

While exploring Facebook's influences on the setting of collaborative learning arrangements, most of the research respondents expressed their views on revolved under three sub-themes- 'large-sized class' (revealed from two teachers and five students' views), 'class arrangements with short duration' (revealed from one teacher and six students' views), and 'class arrangements in unplanned and unstructured set-up' (revealed from one teacher and two students' views). One of the teachers also shared vital opinions about the relevancy of collaborative learning on 'social-constructivist' learning theories (Teacher E).

All respondent teachers and students expressed their alike views that it was nearly impossible to conduct a full-fledged collaborative class within their scheduled class time of only forty minutes. The respondent students realized that they had the opportunity to interact collaboratively in Facebook's domain for making their collaboration meaningful and saturated. It was also revealed from teachers' perceptions that Facebook can play the role for constructing such collaborative learning environment effectively.

The respondent students stated that usually they have to sit in a long bench up to 4-5 students altogether, and therefore the modern class setting for arranging group work is not possible with this traditional sitting arrangement. Facebook collaboration can be emerged as a solution for this limitation as it is not necessary such sorts of physical organization in Facebook collaboration.

All the respondent students and teachers pointed out that arranging collaborative class involving large-sized classes is simply nearly impossible within the allocated short class duration and class setting. But using Facebook, they could avail the opportunity to interact with students before meeting in physical classrooms, create groups and provide necessary instructions, and thereby physically conducted collaborative class can be driven in a good way and can make it more effective.

Some teachers expressed that,Facebook as a learning tool accords with the ideas and privileges of 'social-constructivist' learning theories where learning outcomes achieved in the process of noticing others' views, activities, tasks, and thereby driving students towards achieving socio-cognitive gains. One student was also in support of this evidence who asserted that, "Involving in Facebook's domain, we all can avail the opportunity of learning from others through noticing others' ideas, logical points, writing style and pattern, resourceful content knowledge, and by this process of constructive evaluation, we can develop ourselves."

Theme: Collaborative learning arrangement's fruitfulness

The respondent students were in the opinion that, most of the times, they are susceptible to the negative feelings of nervousness and hesitation in front of their teachers in physically conducted collaborative classes. Teacher respondents also mentioned that sometimes psychological factors create hindrances for the students in utilizing their competency and potentiality fully. They expressed that they have been observing during their teaching career that introvert and shy students usually refrain themselves from taking part in classroom collaborative learning because they suffer from inappropriate frustration and fear in case of physical collaborative works. But it was evident that the collaborative arrangements in Facebook's domain assisted them to get relief from such sorts of unnecessary fear and frustration by allowing a flexible comfort zone for them so that they became spontaneous to ask relevant questions at any stage of the collaboration.

Students expressed that they experienced enhanced level of feedback from their teachers in Facebook collaboration. They also mentioned thatthey gave more importance and attention on a topic in Facebook collaboration other than physical collaboration. Teachers also justified this finding saying that consistent and asynchronous assistances and supervisory guidance in Facebook's domain drive their students to be more constructive in their learning tasks.

Both types of research respondents- teachers and students were in the expression of getting 'higher level of interaction' while collaborating in Facebook's domain. Student respondents were in the expression of getting 'higher level of peer interaction' in the form of 'peer review' and 'peer evaluation' of one another's tasks in Facebook collaboration. Teacher respondents mentioned that, through teacher-students and peer interaction in Facebook collaboration, it could be derived the diversified ideas of the involved students that could be beneficial for all of them by sharing the ideas with each other.

student respondents expressed that they could avail a considerable amount of individual reading while collaborating in Facebook's domain. Hence, they got the beneficial opportunity to properly utilize their leisure time on learning in Facebook collaboration. One student respondent's expression is worthy of mentioning in this respect-

"Earlier, I was in the bad habit of spending time wastefully; now I have availed the opportunity of utilizing my valuable time effectively for learning involving in Facebook collaboration"

 Theme: The ways to overcome the disturbances and challenges of collaborative learning

From both types of research respondents' (teachers and students) citations, it was identified several root problems while organizing collaborative learning effectively. These were- 'systemnon-familiarity' (revealed from two teachers' perceptions), 'free-riding inclination' (revealed from one teacher and one student's perceptions), 'dominating and commanding inclination towards weaker learners' (revealed from one teacher and two students' perceptions), etc.

From the utterings of student respondents, it was revealed that some participants in physical collaborative arrangements did not take part actively and showed the inclination to keep themselves aloof from the collaborative tasks. Regretfully, however, those participants were also found to be assessed equally at the time of final assessment. The respondent teachers also expressed their anxiousness to this persistent problem. They perceived that Facebook use in collaborative learning has got the scope of handling this trouble adeptly as teachers can easily follow and observe all students' involvements in Facebook collaboration and thereby can assess them as per their individual contribution.

Some of the respondent students commented that few group members sometimes showed their 'dominating and commanding inclination' over the other group members of the collaboration. Regarding this issue, the respondent students expressed that they found Facebook collaboration without having these kinds of chaotic disorders, but otherwise Facebook collaboration assisted them to make the necessary group-consensus by keeping aside the dominating and commanding inclinations.

The most encountered challenge of utilizing the collaborative techniques, according to the views of the respondent teachers, was their system non-familiarity and awkwardness in handing the system. They also felt the necessity of being accustomed with the system from the students' side. In utilizing this strategy with its full potential, teachers need to be properly trained and skilled in using its features. Still,taking all these limitations, teachers believed that they could make a good start with Facebook. Teacher B's remark is worthy of mentioning here-

"We have realized that implementing collaborative technique would be tremendously beneficial, but we are not properly prepared to implement it. Facebook bears the potential to do a lot in this respect by making a good start."

Summary

To sum up, for getting answers of the first research question- 'How has Facebook influenced Collaborative learning?' from the perceptions of the research respondents (teachers and students), the present study derived findings that Facebook had significantly fruitful influences in making collaborative learning effective from three dimensions. The research respondents perceived that Facebook collaboration was effective for the better organization of large classes, traditionally designed classes' arrangements, and existing classes' time constraint. Facebook collaboration then found effective in easing learners' hesitation, nervousness, and fear, ensuring higher degree of interaction, ensuring enhanced feedback level, allowing considerable reading time outside class, and keeping students engaged and motivated in learning. Finally, Facebook collaboration was found effective in dealing with the disruptions and challenges of collaborative practice by assisting the teachers and the students to familiarize with the system and erasing free riding as well as dominating and dictating inclination.

Teachers' Perceptions and attitudes regarding Facebook's influences (Covering Research Question 2)

While investigating on the respondent teachers' perceptions regarding the second research question- 'How do teachers perceive and make use of Facebook as a collaborative learningtool?', teachers are observed to show mixed attitudes towards using Facebook for collaborative learning support. I identified thirteen different themes from their expressed feelings addressing their teaching practices and students' learning experiences.

Teachers' perceptions about teaching practices and professional experiences

While expressing their opinions on teaching practices and professional experiences, the teacher respondents addressed different issues. In this study, their perceptions are classified into seven sub-themes as follows:

Table 1

Research Question 2 (a): **Teachers' views on Facebook's influences regarding their teaching practices and professional experiences**
·   Connectivity and interaction opportunities
·   Flexibility and lessened workload
·   Lesson plan formation
·   Assessment technique-related familiarity and sense of accountability
·   Curriculum and content-related familiarity
·   Technology-related familiarity

The teacher respondents were in the opinion that 'Facebook supported teaching strategy' assisted them to be more 'familiar with the technology'. One respondent teacher (Teacher D) mentioned about lesson plan formation as such-

"Involving in Facebook collaboration, I have learnt how to prepare a 'lesson plan' customized for particular learning objectives"

The respondent teachers expressed that the process of Facebook collaboration stimulated the students to think critically by providing practical problems of the relevant contents to them in Facebook's domain. Necessarily, this practice guided them to gain practical problem-solving skills and reflective thinking habit.

The teacher respondents perceived that the incessant 'interaction and connectivity' in Facebook collaboration developed both the teachers' and students' interpersonal and communication skill.

The respondent teachers pointed out that they got sufficient time and scope of prior preparation for answering the questions of the students and giving feedback in Facebook collaboration. Thus, they experienced a 'diminished workload level' (Teacher A) and 'uplifted flexibility level' (Teacher D) for performing their teaching practices.

The respondent teachers asserted that they got the opportunity of more 'curriculum and content familiarization' during their participation in Facebook collaboration (Teacher B and E). As availing more time and greater scope to learn the content deeply, they were guided to get an in-depth understanding of the curriculum. One teacher respondent's (teacher C) expression sounds relevant here-

"The strategy of Facebook collaboration has driven me towards conceiving comprehensive, proper, insightful professional experiences of guiding, assessing, judging, and overall educating techniques"

These involvements assisted teachers to utilize consistent formative and summative assessment procedures with higher sense of accountability. Finally, the respondent teachers realized that they were blessed with getting the vital opportunities to gain professional and academic expertise regarding computer handling skills,technology use and modern pedagogical knowledge.

Teachers' views on Facebook's influences regarding students' learning experiences

During interview sessions, the respondent teachers expressed their views on Facebook's influences in students' learning experiences revolving under seven diversified themes as follows:

Table 2

Research Question 2 (b): **Teachers' views on Facebook's influences regarding students' learning experiences**
·   Students' exam-grades and other learning outcomes
·   Students' comprehension of their learning contents
·   Students' self-confidence building up
·   Students' motivation and engagement in learning
·   External knowledge acquisition
·   Social dillydallies and psychological distraction
·   Discrimination in personal technology ownerships

All the teacher respondents did not have any prior experiences on using Facebook for learning purposes. Therefore, while interviewing, they were in mixed opinions about any direct impact of Facebook collaboration on students' learning outcomes and exam-grades. One respondent teacher's (teacher C) expressed views are seemed vital here-

"In our prevailing assessment system, the students are usually getting the scope of performing better in exams without having involved with their course contents comprehensibly. From this consideration, any such experiment of Facebook collaboration will not bring any noticeable upliftment of exam-grades from the prevailing level"

But they were found of showing positive attitudes regarding achieving other learning outcomes other than exam-grades. In this regard, they expressed their views on the matters of 'knowledge acquisition' (Teacher B and C), 'understanding and comprehension of learning contents' (Teacher A), 'self-confidence build-up' (Teacher B and E), 'enhanced motivation and engagement' (Teacher C and D).

They expressed those involvements in Facebook collaborative group can obviously be a vital source of 'beyond-syllabus knowledge acquisition and dissemination' as conceiving the features of easy accessibility and flexibility. Furthermore, the teacher respondents expressed that learning occurs here in a stressless environment and thereby positive changes are occurred in learners' cognitive structures. They also claimed that Facebook collaboration can make the students self-confident in engaging in a discussion with their teachers and peers as well. They believed that Facebook group engagement for collaborative learning support was thereby helpful for students' better 'comprehension of their learning contents'.

Most of the respondent teachers expressed that Facebook collaboration would surely enhance students' 'engagements in their learning activities'. One of the interviewed teachers' (Teacher A) remark was notable regarding this matter-

"We are now facilitated with delivering more instructional materials and be engaged more with students than before because of Facebook's ease of use feature."

Hence, they realized that they can now promptly and easily interact and exchange views and messages with their students. One of the respondent teachers (Teacher A) expressed that he had been observing the students to engage their more time and effort for learning involvements both inside of their classrooms and outside of classrooms by engaging in Facebook collaboration. The students also acquired the necessary skills to participate in academic discussion.

Based on teachers' observation, students are advantaged to keep themselves away from any type of disincentive in learning and fatigue and, thereby they are 'consistently motivated' (Teacher B) through 'continual interactions and connection with their teachers and peers'.

From the conversation with the respondent teachers, it was also revealed their negative attitudes in two crucial areas that can negatively affect students' learning experiences. One is 'social dillydallies and psychological distraction' (revealed from one teacher's perceptions) and the other one is 'discrimination in personal technology ownerships' (revealed from another one teacher's perceptions).The respondent teachers shared their anxiousness that Facebook collaboration might cause mental distraction as well as losing the benefits of individual learning. They were in opinion that cognitive gains require solitary learning, particularly self-comprehension, secluded thinking, argument building etc. Facebook collaboration might hinder this process and waste solitary learning space and time. The respondent teachers observed that Facebook engagements might cause distraction of attention of the students from their learning contents frequently. However, they pointed out that these problems can be solved if Facebook engagements can be handled with proper care and monitoring.

The respondent teachers pointed out that the students who enrolled in the Government colleges of Bangladesh came mostly from the impoverished families. Another point that they mentioned was that most students are belong to the religious families where they are not permitted to open a Facebook account and use it. In this regard, one respondent teacher (Teacher A) expressed his anxiousness by saying,

"If it cannot be ensured that all the students own at least a smart phone or any other gadget like PC, laptop, notebook, tab, etc. in which Facebook can be used and access of internet connection, then ethically we do not get the right to implement the system. Otherwise, those students will be engendered in discrimination and inferiority complex who lack the possession of essential technology"

Summary

To sum up, for getting answers of the second research question- 'How do teachers perceive and make use of Facebook as a collaborative learning tool?', the present study derived findings that Facebook collaboration had significantly fruitful influences in two dimensions- their teaching practice and students' learning experiences. Regarding their teaching practice, Facebook collaboration was found to be fruitful in assisting them in technology, learning content and curriculum familiarization, preparing effective lesson plan, reducing their workload with uplifted flexibility, and enhancing interaction and connectivity. On the other hand, regarding students' learning experiences, Facebook collaboration was found to be conducive to the better plausibility of learning contents, knowledge acquisition, making the learners self-confident, motivated, and engaged in various learning activities. In contrary to these positive findings, the teacher respondents expressed their anxiousness of the possibility of social dillydallies, attention distractions and technology deficiencies to be engaged in Facebook collaboration. The present study, however, suggested careful handling and proper monitoring to overcome the shortcomings.

Students' views on Facebook's influences

While exploring the third research question- "How do students view on the strengths/weaknesses, etc. of Facebook as a tool of collaborative learning?", students expressed their views revolved under four diversified themes as follows:

Table 3

Research Question 3: **Students' views on Facebook's influences**
·   Facebook as a 'collaborative learning' supportive tool
·   Teachers' interactions in Facebook collaboration
·   Peer interactions in Facebook collaboration
·   Students' inherent aptitudes development

Theme: Facebook as a 'collaborative learning' supportive tool

Most of the student respondents expressed their views that they consider Facebook as an effective tool for collaborative learning support. They pointed out the reasons for its effectiveness as its usability and accessibility from anywhere and at any time and Facebook's capability of treating the discomfort and difficulties of classroom collaborative environment effectively by ensuring enormous space and time. They expressed their feelings that Facebook can create a congenial learning environment for acquiring additional knowledge while keeping the formal classroom collaborative learning same. From one respondent student's (Student 1) remarks, it was best expressed students' attitudes about the usability of Facebook as an efficient tool of collaborative learning support-

"I experienced that Facebook could overcome the possible disorders arise from classroom collaboration. It can also generate opportunities of critical thinking which essentially build our attitudes towards contributing to the fruitfulness of collaborative learning."

Theme: Differentiated interactions of the teachers

During FGD sessions, the respondent students were in the opinion that, in physically arranged collaborative class, they were not able to avail the proximity of their teacher that they could avail in Facebook collaboration. As one of the respondent students (Student 7) stated,

"In case of face-to-face collaborative arrangement, usually we feel shy and fear to participate actively and to engage in discussions with the teacher"

The respondent students asserted that the use of Facebook diminished their shyness and unnecessary fear greatly as they found easiness in engaging in passive interactions with their teacher. Thus, Facebook provided the opportunity of more intensive interactions with their teacher. Students mentioned that the extra attention and support of the teacher in Facebook collaboration turned them as enthusiastic and more attentive to their learning. By providing extra time in Facebook collaboration, the teacher brought more interest of the students on the discussed topic and made them engaged even beyond the physical class schedules. They were leaded to take part positively in conversation with the teacher by the incessant guidance of their teacher.

Theme: Differentiated interactions with the peers

The respondent students expressed that Facebook use uplifted peer interactions somewhat differently. They got the vital opportunity to create their own network and thereby arrange their own learning collaboration. It was dictated from one respondent students' (Student 6) claim-

"After knowing the advantages of Facebook collaboration, we created a 'nuclear Facebook group' only to interact with our peer group members."

By scaffolding throughout the learning process, students experienced higher interdependence. Their self-establishing interdependence enhanced their social and academic consensus in any issue. Facebook collaboration provided them with the opportunity of posting their collaborative task and engaging in interactions in their peer's post. Over the whole interaction process, they observed each other's ideas and information, and it assisted them to build their own ideas and better comprehension of their learning contents. Some of the responded students also expressed that sometimes they availed the learning opportunities by tracking only their peers' discourse and not participating directly.

Theme: Differentiated aptitudes of the students

The respondent students pointed out some crucial areas regarding their aptitudes where Facebook use could bring noteworthy differences. These are- 'verbal presentation and communication skill' (Student 1, 4 and 7), 'reflective thinking' (Student 2 and 5), 'writing ability of native as well as international language' (Student 3, 6 and 8), 'computer and technology handling familiarity and proficiency' (Student 2, 4 and 6), 'time management and social adaptability skill' (Student 5) and so forth.

In this respect, one of the respondent students' explorations was noteworthy,

"Facebook use in learning purposes helped me a lot to uplift my verbal presentation and communication skill"

All the above-mentioned benefits brought them vast confidence to share and present their tasks in the classroom that they accomplished in their collaborative engagement. They gained constructive discourse skill, practical problem-solving skill, conflict resolution and minimization skill, learn the essential skills to make a group consensus on collaborative discussions and thereby to take appropriate decisions.

Again, the respondent students expressed that they became adept in using either a computer device or a smart phone or any other such gadgets by this process of Facebook collaboration. For guiding online conversation effectively, they gained the expertise of using Bengali font or writing in English language. As one of the respondent students (Student 6) mentioned,

"For taking part in Facebook learning group fruitfully, we were necessitating of learning word choice, writing pattern, grammatical issues, etc."

All these involvements also facilitated them with a reflective writing practice.

Finally, the respondent students pointed out that the collaboration in Facebook's domain facilitated them with the vital opportunity of managing and utilizing better available time effectively and making them adept conflict resolute. Having gained all these vital skills, they would now adapt well to the societies and could create a vibrant better social learning atmosphere for all.

Summary

In essence, for getting answers of the third research question (RQ-3)- 'How do students view on the strengths/weaknesses, etc. of Facebook as a tool of collaborative learning?', the present study derived finding that 'Facebook is a supportive tool for collaborative learning'- as the respondent students viewed. In Facebook collaboration, students found positive difference in teacher interaction, peer interaction in the form of peer review and peer feedback. Finally, they perceived that Facebook collaboration uplifted their inherent aptitudes such as reflective thinking, oral communication skill, presentation skill, writing skill in both native- Bangla and international- English languages, expertise in handling computer and other technological gadgets, time management skill, and above all social adaptability skill.

DISCUSSION, LIMITATIONS, IMPLICATIONS AND RECOMMENDATIONS OF THE STUDY

Discussion

Throughout the whole process of carrying through this study, it uncovered some vital facts and dimensions of Facebook use in collaborative learning which were also supported by the already-conducted research studies in literature. Some of the issues, however, are really novel in the college level educational context of Bangladesh. form of peer review and peer feedback. Finally, they perceived that Facebook collaboration uplifted their inherent aptitudes such as reflective thinking, oral communication skill, presentation skill, writing skill in both native- Bangla and international- English languages, expertise in handling computer and other technological gadgets, time management skill, and above all social adaptability skill.

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conducive to making the learning arrangements effective in large-sized classes', was matched with the finding of Yang (2015). Again, another finding of the present study of 'getting the opportunity of technology-assisted instructions in Facebook collaboration by which students' learning outcomes, learning achievements, satisfaction and engagement could be assured' was also supported in literature by Boyle & Nicol (2003)'s and Gleason (2012)'s studies. However, research studies that directly addressed the usability of Facebook for better organizing the class sessions are very scanty which the present study attempted.

The present study's another vital finding that, 'use of social media like Facebook in the context of collaborative learning assures the scope of utilizing the social constructivist learning approach by ensuring flexible interaction-space, intensifying teacher and learner's in-between communication, and providing learning opportunities at any time and in anywhere', informed well the previous finding of Gamble & Wilkins (2014)'s and Gerace, Dufresne & Leonard (1999)'s studies.

The present study also revealed that Facebook use derives influences in 'overcoming students' hesitation, nervousness, and fear', 'uplifting feedback pattern and degree', 'ensuring higher interaction level', 'making available of considerable reading time', and 'keeping the students motivated and engaged in learning'. These findings are clearly some vital additions to the prevailing literature. Again, the study pointed out that students' shyness influences collaborative engagements highly in the negative way and Facebook use can lessen it by means of passive interactions. The study revealed that 'Facebook use greatly intensified the performances of introvert students because social media like Facebook are highly cooperative in uplifting their self-confidence and thereby collaborative learning performances as well'. All respondent students also expressed that they are now getting in touch more with their teachers. These findings contributed to the earlier findings of Razali, Shahbodin, Ahmad & Noor (2017)'s andVoorn & Kommers (2013)'s studies who mentioned that social media like Facebook enlarges the scope of removing shyness and conferring opinions of the students.

The student respondents of this present study also expressed that 'they found Facebook as highly useful regarding exchanging of peer support in the form of peer review and peer feedback'. This finding contributed to Vuopala et al. (2016)'s finding in which they highlighted on the enhanced degree and quality of interaction as a catalyst of effective collaborative engagements. It was also found 'the degree of interaction between students and teachers to be enhanced by using virtual community like Facebook' that was co-related with Demirbilek (2015) & Hsu (2017)'s finding. Student engagement was found to be clearly uplifted by asynchronous learning (got support of the finding of Irwin, Desbrow & Leveritt, 2012).Technology affordance allows extensive flexibility to access the learning contents and thereby students' motivation, satisfaction and engagement have been enhanced (informed the finding of Northey, Bucic, Chylinski & Govind, 2015). These findings also contributed to the finding of Wise, Skues & Williams (2011)'s study where they state that 'the judicious and effective use of Facebook can uplift students' academic performances'.

This study also revealed some findings about Facebook's positive influences on the potential disturbances and challenges of collaborative learning arrangements such as familiarization of collaborative learning practices, lessening of free-riding inclinations, reducing of dominating and commanding inclinations over weaker learners, and mitigating of students' negative attitudes. These findings contributed to the findings of some studies in literature, such as Strijbos & Laat (2010)'s and Roberts (2004)'s studied, in which it was observed 'the positive influences of virtual collaborative learning in mitigating free riding inclinations and other potential downsides of collaborative learning practices'.

From the perceptions of the research respondents, the present study revealed some disadvantages of using Facebook like the possibility of social dillydallies and psychological distractions from learning. In literature, it was also evidenced such sorts of converse findings of using Facebook as Kreijns, Kirschner & Jochems (2003) evidenced social dillydallies and free riding tendencies as the potential disadvantages of social media tools' use in learning. However, the present study added the finding regarding the solution to these disadvantages from the perceptions of the respondent teachers and students that 'handling with proper caution and monitoring' can make Facebook collaboration mostly effective by keeping aside the disadvantages.

Discussions about findings revealed from RQ2

Research studies that directly address 'teachers' perceptions on the usability of Facebook in collaborative learning (RQ2)' are not so frequent, some studies though conducted to derive teachers' perceptions regarding Facebook use for learning and got teachers' positive perceptions regarding these issues, such as Soulaymani & Alem (2019)'s, Tozer (2017)'s and Saboritet et al. (2016)'s studies. Soulaymani & Alem (2019) revealed that Facebook use helped the teachers to gain professional skills. Hence, the present study carried the vital potentiality of furthering our knowledge in this area by deriving some crucial findings from the perceptions of the respondent teachers that Facebook use facilitated them with technology familiarization, lesson plan formulation, intense interaction and connectivity, workload reduction with greater flexibility, curriculum and content familiarization, and assessment techniques' utilization with greater accountability sense. Connolly, Willis, & Lloyd (2019) observed that teachers were less enthusiastic about keeping a personal Facebook ID and applying it as a teaching aid. Teachers were observed to have inadequate knowledge and understanding of Facebook's functions and features. In their study Teachers were also observed to be less confident in dealing with the features and functions of Facebook. In line with their findings, the present study also revealed the same sorts of findings from the assertions of the respondent teachers during the individual interview sessions. The present study, however, promisingly added a new finding regarding the solution of these deficiencies that it is utmost necessary to bring the teachers under trainings regarding handling of the Facebook functionalities adeptly.

During interview sessions, the respondent teachers also expressed their views regarding Facebook use in uplifting students' learning outcomes. The present study was unable to reveal any sort of positive influences of Facebook use in uplifting students' exam-grades because of shortcomings of the prevailing assessment system in Bangladeshi colleges. Carrying outa review of literatures, Yang et al. (2011) observed research studies' weaknesses of addressing properly the issue of Facebook use in uplifting students' academic performances, and therefore they pointed out on the necessity of conducting further studies regarding it. For this reason, intending to cover the gap in literature, I conducted this present study to derive 'teachers' perceptions on Facebook collaboration to enhance students' learning outcomes (RQ- 2)'. Other than exam-grade, the present study revealed that Facebook collaboration was conducive to the better plausibility of learning contents, knowledge acquisition, making the learners self-confident, motivated, and engaged in various learning activities. These findings are some vital additions to the prevailing findings of the literature. In contrary to these positive findings, the teacher respondents expressed their anxiousness of the possibility of social dillydallies, attention distractions and technology deficiencies to be engaged in Facebook collaboration. The present study, however, suggested 'careful handling and proper monitoring to overcome the shortcomings', which is also a new finding added to the literature.

Discussions about findings revealed from RQ3

While exploring the third research question (RQ-3)- 'How do students view on the strengths/weaknesses, etc. of Facebook as a tool of collaborative learning?', students expressed their views regarding Facebook as a 'collaborative learning' supportive tool, teachers' interactions in Facebook collaboration, peer interactions in Facebook collaboration and students' inherent aptitudes development.

The present study's finding that, 'Facebook is a supportive tool for collaborative learning', as student respondents perceived, contributed to the findings of some exploratory studies, such as Backer (2010)'s, Dolan (2014)'s and Shih (2011)'s studies, in which it was revealed students' preferences of Facebook use in support of collaborative learning. Again, the present study's another finding of 'uplifted interaction level with teachers and peers while incorporating Facebook in collaborative learning', according to student respondents' views, was informed the finding of Dolan (2014)'s and Shih (2011)'s studies, where they also revealed the alike finding. The present study, however, added a novel finding that, 'student respondents felt positive difference in interaction with their teacher and peer while using Facebook for collaborative class as compared to physical collaboration'.

Moreover, The present study's finding derived from the respondent students' declaration that 'they achieved inherent aptitudes by using Facebook for collaborative learning as Facebook facilitated them with social involvement' contributed to the finding of some research studies, such as Kirschner et al. (2006)'s, So & Brush (2007)'s and Wang (2014)'s studies, where it was revealed positive co-relation between collaborative learning and social involvement such that students availed the necessary psychological support and motivation to participate actively in their learning activities by getting connected with their team partners virtually.

Finally, the present study's finding that 'Facebook collaboration enhanced their social skills of collaborative practice' did not match with the findings of prevailing literary works. Conversely, in Vrasidas & McIsaac (1999)'s study, learners were found disinterested in virtual collaborative learning for not getting a feeling of actual interaction. The present study thereby added this new finding to the literature. Furthermore, the present study added some other vital findings from the perceptions of the respondent students that Facebook use enhanced their inherent aptitudes like reflective thinking, oral communication skill, presentation skill, writing skill in both native- Bangla and international- English languages, expertise in handling computer and other technological gadgets, time management skill, and above all social adaptability skill.

Limitations

The present research study faced few limitations. Limited time and resources for conducting this study were the foremost limitations. The planned timeframe did not match with all the data generating processes. Qualitative studies carrying out through interview and FGD necessitate inclusive analysis of respondents' views, and it requires a good amount of time to analyze descriptive data (Creswell & Creswell, 2018; Sandelowski, 1999). But the allotted timeframe did not provide the opportunity of in-depth analysis of the collected data. Lack of sufficient funding was also another limitation of this study for more exploration of the research questions so that it could be more beneficial to practitioners and policymakers. If enough time and funding could be allowed for conducting this study, it would demonstrate elaborated scope for exploring the other dimensions of the research questions (Burkhardt & Schoenfeld, 2003; Cohen et al., 2018).I, therefore, suggest that future research should pay attention to overcoming these limitations and should carry out further research with sufficient time and resources so that they could analyze the research respondents' views inclusively, explore the research questions more profoundly and explore all the possible dimensions of the research questions.

The student sample of this study was selected as the usual class size of a particular year of an undergraduate program. But the actual class size was much higher, and because of very high rate of absenteeism, the study could not be conducted with the actual population. Again, as the research was carried out in a single setting, i.e., only a single department of only a single college, the sample size needed to be compromised with the limitation of generalization for the overall college level education of Bangladesh (Boddy, 2016; Creswell & Creswell, 2018).I, therefore, suggest that future research should also pay attention to overcoming these

limitations and should carry out further research with a targeted population exhaustively, more than a single setting that might be covered all the departments of an educational institution and might be with some different colleges representing the college level education of Bangladesh so that the derived findings could generalize for the overall college level education of Bangladesh.

Furthermore, the study could not come across a good number of literary works that were exactly in line with this study. Literature exploring teachers' perceptions and attitudes directly related to collaborative learning and Facebook use was scarce. Again, the study was not able to address enough literary works carried out in Bangladeshi contexts. It was, therefore, appeared as a serious limitation in planning the research properly and analyzing data comprehensively for having limitations of prior empirical research studies directly focusing the topic on the respective country's contexts. Thus, the study had to embrace limitation of aligning literature review with data analysis (Cohen et al., 2018; Creswell & Creswell, 2018). Finally, even though the study conceives vital implications for future educational reforms, concurrent educational environments and policies permit limited scope to generalize the findings of the study for greater benefits (Alam, Mishra, & Shahjamal, 2014; Johnson, 1997). Therefore, like the present study, I suggest carrying out further research relating to the research topic of this present study for covering the gaps in literature.

Implications

Some vital issues such as modern pedagogy, technology incorporation in education, and perceptions and attitudes of students as well as teachers altogether were captured in the findings of this study. In the educational environment of a Bangladeshi college context, all these issues are very new (Mannan, 2016). The Bangladeshi college students are tremendously in need of uplifting quality of learning. Since traditional teaching modes are still dominating in this educational environment, it is expected to uplift the learning quality if a modern pedagogical advancement incorporating technology can be implemented (Alam, Mishra & Shahjamal, 2014; Monem & Muhammad, 2010). Incorporating technology would be further supportive to polish the monitoring, accountability, and assessment system in the learning process (Mannan, 2016; Monem & Muhammad, 2010). Perceptions and attitudes of students as well as teachers would guide the dynamics of the process so that a new window of thinking differently would be opened. All the above-mentioned proceedings can provide assistances to move towards a positive reform of the prevailing learning practices of the college level education of Bangladesh. On the national education policy of Bangladesh, the findings of this study could derive crucial implications. Since making socially adept future leaders is the vital goal of the national education policy of Bangladesh, it necessitates of carrying through the reconstruction of the prevailing unfruitful policies of the conventional learning practice. That reform should be guided with the research-based findings in the respective issues (Alam, Mishra & Shahjamal, 2014). But till to date, research studies covering these vital issues are very sparse in Bangladeshi contexts. Hence, this present study would make vital contributions to educational reformation as one of the paramount research works. The findings of this research study would benefit all the teachers, students, other educators, and policy makers. The future researchers who would like to conduct studies on pedagogy, curriculum and technology in Bangladeshi perspective would be benefitted with the findings of this research study by getting valuable guidelines, suggestions, and pathways from here. The findings would also be beneficial to reconstruct the national education policy as necessary.

Recommendations

The present research study revealed that collaborative learning in the context of Bangladeshi educational environment remained hackneyed with age-old classroom setting. The research respondents uncovered that class size, class duration, sitting arrangement, class structure and organization, learning practice on theoretical grounds- all these necessitate further refinement from the perspectives of modern pedagogical practices. Now it is essential for the Bangladeshi colleges to consider reducing the class size into optimum

level. This can be done by increasing number of conducted class sessions, splitting large-sized classes into sections with optimum number of students. In this case, it would be needed to employ more teachers to maintain student-teacher ratio in the optimum level. Then obviously class structure should be modernized by adopting modern classroom sitting arrangement with the replacement of long benches. It is required for the education authorities to rearrange the class duration to the optimum level since teachers should be provided with desired class duration for carrying through a participatory class session and going in depth of their instructional contents. Finally, it is required for the teachers to be properly trained in modern pedagogical issues to ensure quality learning. The teachers should make their students familiarized with the new system with proper training. Proper training and practice would work well to overcome the challenges of utilizing Facebook in collaborative learning support.

The research respondents viewed that Facebook incorporation in learning worked well in 'lessening students' hesitation, nervousness, and fear', 'uplifting feedback degree', 'allowing enhanced interaction level', 'keeping learners engaged and motivated', 'allowing considerable reading time', and creating positive competitive attitudes of the students. This study, therefore, recommends for the college authority to search the possible ways of incorporating Facebook formally with prevailing mainstream learning management system, and aligning and adapting collaborative learning with Facebook application. For ensuring this purpose, it would be necessary for the colleges to be technologically advanced. From the perceptions of the research respondents, it was revealed that technology incorporation in learning like Facebook use in collaborative learning conceives the vital benefits of asynchronous learning opportunities. Hence, this study recommends for Bangladeshi colleges to invest further in technological advancement so that they can avail the vital opportunities of greater connectivity, flexible working environment, reduced workload, uplifted monitoring and accountability, and advanced learning contents and curriculum. It is also essential for the learners to get familiar with modern technological progression and adept in handling the diversified technological tools in this new arena. However, this study recommends taking proper caution while students' engagement in different technological domains so that students might not be distracted from their learning involvement. Lastly, central education curriculum and syllabuses of different education programs are required to make proper changes so that it can explore the inherent aptitudes and social skills of the students rather than traditional evaluation system weighted solely by examinations. Government should seriously consider making a positive change in the national education policy so that it can properly build future leaders by ensuring such research-oriented reforms in the country's educational environments.

CONCLUSION

Bangladeshi colleges are tremendously in need of uplifting quality in learning (Mannan, 2016). Here lies the significance of introducing modern learning theory for ensuring quality learning (Al-Rahmi, Othman, & Musa, 2014). The present study suggests applying collaborative learning technique which is one of the most beneficial pedagogical concepts for ensuring quality learning (Brindley, Blaschke, & Walti, 2009). This learning technique, however, needs a varied type of institutional and instructional design to be implemented properly. Its fruitfulness also relies heavily on some other prerequisites of the setting of the educational institutions. It is, therefore, needed to gain insights on the effective implementation techniques of the collaborative learning approach despite having some limitations and barriers in the learning environments (Scager et al., 2016; Zheng, Niiya, & Warschaer, 2015).

Modern technological progress has ensured flexibility in making both the synchronous and asynchronous communication and sharing information (Al-Rahmi, Othman, & Musa, 2014). The consideration of utilizing Facebook's different features in learning purposes is a very recent matter of discussion. This social media tool would carry huge prospect in learning if it can be applied properly. Facebook's assurance of social connectivity and interaction has got tremendous significance in playing vital role in making the collaborative learning system effective (Al-Rahmi & Zeki, 2017; Gikas & Grant, 2013).

Giving importance to these viewpoints, this study attempted to examine the influences of Facebook as a vital tool of supporting collaborative learning. The study also revealed the perceptions, attitudes, and experiences of teachers as well as students in this respect. It was carried out based on addressing the three research questions –

1. How has Facebook influenced Collaborative learning?'
2. How do teachers perceive and make use of Facebook as a tool of collaborative learning?
3. How do students view on the strengths/weaknesses, etc. of Facebook as a tool of collaborative learning?

By adopting a qualitative research approach, the study investigated research respondents' views. Individual semi structured interview method was used to explore teachers' perceptions, whereas four FGD sessions with selected students were conducted to explore students' perceptions (Cohen et al., 2018; Creswell & Creswell, 2018).

The study derived some important findings under the investigation on the three research questions from the perceptions of students and teachers. It was revealed from their opinions that Facebook is supportive in collaborative learning arrangements even in large-sized classes, with limited class duration, and in unorganized class setting because of possessing the privileges of ensuring connections and interactions in asynchronous manner (Johansson, 2016). Students' socio-cognitive gains could also be achieved effectively with the use of Facebook, the respondent teachers mentioned. It was also revealed that Facebook use could enhance the effectiveness and benefits of collaborative learning set-up by reducing students' hesitation, nervousness, and fear, enhancing feedback degree, ensuring higher interaction, bringing competitive attitudes with enhanced engagement and motivation, and finally allocating substantial reading time (Sarwar, Zulfiqar, Aziz, & Chandia, 2019). However, there remains some sorts of challenges for establishing collaborative learning system, the respondents expressed. These are- system non-familiarity, free-riding tendency, dictating and dominating tendency over weaker students, etc. (Johansson, 2016). They asserted that Facebook in this regard can play a vital role in making the system familiar to its users, tracking and monitoring students' attitude and behavior for overcoming the challenges.

Most of the respondent teachers considered that Facebook use can play positive influential role on their teaching practices and experiences. They mentioned that Facebook use provided them with flexible space to think differently with their learning contents, curriculum, and lesson plan. While using Facebook as a facilitator of the learning process, they experienced a reduced workload with higher connectivity and interaction with their students (John, 2017; Tozer, 2017). The respondent teachers, however, also expressed their anxiousness of resulting in social dillydallies and psychological distraction while using Facebook in the learning process. However, this study recommends taking proper caution while students' engagement in different technological domains so that students might not be distracted from their learning involvement (So & Brush, 2007; Wang, 2014).

The student respondents considered Facebook as tremendously beneficial for their collaborative involvements because they could avail the opportunity of higher interactions with their teachers and with their peers as well (Ku, Tseng, & Akarasriworn, 2013). They confirmed that Facebook could fruitfully excel their inherent aptitudes such as presentation and communication skill, familiarity with computer and technological tools and expertise in handling them properly, reflective thinking and writing ability, time management skill, and social adaptability (Mckarthy, 2012).

Asthe conventional physical setting of the classroom emerged as a severe problem for arranging collaborative learning in the physical classrooms,investing in modernizing the classroom decoration should have to be the foremost consideration of introducing such modern pedagogical learning approach in this

college. Then it would be required adequate funding to incorporate technology in the learning system and bring all the students under the possession of technological devices as most of the students were found to lack with personal technology devices (Sarwar, Zulfiqar, Aziz, & Chandia, 2019). It would be essential to make the teachers familiar with the technological tools and to properly train up in collaborative pedagogy and technology handling simultaneously. It would also be required to guide the students with proper caution as Facebook use has the risk of engendering serious distraction from learning (Manca & Ranieri, 2016; Tozer, 2017). Finally, the findings of this research study would serve the vital purpose of exploring new guidelines of educational policy reformation for ensuring quality education in Bangladeshi colleges (Mannan, 2016).

PLAGIARISM STATEMENT

I hereby declare that this dissertation thesis is completely prepared with my own efforts and was not copied from any sources such as from any published or unpublished sources. I prepared it with my self-collected primary data that I collected from my research respondents, and thereby I derived findings of this study based on the respondents' own views. I acknowledged all the sources I used in its preparation- materials and references, including books, research papers, and other documents. I also assure that this dissertation paper has not been submitted for assessment earlier at anywhere else.

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APPENDICES

Appendix A

The University of Nottingham

UNITED KINGDOM · CHINA · MALAYSIA

School of Education

Research Ethics Approval Form (Taught Courses)

HOW TO USE THIS FORM

This form should be used by students/participants on School of Education taught courses (undergraduate or postgraduate) who will be conducting research for an assignment or who are undertaking dissertations.

You should complete this form following discussion with your module tutor or dissertation supervisor, as applicable. Discussion with your module tutor/dissertation supervisor may be in person, via Skype or phone, or via email. (In some cases, this may be part of the process of tutor feedback on a proposal.)

Please read the whole form before starting to complete it.

You must complete Sections A and C. If your research involves participants, you must also complete Section B.

For some questions, you will need to write responses providing details of your research or how you have considered ethical issues. For others, you will need to give a YES or NO response. You may write N/A (not applicable) if appropriate, but you must explain why.

Section D is to be completed by your module tutor/dissertation supervisor and, if applicable, a second reviewer.

When you have completed Sections A, B (if applicable) and C, please email the form to your module tutor/dissertation supervisor, using your University email account, or submit via Moodle, as required.

For all research involving participants, please remember to attach the following:

1. *draft information sheet to be provided to prospective participants*
2. *draft consent form to be used with prospective participants.*

SECTION A – ALL RESEARCH

This section applies to all dissertations and all assignments for which ethical approval is required (whether data-generating, using existing data or literature-based).

Name	Tapos Kumar Dutt
University ID Number	20254586
University email address	sbxtd3@nottingham.edu.my
Course	MA in Education
Module	Master level dissertation
Title of dissertation	Use of Facebook in Support of Collaborative Learning to Enhance Learning Outcomes in a Government College at Rajbari
Dissertation supervisor	Dr Peter Wood
Date	12/07/2022

Project details	
Please provide a brief description of the research project and its aims.	In Bangladesh, the Government Colleges are observed to follow traditional instructional delivery mode. Teachers have to operate a huge number of students at a time and students are habituated to learn their lessons individually. In this scenario, to ensure students' engagement and achieve desirable learning outcomes are very challenging tasks (Alam, Mishra & Shahjamal, 2014). Therefore, it is tremendously necessary of adopting such a learning strategy that could bear the vital potential to deal with large class size and to achieve the desired learning outcomes at the same time. Thereby, it would be judicious to implement collaborative learning here which is considered as one of the paramount modern pedagogical innovations. It is also necessary to ensure the effectiveness of the collaborative learning system. For this purpose, it would be wise to identify the potential risks and challenges that collaborative learning would come across in a college level education of Bangladesh. Thus, as a necessary consequence, it can be considered to evaluate the influence and usability of social media, particularly Facebook, in order to make the system more efficient. The usability of Facebook as an assisting instrument of adept collaborative learning can put forth novel pathways to gain students' learning-satisfaction in these educational institutions. For accessing of quality education, it is mostly essential to get a deep insight into discovering potential usage of collaborative learning that can be integrated with Facebook features. Generally, this research project would aim to explore how Facebook can play the influential role in making collaborative learning more effective. Again, it would examine the perceptions and attitudes of teachers as well as students in utilizing the features of Facebook for effective collaborative learning. To be more specific, this research study would aim to point out the vital factors that mostly have influence on the fruitfulness of collaborative learning. Thus, it would address the paramount collaborating practices together with hurdles and challenges of these practices. Consequently, the study will progress on identifying the influential factors of Facebook in this connection. Perceptions of teachers as well as students would be the basis of the investigations of this study. Additionally, this study will aim to have an exploration of teachers' perceptions and attitudes about the use of Facebook such that whether Facebook brings any positive influence in teachers' teaching practices, together with students' learning experiences regarding learning outcome, academic performance, gaining of knowledge, motivation to learning, collaborative behavior and so on. Furthermore, the study will aim to judge students' perceptions and attitudes about the usability of Facebook in collaborative learning by examining whether the use of Facebook can bring any change in the interaction and feedback of teachers, the interaction and conversation of peers, and the enthusiasm and capabilities of learners in collaborative learning. The study will be guided and carried through by highlighting the following subsequent research questions- 1. How has Facebook influenced Collaborative learning?' 2. How do teachers perceive and make use of Facebook as a tool of collaborative learning? 3. How do students view on the strengths/weaknesses, etc. of Facebook as a tool of collaborative learning?

What types of data will be generated/used and how will this be obtained (e.g., observation, interview, questionnaire, document analysis, systematic literature review, use of publicly available data, auto-ethnography)?	'Primary Data' will be generated from the teachers and students of the 'Department of Economics' of 'Rajbari Government College, Bangladesh' by using the method of 'Interview' and 'FGD'. 5 teachers and 8 second-year undergraduate students of Economics Department at this college will be requested to participate in this research. I am considering arranging individual interview sessions with each of the 5 teachers separately. I will invite the students to take part in FGDs and I wish to hold four FGDs, two at the onset (Phase 1) and two towards the end (Phase 2) having 4 students in each of the four FGDs. I am considering selecting my colleagues (teachers of my economics department) as the first respondent group. The department is running its operation presently with 6 employed teachers including me. I am considering selecting all the 5 teachers excluding me as the research sample. I will select all the 5 employed teachers of my department purposefully for getting their perceptions and attitudes regarding the research questions from all of them, and thereby I will be facilitated with getting their diversified and inclusive perceptions and attitudes which will be very helpful to obtain reliable and practical findings of this study. My plan is to set a convenient time-schedule for each of the 5 teachers as per their consent and wish to get interviewed all of them. Thereby, my sampling method of teachers' interviews will be convenience, purposive and exhaustive. The second respondent group would be the second-year undergraduate students of my department. I am considering inviting only 8 students from my designed collaborative class for 4 FGDs in two phases having invited 4 students in each of the 4 FGDs. I will select those 8 students out of 40 to 50 students from my designed collaborative classes purposefully who will be found thoughtful and perceptive regarding the research questions, and thereby I will be facilitated with getting their diversified and inclusive perceptions and attitudes which will be very helpful to obtain reliable and practical findings of this study. My plan is to set a convenient time-schedule for each of the 4 FGDs with students as per their consent and wish so that they can feel comfortable during the FGD sessions and express their varied and all-round perceptions and attitudes. Thereby, my sampling method of students' FGDs will be convenience and purposive. I am intending to collect qualitative data using the two key qualitative methods of data collection - semi-structured interview and FGD, targeting to gather the best possible information for the three research questions in limited time and cost. (Creswell, 2012). Interviews would be applied to unfold individual participants' 'views, experiences, beliefs and motivations' and FGDs would be used to explore 'group dynamics to generate qualitative data' (Gill, Stewart,Treasure and Chadwick, 2008).
In which country/countries will the research take place? If any of your research is to be conducted outside the UK, you will need to follow local ethical requirements. If applicable, please confirm your understanding of these local requirements.	The research will take place in Bangladesh.

Please confirm the following

Ethical guidelines
• I have read the relevant sections of the *Code of Research Conduct and Research Ethics* of the University of Nottingham and discussed this with my dissertation supervisor
• I have read the relevant professional association guidelines (delete as applicable) and discussed these with my dissertation supervisor:
    o British Educational Research Association's *Revised Ethical Guidelines for Educational Research* (BERA, 2011)
    o British Association for Counselling and Psychotherapy *Ethical guidelines for researching counselling and psychotherapy* (Bond, 2004)
    o Guidelines of another relevant professional association (state which here): _____
	YES

Data protection • I am aware of my responsibilities under the General Data Protection Regulation (GDPR) (2018) • I will issue participants with an appropriate GDPR privacy notice	YES

If your research involves human participants (people with whom you will be generating data or whose data you will be using), please continue to Section B.

If you will not be conducting research with participants, please go straight to Section C.

SECTION B – RESEARCH INVOLVING PARTICIPANTS

You must complete this section if your research involves human participants or their data. If, after discussion with your tutor or dissertation supervisor, you are not able to respond YES to any set of statements, please comment on this in Section C.

Research participants	
Please identify the type of research participants, indicating their ages if under 18.	Teachers and Students
How will they be selected and approached?	For collecting data from the respondents, my idea is to arrange a convenient setting of sample. At the very beginning, I am considering approaching to my colleagues (teachers of my economics department) to collect data by urging to get their consent. I will invite them in an individual interview session and request them to answer eight to ten questions targeting to get responses for RQ1 and RQ2. I am considering gathering interview data face to face from the respondent teachers and will record the conversation and take notes so that I can restore them in my memory in details. Concurrently, I will conduct collaborative class with the students during the research period. After getting involved with them in a good number of classes, I am considering arranging two FGD sessions in the first phase with the students. I am thinking to select eight to ten questions for each of the two groups. Afterwards, I will invite all the students of the designed class to join in a 'Facebook Group' that would be created by me. In the 'Facebook Group', I will commence virtual interactions with the students and share resources, arrange online discussions, and provide feedback. Then again, I will arrange another two FGDs in the second phase. For analyzing the data later, I will take notes and keep record of the FGDs.

Please confirm the following

Information for research participants • I will fully explain the purpose and procedures of the research, and the potential benefits and costs of participating (e.g., the amount of their time involved) to prospective research participants at the outset. With child participants, this will be explained in an age-appropriate manner. • I will reveal my full identity to potential participants. • I will inform prospective participants that data generated will be treated in the strictest confidence and will only be reported in anonymised form, but that I will be forced to consider disclosure of certain information where there are strong grounds for believing that not doing so will result in harm to research participants or others, or (the continuation of) illegal activity. • I have attached a draft of the information sheet for participants.	YES
Obtaining voluntary informed consent • I will ask all potential participants to give explicit, normally written, voluntary informed consent to participating in the research. Where written consent is given, the participant and I will retain separate copies. • In addition to the consent of the individuals concerned, I will seek the signed consent of a parent, guardian or 'responsible other' to sanction the participation of children (i.e., persons under 16 years of age) or vulnerable adults (BERA, 2011, p. 6). Children will also be facilitated to give fully informed consent, as appropriate for their age and maturity. *(For counselling programmes only: Gillick competency testing guidelines may be applied with participants under 16 years old in some circumstances, if agreed by your module tutor/dissertation supervisor.)* • I will not place undue pressure on individuals or institutions to participate in research activities. • My treatment of potential research participants will in no way be prejudiced if they choose not to participate in the project. • I will provide participants with my contact details (including university email address), and those of my module tutor/dissertation supervisor, in order that they are able to make contact in relation to any aspect of the research, should they wish to do so. • I will inform participants will that they may freely withdraw from the project at any time without risk or prejudice. • I will inform participants that my research has received ethical approval from the University of Nottingham and will provide contact details in case of any complaint. • I have attached a draft of the consent form for participants (and/or for any others consenting on behalf of participants).	YES

Confidentiality   • I will take all necessary steps to protect the privacy and ensure the anonymity and non-traceability of participants and/or other individuals for whom confidentiality would be expected, for example, by using pseudonyms, for both individual and institutional participants, in any written reports of the research and other forms of dissemination.
Sensitive issues   • I will be sensitive to differences relating to age, culture, disability, race, gender, religion, and sexual orientation amongst research participants, when planning, conducting, and reporting on the research.   • I will not collect personal data, for example relating to age, gender, ethnicity, religious affiliation, sexuality, unless this is directly relevant to the research aims.   • If the study involves collecting personal data or the discussion of sensitive issues such as mental health issues or sexual activity, I have discussed this in detail with my module tutor/dissertation

supervisor and understand that this makes my project higher risk.

Storage and access to research data

- I will not store names or any other personal data (if collected) for longer than necessary.
- I will safeguard participants' identity in stored research data through encryption, pseudonymisation and full anonymisation, as applicable to the particular research study.
- I will keep data generated by the research (e.g., transcripts of research interviews) securely until the completion of my studies or, if publication is intended, for a period of seven years.
- I will use data purely for the purposes of the research project (including dissemination of findings).
- No-one other than myself, my module tutor/dissertation supervisor or examiners will have access to any of the data generated.
- I will inform research participants that they have the right of access to their data, but not to that of others.
- Where possible, I will provide research participants with a summary of research findings and an opportunity for debriefing after taking part in the research.
- I will reflect ethical principles and discuss considerations, as appropriate, in my assignment (whether in written or presentation format) or dissertation.

Disclosure and Barring Service (DBS) – for UK-based research only

A DBS check is *only* required if your research takes place in the UK *and* will involve you being left alone with children and/or vulnerable adults. You *do not* need an additional DBS check if you already hold one for the setting in which you will be undertaking your research.

- Do you need a new DBS check for this research?
- If you already hold a check for the research setting, please provide your DBS number here: _____

Please continue to Section C.

SECTION C – SUMMARY OF ETHICAL ISSUES AND DECLARATION

You must complete this section.

Summary of ethical issues and risks	
Please identify the ethical issues and potential risks associated with this research, in terms of data generation, the research setting and any work with participants, including any risks to yourself (e.g., from lone working or identification of sensitive issues). Remember that all research carries some risk of physical or emotional harm to those involved, even if this is minimal. Consider your responses in Sections A and B, and the discussion with your dissertation supervisor. If you were unable to respond YES to any set of statements in Section B, please explain why as part of your response.	This research project will maintain the following 'Ethical Considerations': **Informed Consent:** All participants will be provided with a project summary (information sheet), and an ethical consent form. This consent form will make clear the commitments and expectations relating to the project (commitments to anonymity and confidentiality, details about uses of data). The consent form will offer a range of issues for which consent will be sought, and each participant will be asked to indicate positively their support for each one (for example, digital recording of interviews will involve specific consent). All participants will be asked to provide active consent. **Right of withdrawal:** All respondents will be assured that they might change their minds at any time up until the data was analyzed. After each interview, the researcher informed all that they had the freedom to modify or withdraw their thoughts at any time. **Data Protection:** Completed research questionnaire will be stored securely on password protected computers. Data will be stored in a way what makes it non-

traceable to individuals (using codes for individuals).

Assurance of anonymity, confidentiality, and non-traceability of research participants:
No individuals will be named in the writing up of the research project, and any resulting reports. All participants will be assured that they will not be identifiable in any resulting presentations or publications arising from the study.

Risks to participants:
Generally, the research might be considered to face no more than standard risks. The subject matter does not involve sensitive issues, and most of the methods of data collection are commonly understood. It will be made clear to potential participants that non-participation will have no negative consequences. All ethical issues and risks will be communicated to the participants.

Other Considerations:
Demographic data concerning participants' date of birth, race, religion, and gender will be collected. Although these are potentially sensitive data, they are pertinent to the research since these are important variables in relation to many aspects of attitude/perceptions, teaching, and learning. The degree to which the participants are representative of the population in general, and of Asia-Pacific educators specifically, in terms of race, gender and religion is of direct relevance. Age, race/nationality, and gender have been demonstrated to impact attitudes and perceptions towards disabilities and inclusion.

Potential risks and disadvantages associated with this research project:
I realize that some people may find taking part in an interview as tiring or difficult and we understand that for some teachers and students this may cause feelings of discomfort or anxiety. Otherwise, I do not believe there are any risks or disadvantages to the participants in taking part.

Explain how you will take steps to mitigate these risks.	I will discuss with the participants that when they will be conveniently available without feeling any discomfort or anxiety in taking part in the interviews and FGDs and will arrange the time-schedule of the interviews and FGDs accordingly.
	For mitigating the feeling of difficulty in taking part, I will brief them about the research project, its aims, and the questions of the interviews and FGDs prior to start the conversation with them. Their doubts and unclarity will be resolved, and their questions will be answered with explanation and proper clarification.
	The duration of the interviews and FGDs will be set in the way that the participants would not find to take part as tiring. The conversation will be guided in the way that the participants would consider taking part as an enjoyable experience.

Please confirm the following

Declaration	
• I understand that I may not start my research, including the recruitment of any participants or data generation, until I have received ethical approval. • I agree to work within the protocol that I have outlined and to abide by the School of Education policy on research ethics and the University of Nottingham's *Code of Research Conduct and Research Ethics* throughout the research and in any reporting of this. • If I make any changes to my research that change my answers to any of the questions above, I will submit a new ethical approval form to my dissertation supervisor.	YES

SECTION D – REVIEW AND APPROVAL

Reviewers should send the form from university email accounts in lieu of signatures

Module tutor/dissertation supervisor

Name	
Date	12/07/2022
I have discussed the proposed research outlined on this form with the student and I am satisfied that the work will be carried out with due regard to ethical protocol and any research participants' interests.	YES
All dissertations and any research considered to be outside the School of Education criteria for expedited review must be approved by a second reviewer. Is second review required?	NO

For research requiring second review

Course Leader/ second reviewer

Name	
Date	
I have reviewed the proposed research outlined on this form and I am satisfied that the work will be carried out with due regard to ethical protocol and any research participants' interests.	YES NO

Appendix B

Information Sheet for Principal's Approval

The University of Nottingham

UNITED KINGDOM · CHINA · MALAYSIA

Dissertation Research Project

<u>**Research Title**</u> – **"Use of Facebook in Support of Collaborative Learning to Enhance Learning Outcomes in a Government College at Rajbari, Bangladesh"**

General Information Sheet (For Principal's Approval)

I am seeking your kind approval for conducting this research and collecting data from the teachers and students at this college. This research study is part of a Module I am taking at the School of Education, University of Nottingham Malaysia. Before you agree to approve, it is important to understand why the research is being done and what it will involve.

Please take time to carefully read the following information. Please ask me if there is anything that is not clear, or if you would like more information. Please think about it carefully and then decide whether you would like to approve it or not.

What are the aims of the research?

For accessing of quality education, it is mostly essential to get a deep insight into discovering potential usage of collaborative learning that can be integrated with Facebook features. Generally, this research project would aim to explore how Facebook can play the influential role in making collaborative learning more effective. Again, it would examine the perceptions and attitudes of teachers as well as students in utilizing the features of Facebook for effective collaborative learning.

To be more specific, this research study would aim to point out the vital factors that mostly have influence on the fruitfulness of collaborative learning. Thus, it would address the paramount collaborating practices together with hurdles and challenges of these practices. Consequently, the study will progress on identifying the influential factors of Facebook in this connection. Perceptions of teachers as well as students would be the basis of the investigations of this study. Additionally, this study will aim to have an exploration of teachers' perceptions and attitudes about the use of Facebook such that whether Facebook brings any positive influence in teachers' teaching practices, together with students' learning experiences regarding learning outcome, academic performance, gaining of knowledge, motivation to learning, collaborative behavior and so on.

Furthermore, the study will aim to judge students' perceptions and attitudes about the usability of Facebook in collaborative learning by examining whether the use of Facebook can bring any change in the interaction and feedback of teachers, the interaction and conversation of peers and the enthusiasm and capabilities of learners in collaborative learning.

The study will be guided and carried through by highlighting the following subsequent research questions-

1. How has Facebook influenced Collaborative learning?'
2. How do teachers perceive and make use of Facebook as a tool of collaborative learning?
3. How do students view on the strengths/weaknesses, etc. of Facebook as a tool of collaborative learning?

Who will be involved in this study?

5 teachers and 8 second-year undergraduate students of Economics Department at this college will be requested to participate in this research.

The teachers will be individually interviewed. The students will be invited to take part in FGDs and the number of FGDs will be four in two rounds having 4 students in each of the four FGDs.

What sorts of methods are being used?

This research is based on data collected via interview and FGDs which asks about teachers' and students' perceptions/understanding of the research questions as well as some of their demographic information. Their responses will be audio-taped or recorded using a recording app.

Why have these participants been chosen?

These participants have been invited to participate in this study because they are belonging to this college and the research focus is also concerning of this college.

What are the participants being asked to do?

The participants are being asked to take part in an interview, audio-taped and give permission for the researchers to use their responses on the interview.

Will participants' taking part in this study be kept confidential?

The data we collect will be treated confidentially, and only members of the research team will have access to the raw data. All information collected while carrying out the study will be stored on a database which is password protected and strictly confidential. The digital and textual data will be kept in a secure and confidential location. Participants' name will not appear on any database or any information which is then published. Instead, a number will be used as an identifier on all data associated with you. The master copy of the names associated with each number will be kept in a separate, secure, and confidential location.

We will report the results anonymously. When results are reported all individuals and institutions (e.g., individual schools and zones) will be anonymized, so neither you nor your affiliations will be identifiable.

We are committed to carrying out our research according to the ethical guidelines provided by the British Educational Research Association (online at http://tinyurl.com/6r5juen).

What will happen to the results of the research study?

We expect to talk about our research at professional conferences and write about it in academic journals.

Do participants must have to take part?

Participants' participation is entirely voluntary. It is important participants understand that they do not have to participate in the project at all, and even if they decide to take part, they are still free to withdraw up until data is analyzed and without giving a reason.

What are the possible disadvantages of taking part?

We realize that some people may find taking part in an interview as tiring or difficult and we understand that for some teachers and students this may cause feelings of discomfort or anxiety. Otherwise, we do not believe there are any risks or disadvantages to the participants in taking part.

What are the possible benefits to the participants of taking part?

We hope that participants' responses and views will serve the purpose to better understand the knowledge and perceptions about the use of Facebook in support of collaborative learning to enhance students' learning outcomes amongst students, teachers and administrators of this college.

Who is paying for this research and who is carrying it out?

The research is being carried out by myself. I am a student at the University of Nottingham, School of Education. I am being supervised by Dr Peter Wood. If you have any questions or concerns about the research, you can contact me or my supervisor:
Tapos Kumar Dutt ; Email: sbxtd3@nottingham.edu.my/taposkdutt@gmail.com;Phone: (+88)01740582955

Dr Peter Wood (Supervisor)   Email: Peter.Wood@nottingham.edu.my

If you agree to approve this study, please: 1. Keep this copy of the Information Sheet for your records

2. Sign the attached Consent Form   3. Provide me with a written ethical approval letter

Appendix C

Consent Form for Principal's Approval

The University of Nottingham

UNITED KINGDOM · CHINA · MALAYSIA

Dissertation Research Project

<u>**Research Title**</u> – **"Use of Facebook in Support of Collaborative Learning to Enhance Learning Outcomes in a Government College at Rajbari, Bangladesh"**

Consent Form (For Principal's Ethical Approval)

1. I have read the Information Sheet.
2. I understand the nature and purpose of this research.
3. I have received enough information to make an informed decision about giving ethical approval of conducting this research project at this college's context and collecting data from the teachers and students at this college.
4. I understand that I can raise questions, offer criticisms, and make suggestions about the project.
5. I understand that I can decide to withdraw my ethical approval of this project up until data is analyzed after agreeing to.
6. I agree to contribute to this research.
7. I agree for the interview to be audio-taped or recorded using a recording app.
8. I agree for my ethical approval to be documented and communicated, and participants' responses to be analyzed for this research project,talk about it at professional conferences and write about it in academic journals.
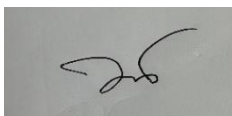
I consent to give the ethical approval of conducting this research project at this college's context and collecting data from the teachers and students at this college after considering the information provided.

NAME: A

Designation: Principal

Working Institution's Name: **'**R' Government College, Bangladesh

Signature:

Date: 14/07/2022

Appendix D

Information Sheet for Teachers' Interviews

The University of Nottingham

UNITED KINGDOM · CHINA · MALAYSIA

Dissertation Research Project

<u>Research Title</u> – **"Use of Facebook in Support of Collaborative Learning to Enhance Learning Outcomes in a Government College at Rajbari, Bangladesh"**

General Information Sheet (For Teachers' Interview)

You are invited to take part in a research study. This research study is part of a Module I am taking at the School of Education, University of Nottingham Malaysia. Before you agree to take part, it is important to understand why the research is being done and what it will involve.

Please take time to carefully read the following information. Please ask me if there is anything that is not clear, or if you would like more information. Please think about it carefully and then decide whether you would like to take part or not.

What are the aims of the research?

For accessing of quality education, it is mostly essential to get a deep insight into discovering potential usage of collaborative learning that can be integrated with Facebook features. Generally, this research project would aim to explore how Facebook can play the influential role in making collaborative learning more effective. Again, it would examine the perceptions and attitudes of teachers as well as students in utilizing the features of Facebook for effective collaborative learning.

To be more specific, this research study would aim to point out the vital factors that mostly have influence on the fruitfulness of collaborative learning. Thus, it would address the paramount collaborating practices together with hurdles and challenges of these practices. Consequently, the study will progress on identifying the influential factors of Facebook in this connection. Perceptions of teachers as well as students would be the basis of the investigations of this study. Additionally, this study will aim to have an exploration of teachers' perceptions and attitudes about the use of Facebook such that whether Facebook brings any positive influence in teachers' teaching practices, together with students' learning experiences regarding learning outcome, academic performance, gaining of knowledge, motivation to learning, collaborative behavior and so on.

Furthermore, the study will aim to judge students' perceptions and attitudes about the usability of Facebook in collaborative learning by examining whether the use of Facebook can bring any change in the interaction and feedback of teachers, the interaction and conversation of peers and the enthusiasm and capabilities of learners in collaborative learning.

The study will be guided and carried through by highlighting the following subsequent research questions-

1. How has Facebook influenced Collaborative learning?'
2. How do teachers perceive and make use of Facebook as a tool of collaborative learning?
3. How do students view on the strengths/weaknesses, etc. of Facebook as a tool of collaborative learning?

Who else is and can be involved?

Besides you, some other students and teachers at this college will be asked to participate.

5 teachers including you and 8 second-year undergraduate students of Economics Department at this college will be requested to participate in this research.

The teachers will be individually interviewed. The students will be invited to take part in FGDs and the number of FGDs will be four in two rounds having 4 students in each of the four FGDs.

What sorts of methods are being used?

This research is based on data collected via interview which asks about your perceptions/understanding of the research questions as well as some of your demographic information. Your responses will be audio-taped or recorded using a recording app.

Why have you been chosen?

You have been invited to participate in this study because you are belonging to this college and the research focus is also concerning of this college.

What are you being asked to do?

You are being asked to take part in an interview, audio-taped and give permission for the researchers to use your responses on the interview.

Will my taking part in this study be kept confidential?

The data we collect will be treated confidentially, and only members of the research team will have access to the raw data. All information collected while carrying out the study will be stored on a database which is password protected and strictly confidential. The digital and textual data will be kept in a secure and confidential location. Your name will not appear on any database or any information which is then published. Instead, a number will be used as an identifier on all data associated with you. The master copy of the names associated with each number will be kept in a separate, secure and confidential location.

We will report the results anonymously. When results are reported all individuals and institutions (e.g., individual schools and zones) will be anonymized, so neither you nor your affiliations will be identifiable.

We are committed to carrying out our research according to the ethical guidelines provided by the British Educational Research Association (online at http://tinyurl.com/6r5juen).

What will happen to the results of the research study?

We expect to talk about our research at professional conferences and write about it in academic journals.

Do you have to take part?

Your participation is entirely voluntary. It is important you understand that you do not have to participate in the project at all, and even if you decide to take part you are still free to withdraw up until the data is analyzed without giving a reason.

What are the possible disadvantages of taking part?

We realize that some people may find taking part in an interview as tiring or difficult and we understand that for some teachers this may cause feelings of discomfort or anxiety. Otherwise, we do not believe there are any risks or disadvantages to you in taking part.

What are the possible benefits to me of taking part?

We hope that your views, and those of others, will serve the purpose to better understand the knowledge and perceptions about the use of Facebook in support of collaborative learning to enhance students' learning outcomes amongst students, teachers and administrators of this college.

Who is paying for this research and who is carrying it out?

The research is being carried out by myself. I am a student at the University of Nottingham, School of Education. I am being supervised by Dr Peter Wood. If you have any questions or concerns about the research, you can contact me or my supervisor:

Tapos Kumar Dutt

Email: sbxtd3@nottingham.edu.my/taposkdutt@gmail.com

Phone: (+88)01740582955

Dr Peter Wood (Supervisor)

Email: Peter.Wood@nottingham.edu.my

Phone:

If you agree to take part in this study, please:

1. Keep this copy of the Information Sheet for your records
2. Sign the attached Consent Form
3. Take part in an interview with me.

Appendix E

Consent Form for Teachers' Interviews

The University of Nottingham

UNITED KINGDOM · CHINA · MALAYSIA **Dissertation**

Research Project

Research Title – **"Use of Facebook in Support of Collaborative Learning to Enhance Learning Outcomes in a Government College at Rajbari, Bangladesh"**

Consent Form (For Teachers' Interview)

1. I have read the Information Sheet.
2. I understand the nature and purpose of this research.
3. I have received enough information to make an informed decision about taking part.
4. I understand that I can raise questions, offer criticisms, and make suggestions about the project.
5. I understand that I can decide *not* to participate in this project up until data is analyzed after agreeing to.
6. I agree to contribute to this research.
7. I agree for the interview to be audio-taped or recorded using a recirding app.
8. I agree for my responses to be analyzed for this research project,talk about it at professional conferences and write about it in academic journals.
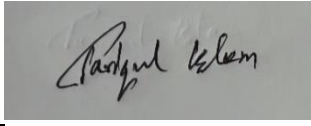
I consent to take part in this project after considering the information provided.

NAME (capital letter): T_B (Teacher B)

Designation: Assistant Professor, Department of Economics

Working Institution's Name: 'R' Government College, Bangladesh

Signature:

Date: 01/08/2022

*Participant Code (for research team use):*T_B

Appendix F

Information Sheet for Students' FGDs

The University of Nottingham

UNITED KINGDOM · CHINA · MALAYSIA

Dissertation Research Project

Research Title – "Use of Facebook in Support of Collaborative Learning to Enhance Learning Outcomes in a Government College at Rajbari, Bangladesh"

General Information Sheet (For Students' FGDs)

You are invited to take part in a research study. This research study is part of a Module I am taking at the School of Education, University of Nottingham Malaysia. Before you agree to take part, it is important to understand why the research is being done and what it will involve.

Please take time to carefully read the following information. Please ask me if there is anything that is not clear, or if you would like more information. Please think about it carefully and then decide whether you would like to take part or not.

What are the aims of the research?

For accessing of quality education, it is mostly essential to get a deep insight into discovering potential usage of collaborative learning that can be integrated with Facebook features. Generally, this research project would aim to explore how Facebook can play the influential role in making collaborative learning more effective. Again, it would examine the perceptions and attitudes of teachers as well as students in utilizing the features of Facebook for effective collaborative learning.

To be more specific, this research study would aim to point out the vital factors that mostly have influence on the fruitfulness of collaborative learning. Thus, it would address the paramount collaborating practices together with hurdles and challenges of these practices. Consequently, the study will progress on identifying the influential factors of Facebook in this connection. Perceptions of teachers as well as students would be the basis of the investigations of this study. Additionally, this study will aim to have an exploration of teachers' perceptions and attitudes about the use of Facebook such that whether Facebook brings any positive influence in teachers' teaching practices, together with students' learning experiences regarding learning outcome, academic performance, gaining of knowledge, motivation to learning, collaborative behavior and so on.

Furthermore, the study will aim to judge students' perceptions and attitudes about the usability of Facebook in collaborative learning by examining whether the use of Facebook can bring any change in the interaction and feedback of teachers, the interaction and conversation of peers and the enthusiasm and capabilities of learners in collaborative learning.

The study will be guided and carried through by highlighting the following subsequent research questions-

1. How has Facebook influenced Collaborative learning?'
2. How do teachers perceive and make use of Facebook as a tool of collaborative learning?
3. How do students view on the strengths/weaknesses, etc. of Facebook as a tool of collaborative learning?

Who else is and can be involved?

Besides you, some other students and teachers at this college will be asked to participate.

5 teachers including you and 8 second-year undergraduate students including you of Economics Department at this college will be requested to participate in this research.

The teachers will be individually interviewed. The students will be invited to take part in FGDs and the number of FGDs will be four in two rounds having 4 students in each of the four FGDs.

What sorts of methods are being used?

This research is based on data collected via FGDs which asks about your perceptions/understanding of the research questions as well as some of your demographic information. Your responses will be audio-taped or recorded using a recording app.

Why have you been chosen?

You have been invited to participate in this study because you are belonging to this college and the research focus is also concerning of this college.

What are you being asked to do?

You are being asked to take part in FGDs for two rounds, audio-taped and give permission for the researchers to use your responses on the FGDs.

Will my taking part in this study be kept confidential?

The data we collect will be treated confidentially, and only members of the research team will have access to the raw data. All information collected while carrying out the study will be stored on a database which is password protected and strictly confidential. The digital and textual data will be kept in a secure and confidential location. Your name will not appear on any database or any information which is then published. Instead, a number will be used as an identifier on all data associated with you. The master copy of the names associated with each number will be kept in a separate, secure, and confidential location.

We will report the results anonymously. When results are reported all individuals and institutions (e.g., individual schools and zones) will be anonymized, so neither you nor your affiliations will be identifiable.

We are committed to carrying out our research according to the ethical guidelines provided by the British Educational Research Association (online at http://tinyurl.com/6r5juen).

What will happen to the results of the research study?

We expect to talk about our research at professional conferences and write about it in academic journals.

Do you have to take part?

Your participation is entirely voluntary. It is important you understand that you do not have to participate in the project at all, and even if you decide to take part you are still free to withdraw up until the data is analyzed without giving a reason.

What are the possible disadvantages of taking part?

We realize that some people may find taking part in FGDs as tiring or difficult and we understand that for some students this may cause feelings of discomfort or anxiety. Otherwise, we do not believe there are any risks or disadvantages to you in taking part.

What are the possible benefits to me of taking part?

We hope that your views, and those of others, will serve the purpose to better understand the knowledge and perceptions about the use of Facebook in support of collaborative learning to enhance students' learning outcomes amongst students, teachers, and administrators of this college.

Who is paying for this research and who is carrying it out?

The research is being carried out by myself. I am a student at the University of Nottingham, School of Education. I am being supervised by Dr Peter Wood. If you have any questions or concerns about the research, you can contact me or my supervisor:

Tapos Kumar Dutt

Email: sbxtd3@nottingham.edu.my/taposkdutt@gmail.com

Phone: (+88)01740582955

Dr Peter Wood (Supervisor)

Email: Peter.Wood@nottingham.edu.my

Phone:

If you agree to take part in this study, please:

1. Keep this copy of the Information Sheet for your records
2. Sign the attached Consent Form
3. Take part in FGDs with me in two rounds

Appendix G

Consent Form for Students' FGDs

The University of Nottingham

UNITED KINGDOM · CHINA · MALAYSIA

Dissertation Research Project

<u>Research Title</u> – **"Use of Facebook in Support of Collaborative Learning to Enhance Learning Outcomes in a Government College at Rajbari, Bangladesh"**

Consent Form (For Students' FGDs)

1. I have read the Information Sheet.
2. I understand the nature and purpose of this research.
3. I have received enough information to make an informed decision about taking part.
4. I understand that I can raise questions, offer criticisms, and make suggestions about the project.
5. I understand that I can decide *not* to participate in this project up until data is analyzed after agreeing to.
6. I agree to contribute to this research.
7. I agree for the interview to be audio-taped or recorded using a recording app.
8. I agree for my responses to be analyzed for this research project,talk about it at professional conferences and write about it in academic journals.

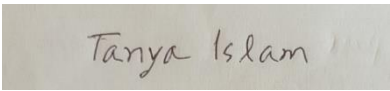I consent to take part in this project after considering the information provided.

NAME (capital letter): S_3 (Student 3)

Enrolled Program: Undergraduate Program, Economics

Studying Year: Second Year

Educational Institution's Name: 'R' Government College, Bangladesh

Signature: _Tanya Islam_

Date: 17/08/2022

*Participant Code (for research team use):*S_3

Appendix H

Questions for Teachers' Interviews

The University of Nottingham

UNITED KINGDOM · CHINA · MALAYSIA

Dissertation Research Project

Research Title – "Use of Facebook in Support of Collaborative Learning to Enhance learning Outcomes in a Government College at Rajbari, Bangladesh"

Interview Protocol (Interview Schedule with Teacher Participants)

Dear Participants,

Thank you for taking time to participate in this Interview Protocol and agreeing to be part of this research study.

This Interview Protocol consists of two sections. **Section One** asks you information about yourself and **Section Two** asks you to respond to items related to:(1) How has Facebook influenced Collaborative learning? and, (2) How do you perceive and make use of Facebook as a tool of collaborative learning? It should take about 10-15 minutes to complete this Interview Protocol.

Section One:

Information of the participants:

1.Name….2. Length of teaching period….

Section Two:

Teachers' Interview schedule

Questions to be asked:

Research question 1

1. What do you think about the key issues (theory, structure, strategies, aims/goals etc.) of collaborative learning theory and practices? Do you think Facebook can exert influences on these? Would you please talk a little bit about how Facebook might exert influences on these?
2. What are the benefits of collaborative learning strategy? Do you think Facebook can enhance the effectiveness of these benefits? Would you please talk a little bit about how Facebook mightenhance the effectiveness of these benefits?
3. What are the challenges of collaborative learning techniques? Do you think Facebook has the potential to meet these challenges? Would you please talk a little bit about how Facebook mightmeet these challenges? (Organization, assessment, monitoring, feedback, collaborative behavior……)
4. Do you think collaborative learning techniques are needed to be implemented in your classroom/ college? Why or why not? Would you please talk a little bit about why or why noncollaborative learning techniques are needed to be implemented in your classroom/ college?
5. Do you think Facebook can play some role in this regard? Would you please talk a little bit about why and how Facebook can play some role in this regard?

Research question 2

6. What are the practices you need to perform in a collaborative class? Do you think Facebook can exert influences of your teaching experiences of collaborative learning? Would you please talk a little bit about how Facebook might exert influences of your teaching experiences of collaborative learning?
7. What obstacles do you face in a collaborative class? Do you think Facebook can have influence on this? Would you please talk a little bit about how Facebook might exert influences of tackling the obstacles?

Do you think Facebook can have influences on students' learning experiences in a collaborative class? Would you please talk a little bit about how Facebook might exert influenceson students' learning experiences in a collaborative class? (Learning experiences…in terms of learning outcome, grade, knowledge acquisition, learning motivation, collaborative behavior etc.)

How do your students view about Facebook use in collaborative learning as a teaching aid? Do they consider it as beneficial or harmful? Why and how?

Exit question

1. Is there anything you would like to add about collaborative learning?
2. Is there anything you would like to add about Facebook as a supportive tool for collaborative learning?

Thanks

Appendix I

The University of Nottingham

UNITED KINGDOM · CHINA · MALAYSIA

Questions for Students' FGDs

Dissertation Research Project

<u>**Research Title**</u> – **"Use of Facebook in Support of Collaborative Learning to Enhance learning Outcomes in a Government College at Rajbari, Bangladesh"**

Interview Protocol (FGDs with Student Participants)

Dear Participants,

Thank you for taking time to participate in this Interview Protocol and agreeing to be part of this research study.

This Interview Protocol consists of two sections. **Section One** asks you information about yourself and **Section Two** asks you to respond to items related to:(1) How has Facebook influenced Collaborative learning? and, 2) How do you view on the strengths/weaknesses, etc. of Facebook as a tool of collaborative learning? It should take about 15-20 minutes to complete this Interview Protocol.

Section One:

Information of the participants:

1.Name….2. Age….3. Gender…. 4.Study year…. (1st year/2nd year/3rd year/ 4th year) 4. Academic session…. 5. Residence address….

Section Two:

Students' Interview Protocol Questions (semi-structured)

Two Phases

FGD (First Phase)

Two Groups (each having 8 students)

1. Do you prefer group work? If yes, would you please explain why and how do you feel when working within groups?
2. How would you describe your abilities as a member of a collaborative group in your class? (**Peer interaction, positive interdependence, and interpersonal skill, in-depth knowing, exchange of views, socio-emotional skills etc.**)
3. What do you feel about the benefits of collaborative learning strategy? Would you please explain your views?
4. What are the aspects of the challenges and difficulties in teamwork? (In terms of time, classroom setting, teacher feedback, time and physical distance from teacher and team)
5. What factors causes disruption or hinders the completion of teamwork? Why and how? Would you please talk a little bit about why and how these sorts of disruptions/hindrances occur?

Exit question

1. Is there anything you would like to add about collaborative learning?

Thanks

FGD (Second Phase)

Students' Interview Protocol Questions (semi-structured)

Two Groups (each having 8 students)

Probe questions

1. Have you attached yourself with the Facebook learning group? If yes how frequently you visit the group?
2. What activities do you perform in Facebook learning group and how frequently?
3. Do you prefer Facebook in support of classroom collaborative work? Would you please talk a little bit about why prefer Facebook in support of classroom collaborative work?

Follow up questions

(For Research question 1: Influence of FB on CL)

1. Do you think Facebook can exert influences on the organization of collaborative class? Would you please talk a little bit about how Facebook can exert influences on the organization of collaborative class?
2. Do you think Facebook can enhance the effectiveness and benefits of collaborative class? Would you please talk a little bit about how Facebook can enhance the effectiveness and benefits of collaborative class?
3. Do you think Facebook has the potential to meet the disruptions and challenges of collaborative class? Would you please talk a little bit about how Facebook might meet the disruptions and challenges of collaborative class? (Organization, assessment, monitoring, feedback, collaborative behavior……)

(For Research question 3: Students' perceptions about Facebook use in support of collaborative learning)

1. Do you think Facebook will be supportive for collaborative learning? Would you please talk a little bit about why and how Facebook will be supportive for collaborative learning?
2. Do you feel more enthusiastic in your study using Facebook rather than only learning collaboratively in classroom setting? Would you please talk a little bit about why or why not you feel more enthusiastic in your study using Facebook rather than only learning collaboratively in classroom setting? (Motivation)
3. Do you feel difference in teachers' interaction and feedback over individual collaborative class? Would you please explain why or why not you feel difference in teachers' interaction and feedback over individual collaborative class? (Interactions with the teachers)
4. Do you feel difference in peer interaction and conversation with Facebook over individual collaborative class? Would you please explain why or why not you feel difference in peer interaction and conversation with Facebook over individual collaborative class? (Peer interactions)
5. Do you feel difference in your abilities when using Facebook as a member of a collaborative group in your class? Would you please explain why and howyou feel difference in your abilities when using Facebook as a member of a collaborative group in your class? (From social-constructivist perspective)

Exit question

1. Is there anything you would like to add about Facebook as a supportive tool for collaborative learning?

Thanks