

Satisfaction Level of B.Ed. Students of Bangladesh Open University: An Analysis

Rezwanul Alam*

School of Education, Bangladesh Open University, Bangladesh

Abstract

This study was carried out to assess the satisfaction level of the B.Ed. students in different study centers of Bangladesh Open University (BOU). School of Education (SoE) of Bangladesh Open University has 26 study centers to conduct the B.Ed. programme. This programme helps teachers to become more proficient in the classroom. Similar to other academic programmes, the B.Ed. programme's strengths and areas for development can be determined by student satisfaction. The educational experiences, administrative and other relevant programme activities, and the facilities that Bangladesh Open University offers its students during the learning process are the main factors that determine the level of student satisfaction. By using two different tools (survey questionnaire and FGD schedule) data were collected from the students of six B.Ed. study centres of Bangladesh Open University. The survey questionnaire used a Likert-type rating

Correspondence should be addressed to **Associate Professor Rezwanul Alam, School of Education, Bangladesh Open University, Bangladesh.*

Email: rezwanul_alam@bou.ac.bd



<https://orcid.org/0009-0007-6426-4784>

(Received 11th March 2025; Revised 01st November 2025; Accepted 30th November 2025, © OUSL)



This article is published under the Creative Commons Attribution-Share Alike 4.0 International License (CC-BY-SA). This license permits use, distribution and reproduction in any medium; provided it is licensed under the same terms and the original work is properly cited.

system, with five points ranging from "strongly disagree" to "strongly agree" against each statement. The number of B.Ed. students to whom the questionnaire and FGD schedule were administered were 180 and 48, respectively. So, the total sample size was 228. The major findings from the quantitative data revealed that the agreed response obtained a satisfaction level ($M > 3.00$) from 2 out of 4 areas of. It further indicated that the highest agree response ($M = 3.56$) belonged to the statements outlined under the area "Tutor performance" followed by "Student-tutor interaction" ($M = 3.22$). Contrarily, the lowest response ($M = 2.48$) belonged to the statements related to "Infrastructural facilities and support services" followed by "Course evaluation" ($M = 2.76$). The study's qualitative data discovered that although students were happy with the tutors' performance, they were not satisfied with less number of tutorial sessions. It was also apparent from the qualitative data that students' satisfaction level was very low regarding the existing physical facilities of the study centres. Exam-related complications and insufficient support services were also addressed by the students.

Keywords: *satisfaction level, B.Ed. programme, distance education, study center, tutor*

Introduction

Bangladesh Open University (BOU), which was founded in 1992 by an Act of Parliament, is the country's top provider of open and distance education. The School of Education (SoE) of BOU has been offering the Bachelor of Education (B.Ed.) for more than three decades, making it one of BOU's top academic programmes. Every year a good number of graduates come out of this programme, absolute majority of whom are teachers at secondary level. Distance education for teacher preparation has already been widely employed in many developing nations, especially in Africa, to augment the traditional college-based approach (e.g., Brophy & Dudley, 1982; Perraton, 1984, 1993; Coldevin & Coldevin, 1989) – and in, for example, Australia (Evans & Nation, 1996) and the United Kingdom (Prescott & Robinson, 1993). The growth of distance education has been significantly aided by technological advancements (Daniel & Mega, 1996; Oliveria & Rumble, 2013). Planning for teacher education through distance

learning should incorporate multifaceted methods to accomplish the goals of the programme (Saravanakumar & Subbiah, 2011). The B.Ed. programme at Bangladesh Open University is primarily administered by several study centers, much like other BOU programmes. Self-learning is the primary focus of BOU's blended learning approach.

Nowadays, student satisfaction is one of the major components of any successful programme. So, it is very important to know to what extent B.Ed. students are satisfied with the services provided by BOU and the respective study centers. According to Allen et al. (2002) and Wang (2003), students' degree of satisfaction in any educational setting may be assessed based on both the quality of the education they receive and how much pleasure they have. Student satisfaction regarding different aspects of any academic programme is an important indicator of the quality of learning experiences (Moore & Kearsley, 1996; Yukselturk & Yildirim, 2008). According to Kaminski et al. (2009), as new technologies have changed how students connect with teachers and peers, it is worthwhile to investigate student satisfaction. Distance learners who struggle to effectively regulate their learning are unlikely to be satisfied (Artino, 2007; Puzziferro, 2008). This study - Satisfaction Level of B.Ed. Students of Bangladesh Open University: An Analysis aimed to assess the satisfaction level of B.Ed. students of BOU.

Problem Statement

Quality teachers are very much needed to ensure the quality of education. School of Education (SOE), BOU offers the B.Ed. programme to enhance the expertise of the teachers in classroom teaching as teacher education is a noteworthy component of today's higher education system (Passi, 2000). Bangladesh Open University has 26 study centers to conduct the B.Ed. programme. Like other distance mode programmes of BOU, the B.Ed. programme is implemented by these study centers which are the main figures responsible to organize the tutorial sessions. The first B.Ed. curriculum of SOE was implemented since the emergence of the university in 1992, and the duration of that programme was two years. The existing one-year B.Ed. curriculum was introduced from

the academic year 2019-2020. The aim of this programme is to produce competent, self-assured, and professionally knowledgeable secondary school teachers who can oversee the implementation status, manage the teaching-learning process effectively, and be committed to their own professional growth. An ongoing evaluation is essential to determine whether this new curriculum is working successfully or not. The relationship between the administrative structure of School of Education, BOU for conducting the one-year distance mode B.Ed. programme, the study centers for teaching-learning activities and the intricacies of the curriculum with these two as a system of interrelated components implies that any new change has wider consequences on the whole education system. Like other academic programmes, student satisfaction enables this particular B.Ed. programme to define its strengths and the areas for improvement. This does not simply examine teaching-learning strategy that has a limited emphasis to consider wider area of the learning experience of students in distance mode education system. Hasan et al. (2008) used a case study of private higher education institutions in Malaysia to investigate service quality and student satisfaction. The level of student satisfaction is focused on the educational experiences, administrative and other pertinent activities of the programmes and the facilities enjoyed by the students during the learning process provided by the institution. Some questions may arise at the start of this 1-year distance mode B.Ed. programme. For instance:

- Can this B.Ed. programme meet up the increasing demand of the students?
- Are the students satisfied with this programme?

The main concern of this study was to find out the answers of these questions.

Objective and Research Question

The main objective of this study was to assess the satisfaction level of B.Ed. students of Bangladesh Open University.

This study was carried out to address the following research question-

1) What is the satisfaction level of the B.Ed. students at Bangladesh Open University?

Rationale of the Study

This study assessed the satisfaction level of the B.Ed. students in accordance with the academic, administrative and other programme-related support provided by Bangladesh Open University. Previous studies have demonstrated the beneficial impact of interaction on distant learning students' satisfaction (Bray et al., 2008; Moore & Kearsley, 1996; Thurmond & Wambach, 2004). In a study of undergraduates and graduates who took a web-based distance education course from a US university, Robles (2006) discovered that Internet self-efficacy is not a major predictor of student satisfaction. Chu & Chu (2010) mentioned that satisfaction and self-efficacy were positively correlated in their research of adults aged 45 - 87 who took computer courses. In a study involving 200 students enrolled in online courses, Levy (2003) concluded that one key indicator of e-learning's efficacy is how satisfied the students are with it. The results showed a substantial positive correlation between student satisfaction and the Service Quality (SERVQUAL) aspects of tangibility, responsiveness, assurance, reliability, and empathy. Using a sample of 550 business students, Asaduzzaman et al. (2013) also looked at service quality and student satisfaction in Bangladeshi private universities using SERVQUAL dimensions and the results showed a substantial relationship between student satisfaction and each dimension. There is a research gap regarding identification of the level of satisfaction of the students of distance mode teacher education programmes in Bangladesh. Thus, this study focused on assessing the satisfaction level of B.Ed. students of Bangladesh Open University and it might be a good source for the interested researchers who can get necessary guidelines in this area of study in future.

Methodology

A sound research design is essential for every research study to be effective which is a strategy that involves several choices related to doing the study (Creswell, 2015; Robson, 2002). Prior to conducting a

study, research strategy is beneficial to comprehend and have knowledge of several approaches (Bell, 2018). This study used a mixed method (qualitative and quantitative) approach that helped to clarify the research issue and appropriately address the research questions. From primary sources, in depth information was collected through quantitative and qualitative methods. The quantitative survey included a questionnaire. On the other hand, the qualitative survey included a focus group discussion (FGD) schedule. Documents, research reports and articles were the basis of secondary source of information. As mentioned already, the main objective of this study was to assess the satisfaction level of the B.Ed. students in different study centers of Bangladesh Open University. Therefore, this study included the following activities:

- Developing the research tools i.e., a questionnaire and a focus group discussion (FGD) schedule for the students of the B.Ed. Programme.
- Administering these research tools to B.Ed. students in the selected study centers of Bangladesh Open University.

Conceptual Framework

The design of this study considered a few essential components of teacher education programmes that are offered in distance mode. It was separated into four main sections, with the third and fourth sections being joined by a different part. At first, the idea of distance mode teacher education programmes and Bangladesh Open University were clarified. Thus, various factors that contribute to students' satisfaction with distance learning teacher education programmes were identified. The satisfaction level of the B.Ed. students in various study centers of BOU was then determined. It should be noted that there were four major areas of student satisfaction. The factors which influence students' satisfaction worked as the blueprint to develop the research instruments (Figure 1).

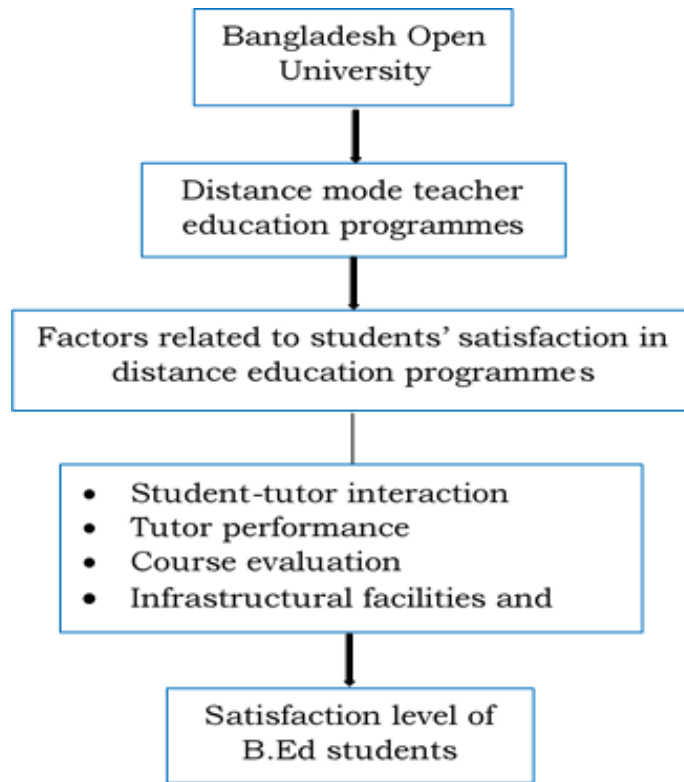


FIGURE 1: CONCEPTUAL FRAMEWORK OF SATISFACTION LEVEL OF B.ED. STUDENTS OF BANGLADESH OPEN UNIVERSITY

Questionnaire Design

Following a review of pertinent research and related literature, it became clear that four distinct areas of satisfaction were primarily linked to student satisfaction with distance mode teacher education programmes which are student-tutor interaction; tutor performance; course evaluation; and infrastructural facilities and support services. For assessing the satisfaction level regarding student-tutor interaction, 5 items were adapted from the study of Johnson et al. (2000). Similarly, 9 items regarding tutor performance and 6 items related to course evaluation were utilized from Teaching Evaluation Scale of Texas Tech University's College of Education (Tallent-Runnels et al., 2005). Lastly, 7 items from the study of Alghamdi (2015) were taken which were related to the level of satisfaction of infrastructural

facilities and support services. The statements used in the questionnaire of this study were developed because of those 27 items. The statements are as follows-

Statements used to assess the satisfaction level regarding student-tutor interaction

1. Tutors encourage me to become actively involved in the courses discussions
2. Tutors provide me feedback on my work through comments
3. I can interact with the tutors during the courses discussions
4. The tutors treat me individually
5. Tutors inform me about my progress

Statements used to assess the satisfaction level regarding tutor performance

1. Overall, the tutors are effective
2. Tutors are available for consultation during office hours or by appointment
3. Tutors stimulate students learning
4. Tutors treat all students fairly
5. Tutors treat all students with respect
6. Tutors welcome and encourage questions and comments
7. Tutors present the information clearly
8. Tutors emphasize the major points and concepts
9. The tutors demonstrate knowledge of the subject

Statements used to assess the satisfaction level regarding course evaluation

1. Overall, I have valuable learning experiences from my courses
2. The assignments are relevant and useful
3. Course materials are relevant and useful

4. Learning outcomes are clearly stated in the syllabus
5. The testing and evaluation procedures are fair
6. The workload is appropriate for the hours of credit

Statements used to assess the satisfaction level regarding administrative and support services

1. There is a variety of services (call center, internet, self-payment system, technical assistance etc.)
2. Admission and registration processes are effective
3. General information and extension services are available
4. Psychological and social counseling services are accessible
5. Physical facilities (academic building, exam hall, library, dining, washroom etc.) are sufficient
6. Facilities and services dedicated to people with special needs are available
7. There is provision of guidance and training programmes to support students on how to avail facilities and services

Sample Size and Sampling Techniques

Bangladesh Open University has 26 study centers for the B.Ed. programme. The target population of this study was all B.Ed. students of the respective study centers. Six (6) B.Ed. study centers (Govt. TTC, Dhaka; Govt. TTC, Chattogram; Govt. TTC, Rajshahi; Govt. TTC, Khulna; Govt. TTC, Barishal and Govt. TTC, Sylhet) from 6 divisional cities of Bangladesh were selected for conducting the study. One hundred and eighty (180) students (30 students/TTC) were selected conveniently to fill up the questionnaire. Six (6) FGDs were conducted in 6 TTCs and 8 students took part in each FGD. The details of the data collection procedures including sample are mentioned in Table 1.

Table 1. *Data collection procedures including sample*

Research Instrument	Data Source	Sample Size	Sampling Technique
Questionnaire (Likert scale type)	B.Ed. students of BOU	180 from 6 study centres (30 students/study centre)	Convenience
FGD schedule	B.Ed. students of BOU	48 from 6 study centres (8 students/study centre)	Convenience
Total sample size=228			

Pilot Study and Reliability Analysis

A pilot study was done by the researcher as a pilot study looks into the actual research's setting and explores final study instructions that are essential to running the actual study (Hazzi & Maldaon, 2015; Vogel & Draper-Rodi, 2017). Following the completion of the pilot study at Government Teachers' Training College (TTC), Rangpur and TTC, Mymensingh it was identified that the Likert scale items in the questionnaire needed further explanation to the respondents, and that the FGD schedule needed to be modified. While rearranging the research tools, two items were eliminated from the FGD schedule. The reliability of the constructs in the pilot study was assessed using the reliability coefficient alpha prior to real data collection. There were 16 responders from 2 study centers (8 students/study center) in the pilot study's sample. The number of items and Cronbach's alpha coefficient for each area of student satisfaction are displayed in Table 2 and Figure 2. The range of reliability values was from 0.54 to 0.72 which was at acceptable level to endorse the reliability of the research instrument.

Table 2. *Reliability of the research instrument*

Area of Student Satisfaction	No. of Items	Reliability Cronbach's Alpha
Student-Tutor Interaction	5	0.54
Tutor Performance	9	0.56
Course Evaluation	6	0.72
Administrative and Support Services	7	0.68

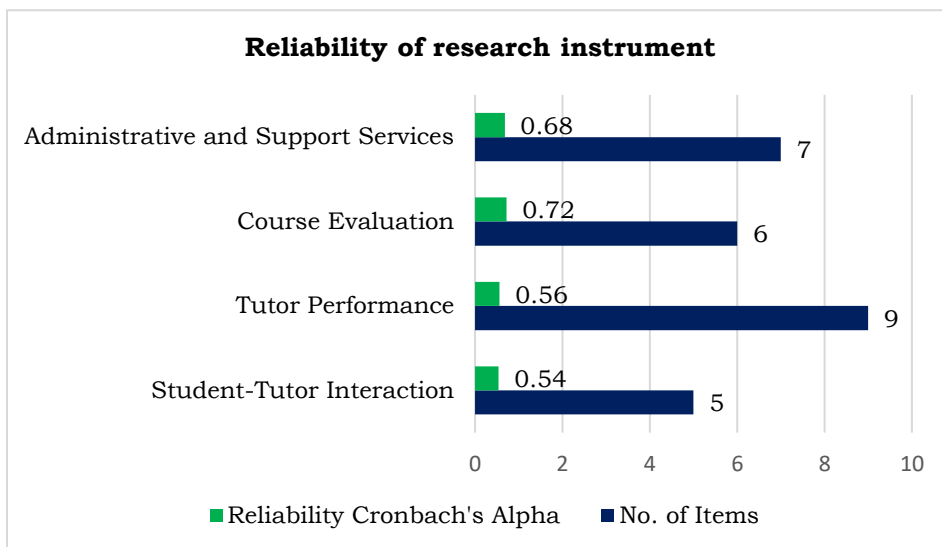


Figure 2. Reliability Cronbach's Alpha against no. of items under each area of student satisfaction

Data Processing Procedure

Initially, the respondents' demographic data were gathered via the questionnaire, and descriptive statistics such as percentage distribution were employed for analysis. Secondly, SPSS 21 was used to evaluate the quantitative data gathered from Likert-type questions. The participants' responses to each Likert-type statement were categorized as follows: 1 for strongly disagree, 2 for disagree, 3 for neutral, 4 for agree, and 5 for strongly agree. Since the range was from

1 to 5, 3 (neutral) was the midpoint. As a result, the items' combined mean score was higher than 3, suggesting that the respondents' responses tended to agree. The greater the degree of agreement with the response, the closer the mean was to 5. To facilitate data interpretation, the mean scores and standard deviations were calculated and then presented. Thirdly, the researcher manually extracted the qualitative data from the test scripts obtained from focus group discussions, then processed it analytically in a narrative approach.

Presentation and Analysis of Data

This section presents and discusses the satisfaction level of the B.Ed. students of Bangladesh Open University.

Analysis of quantitative data gathered from Likert-type items of the questionnaire

According to the data presented in Table 3 and Figure 3, the agreed response ($M > 3.00$) was obtained for the level of satisfaction under 2 out of the 4 areas. It is also evident that the statements listed under the category "Tutor performance" received the highest agree response ($M = 3.56$) followed by "Student-tutor interaction" ($M = 3.22$). Contrarily, the data in the table makes it clear that the statements under the area "Infrastructural facilities and support services" had the lowest agree response ($M = 2.48$) which was followed by "Course evaluation" ($M = 2.76$). Moreover, it is noticeable that the standard deviation (SD) against the responses on the statements across all areas were significant ($SD > 0.50$) which indicated that the data points were not tended to be near to the mean.

Table 3. *Satisfaction level of B.Ed. students of Bangladesh Open University*

Sl. No.	Areas of Satisfaction of B.Ed. Students Regarding the Program	Number of Items (N)	Mean (M)	Standard Deviation (SD)
1.	Student-tutor interaction	5	3.22	1.34

2.	Tutor performance	9	3.56	1.42
3.	Course evaluation	6	2.76	1.08
4.	Infrastructural facilities and support services	7	2.48	0.95

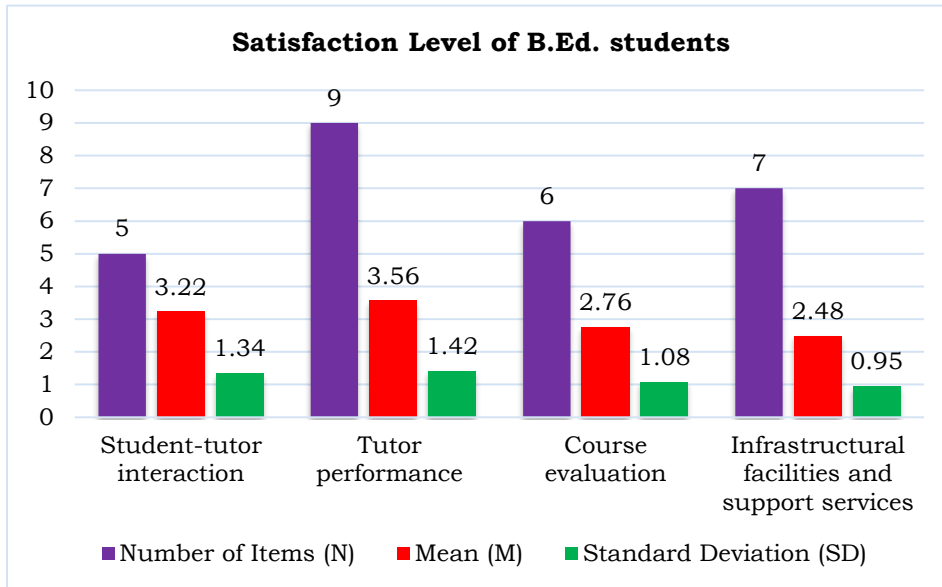


Figure 3. Satisfaction level of B.Ed. students regarding different aspects of B.Ed. programme

Major Findings

The following key findings were drawn from this study's analysis of quantitative as well as qualitative data.

Major findings from quantitative data analysis

- Most of the respondents (76.50%) were involved with teaching which indicated that only a few were non-teachers.
- Less than 5 years of work experience was possessed by 46% of the B.Ed. students.
- Two (2) out of 4 areas of satisfaction got the agree response ($M > 3.00$).

- The statements listed under the category "Tutor performance" received the highest agree response (M=3.56) followed by "Student-tutor interaction" (M=3.22).
- Statements under the area "Infrastructural facilities and support services" had the lowest agree response (M=2.48) which was followed by "Course Evaluation" (M=2.76).
- Standard deviation (SD) against the responses on the statements across all areas were significant (SD>0.50) which specified that the data points did not tend to be near to the mean.

Major findings from qualitative data analysis

➤ Satisfactory aspects regarding B.Ed. programme offered by Bangladesh Open University

- Most of the B.Ed. tutors are highly qualified and well experienced.
- Tutors pay particular attention to the students who are relatively weak and offer feedback during the tutorial session as needed.
- There are fewer tendencies in adapting unfair means in the examinations.
- Standard admission process.
- Well organized orientation programme.
- Teaching materials provided by BOU are standard.
- On the day of tutorial sessions, the course coordinator is mostly available so that students can discuss with him if required.

➤ Dissatisfactory aspects regarding B.Ed. programme offered by Bangladesh Open University

- Number of B.Ed. tutorial sessions is insufficient.
- Prolonged delay in completing the B.Ed. programme.

- There is a common extended delay for exam results to be published.
- Needlessly hold-up in addressing result complaints.
- Study materials and ID cards are not given to the students in time.
- Respective study centres are unable to solve some administrative problems.
- There is a scarcity of ICT equipment.
- Inadequate number of support staff in the study centre.

Conclusions

High levels of satisfaction have a favourable impact on students' academic performance and lower percentage of students who leave the institution before completing their degree (Astin, 1993). Student satisfaction is frequently accomplished by making a set of requirements and guidelines available for the university's academic as well as non-academic services (Saif, Sartawi & Al-Aqra, 2014). According to Douglas et al. (2008), there is disagreement among researchers regarding the nature of the relationship between service quality and student satisfaction and which one causes the other. People's expectations for high-quality instruction, successful educational outcomes, and ultimately learning satisfaction have increased due to the expanding demand and growing consumer experience with flexible education programmes that support career development and lifetime learning (Debourgh, 1999). Nevertheless, student satisfaction is a key quality indicator and a crucial component of the dominance and success of the educational institution (Budic, 2011). This study- **Satisfaction Level of B.Ed. Students of Bangladesh Open University: An Analysis** discovered that overall satisfaction level of the B.Ed. students is acceptable though they are dissatisfied with some academic and non-academic aspects. This circumstance must be resolved and should not be prolonged. Therefore, identifying the root causes of the existing state should be the top priority, and efforts should be made to remedy the situation

as quickly as feasible. The field level employees of BOU and the tutors at various study centers are the main implementers of the B.Ed. programme at BOU. Their overall activities and professionalism play the most important role in making students satisfied regarding the programme. Without having satisfaction students will not be able to gain the maximum benefit from any academic programme. Therefore, it is crucial to acknowledge their opinions and satisfaction level regarding the development and implementation process of the B.Ed. programme. The administration of BOU and the corresponding study centres should take the appropriate actions, keeping in mind the degree of satisfaction of the B.Ed. students, in order to address the existing situation and the way to increase the satisfaction level of the B.Ed. students that this study revealed.

Recommendations

Considering the major findings of the study, the researcher considers the following recommendations:

- Before the tutorial sessions begin, the study materials should be delivered to the study centers.
- There should be more tutorial sessions.
- The BOU website has to be updated frequently.
- The study centers should have more technological resources and infrastructural facilities.
- Study centers should create the opportunity for the students to use the computer laboratory and library at their convenience.
- BOU should act right away to ensure that the B.Ed. programme examinations are held on time and publish the result within 3 months after the examination.
- In order for the B.Ed. programme to function more efficiently, the number of support staff of the study centers should be increased.

Ethical Consideration

The study posed no risk and did not harm the respondents physically or emotionally because it did not include any physical, psychological or mental condition. It took time to build a rapport with the participants and ensured highest possible concern while executing the research design. The participants were informed of the purpose before they agreed to join the study. The researcher ensured the participants that all data would be kept in strict confidence and for research use only. The respondents were not asked to give their personal information (e.g. residential address, permanent address, height, weight etc.) which were not linked to this study. They were also informed about their rights to withdraw from the study any time, even without prior notice or showing any cause. Researcher's personal biases and opinions did not get in the way of the research, which ensured both sides fair consideration. Moreover, proper approval for data collection was taken from a respective authority ensuring the issues related to ethical and legal considerations and the respondents were well informed that they would not be identifiable anywhere in the report.

References

- Alghamdi, O. S. (2015). Satisfaction of Preparatory Year Students with University Services. *World Journal of Education*, 5(5), 117-129. doi: org/10.5430/wje.v5n5p117
- Allen, M., Bourhis, J., Burrell, N., & Mabry, E. (2002). Comparing student satisfaction with distance education to traditional classrooms in higher education: A meta-analysis. *The American journal of distance education*, 16(2), 83-97. doi: org/10.1207/S15389286AJDE1602_3
- Artino Jr, A. R. (2007). Online military training: Using a social cognitive view of motivation and self-regulation to understand students' satisfaction, perceived learning, and choice. *Quarterly Review of Distance Education*, 8(3), 191. doi: org/10.1108/QRDE-09-2007-0002

- Asaduzzaman, M., Hossain, M., & Rahman, M. (2013). Service quality and student satisfaction: a case study on private universities in Bangladesh. *International journal of economics, finance and management sciences*, 9(4), 128-135.
doi: org/10.11648/j.ijefm.20130103.11
- Astin, A. W. (1993). What Matters in College?: Four Critical Years Revisited. *Jossey-Bass google schola*, 2, 349-387.
doi: org/10.2307/2943781
- Bell, J. (2018). *Doing your research project: A guide for first-time researchers in education, health and social science* (4th ed.). Berkshire: Open University Press.
doi: org/10.1177/144078339403000210
- Bray, E., Aoki, K., & Dlugosh, L. (2008). Predictors of learning satisfaction in Japanese online distance learners. *International Review of Research in Open and Distributed Learning*, 9(3), 1-24.
doi: org/10.19173/irrodl.v9i3.525
- Brophy, M., & Dudley, B. (1982). Patterns of distance teaching in teacher education. *British Journal of Teacher Education*, 8(2), 95-162. doi: org/10.1080/0260747820080205
- Budic, H. (2011). Importance and Application of Test Method In The Process Of Determining Students Satisfaction with the Quality of Educational Services. *International Journal of Management Cases*, 13(3), 368-375.
doi: org/10.5848/apbj.2011.00073
- Chu, R. J., & Chu, A. Z. (2010). Multi-level analysis of peer support, Internet self-efficacy and e-learning outcomes–The contextual effects of collectivism and group potency. *Computers & Education*, 55(1), 145-154.
doi: org/10.1016/j.compedu.2009.12.011
- Coldevin, G., & Coldevin, C. (1989). In-service teacher education at a distance: trends in Third World development. *Open Learning: The Journal of Open, Distance and e-Learning*, 4(1), 9-15.
doi: org/10.1080/0268051890040103
- Creswell, J. W. (2015). Revisiting mixed methods and advancing scientific practices.
doi: org/10.1093/oxfordhb/9780199933624.013.39

- Daniel, J., & Mega, S. (1996). *Universities and Knowledge Media, Technology Strategies for Higher Education*. London, Kogan Page Ltd. ISBN-0-7494-2119-3
- Debourgh, G. A. (1999). Technology is the tool, teaching is the task: Student satisfaction in distance learning. In *Society for information technology & teacher education international conference* (pp. 131-137). Association for the Advancement of Computing in Education (AACE).
<https://www.learntechlib.org/primary/p/7521/>.
- Douglas, J., McClelland, R., & Davies, J. (2008). The development of a conceptual model of student satisfaction with their experience in higher education. *Quality assurance in education*, 16(1), 19-35. doi: [org/10.1108/09684880810848396](https://doi.org/10.1108/09684880810848396)
- Evans, T., & Nation, D. (1996). Theories of teaching and learning in open and distance education. *Open Learning: The Journal of Open, Distance and e-Learning*, 11(3), 50-53.
doi: [org/10.1080/0268051960110309](https://doi.org/10.1080/0268051960110309)
- Hasan, H. F. A., Ilias, A., Rahman, R. A., & Razak, M. Z. A. (2008). Service quality and student satisfaction: A case study at private higher education institutions. *International business research*, 1(3), 163-175. doi: [org/10.5539/ibr.v1n3p163](https://doi.org/10.5539/ibr.v1n3p163)
- Hazzi, O., & Maldaon, I. (2015). A pilot study: Vital methodological issues. *Business: Theory and Practice*, 16(1), 53-62.
doi: [org/10.3846/btp.2015.437](https://doi.org/10.3846/btp.2015.437)
- Johnson, D., Aragon, S. R., & Shaik, N. (2000). Comparative analysis of learner satisfaction and learning outcomes in online and face-to-face learning environments. *Journal of interactive learning research*, 11(1), 29-49.
<https://api.semanticscholar.org/CorpusID:142791632>
- Kaminski, K., Switzer, J., & Gloeckner, G. (2009). Workforce readiness: A study of university students' fluency with information technology. *Computers & Education*, 53(2), 228-233.
doi: [org/10.1016/j.compedu.2009.01.017](https://doi.org/10.1016/j.compedu.2009.01.017)

- Levy, Y. (2003). *A study of learners' perceived value and satisfaction for implied effectiveness of online learning systems*. Florida International University.
<https://www.learntechlib.org/p/117028/>.
- Moore, M. G., & Kearsley, G. G. (1996). *Distance education: A system view* 72(9):1-1. doi:10.1080/00131911.2020.1766204
- Oliveira, J., & Rumble, G. (2013). Vocational education at a distance. In *Vocational Education at a Distance* (pp. 3-9). Routledge.
doi: org/10.4324/9781315041377
- Passi, B. K. (2000). Innovative Teacher education: A pipe dream. *Teacher Education in India, Selection from University News, Association of Indian Universities, New Delhi*. <https://WorldConferences.net>
- Perraton, H. (1984). *Training Teachers at a Distance*. Commonwealth Secretariat, Marlborough House, Pall Mall, London SW1Y 5HX.
doi: org/10.1177/146642408410400419
- Perraton, H. (Ed.). (1993). *Distance Education for Teacher Training*. London: Routledge. doi: 10.4324/9780203304075
- Prescott, W., & Robinson, B. (1993). Teacher Education at the Open University in H. Perraton (Ed.). *Distance Education for Teacher Training*. London: Routledge.
doi: org/10.4324/9780203304075
- Puzziferro, M. (2008). Online technologies self-efficacy and self-regulated learning as predictors of final grade and satisfaction in college-level online courses. *The Amer. Journal of Distance Education*, 22(2), 72-89.
doi: org/10.1080/08923640802039024
- Robles, F. M. R. (2006). *Learner characteristic, interaction and support service variables as predictors of satisfaction in Web-based distance education*. The University of New Mexico. 8(4), 759-773.
doi: org/10.18488/journal.61.2020.84.759.773
- Robson, C. (2002). *Real world research* (Vol. 2). Oxford: Blackwell.
doi:scholar.google.com/scholar?q=Robson,+C.+(2002).+Real+wo

rld+research+(Vol.+2).+Oxford:+Blackwell&hl=en&as_sdt=0&as_vis=1&oi=scholart

Saif, N. I., Sartawi, K. S., & Al-Aqra, S. S. (2014). Quality of services and student satisfaction at Jordanian Universities. *The Arab Journal For Quality Assurance in Higher Education*, 7.
doi: org/10.20428/ajqahe.v7i0.281

Saravanakumar, A. R., & Subbiah, S. (2011). Teacher Education Programme through Distance Mode–A Technological Approach. *Indian Journal of Applied Research*, 1(3), 56-57.
doi: org/10.15373/2249555x/dec2011/20

Tallent-Runnels, M. K., Lan, W. Y., Fryer, W., Thomas, J. A., Cooper, S., & Wang, K. (2005). The relationship between problems with technology and graduate students' evaluations of online teaching. *The Internet and higher education*, 8(2), 167-174.
doi: org/10.1016/j.iheduc.2005.03.005

Thurmond, V., & Wambach, K. (2004). Understanding interactions in distance education: A review of the literature. *International journal of instructional technology and distance learning*, 1(1), np.
doi:www.researchgate.net/publication/313196528_Understanding_interactions_in_distance_education_A_review_of_the_literature

Vogel, S., & Draper-Rodi, J. (2017). The importance of pilot studies, how to write them and what they mean. *International Journal of Osteopathic Medicine*, 23, 2-3
doi: org/10.1016/j.ijosm.2017.02.001

Wang, Y. S. (2003). Assessment of learner satisfaction with asynchronous electronic learning systems. *Information & management*, 41(1), 75-86.
doi: org/10.1016/S0378-7206(03)00028-4

Yukselturk, E., & Yildirim, Z. (2008). Investigation of interaction, online support, course structure and flexibility as the contributing factors to students' satisfaction in an online certificate program. *Journal of Educational Technology & Society*, 11(4), 51-65.

doi:www.researchgate.net/publication/220374757_Investigation_of_Interaction_Online_Support_Course_Structure_and_Flexibility_as_the_Contributing_Factors_to_Students'_Satisfaction_in_an_Online_Certificate_Program