Original Research Article

LEARNERS' ATTITUDE TOWARDS DISTANCE EDUCATION PROGRAMME: CASE OF BACHELOR PROGRAM IN AGRICULTURE OF BANGLADESH OPEN UNIVERSITY

ABSTRACT

The study aimed to explore learners' attitudes toward 'the Bachelor of Agriculture Education (BAgEd) distance education program' and to show its relationship with the selected socioeconomic characteristics of the learners. The target population for this study were learners at different BAgEd Study Centers of Bangladesh Open University BOU). Data collection was conducted from June 15, 2020, to April 30, 2022, by the survey through Google form in the web link. Random sampling was used from 438 learners who participated in the study of 1750 learners findings show that around 57.3% of participants stayed in earlier stages in the innovation-decision process related to learners' attitude toward BAgEd distance education (no knowledge, knowledge, persuasion decision, implementation and confirmation). About 42.7% were in later stages (decision, implementation and confirmation). A large portion (22.2%) of the learners think that after acquiring BAgEd degree, one may apply earned knowledge in own service field. On the other hand, only eleven participants think combining web-based and traditional methods in distance education can help learners access higher education. Out of ten selected characteristics of the learners, only one characteristic, family member, showed a significant positive relationship with their attitude towards the BAgEd distance education program. Six of the significant characteristics, such as earning members, training, organizational participation, cosmopoliteness, uses of e-resources and creativity with correlation at 0.01. On the other hand, three independent variables, such as an academic semester, age and educational qualification, are significant at 0.05.

Keywords: Attitude, distance education, Bangladesh Open University

1. INTRODUCTION

Open and Distance learning is a (blanket) general term that encompasses blends of learning in different mixes and contexts; it encompasses e-learning, blended learning, mixed-mode learning, flexible learning and distributed learning [1]. Most definitions, however, pay attention to the following characteristics: the separation of the teacher and the learner in time or place [2]. Planned learning usually occurs is a different place and requires a well-defined system of delivery that includes modified teaching techniques, alternative modes for communication including, but not limited to, technology, and alternative administrative and organizational components [3]. Distance education is heavily entrenched in technology. For

communicating alone, there are a variety of methods. The most popular and common methods of communication used is electronic mail (e-mail); bulletin board systems (BBS); Internet [using chat programs]; telephone-based audio conferencing; and video conferencing with 1- or 2-way video and 2-way audio via broadcast; and closed-circuit or low power television [4].

Distance education in Bangladesh started its journey in 1956. It began with the distribution of 200 radio receivers throughout the country, which led to the creation of the Audio-Visual Cell (AVC) and later the Audio-Visual Education Centre (AVEC) in 1962. In 1978-1983, a pilot project entitled 'School Broadcasting Program (SBP)' was undertaken. In 1983, the SBP and AVEC were merged to form the National Institute of Education Media and Technology (NIEMT). In 1985, the Bangladesh Institute of Distance Education (BIDE) was established and NIEMT was incorporated into BIDE, in 1989, as per the request of the Government of Bangladesh, Asian Development Bank (ADB) sent a fact-finding mission on Open University' to Bangladesh. Then a feasibility study on Open University was conducted through a 'Technical Assistance Project (TAP)' under the assistance of ADB. Finally, with a mission to ensure citizens' education irrespective of age and gender, Bangladesh Open University (BOU) emerged on 21st october1992 by an Act passed in the Bangladesh National Parliament (BOU Act 1992).

The School of Agriculture and Rural Development (SARD) of the BOU is actively engaged in educating people in the country's rural areas with the help of modern agriculture technology to boost the production of different agricultural commodities, including field crops, poultry, dairy and fish. Agriculture contributes in GDP is 13.29%; the Growth rate is 3.45%, and the labour force above 15 years old are involved in the country's agriculture sector is 2,46,93,000 [5]. The primary emphasis of development efforts in agriculture since independence has been to replace the age-old methods of agriculture with modern technology capable of sustainable growth. SARD ensures the practical courses of the BAgEd program for learners through the laboratory and field facilities of recognized tutorial institutes. Both theoretical and practical are held at the end of each semester. Objective and broad type questions are set, and scripts are examined by external examiners examine hands. Practical demonstration and oral are part of practical examination. The result of every examination is centrally published by Controller of Examinations centrally publishes the result of every examination at the BOU after each semester. SARD of BOU is to impart certificate, diploma, and graduate (BAgEd) level education through distance mode comprising formal and non-formal programs in agriculture and rural development to boost the production of different agricultural commodities, including crops, livestock and fisheries. Although distance education may be a viable alternative at Bangladesh Open University, there are also many obstacles in establishing and maintaining a distance education program that must be overcome to ensure success Roger's [6] diffusion theory shows a general model of the innovation-diffusion process. Keeping this view in mind, the present study was undertaken to measure learners' attitudes toward BAgEd distance education of BOU contributing to agricultural development in Bangladesh. The outcome of this study will be a set of guidelines for implementing successful and sustainable distance education programs in the School of Agriculture and Rural Development (SARD) of BOU. In addition, it will provide valuable information to policymakers of Bangladesh Open University to assist in generating vital decisions regarding the implementation of BAgEd distance education in BOU.

2. OBJECTIVES of the study

The general objective of the was to examine learners' attitude towards distance education programme, while the specific objectives of the research study were to:

i) describe learners by their selected personal characteristics
ii) measure learners' attitudes towards BOU BAgEd Distance Education Program by their current stage in the innovations-decision process and
iii) explore the relationship between the learners' selected characteristics and their current attitude toward the BAgEd distance education program.

3. RESEARCH METHODOLOGY

The target population for this study were learners at different BAgEd Study Centers of Bangladesh Open University (*N*=1750). Among the 1750 learners, 438 learners were selected for (this) the study. Random sampling was used for the study [7]. Four hundred thirty-eight learners involved in BAgEd Distance Education programs were randomly drawn from across the study centres of Bangladesh Open University. Data were collected by the in-person delivered survey through Google form in web link because of the COVID-19 pandemic. Sampling started on June 15, 2020, and the sample learners included 438 learners with BAgEd Distance Education program. Participants were asked to fill in the questionnaire through the Google form in their Smartphones, and the researcher checked the questionnaires through the response link after they were submitted. Participants were assured that their responses were confidential and only group data would be reported. The questionnaires were coded for convenient analysis.

3.1 Measurement of Dependent Variable

The research instrument consisted of a four-part questionnaire, which was designed based on the review of the literature [8; 6]. The first part of the instrument was designed to measure the participants' stage in the innovation-decision process related to BAgEd DE. Rogers' [6] model of the innovation-decision process was adopted and modified as the theoretical base for this part. Besides the five stages (knowledge, persuasion, decision, implementation, and confirmation) mentioned in the model, another stage named "no knowledge" was added as the first stage in the innovation-decision process. Six statements were used to indicate participants' current stage (no knowledge, knowledge, persuasion, decision, implementation, or confirmation) in the innovation-decision process (the statement that best reflects participants' current attitude toward BAgEd distance education program) related to BAgEd Distance Education.

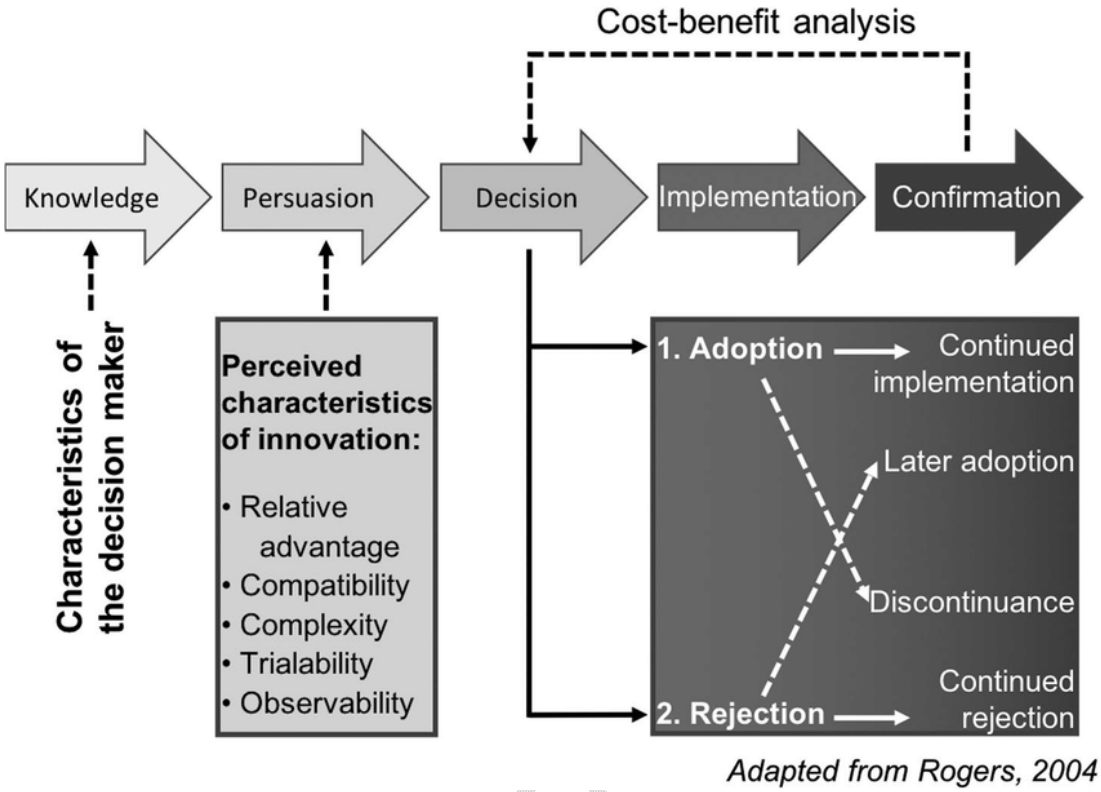

Figure1: The innovation-decision process

3.2 Data Collection and Analysis

The collected data were coded, compiled, tabulated and analyzed. The qualitative were transferred into quantitative data by appropriate scoring techniques. Data were analyzed in accordance with the objectives of the study by using SPSS (Statistical Package for Social Sciences) computer program (Version 23). Various statistical measures such as range, mean, number, percentage, standard deviation and rank order were used to describe the selected characteristics of the respondents of the study area. To find the relationship between the selected characteristics of the learners and their attitude toward BAgEd distance education, Pearson's Product Moment Correlations Co-efficient was computed.

4. Result and Discussion

4.1 Socioeconomic Characteristics of the Learners

The first objective was to describe the socioeconomic characteristics of the learners, which is presented in Table 1**(Remove this!)**

Table 1: Distribution of the respondents according to their socioeconomic characteristics

Characteristics	Scoring	Categories	Respondents		Mean	S.D
			f	%		
Academic semester	1	1st & 2nd semester	163	37.2	1.89	0.79
	2	3rd & 4th semester	161	36.8		
	3	5th & 6th semester	114	26.0		

Age	1	18 to 20 years old	127	29.0	31.29	9.61
	2	21 to 30 years old	173	39.5		
	3	31 to 40 years old	99	22.6		
	4	41 to 55 years old	26	5.9		
	5	Above 55 years old	13	3.0		
Educational Qualification	Years of schooling	HSC/Alim	114	26.0	2.00	0.75
		Diploma in Agriculture/equivalent	219	50.0		
		Bachelor	95	21.7		
		Others(if any)	10	2.3		
Family member	1	1 to 3 members	95	21.2	4.06	0.86
	2	4 to 6 members	266	60.7		
	3	7 to 9 members	59	13.5		
	4	Above 9 members	20	4.6		
Earning member	1	1 to 2 members	206	47.0	1.61	0.64
	2	3 to 4 members	194	44.4		
	3	5 to 6 members	37	8.4		
	4`	Above six members	1	0.2		
Training	duration	Yes	279	63.7	2.67	1.58
	0	No	159	36.3		
Organizational participation	∑ (items* weight)	Student union/Youth club	42	9.6	3.71	1.74
		U P chairman /member	96	21.9		
		Trade union/NGO group	85	19.4		
		School/madrasa/mosque committee	55	12.6		
		Bazar/other committee	42	6.9		
		Non of above	118	26.9		
Cosmopoliteness	∑ (items* weight)	Low cosmopoliteness	114	26.1	12.70	6.13
		Medium cosmopolites	158	36.1		
		High cosmopoliteness	166	37.8		
Uses of e-resources	1-2	Low respondents	105	23.6	16.53	7.55
	3	Medium respondents	146	33.3		
	4-5	High respondents	187	43.1		

Creativity	1-2	Low creativity	116	26.4		
	3	Medium creativity	123	28.1	8.50	3.96
	4-5	High creativity	199	45.5		

The first objective was to describe the socioeconomic characteristics of the learners. The adopter was a learner of 1st to 6th semester, with a mean of 1.89 and a standard deviation of 0.79(table-1). Most responders (37.2%) were learners of the 1st & 2nd semesters, with 36.8% and 25.8% being 3rd & 4th semesters and 5th & 6th semesters, respectively. Here, The senior (5th & 6th semester) learners showed their opinion at a lower rate than young (3rd & 4th semester) learners. Because of the young learners who were usually capacious to new and innovative things. 114 participants (26%) had an HSC degree; 219 participants (50%) had a Diploma in Agricultural/equivalent degree, and 95 participants (21.7%) had a Bachelor's degree when only 2.3% were with others degree. Here the largest number of participants were with Diploma in Agriculture because they were regarded to achieve an M.Ag degree after BAgEd degree. 93 participants (21.2%) had a family member from 1 to 3, 266 participants (60.7%) had a family member from 4 to 6, 59 participants (13.5%) had a family member from 7 to 9 and 20 participants (4.6%) had family member more than 9. The overall mean and standard deviation was 4.06 and 0.86, respectively. 206 participants (47.0%) had to earn a family member from 1 to 2.194 participants (44.3%) had earn a family member from 3 to 4, 37 participants (8.4%) had to earn a family member from 5 to 6, only 1 participant had to earn family member above 6. Overall mean and standard deviation was 1.61 and 0.64, respectively. 42(9.6%) of the participants were involved with a student union/youth club, 86 with union porishad member/chairman, 85(19.4%) with trade union /NGO group, 55(15.2%) with a school /madrasa/ mosque committee, 42 with bazaar/others committee, and 118 participants (26.9%) had no experience of organizational participation. The overall mean and standard deviation was 3.71 and 1.74, respectively. 114(26.1%) participants who visited to the mentioned places irregularly had been indicated as low cosmopolites, 36.1% of respondents were called medium cosmopolites visited to target places regularly. At the same time, the high cosmopolites showed their performance at the rate of the respondents was 37.8%. The overall mean and standard deviation was 12.70 and 6.13espectively. 105 participants who watched the mentioned e-Resources irregularly had been indicated as low respondents, 33.3% of participants were called medium respondents who watched target e-Resources regularly. At the same time, the high respondents shown their performance at the rate of the participants was less than fifty per cent (about 43.1%).The overall mean and standard deviation was 16.53 and 7.55, respectively. 116 participants who played role to the mentioned sectors had been indicated as low creativity, 28.1% of respondents were called medium creativity and played role in target sectors almost regularly. At the same time, the high creativity shown their performance at the rate of the respondents was 45.5%. The overall mean and standard deviation was 8.50 and 3.96, respectively.

4.2 Learners' attitude towards BAgEd distance education program

The second objective was to describe learners by their current stage in the innovation-decision process related to the diffusion of BAgEdDE**(Learners' attitude towards the BAgEd distance education program) (Remove this!)**

4.2. Table 2 *Distribution of Participating BOU BAgEd learners by Their Current Stages in the Innovation-Decision Process* ***(Learners' attitude towards BAgEd distance education program)****, (N=525)*

Stages	Descriptions	Respondents		Mean	S.D
		f	%		
No knowledge	I have no clear idea about BIMS technology's functions in the BAgEd distance education program.	54	12.3	3.38	1.62
Knowledge	After achieving a BAgEd degree, one can play a role in the agricultural field.	99	22.6		
Persuasion	After acquiring a BAgEd degree, one may apply earned knowledge in own service field.	98	22.4		
Decision	After earning a BAgEd degree, a way will be created to access higher education for more learners.	67	15.3		
Implementation	I think combining the web-based system with the traditional method in distance education can help learners access higher education.	48	11.0		
Confirmation	I am unsure about the possibility of a BAgEd distance education program.	72	16.4		
Total		438	100		

Note:scale1=NoKnowledge,2=Knowledge,3=Persuasion,4=Decision,5=Implementation,6=Confirmation.

(The above) Table 2 shows the distributions of participants according to their different stages in the innovation-decision process related to the diffusion of BAgEd DE. Six stages were used in the study to describe the innovation-decision process: no knowledge, knowledge, persuasion, decision, implementation, and confirmation. Among the 438 participants, 12.3% showed "no knowledge" about BAgEd DE. Less than a quarter of the population was in the stages of either "knowledge" (22.6%) or "persuasion" (22.4%). The rest of the population was in the stages of "decision" (15.3%), "implementation" (11.0%) or "confirmation" (16.4%). Overall, the mean and standard deviation for stages in the innovation-decision process related to the diffusion of BAgEd distance education were *M*=3.38 and *SD*=1.62. Here a big portion of the learners thinks that after acquiring a BAgEd degree, one may apply earned knowledge in own service field. On the other hand, a small portion of the learners think that combining the web-based system with traditional method in distance education can help learners access in higher education.

4.3 Relationship between the learners' selected socioeconomic characteristics and their stages in the innovation-decision process (Learners' attitude towards BAgEd distance education program) (Remove this!)

4.3 Table 3 relationship between the learners' selected socio-economic characteristics and their stages in the innovation-decision process (Learners' attitude towards BAgEd distance education program)

Dependent variable	Independent variable	Value of correlation co-efficient(r)

Learners' stages in the innovation-decision process (learners attitude towards BAgEd distance education program)	Academic semester	0.117*
	Age	0.110*
	Educational Qualification	0.123*
	Family member	0.057
	Earning member	0.128**
	Training	0.632**
	Organizational participation	0.571**
	Cosmopoliteness	0.664**
	Uses of e-resources	0.679**
	Creativity	0.622**

*Correlation is significant at the 0.05 level and **correlation significant at the 0.01 level

Karl Pearson's Product Moment Correlation Co-efficient® was used to determine the relationship between socioeconomic characteristics and the focus issue. A summary of the correlation analysis is presented in Table 3. Out of Ten selected attributes of the learners, only one characteristic such as family member, showed positive significance at 0.05 level relationship with their attitude towards the BAgEd distance education program. Here six of the characteristics such as earning member, training, organizational participation, cosmopoliteness, uses of e-resources and creativity with dabble stars(**) correlation is significant and three independent variables such as academic semester, age and educational qualification with one star(*) correlation is significant.

5. Conclusion and Recommendations

The study population was the learner from all of the BAgEd study centres of Bangladesh Open University, and the adopters were learners of 1st to 6th semester, with a mean of 1.88 and a standard deviation of 0.78. Most responders (38.7%) were learners of 3rd & 4th semesters with 36.4% and 24.9% being 1st & 2nd semester and 5th & 6th semesters respectively. Here, The new (1st & 2nd semester) and senior (5th & 6th semester) learners showing their opinion at a lower rate than young (3rd & 4th semester) learners because the young learners who were usually capacious to new innovative things. There were more male participants than female participants in the study. The majority of the participants were between 24 and 44 years old. More than half of participants had a Diploma in Agriculture degree. The majority of the faculty members were teachers. The study found clear information of the learner perceptions about attributes and barriers impacting the diffusion of the BAgEd distance education program of BOU. This study will have potential benefits of providing strategies for identifying teaching strengths and weaknesses. A key function of this study is to help staff involved in higher learning assessment to use technology effectively. Besides, this study can contribute to be a better understanding BAgEd distance education in Bangladesh Open University, can provide better guidance for the implementation of the BAgEd program in the Bangladesh Open University higher education system, enrich diffusion of innovation theory and also can provide a research model for other researchers about the diffusion of BAgEd program in distance education system.

Informed by the conclusions of this study, the researcher presented recommendations for educational practice, theory and further research on student assessment in BAgEd distance education. For example, more research is needed to study the following problems: (1) why level of education harms learners' stage in the innovation-decision process; (2) how to design online courses for curriculum areas related to BAgEd distance education program;

and (3) how to combine online lecture and lab, workshop, or hand-on activities in engineering or biology-related majors? To complete those objectives, a similar survey method mentioned in the methodology section will be followed.

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