

Quality of Education in Bangladesh: A Survey on Private Business Schools

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Abstract

A survey was conducted to study the customers' (students') evaluation of private higher education sector in Bangladesh with special reference to the quality of business education. The sample was taken from business schools on a random basis from seven private universities of Bangladesh. The respondents (students) were asked to evaluate the quality of business education at private universities in light of sixty six variables and they ranked the attributes in a seven-point Likert's summated scale. The result of this study shows that faculty credentials, intake (student) selection system, assessment system, campus facilities, research environment, leadership of university, market orientation, and corporate attachment are associated with quality of business education. Finally, the study suggests that the policymakers and administrators should address the identified factors for ensuring quality in their business schools.

Keywords: Intake, Assessment, Leadership, Faculty, Market orientation.

1.0 Introduction

Education builds generation and generation builds nation (Huda et al., 2009). Higher education plays a central role in promoting productivity, innovation, entrepreneurship, gender mainstreaming and overall socio-cultural advancement (Miyani, 2008). The independence becomes meaningless without proper education. It is impossible to survive in the modern competitive world with due identity, courage and dignity without proper education. Moreover, the overall development of a society is largely determined by the quality of its education, especially higher education. A well-educated, well-trained population could propel a nation towards rapid economic growth. Despite lack of natural resources, countries such as Japan, Korea, and Singapore have made rapid economic progress. This was because they invested heavily in education and training. On the other hand, countries such as Nigeria or Congo, despite enormous natural resources are poor and backward because of large-scale illiteracy and lack of skilled work force. In Bangladesh, opportunities for higher education was extremely limited before 1992. A large number of prospective students could not get admission due to very limited seats in public universities. Moreover, campus violence, session jams and deterioration of quality of education in public university compelled many students to go abroad (especially India, Cyprus, Thailand, the Philippines, Malaysia, Singapore, UK, etc) for higher education. In addition to these problems, other factors such as outdated curriculum, backdated teaching methods, inadequate reference books etc., laid down the grounds for the private universities to thrive in Bangladesh (Mamun, 2008). In order to alleviate the situation, the Government of Bangladesh (GOB) in 1992 promulgated an ordinance permitting the establishment of private universities. So the background of establishing private universities in Bangladesh is very logical and rational and patriotic. Though many criticized the concept of private university at the initial stage but now it is a reality. At present there are 54 private universities in Bangladesh where 57% (1, 82,641) students are studying whereas only 43% (1, 36,831) students (other than national and open university) are studying in public universities (Daily Star, December 30, 2009). As per UGC annual report (2008) 26% students are studying in private business schools. Even some private universities have already established their name and fame through quality education for which foreign students are also coming to study in private universities. At present there are 1270 foreign students who are studying at different universities in Bangladesh out of which 82% (1049) students are studying in private universities and only 18% (221) students are studying in public universities (Daily Star, December 30, 2009). It indicates that some private universities are not only fulfilling the needs of the students of Bangladesh rather have drawn the attention of overseas students which is a great achievement of private universities and the country as a whole. If proper steps are taken by policy makers for ensuring quality, private universities can contribute in large scale to the economy of Bangladesh from two

dimensions; one it saves foreign currency by reducing the going tendency of Bangladeshi students to other countries and side-by-side can earn foreign currency by attracting more overseas students. One very familiar feature of these universities is the way they follow the American method of education rather than the British model. They offer four-year bachelor degree programs with credit-based courses. This system has also created popular appeal in Bangladesh. But still, many stakeholders have concerns about the quality of many private universities (Haque,2004).Since private universities receive no funding from the University Grants Commission(UGC), there is little that UGC can do except reporting some facts to the government(Alam et al.,2007).

Without ensuring quality no one can survive in the modern competitive world for long period of time. Thus, quality, its assessment and assurance procedures, have received a great deal of attention in higher education all over the world in recent years. In fact, quality is a composite variable that consists of the dominant factors of customer requirements. The term “quality” is derived from the Latin word “qualitas,” which means the degree of excellence of a thing (Oxford Dictionary, 2003). Murgatroyd and Morgan (1994) offer two different definitions of quality. One is related to quality assurance, and the other is from consumers’ points of view, such as quality assurance refers to the determination of standards, appropriate methods and quality requirements by an expert body, accompanied by a process of inspection or evaluation that examines the extent to which practice meets these standards; and consumer-driven quality refers to a notion of quality in which those who are to receive a product or service make explicit their expectations for this product or service and quality is defined in terms of meeting or exceeding the expectations of customers. In terms of quality in education, the World Bank (1995) puts forth that quality in education is difficult to define and measure. An adequate definition must include student outcomes. Most educators would also include in the definition the nature of the educational experiences that help to produce thus outcomes—the learning environment. Coombs (1985) says that quality of education has many dimensions which is not only customarily defined and judged by student learning achievements, in terms of traditional curriculum and standards rather, Quality also pertains to the relevance of what is taught and learned—to how well it fits the present and future needs of the particular learners in question, given their particular circumstances and prospects. It also refers to significant changes in the educational system itself, in the nature of its inputs; its objectives, curricula and educational technologies; and its socioeconomic, cultural and political environment. In fact, service quality has now become an important dimension for education providers, as with any other business organizations. Hence, customer evaluations of the quality of education should be an integral part of overall quality management in any of the organizations (Haque, 2004). So, present issue regarding private universities in Bangladesh is quality. But, this study will address the quality of private business schools in Bangladesh.

2.0 Literature Review

Mamun et al. (2008) conducted a study on the students of private universities where students identified forty-five variables with which their satisfaction is related .The variables are scheduled semesters, standard class size, accessible location, drinking water on each floor, Proper security, good faculty members, quick feedback from instructors, teachers’ accessibility and availability, course counseling, well-equipped class rooms, up-to-date curriculum, high speed internet, teachers’ evaluation, being the best business schools, library with latest edition of books and journal, career counseling, equipped auditorium, students welfare body, quality canteen ,medical support, foreign faculty members, residential facilities, on-campus sports facility, students loan, emergency fire drills, transportation, co-curricular activities, flexibility in course choice, hygienic washrooms, cost-effective education, tutorial, own campus, credit transfer facility, availability of dual majors, competitions, students lounge, corporate presentation, student counseling, study tours, smoke-free campus, on-campus parking, internship facilities during study, international affiliation, and placement services after graduation.

Salahuddin et al. (2008) undertook a study in which they identified that fee structure, mode of payment, quality education and physical environment as the key factors in choosing a private university. Hopper (1998) explores the American model of higher education, credit transfer system with the foreign university, and market orientation subjects are the key factors of students’ choice of private universities. He also stated that Vice Chancellors (VCs) of private universities provide a positive impression about the standard of institutions. Mamun and Jesmine (1999) conducted a study in which they identified that teaching staff and learning support materials as the key factors in choosing a private university. Mamun and Das undertook a similar study in 1999 and evaluated performance factors of private universities in Bangladesh .They identified that leadership of private university, especially the social and academic status of the Vice chancellor (VC) and other senior officials (dean and head) are key factors attracting students to private universities. They also pointed towards some other attracting factors such as library facilities, laboratory facilities, and internship assistance for students. Andaleeb (2003) analysed seven issues crucial for effectively fostering higher education in Bangladesh, namely, teaching quality, method, content, peer quality, direct facilities, indirect facilities and political climate. Lamanga (2002) highlighted three different aspects

involved in measuring quality education in private universities in Bangladesh: the quality of teaching and research, responsiveness to the demands of the labour market, and equity. Dhali (1999) emphasised techniques related to student evaluation procedures, which he classifies as either formative or summative. In Lamanga's (2006) report on quality assurance in tertiary education in the case of Bangladesh, he recommended several initiatives that can ultimately ensure a quality education system for the higher learning institutions in the country. Aminuzzaman (2007) noted that most departments of universities do not have a long-term national vision, but that such a vision is crucial to quality education. According to Aminuzzaman Quality education in universities will be achieved through changing the method of teaching and learning as well as assessment methods, renewing the curriculum continually, updating and upgrading professional knowledge and skills and improving the broader educational, administrative and resource environments.

For ensuring quality of education both the content and process aspects should be considered importantly (James et. Al,2004). Friendly, supportive, and energizing environment in the classroom is very effective to deal with difficult information (Johnson,Johnson, & Smith, 1998; Qin, Johnson, & Johnson,1995). Dale (1972) states that excellent teaching is more than the dissemination of knowledge rather it is a concept building process. Basically a more detailed understanding leads to individual growth and development. And an individual's development comes as a result of first creating awareness and recognition based upon individual experiences. Excellent teaching helps learners to acquire the required knowledge content; the ability to apply the knowledge to standard classroom problems and situations, to novel types of problems and situations which may have been encountered in the textbook scenarios; and the ability to learn and think independently, which includes the ability to discover or construct knowledge(Mohanani,2000).

Basically, interface between teachers and students are important in determining quality, and it is required to monitoring quality through appropriate quality assurance processes. Though this is a superficial approach, the real challenge is the enhancement of quality. Different institutions have started to investigate approaches to quality enhancement (Rowley, 1996). For instance, Hart and Shoolbred (1993) cited Wolverhampton University as seeking registration under BS 5750 and a number of other universities as taking the TQM path, including Aston, South Bank, Robert Gordons and Wolverhampton. Other contributions that describe initiatives in this area include Marchese (1991), Ewell (1991) and Cornesky (1991). A paper by the Further Education Unit (1991) offers six criteria for a quality model: (1) it seeks to improve the quality of teaching and learning strategies, (2) it is flexible, (3) it harnesses the commitment of all staff, (4) the learner should be involved, (5) there must be enhanced working relationships associated with all functions of the organisation, and (6) requirements can be measured and progress can be demonstrated. Hart and Shoolbred (1993) seek to emphasise the relationship between quality and culture; it is relevant to mention that quality management is after all related to how people act, and that this element of action is manifested in an organisation's work atmosphere and culture. If further and higher education institutions are proceeding to make serious moves towards effective quality assurance, they need to be aware of how much the culture may have to change. This may be highly uncomfortable for senior management and for the entire workforce of the institution. Pierson (1959) identified that the most precious resource of a business school is a highly qualified and highly motivated faculty. So from the above literature review it is clear to us that there are many variables of quality with which quality of education is related and many researchers have already identified many variables of quality education of business schools in Bangladesh, but no comprehensive study is done on the quality of business schools in Bangladesh which motivated the researchers to conduct an study with comprehensive variables. So this study is an effort to find out the factors of quality of business schools in Bangladesh and it is believed that the policy makers of private university will get an idea while making policies for ensuring quality of business schools.

3.0 Research Methods

3.1 Sampling Design

The sample for this study was seven private universities located both Dhaka and Chittagong. A purposive sampling technique was used to select the seven private business schools, then, decided to distribute questionnaires among 154 students out of which 98 students were in Bachelor programs (not below 5th semester) and 56 were in graduate programs. The students were selected equally (22) from each of the university with the help of random sampling technique and while selecting sample university the researcher consider those universities whose establishment year was before 2004.

3.2 Variables:

The dependent variable in this study was 'quality of business education in private universities' and independent variables were sixty six (66). Those variables were chosen based on above literature review in addition to brainstorming sessions with the students and teachers of private universities.

3.3 Data Collection

Both primary and secondary data were used for the study. Primary data were collected through the written questionnaire followed by direct personal interview technique during November 2009 to January 2010. The secondary data were gathered from journals, books, magazines and so on.

3.4 Survey Instrument

Respondents' reply on questions was recorded in the 7-point Likert's summated scale, where '1' represents highest disagreement and '7' represents highest agreement. After proper pre-testing, it was finalized to make it easily understandable.

3.5 Reliability and Validity

The reliability value of our surveyed data was 0.860 for variables of quality business education. If we compare our reliability value with the standard value alpha of 0.7 advocated by Cronbach (1951), a more accurate recommendation (Nunnally and Bernstein's, 1994) or with the standard value of 0.6 as recommended by Bagozzi and Yi's (1988) we find that the scales used by us are sufficiently reliable for data analysis.

3.6 Mode of Data Analysis

The present study has used a sophisticated method of statistics – Factor analysis (FA) using varimax rotation analyzing the collected data. In order to obtain interpretable characteristics and simple structure solutions, researchers have subjected the initial factor matrices to varimax rotation procedures (Kaiser, 1958). Varimax rotated factors matrix provides orthogonal common factors. Finally ranking of the indicators has been made on the basis of factor scores.

4.0 Findings and Analysis

Before using factor analysis the data adequacy was tested. Data adequacy shows KMO (Kaiser-Meyer-Olkin) and Bartlett's Test of Sphericity. KMO indicator varied from 0 to 1. In case the indicator is closer to 1, data adequacy is higher. The criterion of Bartlett's Test of Sphericity is Chi-Square value is 727.31 with 325 degree of freedom at the 0.05 level of significance. KMO indicator .875 shows that data is adequate near to 1 and also Bartlett's Test of Sphericity shows that significant is valued perfectly because of the significance $p < 0.05$. It was decided the appropriateness of factor analysis and also suggested further investigation using Principles Component Analysis Method. **(annexure – I)**.

The results from the survey were coded and entered for statistical analysis. The data obtained for the study were analysed by using "Factor Analysis" for identification of the "key factors" of quality preferred by the respondents. Factor analysis identifies common dimensions of factors from the observed variables that have a high correlation with the observed and seemingly unrelated but no correlation among the factors. Principal component factor analysis with rotated factor loadings **(annexure-III)** was performed on the survey data. Variables with a factor loading of higher than 60 are grouped under a factor. A factor loading is the correlation between the original variable with specific factor and the key to understanding the nature of that particular factor (Pal, 1986; Pal and Bagi, 1987)

When the original sixty-six variables **(annexure-IV)** were analyzed by the Principal Component Analysis (PCA) with varimax rotation, eight factors extracted from the analysis with an Eigen value of greater than one. The analysis of the sixty six variables yielded eight factors, which explained 88.174 **(annexure-II)** percent of the total variance. This implied that 11.826% variations could be explained by other factors, which were not included in the model of analyses of this study. The result of the factor analysis is as follows

Factor 1 named as 'Faculty credentials' consisted of four variables. The names of the variables are academic background of faculty (V_1), experience of faculty (V_2) communication skill of faculty (V_3), and proper caring of students by faculty (V_5). The loading of these variables are .78, .75, .71, and .67 respectively. The eigen value of this factor is 8.251 and this factor is responsible for 31.354 % variance of quality of education. Hence, policymakers at private universities should be more concerned about these variables if they wish to increase education quality in higher education programs. Ashraf et al. (2009) stated that by and large, the faculty's main function is to equip students with the pragmatic knowledge that is most necessary for and suitable in the current and emerging new age of science and technology. In fulfilling this function, educational entities must inevitably hire and retain talented teachers. Moreover, Hensel (1991) emphasises talented faculty members and maintained that the well-being of the university depends on its ability to recruit and retain a talented faculty. The wellbeing of any nation as a whole depends on the ability to develop a happy, emotionally healthy, and productive next generation. According to Bowen and Schuster (1986), the excellence of higher education is a function of the kind of people it is able to enlist and retain on its faculties. Thus, all these scholarly qualities of the faculties need to be ensured in order to secure quality of education in the private universities.

Factor 2 named 'Intake selection system', which explains 18.524 % of the variation in students' evaluation of

education quality. The factor is constituted by four variables including basic knowledge in English (V_{11}), analytical ability (V_{42}), academic result (V_{43}), and communication skill (V_{44}). The loading of the variables of this factor are .78, .70, .68, and .60 respectively. The factor loading points for these variables are higher than 60. Thus, the intake credentials is also very significant for quality of education at private business schools. Many private business schools don't test the basic knowledge of intake while selecting them, but this can hardly ensure quality in business schools. The very interesting finding of this study is that the presence of intake selection system increases the image of the private business schools which ultimately helps in attracting more quality students. So, the decision makers should introduce intake selection system in their business schools for attracting quality students and thereby ensuring better quality of education.

Factor 3 named as 'Assessment system' which is formed by fourteen variables such as updated course content (V_6), defense for outgoing students (V_{10}), quality of question paper (V_{14}), case study system (V_{17}), term paper preparation (V_{19}), assignment preparation (V_{20}), collegiate system (V_{21}), proper marking system (V_{22}), class monitoring (V_{23}), proper class size (V_{24}) performance evaluation of teachers (V_{25}), presentation system (V_{36}), examination hall environment (V_{48}), and viva-voce (V_{53}). The loading of different variables under this factors are .70, .63, .62, .65, .73, .60, .68, .76, .71, .63, .74, .69, .72, and .66 respectively. This factor accounts for 11.225 % of the variance. Thus, the results show that the private business schools as a whole should be more careful with regard to the identified factor (assessment system), by which they can achieve a higher quality of education; in effect, this will help to push up the overall performance and productivity of the universities.

Factor 4 named as 'Campus facilities'. This factor consists of fifteen variables. The variables are suitable location (V_8), modern campus building (V_9), well-equipped class room (V_{12}), high-speed internet (V_{15}), neat and clean environment (V_{16}), Transport facility (V_{32}), hostel and dormitory facility (V_{33}), recreation and gym facility (V_{34}), air-conditioning (V_{35}), rich library (V_{37}), computer lab facility (V_{39}), online registration facility (V_{40}), stand-by generator (V_{41}), canteen facility (V_{65}), and photocopy facility (V_{66}). The loading of the variables of this factor are .76, .72, .69, .67, .70, .72, .68, .69, .70, .73, .76, .69, .79, .64, and .75 respectively. This factor accounts for 8.117 % of the variance. Rowley (1996) states higher education is by its nature a developmental environment.

Factor 5 included eight variables and was named as 'Research environment'. This factor is measured by research support facility (V_7), motivation for research (V_{38}), publication facility (V_{45}), students' magazine (V_{46}), existence of research center (V_{47}), faculty exchange with other universities (V_{49}), student exchange with other universities (V_{50}), and work load of teacher (V_{51}). This factor is responsible for 5.950 % of the variance in quality of education. The loading of variables under this factor are .75, .69, .66, .63, .60, .75, .73, and .67 respectively. Still now, the research facilities are underdeveloped in most of the private universities. Alam et al. (2007) investigated in their study that most of the universities do not have research bureaus, and publication facilities are also limited, as indicated by the fact that only four or five journals are published among more than 50 private universities in Bangladesh. Due to the lack of adequate reference materials in the libraries, the teachers and the students face enormous problems.

Factor 6 named as 'University leadership', which accounts for 5.293 % variance of quality education.. This factor consisted of six variables such as syndicate's formation (V_{18}), view exchange with teachers (V_{28}), vice-chancellor's academic and social status (V_{52}), rapid problem solving system (V_{55}), view exchange with students (V_{56}), and status of dean & head (V_{62}). The loading of the variables of this factor are .79, .70, .67, .67, .78, and .78 respectively.

Factor 7 named as 'Market orientation' which consisted eleven variables. The variables are job fair (V_4), monthly payment system of tuition fee (V_{26}), open credit system (V_{29}), scholarship and assistance to students (V_{30}), leadership development camp (V_{31}), Business club (V_{57}), workshop (V_{58}), reasonable tuition fee (V_{59}), Study tour (V_{60}), timely convocation (V_{61}), and Alumni association (V_{63}). The loading of the variables of this factor are .81, .61, .60, .68, .65, .67, .66, .69, .68, .70, and .73 respectively. This factor accounts for 4.018 % of variance also. So the policymakers of private business schools can increase the satisfaction level of students addressing the variables of this factor which will ultimately help them in attracting more quality students to their universities.

And the last factor named as 'Corporate attachment' which consisted of four variables such as industrial tour (V_{13}), internship (V_{27}), corporate presentation (V_{54}), and job placement facility (V_{64}). The loading of different variables of this factor are .66, .79, .77, and .73 and accounts for 3.703 % of variance in quality of private business schools in Bangladesh. Corporate attachment is also very important for the business schools because of the nature of programs of business schools.

5.0 Conclusion and Recommendation

Despite the relentless and continuous effort of private educational institutions, quality has not yet achieved at the desired level (Ashraf et al. 2009). But, private education in Bangladesh is getting more competitive with the

remarkable increase in the number of academic institutions in the country. So assurance of is a must because without ensuring it no organization can survive in this volatile business world. Indeed, the ineluctable forces of globalization in this new millennium make the issue more complex and challenging. This study has shed the light on the dimensions perceived by students as associated with the quality of business education. These dimensions are faculty credentials, intake selection system, assessment system, campus facilities, research environment, university leadership, market orientation, and corporate attachment. The study, therefore, strongly recommends that the academics and the business community (founder of university) should consider those factors while ensuring quality in their business schools. The managers involved in the administration of these schools must ensure quality education for long run survival which will ultimately fulfill the need of employers and the country as a whole.

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Annexure – I: KMO and Bartlett’s test

| | | | | | |
|--|--|--|--|--------------|---------|
| Kaiser – Meyer- Olkin Measures of Sampling Adequacy | | | | .875 | |
| Bartlett’s Test of Sphericity | | | | | |
| Approx. | | | | Chi- Square | 727.317 |
| | | | | df | .325 |
| | | | | Significance | .000 |

Source: Survey data

Annexure – II: Total Variance Explained

| Component | Initial Eigen values | | | Extraction Sums of Squared Loadings | | | Rotation Sums of Squared Loadings | | |
|-----------|----------------------|---------------|--------------|-------------------------------------|---------------|--------------|-----------------------------------|---------------|--------------|
| | Total | % of Variance | Cumulative % | Total | % of Variance | Cumulative % | Total | % of Variance | Cumulative % |
| | | | | | | | | | |
| 1 | 8.251 | 31.354 | 31.354 | 8.251 | 31.354 | 31.354 | 5.156 | 19.592 | 19.592 |
| 2 | 4.872 | 18.514 | 49.868 | 4.872 | 18.514 | 49.868 | 4.086 | 15.526 | 35.118 |
| 3 | 2.954 | 11.225 | 61.093 | 2.954 | 11.225 | 61.093 | 3.763 | 14.299 | 49.417 |
| 4 | 2.136 | 8.117 | 69.210 | 2.136 | 8.117 | 69.210 | 3.284 | 12.479 | 61.896 |
| 5 | 1.566 | 5.950 | 75.161 | 1.566 | 5.950 | 75.161 | 2.656 | 10.092 | 71.988 |
| 6 | 1.393 | 5.293 | 80.453 | 1.393 | 5.293 | 80.453 | 2.122 | 7.475 | 78.463 |
| 7 | 1.086 | 4.018 | 84.471 | 1.086 | 4.018 | 84.471 | 1.481 | 5.627 | 84.110 |
| 8 | 1.001 | 3.703 | 88.174 | 1.001 | 3.703 | 88.174 | 1.070 | 4.064 | 88.174 |

Extraction Method: Principal Component Analysis

Annexure – III: Rotated Factor Matrix for Quality Education

| Variable | Factor – I | Factor -2 | Factor – 3 | Factor –4 | Factor – 5 | Factor –6 | Factor –7 | Factor –8 |
|-----------------|------------|-----------|------------|-----------|------------|-----------|-----------|-----------|
| V ₁ | .78 | | | | | | | |
| V ₂ | .75 | | | | | | | |
| V ₃ | .71 | | | | | | | |
| V ₅ | .67 | | | | | | | |
| V ₁₁ | | .78 | | | | | | |
| V ₄₂ | | .70 | | | | | | |
| V ₄₃ | | .68 | | | | | | |
| V ₄₄ | | .60 | | | | | | |
| V ₆ | | | .70 | | | | | |
| V ₁₀ | | | .63 | | | | | |
| V ₁₄ | | | .62 | | | | | |
| V ₁₇ | | | .65 | | | | | |
| V ₁₉ | | | .73 | | | | | |
| V ₂₀ | | | .60 | | | | | |
| V ₂₁ | | | .68 | | | | | |
| V ₂₂ | | | .76 | | | | | |
| V ₂₃ | | | .71 | | | | | |
| V ₂₄ | | | .63 | | | | | |
| V ₂₅ | | | .74 | | | | | |
| V ₃₆ | | | .69 | | | | | |
| V ₄₈ | | | .72 | | | | | |
| V ₅₃ | | | .66 | | | | | |
| V ₈ | | | | .76 | | | | |
| V ₉ | | | | .72 | | | | |
| V ₁₂ | | | | .69 | | | | |
| V ₁₅ | | | | .67 | | | | |
| V ₁₆ | | | | .70 | | | | |
| V ₃₂ | | | | .72 | | | | |
| V ₃₃ | | | | .68 | | | | |
| V ₃₄ | | | | .69 | | | | |
| V ₃₅ | | | | .70 | | | | |
| V ₃₇ | | | | .73 | | | | |
| V ₃₉ | | | | .76 | | | | |
| V ₄₀ | | | | .69 | | | | |

To be continued

| Variable | Factor – I | Factor –2 | Factor – 3 | Factor –4 | Factor – 5 | Factor –6 | Factor –7 | Factor –8 |
|-------------------------|------------|-----------|------------|-----------|------------|-----------|-----------|-----------|
| V ₄₁ | | | | .79 | | | | |
| V ₆₅ | | | | .64 | | | | |
| V ₆₆ | | | | .75 | | | | |
| V ₇ | | | | | .75 | | | |
| V ₃₈ | | | | | .69 | | | |
| V ₄₅ | | | | | .66 | | | |
| V ₄₆ | | | | | .63 | | | |
| V ₄₇ | | | | | .60 | | | |
| V ₄₉ | | | | | .75 | | | |
| V ₅₀ | | | | | .73 | | | |
| V ₅₁ | | | | | .67 | | | |
| V ₁₈ | | | | | | .79 | | |
| V ₂₈ | | | | | | .70 | | |
| V ₅₂ | | | | | | .67 | | |
| V ₅₅ | | | | | | .67 | | |
| V ₅₆ | | | | | | .78 | | |
| V ₆₂ | | | | | | .78 | | |
| V ₄ | | | | | | | .81 | |
| V ₂₆ | | | | | | | .61 | |
| V ₂₉ | | | | | | | .60 | |
| V ₃₀ | | | | | | | .68 | |
| V ₃₁ | | | | | | | .65 | |
| V ₅₇ | | | | | | | .67 | |
| V ₅₈ | | | | | | | .66 | |
| V ₅₉ | | | | | | | .69 | |
| V ₆₀ | | | | | | | .68 | |
| V ₆₁ | | | | | | | .70 | |
| V ₆₃ | | | | | | | .73 | |
| V ₁₃ | | | | | | | | .66 |
| V ₂₇ | | | | | | | | .79 |
| V ₅₄ | | | | | | | | .77 |
| V ₆₄ | | | | | | | | .73 |
| Eigen Value | 8.251 | 4.872 | 2.954 | 2.136 | 1.566 | 1.393 | 1.086 | 1.001 |
| Variance | 31.354 % | 18.514 % | 11.225 % | 8.117 % | 5.950 % | 5.293 % | 4.018 % | 3.703 % |
| Total Variance 88.174 % | | | | | | | | |

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization

Annexure –IV: List of variables analyzed

| List of variables | Name of variables | List of variables | Name of variables |
|-------------------|---|-------------------|---|
| V ₁ | Academic background of faculty | V ₃₄ | Recreation and gym facility |
| V ₂ | Experience of faculty | V ₃₅ | Air-conditioning |
| V ₃ | Communication skill of faculty | V ₃₆ | Presentation system |
| V ₄ | Job fair | V ₃₇ | Rich library |
| V ₅ | Proper caring of students by faculty | V ₃₈ | Motivation for research |
| V ₆ | Updated course content | V ₃₉ | Computer-lab facility |
| V ₇ | Research supportive facilities | V ₄₀ | Online registration |
| V ₈ | Suitable location | V ₄₁ | Stand-by-generators |
| V ₉ | Modern campus building | V ₄₂ | Analytical ability of intake |
| V ₁₀ | defense for Outgoing students | V ₄₃ | Academic result of intake |
| V ₁₁ | Basic knowledge of intake in English | V ₄₄ | Communication skill of intake |
| V ₁₂ | Well-equipped class room | V ₄₅ | Publication facility |
| V ₁₃ | Industrial tour | V ₄₆ | Students' magazine |
| V ₁₄ | Quality of question paper | V ₄₇ | Existence of research center |
| V ₁₅ | High-speed internet | V ₄₈ | Exam hall environment |
| V ₁₆ | Neat and clean environment | V ₄₉ | Faculty exchange with other universities |
| V ₁₇ | Case study system | V ₅₀ | Students exchange with other universities |
| V ₁₈ | Syndicate's formation | V ₅₁ | Workload of teacher |
| V ₁₉ | Term paper preparation | V ₅₂ | Vice-chancellor's status |
| V ₂₀ | Assignment preparation | V ₅₃ | Viva-voce for student |
| V ₂₁ | Collegiate system | V ₅₄ | Corporate presentation |
| V ₂₂ | Proper marking system | V ₅₅ | Rapid problem solving system |
| V ₂₃ | Class monitoring | V ₅₆ | View exchange with students |
| V ₂₄ | Proper class size | V ₅₇ | Business club |
| V ₂₅ | Performance evaluation of teachers | V ₅₈ | Workshop |
| V ₂₆ | Monthly payment system of tuition fee | V ₅₉ | Reasonable tuition fee |
| V ₂₇ | Internship | V ₆₀ | Study tours |
| V ₂₈ | View exchange with teachers | V ₆₁ | Timely convocation |
| V ₂₉ | Open credit system | V ₆₂ | Status of dean & head of dept. |
| V ₃₀ | Scholarship and assistance for students | V ₆₃ | Alumni association |
| V ₃₁ | Leadership development camp | V ₆₄ | Job placement facilities |
| V ₃₂ | Transport facility | V ₆₅ | Canteen facility |
| V ₃₃ | Hostel and dormitory facility | V ₆₆ | Photocopy facility |