

## DIFFERENCES IN OPINION BETWEEN INDUSTRY AND ACADEMIA IN RELATION TO RELEVANT ISSUES ON ACADEMIC SERVICE QUALITY: A STUDY ON MANAGEMENT EDUCATION

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### Abstract

**Purpose** – The purpose of the present study is to explore empirically the disparities in view between industry and academia on the programme quality with a special reference to management education. This research also establishes the key areas of difference by employing scientific testing procedure.

**Methodology / approach** – A sample of 278 respondents, including executives from 15 industries and faculty members from 14 premier management institutes of West Bengal, have been selected by random sample technique. A questionnaire, consisting of 25 items related to the quality of an ideal management programme has been administered. The One-Sample Kolmogorov-Smirnov test for testing the normality of said 25 observations have been employed. Test infers that observations are non-normal in nature. Thus, any non-parametric test is suitable to examine the hypothesis. Therefore, the Mann-Whitney U test has been carried out to ascertain the differences between two groups of populations.

**Findings** - This paper identifies the gap (differences in opinion) between the industry and academia on the 11 key issues related to the quality of management programme.

**Practical implications** – Industry raises question on academics vis-à-vis industry readiness of their pass out students. This research highlights the specific issues for which management graduates from B-schools are less employable to the industry. Thus, this research benefits industry and academia both.

**Key words:** Service sector, Academic service quality, Management Education, Disparity Industry, Academia

### Introduction

Management education is one of the most vibrating service sectors, where quality is the benchmark for nurturing budding talents and producing future business leaders. The growth of management education is phenomenal during 21st century and India is no exception to that. India has witnessed a sea change in its educational system during this era. Management education is one of the most sought after courses in India, because of its positive effect and edge in the world of placement. There are over 3500 AICTE approved management institutions

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in India but the quality of these institutions varies widely in terms of their infrastructure, pedagogical approaches, faculty training, and student placements upon graduation.

In recent years India has witnessed an incredible expansion in the number of management institutions most of them in private sector, offering management programs in different functional areas of management.

At the same time we have experienced two counteracting forces working on Indian management education system. In one hand there is supply side growth in terms of mushrooming of B-schools mostly under private initiatives. On the other hand it is also seen that corporate employability of the student is under question since corporate houses on an average are not happy with the industry readiness of the students. Despite existence of regulatory bodies like 'AICTE', 'UGC', 'NBA', 'NAAC', etc., quality of training is still in question. From the point of view of management of education service, we can raise questions on quality of service offered by these education managers for their organization.

However, it is practically not possible for the management institutions to prepare students as per the customized requirements of industry, while they can prepare students as mass customized solutions for industry, who can be utilized and shaped easily by the industry as per their needs and requirements. These students, with a well-tailored education can reduce the difference between industry and academia on the service imparted on them. Hence, in the current situation, business schools have an obligation to design course curriculum taking into consideration of the view of industry. However, in practice, the view of industry is being overlooked at the time of developing such curriculum. Therefore, we apprehend a perceptual gap between industry and academia in terms of quality of output.

Since, industry is holding high power of bargaining, academic service organizations have to change their line of thinking as per the requirement of the industry. If this is done correctly, it would ensure sustainability of the academic service organizations,

Hence, it is necessary to determine the dimensions which are considered as important by both industry and academia to design the curriculum and pedagogy so that it can match. So, it is absolutely necessary to explore the findings already present in the existing literatures. In the next section of the study we have discussed the previous literatures on these related issues.

## **Review of Studies**

### **Management Education**

Several researches have been initiated on the issues of quality of management education based on the perceptions of major stakeholders namely industry and academia. Montgomery and

Porter (1991) found that academia is trailing behind the trend of requirements of the industry. Academia should be aware of industry requirements so that it continues to be relevant in its production of management graduates who will be seeking employment after completing their degrees and leaving the institution. Modi (2009) concluded that fresh graduates, who join the industries, require six months to 2 years as gestation lag to show their contribution but in most of the cases they leave the organization before they start showing results. This is due to the gap between theories students learn and practice as required in industry as an executive. Patel and Popker (1998) emphasized on ensuring a common platform for industry and education institutions to work out value-based curriculum taking into consideration of the needs of industry. Siememsma (1998) concluded that there is a great deal of conflict between what is being taught to the students and what they are going to do when they move to industries. Rajsekaran and Rajasingh (2009) have suggested a solution to the problem by stating that the perception gap between industry and faculty must be bridged to improve the employability of students and enhance the quality of higher education. Ghosh et al (2007) identified that at present, there are several mechanisms operational in India, with 'Academia-Industry interaction,' as a fulcrum of technical education. He also suggested that by involving the industries right from the stage of drafting syllabi to absorbing the trained students, they are allowed to shape the 'CORE' (students) into a highly productive human resource pool. This also enables them to train the fresh employees and upgrade existing employees at a very competitive cost. Zahid (2008) concluded that higher education and industry linkages should remain alive for constant updating of courses. By creating the partnership between academia and industry, both can be benefited from resources of each other. Paliwal (2009) has focused on coordination among the efforts of academia, industry and the government. He emphasized on injecting the traits which are expected by the prospective employers. Hannan (2003) opined that faculty-student ratio should be close to 1:10 and frequent revision of syllabus in consultation with the industry. He also recommended that institutions should create the professionals with global mind set so that they can adjust in different cultural and social settings.

### **Education as a service**

As far as education is concerned it is unique as a service. In education sector, faculty and students together create co-created values and ethics but neither students are considered as customer nor the faculties are regarded as manufacturers or producers. Secondly, industry is considered as customer in education sector because it acquires employable quality students from the produced output of the institutes. Education is one of the services that have the highest interaction between student (customer) and teacher (service provider), which requires development of a relationship based on cultural norms and that is a lifetime relationship.

Lovelock (1983) refers to this as a 'membership' relationship with the service provider. Temponi (2005) analyses the main elements of continuous improvement in higher education that address the concerns of academia's stakeholders during the process of its implementation and maintain the quality of service.

### **Service Quality Measurement**

In general, service quality perception of a customer is the difference between customer expectation and customer realization. Hence, service quality varies among customers. Therefore, there is a need to measure the quality of service from aggregate view of customers. There are several measurement tools and techniques available for assessing the service quality. Some of the measures relate it with customer satisfaction. It is obvious that service quality is holding a relationship with customer satisfaction. The perception of service quality has been studied extensively during the past two decades, with most studies being based on the model proposed by Parasuraman, Zeithaml & Berry (1988) and Gronroos (2000). Despite few criticisms regarding the applicability of SERVQUAL scale, it is a widely accepted scale for the measurement of service quality. Among the other researchers, Teas (1993) has pointed out that there are varying interpretations of expectations, and these lead to a number of measurement problems.

### **Service Quality Measurement in education with special emphasis on Management education**

Researchers concerned with measuring service quality in the education sector have carried out both qualitative and quantitative studies to identify attributes before developing and administering a quantitative instrument (LeBlanc & Nguyen 1997; Aldridge & Rowley 1998) for measurement. The researchers concerned with measuring education service quality can be classified into three categories. Few researchers have sought to either improve on, or adapt the widely recognized SERVQUAL model to this setting with varying levels of success (Anderson 1995; Anderson & Zwelling 1996; Soutar & McNeil 1996; Pariseau & McDaniel 1997). Few of the researchers have developed alternative scale for measuring quality in education sector. In this context, the integrative scale EduQUAL (Education Quality), developed by Mahapatra et.al (2007) for evaluating service quality for the education sector can be mentioned. Abdullah (2006) developed an alternative instrument named HEDPERF consisting of 41 statements to assess service quality in the higher education sector. Several researchers have investigated the criteria for quality of higher education based on the perceptions of stakeholders, related to this field like society, administration, faculty, alumni, or student with their varied expectation level. Faganel (2010) focuses on the most important quality dimensions

for different stakeholders for measuring service quality in technical education. Tan et.al. (2004) offer an enhanced approach of SERVQUAL for measuring student satisfaction similarly Khan et.al. (2011) evaluate the perceived teaching service quality in higher education for students' satisfaction.

Other researchers have worked on various related issues on academic service quality like programme quality, placement, training and teaching pedagogy etc.. Sahney et al., (2004) pointed out that the quality of education has become important as the product/output of the system and has a direct impact on the quality of their employer organizations. The service quality in education and management education was measured by various other researchers like Sahid (2001); Gagandeep et al., (2006), Raju et al., (2004) and Khan et al. (2007). In their research, Mandal and Banerjee (2012) have focused on the important dimensions of education services like teaching pedagogy, practical training, communication skills, global exposure etc. in order to improve the programme quality and enhance the employability of the students. These studies attempted to bring out the important dimensions of program quality as a result of service quality. No previous studies have put an effort to study the opinion differences between academia and industry empirically. But, without empirical disclosure it is hard to pinpoint the problem. Thus, from the literature review we have found that :

1. There are significant gaps between Industry and Academia on various issues of academic service quality. As both the stakeholders are important for academic sector, hence, the opinion of both the stakeholders is important for providing better service quality.
2. If there is any gap between the opinions of these stakeholders then it affects the program quality of the institutes and the output produced by the institutes will not match the quality as expected by the industry.

Hence the present study focuses to fill up that research gap with specified objectives such as

1. Reveal the quality dimensions of the management education which are important for academia and industry based on critical survey of literatures.
2. Disclose the difference in opinion on academic service quality among these two groups by means of empirical testing.

Already, Mandal and Banerjee(2012) have revealed some important issues in relation to program quality. In the present study, we are considered these issues as related to quality of a program as the objective of this study is to find out the opinion differences between two groups empirically.

### Research Problem and Hypothesis

It is already discussed in this present research that we are interested to explore the disparities in view between industry and academia on the academic service quality with a reference to management education. This paper also studies the variation between academic output and industrial requirement in current scenario. Therefore, following hypothesis has been drawn.

**H<sub>0</sub>: There is no difference in opinion between industry and academia in relation to relevant issues of Academic service quality.**

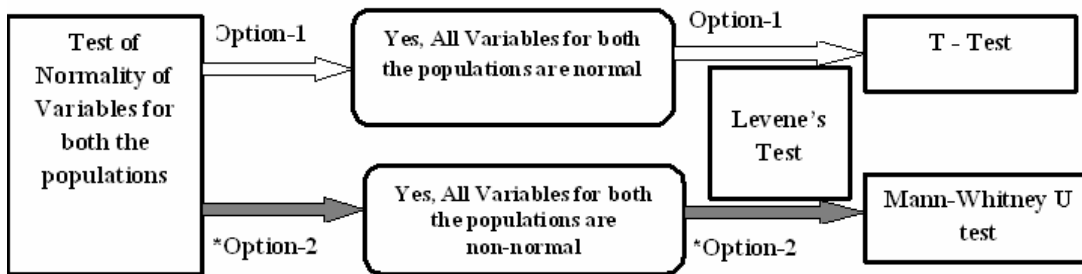
**H<sub>1</sub>: There is difference in opinion between industry and academia in relation to relevant issues of Academic service quality.**

However, for the purpose of testing a scheme of analysis has been followed.

### Scheme of Analysis

At first, we have tested the normality of the each variable for two different populations i.e. industry and academia. For testing of normality we have used **K-S test (Kolmogorov-Smirnov Test)** (Stephens, 1974). If the result of K-S test reveals that all of the variables for each of the population follow normal distribution then only we can go for any suitable parametric testing. Otherwise, we have to employ any relevant non-parametric testing. As it is a case of comparing two populations, in case of parametric testing we generally use ‘t’ test and in case of non-parametric testing we normally deploy **Mann-Whitney U test** (Mann and Whitney, 1947). However in both of the cases it is desirable to carry out homogeneity tests for the populations under study. If it is found that two studying populations are heterogeneous inference drawn out of the study is of less statistically confidence but not void. We carry out **Levene’s (Levene, 1960) test for this purpose.**

**Figure - 1 : Scheme of Analysis**



\*We have used option-2 in this study as all variable for both the populations are non-normal in nature.

### **Survey Instrument**

In this research, a questionnaire based on the work of Mandal and Banerjee (2012) was compiled to investigate the dimensions of an ideal business management program from industry and academia viewpoint. The survey instrument comprised two sections: Section-A gathered background information of the participants and section- B introduced the 25 items related to the relevant issues related to the quality of a business management programme.

### **Designing of sample**

In this study we have constricted our focus on the state of West Bengal because of the tremendous development of this state in terms of technical education during last ten years. Within West Bengal we have chosen randomly 15 private management institutes from the pool of management institutes under West Bengal University of Technology, out of which 14 institutes agreed to allow for survey. For each institute most experienced ten faculties have been interviewed. For one institute we have taken seven faculties as in this case we have found these faculty members as most experienced. We have contacted 200 faculty members personally. Finally, we have surveyed 137 faculty members with a response rate of 68.5%. Similarly, for industry survey, we have prepared a list of companies from the yellow pages and pool of companies which are frequently visited for campus recruitment in the above mentioned management institutes. We have randomly chosen and approached 35 companies but 15 finally have turned up. We have contacted 210 executives randomly and finally have surveyed 141 industry executives from the 15 industries including PSU's, MNC's and other private industries in West Bengal with a response rate of 67.14%. Therefore, a total of 278 (137+141) valid responses are taken into consideration for further analysis.

### **Result and Discussion**

We have tested the normality of the data through K-S test (Kolmogorov-Smirnov Test) as in this case we have seen the variables are quasi-normal in nature and that is confirmed by a subsequent test ( $p$  value  $< 0.05$ ) (See Table 1) and we have gone for non-parametric testing.

**TABLE 1**  
**Tests of Normality for Faculty & Industry Executive**

| Variables | Kolmogorov-Smirnov |     |       |                    |     |      |
|-----------|--------------------|-----|-------|--------------------|-----|------|
|           | Faculty            |     |       | Industry Executive |     |      |
|           | Statistic          | df  | Sig.  | Statistic          | df  | Sig. |
| V1        | 0.202              | 137 | 0.000 | .261               | 141 | .000 |
| V2        | 0.239              | 137 | 0.000 | .357               | 141 | .000 |
| V3        | 0.251              | 137 | 0.000 | .344               | 141 | .000 |
| V4        | 0.297              | 137 | 0.000 | .259               | 141 | .000 |
| V5        | 0.238              | 137 | 0.000 | .343               | 141 | .000 |
| V6        | 0.304              | 137 | 0.000 | .437               | 141 | .000 |
| V7        | 0.184              | 137 | 0.000 | .304               | 141 | .000 |
| V8        | 0.183              | 137 | 0.000 | .298               | 141 | .000 |
| V9        | 0.451              | 137 | 0.000 | .425               | 141 | .000 |
| V10       | 0.222              | 137 | 0.000 | .346               | 141 | .000 |
| V11       | 0.319              | 137 | 0.000 | .357               | 141 | .000 |
| V12       | 0.188              | 137 | 0.000 | .308               | 141 | .000 |
| V13       | 0.325              | 137 | 0.000 | .324               | 141 | .000 |
| V14       | 0.492              | 137 | 0.000 | .476               | 141 | .000 |
| V15       | 0.279              | 137 | 0.000 | .363               | 141 | .000 |
| V16       | 0.215              | 137 | 0.000 | .197               | 141 | .000 |
| V17       | 0.224              | 137 | 0.000 | .283               | 141 | .000 |
| V18       | 0.164              | 137 | 0.000 | .262               | 141 | .000 |
| V19       | 0.343              | 137 | 0.000 | .499               | 141 | .000 |
| V20       | 0.149              | 137 | 0.000 | .189               | 141 | .000 |
| V21       | 0.227              | 137 | 0.000 | .405               | 141 | .000 |
| V22       | 0.252              | 137 | 0.000 | .267               | 141 | .000 |
| V23       | 0.269              | 137 | 0.000 | .179               | 141 | .000 |
| V24       | 0.269              | 137 | 0.000 | .307               | 141 | .000 |
| V25       | 0.216              | 137 | 0.000 | .358               | 141 | .000 |

After the testing, we have calculated aggregate value of every single opinion for each of the groups that are industry and academia.



**TABLE 2**  
**Comparison of Mean Value**

| Variables | Industry Executive Mean | Faculty Mean | Remarks |
|-----------|-------------------------|--------------|---------|
| V1        | 4.659                   | 4.737        | No Gap  |
| V2        | 5.723                   | 5.430        | GAP     |
| V3        | 5.531                   | 5.722        | No Gap  |
| V4        | 4.382                   | 4.510        | No Gap  |
| V5        | 5.751                   | 5.423        | GAP     |
| V6        | 6.375                   | 5.963        | GAP     |
| V7        | 5.049                   | 4.408        | GAP     |
| V8        | 4.787                   | 4.423        | GAP     |
| V9        | 6.340                   | 6.459        | No Gap  |
| V10       | 5.780                   | 5.569        | GAP     |
| V11       | 6.141                   | 5.700        | GAP     |
| V12       | 3.702                   | 3.007        | GAP     |
| V13       | 5.730                   | 6.036        | No Gap  |
| V14       | 6.801                   | 7.875        | No Gap  |
| V15       | 5.893                   | 5.759        | GAP     |
| V16       | 5.063                   | 5.197        | No Gap  |
| V17       | 3.921                   | 4.912        | No Gap  |
| V18       | 5.390                   | 4.729        | GAP     |
| V19       | 6.624                   | 6.021        | GAP     |
| V20       | 5.659                   | 4.540        | GAP     |
| V21       | 4.333                   | 3.956        | GAP     |
| V22       | 4.326                   | 4.270        | GAP     |
| V23       | 4.886                   | 4.795        | GAP     |
| V24       | 3.851                   | 3.832        | GAP     |
| V25       | 6.461                   | 5.832        | GAP     |

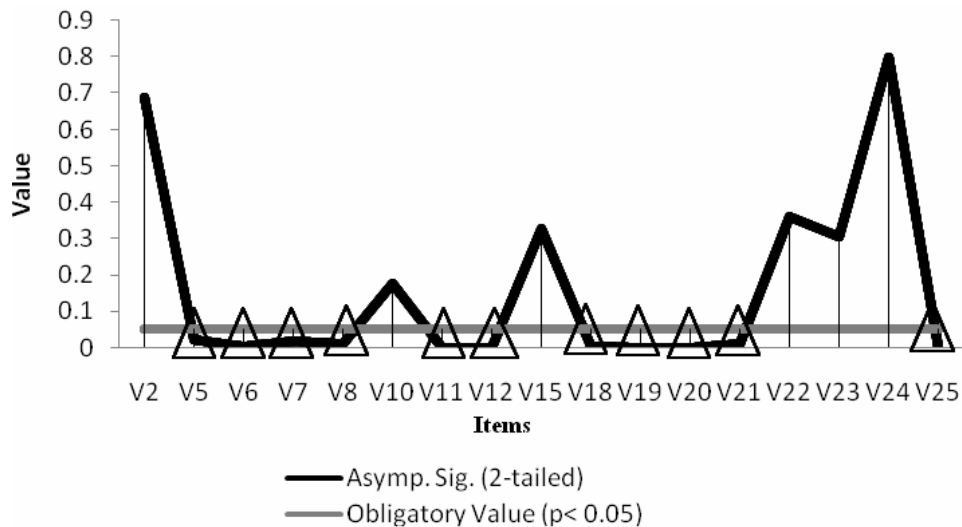
We have compared them to find out if there is any difference in mean values between them or not (Table 2). When industry executives in an aggregate assign higher importance for a particular issue compared to their academic counterpart we termed it as ‘GAP’. If faculty mean is higher than industry executive mean, we consider it as ‘no gap’ situation. It is well understood that industry view can be seen as benchmark and if faculty view is giving importance less than that it generates ‘GAP’ otherwise ‘NO GAP’ situation. Based on the comparison we found that there are 17 opinion-gaps between industry and academia vis-à-vis academic service quality of management education, where, the industry expectation is higher than the produced mean of faculties from academic.

To test further, whether these gaps are significant or not we have carried out a non parametric **Mann-Whitney U** test on all 17 variables, only where said gaps (‘GAP’) are found.

**TABLE 3**  
**Mann-Whitney Test Result**

| Observations | Mann-Whitney U | Z      | Asymp. Sig. (2-tailed) | Remarks            |
|--------------|----------------|--------|------------------------|--------------------|
| V2           | 9,411.500      | -0.399 | 0.690                  | No Significant Gap |
| V5           | 8,227.000      | -2.308 | 0.021                  | Significant Gap    |
| *V6          | 7,852.000      | -3.084 | 0.002                  | Significant Gap    |
| V7           | 8,156.000      | -2.341 | 0.019                  | Significant Gap    |
| V8           | 7,993.000      | -2.556 | 0.011                  | Significant Gap    |
| V10          | 8,825.500      | -1.352 | 0.176                  | No Significant Gap |
| V11          | 7,471.000      | -3.591 | 0.000                  | Significant Gap    |
| *V12         | 7,574.000      | -3.236 | 0.001                  | Significant Gap    |
| V15          | 9,069.500      | -0.976 | 0.329                  | No Significant Gap |
| *V18         | 7,786.000      | -2.904 | 0.004                  | Significant Gap    |
| *V19         | 6,951.500      | -5.043 | 0.000                  | Significant Gap    |
| *V20         | 6,231.000      | -5.238 | 0.000                  | Significant Gap    |
| *V21         | 8,072.500      | -2.515 | 0.012                  | Significant Gap    |
| V22          | 9,079.000      | -0.914 | 0.360                  | No Significant Gap |
| V23          | 9,001.000      | -1.026 | 0.305                  | No Significant Gap |
| V24          | 9,498.500      | -0.255 | 0.799                  | No Significant Gap |
| *V25         | 6,436.500      | -5.187 | 0.000                  | Significant Gap    |

From the test, we found 11 statistically significant gaps between industry and executives as the p value is lower than obligatory value 0.05 ( $p < 0.05$ ) (See Table 3). Thus, the null hypothesis ( $H_0$ ) is rejected and the alternative hypothesis ( $H_1$ ), which assumes difference between industry and academia in relation to relevant issues of Academic service quality, is accepted. It indicates that these 11 gaps are significant because they point out the area where industry and academia differ in terms of quality of an ideal management programme, further which helps the increasing employability of the students. The differences are significant on various issues on management education like, international exposure (V5) of the programme ( $U = 8227.000$ ,  $p = 0.021$ ), practical focus (V6) of the programme ( $U = 7852.000$ ,  $p = 0.002$ ), specialization (V7) issue ( $U = 8156.000$ ,  $p = 0.019$ ), audio-visual (V8) teaching pedagogy ( $U = 7993.000$ ,  $p = 0.011$ ), guest handling (V11) skill ( $U = 7471.000$ ,  $p = 0.000$ ), course content (V12) of the programme ( $U = 7574.000$ ,  $p = 0.001$ ), academic accreditation (V18) of the course ( $U = 7786.000$ ,  $p = 0.004$ ), case study (V19) ( $U = 6951.500$ ,  $p = 0.000$ ), industry centric syllabus (V20) ( $U = 6231.000$ ,  $p = 0.000$ ), specialized training (V21) ( $U = 8072.500$ ,  $p = 0.012$ ), industry accreditation (V25) of the programme ( $U = 6436.500$ ,  $p = 0.0000$ ).

**Figure - 2 : Opinion Gap between Industry and Academia**

### Conclusion and Recommendations

The study reveals 11 significant gaps between industry and academia on various issues related to academic service quality of management education. However, among these 11 gaps, results relating to these 4 gaps (V5, V7, V8, and V11) are producing statistically more confident result since for these cases test populations are found to be homogenous. Though this research has been carried out in the state of West Bengal only but this result vis-a-vis opinion differences between industry and academia is the scenario of the country as a whole. This validates lack of employability of our business school graduates all over India including West Bengal. This research is mainly executed over private run academics but we hope indication generated from this research may apply to all forms of academic institutions leaving a few highly prestigious quality driven institutes of national and international repute.

It is now imperative for business schools to bring academia and industry closer and build strong collaborative relationship. Each business school needs to identify the areas where they can build an effective academia-industry relationship. Academia and industry need to build effective relationships, with a long term strategic intent for contributing growth and development of both the stakeholders. Present research supports that modern management education should show concern on few emerging issues like communication skill, teaching pedagogy, industry orientation, industry and academic accreditation, developing industry centric curriculum in order to increase the industry-academia relationship and enhance the placement opportunities

for their students. It is the order of the day that Business schools have to collaborate with corporate to provide training and internships for students. These initiatives on the part of business schools trigger industry's interest to collaborate with academics by assisting them in development and training of their human capital, and which results in increasing the mind-share and enhancing the image of the business school. This kind of partnership model is still in nascent stages in India, which requires appropriate push for mutual benefit of both academic and industry.

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| V1) Business management course should not confine to one specialisation. Rather it gives opportunities to operate with flexible combination covering all four specialisation for a candidate aspires for business management carrier. |
| V2) For management courses practical hands-on training and lecture in the class room should weight equally.   |
| V3) Institute should emphasise on development of oral communication of business management students.  |
| V4) For all type of professional courses including business management only procedure of industry accreditation is required   |
| V5) Now-a-days business management course should have exposure of international rules, regulation and culture.  |
| V6) For more practical focus case study analysis should be imparted.  |
| V7) Business management course should not cover all the specialization it offers. Rather it covers only one specialization in details.  |
| V8) Only video of industry's practical supported by lecture is good for business management course  |
| V9) Ability of oral and written, both type of communications are essential for business management students.  |
| V10) A modern updated course of business management should arrange global training of the students.   |
| V11) Dealing habits with foreign guests are necessary for present business management students.   |
| V12) General but peripheral courses in studying business management should be as less as possible.  |
| V13) Only lecture method is not sufficient for business management course.  |
| V14) Business management students should also learn to appear neat, clean and smart.  |
| V15) A good course of business management should impart 'on-job training' to the students.  |
| V16) Course should be designed to match with the entry level requirements in the industry.  |
| V17) Six months practical training is must for the course like business management.   |
| V18) professional courses like business management should only be approved by aicte.  |
| V19) student should learn to develop case studies on real life business problems.   |
| V20) courses should not be designed with subjects which are not required at operational level activities of the industry.   |
| V21) two month practical training is sufficient for course like business management.  |
| V22) business management course should only be accredited by global agency.   |
| V23) a developed course of business management should facilitate students with at least two to three foreign languages.   |
| V24) only practical hands on training supported by as less as possible lecture should require for business management course.   |
| V25) performance in the practical training should be evaluated by persons of the industry concerned and should be credited in the score card.   |

Source: Mandal, K., and Banerjee, C. (2012) Development of a construct for measuring the performance of engineering and technology program: A confirmatory factor analysis approach

