

Discernment of Alumni on Activities as Implemented in Academia

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ABSTRACT

This article analyses the Alumni accomplishments on the activities conducted in there year of study to obtain a better understanding of the characteristics of existing programs and the student challenges. The study reveals the conclusions on the different aspects that effect the achievements of students goal which are, the academic engagements of the department, the on job training, the specialization offered by the department, the rating on the used assessment tools, the overall rating of the program and the academic initiatives taken by the college for the progress of the students. The outcome will assist the universities/ college to strategize and prioritize its actions in order to improve or stabilize the activities for the benefit of the future students.

General Terms

Statistics, Correlation, Z-test et. al.

Keywords

Alumni; Hypothesis testing; correlation; Z-test; Gaussian distribution

1. INTRODUCTION

An alumni association is an association of graduates or, more broadly, of former students. In many countries, alumni of Universities, Colleges and Schools (especially the Government Schools), fraternities, and sororities often form groups with alumni from the same organization. These associations often organize social events, publish newsletters or magazines, and raise funds for the organization. Many provide a variety of benefits and services that help alumni maintain connections to their educational institution and fellow graduates. Additionally, such groups often support new alumni, and provide a forum to form new friendships and business relationships with people of similar background. This study showed that alumni in general are of the opinion that the academic activities are an important source for the future of the students and is certain about the positive transformation that occurs in them. As discussed in [8] investigates the challenges of alumni at Traditional South African Universities, particularly the role of alumni associations as an alternative income for universities. These researches plays an important role in the development of universities/colleges both academic and progress financially. The overall support services has its own importance in the academic progress. Support services include real-time information about courses, student advising (study help, financial help, health services, counselling), online registrations, orientation, student accounts, help-desk, complaint handling, and feedback in a friendly, trustworthy and timely manner as discussed in [9]. Alumni also includes partnerships in research projects, placing of students for practical experiences, lobbying with other role players (e.g. with government in policy making); in

making a standpoint on a variety of forums (that is, economically, socio-economically, and politically views). Rattanamethawong et.al. [10] study can assist in formulating strategic marketing by alumni associations to satisfy and engage their alumni.

Alumni associations are mainly organized around universities or various departments of universities, colleges or various departments of technical and non-technical colleges, but may also be organized among students that studied in a certain country. In the past, they were often considered to be the universities or school's old boy society. Today, alumni associations involve graduates of all age groups and demographics. Alumni associations are often organized into chapters by city, region, or country as in [1]. Alumni reunions are welcomed by some and dreaded by others. Either way, a well-planned alumni reunion can be a lot of fun, and even those who dreaded coming will be glad they did. Vivek S.Yedavalli, Parinda Shah [2] concentrates on the objective to implement a formal mentorship program for potentially increasing faculty engagement, improving resident morale, research opportunities, and networking for fellowship and job opportunities. whereas [11] discusses the results of the study suggest that organizational identification may benefit both alumni relations professionals and former students, alumni are more likely to volunteer or donate based on a personal connection to the university, and the academic and social experience as an undergraduate student has a significant impact on alumni involvement and philanthropy. Organizing an alumni reunion takes more than one person, so there is usually a reunion committee to make sure all the details is covered. Once the committee is formed, it can send an alumni reunion letter to each member of the class. It is recommended to start planning an alumni reunion at least one year in advance of the desired date. Class members may know that a reunion is in the works months before the letter goes out because they will have been contacted by a committee member or volunteer for their current address and email address.

Alumni reunion invitation letters may be formal business letters, or have a more casual tone. They may be in the form of an invitation or an email. The planning committee needs to decide what style best suits the occasion. It is intended to make class members feel relaxed about attending. The letter can open with a humorous comment to attract the recipient to attend. For very large classes, it is recommended to send a generic letter to Fellow Classmates, but if the class is small, a personal letter is better.

The objective of the study is to make the authorities alert the changes required in the academia for the future economic stability of the environment. Therefore, higher education institutions must always be concerned that they effectively

market to their alumni in order to foster healthy relationships between graduates and their alma mater [12].

2. MATERIALS AND METHODS

Shinas College of Technology – Information Technology Department, has conducted an Alumni Meet for the REUNION of the students for the first time in its sections (Software / Database / Networking), in the month of November, 2017. The Alumni committee, has designed the scenario for the program, and started working on it with its member in the following disciplines.

- To collect the information of the students from college Registration Department (data from Ministry of Manpower).
- To send them the message regarding the timing, location of the scheduled event through mails, SMS (English and Arabic Languages) and phone calls.
- The reunion message was also conveyed through the college website.

This event was scheduled on 20th November 2017, the committee has traced around 500 students of different years and level then had passed the information regarding this event. Out of these around 59 (12% of) students of different years and levels were present for the event.

There was a mutual interaction between the alumni and the faculty members, which lead to the question and answer session, to know well about the work status of the alumni and run-through of gained knowledge from the college, also there was discussion between alumni and present exiting level students of the college to help the students to understand the market strategies. The interaction includes:

- About the department.
- On Job Training.
- About their specialization selected in B.Tech.
- About the assessment methods.
- Academic initiatives taken by the college to improve technical knowledge w of the students.
- Industry oriented projects.
- Seminars and workshops.
- Online Examinations.
- Special Training Classes for bridging Industry - Academic gap.

Alumni Student Feedback form from Quality Assurance Unit of Shinas College of Technology was floated to student-respondents to evaluate how academic/college activities are perceived. Thirty six different items are listed in the forms which are rated from 1 to 5, with 5 as the highest mark. Marks were tallied and averages of each item, along with the total average, were presented in the analysis of data. Quality Assurance Unit marking criteria is used to describe each average (refer Table:1). Also, personal interviews were conducted at random to 5 selected respondents for each category (IT/NETWORKING/SOFTWARE ENGINEERING

section). Total of assessment marks are used to determine the label of respondents. Individual responses were recorded and acknowledgement of signature was required right after the process. Further, responses were presented and used in the analysis of this study; later student's alumni group was formed headed by the old graduates of the college as discussed in [3] and [13].

3. ANALYSIS

After conducting a careful analysis on the survey forms of the ALUMNI FEEDBACK responded by 59 students, as been floated in the 1st Semester, AY 2017-18, these are the subsequent findings:

3.1 Findings

With Thirty Six (36) assessment items, considered thereof, respondents gave an Overall average mark of **3.88** equivalent to a descriptive rating of **“Agree”**. Nine (9) Assessment Items received **“Agree”**, Twenty Six (26) received **“Neutral”** score, all other Assessment Items got contended with **“Disagree”** rating. The results are as follows:

- A. The Item No. 1 of Assessment Element **“DEPARTMENT”** (The department management is very helpful and cooperative) garnered the highest mark at **4.11** while Item 6 (The obtained education as well as skills is useful and relevant to my present job) received the lowest score of **3.77**.
- B. The Item No. 13 of Assessment Element **“ON JOB TRAINING”** (This enhanced my knowledge of instructional strategies for engaging subordinates) garnered the highest mark at **4.00** while Item 11 (OJT department has provided me a platform to have link with industry) received the lowest score of **3.85**.
- C. The Item No. 15 of Assessment Element **“RATING ON SPECIALIZATION”** (This enhanced my knowledge of instructional strategies for engaging subordinates) garnered the highest mark at **4.25** while Item 17 (Depth of course content) received the lowest score of **3.63**.
- D. The Item No. 19 of Assessment Element **“RATING ON ASSESSMENT METHODS”** (Understanding the course) garnered the highest mark at **4.00** while Item 20 (Early discovery of difficulties) received the lowest score of **3.65**.
- E. The Items 28 & 30 of Assessment Element **“OVERALL RATING OF THE ACADEMIC PROGRAM”** (Library facilities & Recreational facilities) garnered the highest mark at **3.95** while Item 32 (Sports facility) received the lowest score of **3.45**.
- F. The Item No. 34 of Assessment Element **“ACADEMIC INITIATIVES TAKEN BY THE COLLEGE”** (Seminars and Workshops) garnered the highest mark at **4.00** while Item 36 (Special Training Classes for bridging Industry Academic gap) received the lowest score of **3.75**.

Table 1: Quality Assurance Unit marking criteria average

S.N	Assessment Elements	Ratings				Respondents				
		Median	Variance	Rating	Remarks	SA	A	N	D	SD
A	Department									
1	The department management is very helpful and cooperative.	4.00	0.95	4.11	Agree	44%	30%	19	7%	0%
2	The department has well experienced staff to teach different specialization.	4.00	0.98	3.85	Neutral	26%	48%	11%	15%	0%
3	The department staff are very helpful, cooperative and provide individual attention.	4.00	0.88	4.00	Agree	33%	37%	19%	7%	0%
4	The department staff are the reasons for some part of my success.	4.00	0.83	3.88	Neutral	30%	30%	33%	4%	0%
5	The department staff have assisted me in learning skills that will enhance my job performance.	4.00	0.85	4.00	Agree	37%	30%	30%	4%	0%
6	The obtained education as well as skills is useful and relevant to my present job.	4.00	0.82	3.77	Neutral	19%	48%	19%	11%	0%
7	I have gained great practical experience from various students' activities (such as seminars, workshops, academic competitions, special training programs, industrial visits, and etc.)	4.00	1.11	3.96	Neutral	37%	37%	11%	15%	0%
8	How do you rate development activities organized by the Department for your overall development	4.00	0.90	3.85	Neutral	26%	44%	19%	11%	0%
9	IT club activities in the department helped me to develop leadership skills for use in my working environment.	4.00	0.77	4.00	Agree	30%	48%	15%	7%	0%
B	On Job Training									
10	I am fully satisfied with the services provided by OJT department.	4.00	1.08	3.96	Neutral	37%	30%	19%	11%	0%
11	OJT department has provided me a platform to have link with industry.	4.00	1.05	3.85	Neutral	33%	30%	26%	11%	0%

12	The OJT program has helped me to obtain hands-on experience through reinforcing my theoretical knowledge.	4.00	1.04	3.96	Neutral	41%	22%	30%	7%	0%
13	This enhanced my knowledge of instructional strategies for engaging subordinates.	4.00	1.15	4.00	Agree	44%	22%	22%	11%	0%
14	It enhanced my ability to positively impact job motivation and/or confidence.	4.00	1.10	3.89	Neutral	33%	37%	15%	15%	0%
C	Rating on Specialization	Median	Variance	Rating	Remarks	SA	A	N	D	SD
15	Learning value (in terms of skills, concepts, knowledge, analytical abilities, or broadening perspectives)	4.00	0.50	4.25	Agree	11%	15%	4%	0%	0%
16	Applicability/relevance to real life situations	4.00	0.70	3.88	Neutral	7%	11%	11%	0%	0%
17	Depth of the course content	3.50	1.13	3.63	Neutral	7%	7%	11%	4%	0%
18	Relevance/learning value of project/ report	4.00	0.57	4.00	Agree	7%	15%	7%	0%	0%
D	Rating on Assessment methods	Median	Variance	Rating	Remarks	SA	A	N	D	SD
19	Understanding the course	4.00	0.60	4.00	Agree	19%	44%	11%	4%	0%
20	Early discovery of difficulties	4.00	0.66	3.65	Neutral	7%	41%	19%	7%	0%
21	interaction with the teacher	4.00	0.69	3.90	Neutral	19%	37%	19%	4%	0%
22	regular work	4.00	0.85	3.95	Neutral	22%	37%	11%	7%	0%
23	continuous self-assessment	4.00	0.68	3.95	Neutral	19%	37%	15%	4%	0%
E	Overall Rating of the Academic Program	Median	Variance	Rating	Remarks	SA	A	N	D	SD
24	Academic content	4.00	0.56	3.81	Neutral	11%	44%	19%	4%	0%
25	Fairness of evaluation	4.00	0.79	3.76	Neutral	19%	26%	30%	4%	0%
26	Interaction with faculty	4.00	0.45	3.65	Neutral	4%	44%	22%	4%	0%

27	Interaction with administration	4.00	0.81	3.71	Neutral	15%	33%	22%	7%	0%
28	Library facilities	4.00	0.85	3.95	Neutral	26%	26%	22%	4%	0%
29	Computer facilities	4.00	0.93	3.86	Neutral	22%	30%	19%	7%	0%
30	Recreational facilities	4.00	0.75	3.95	Neutral	22%	33%	19%	4%	0%
31	Extra-curricular activities	4.00	0.83	3.75	Neutral	15%	33%	19%	7%	0%
32	Sports facilities	3.00	0.68	3.45	Disagree	7%	26%	33%	7%	0%
F	Academic Initiatives taken by the College	Median	Variance	Rating	Remarks	SA	A	N	D	SD
33	Industry oriented projects	4.00	0.68	3.95	Neutral	19%	37%	15%	4%	0%
34	Seminars and workshops	4.00	0.84	4.00	Agree	26%	26%	19%	4%	0%
35	Online Examinations	4.00	0.58	3.84	Neutral	11%	41%	15%	4%	0%
36	Special Training Classes for bridging Industry Academic gap	4.00	0.93	3.75	Neutral	19%	26%	22%	7%	0%
OVER-ALL AVERAGE				3.88						
REMARKS					Agree					

3.2 Overall Rating

The Item No. 15 of Assessment Element “**RATING OF SPECILAIZATION**” (Learning value (in terms of skills, concepts, knowledge, analytical abilities, or broadening perspectives)) garnered the highest mark at **4.25** while Item 32 of Assessment Element “**OVERALL RATING OF THE ACADEMIC PROGRAM**” (Sports facilities) received the lowest score of **3.45**.

Table 2: Rating of the 9 assessment elements relating to Department

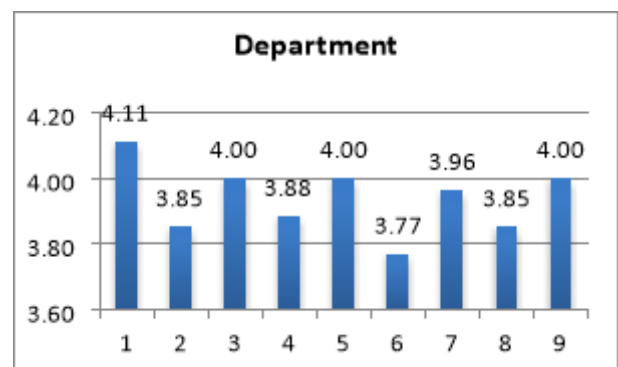


Table 3: Rating of the 5 assessment elements relating to On Job Training



Table 4: Rating of the 4 assessment elements relating to Specialization

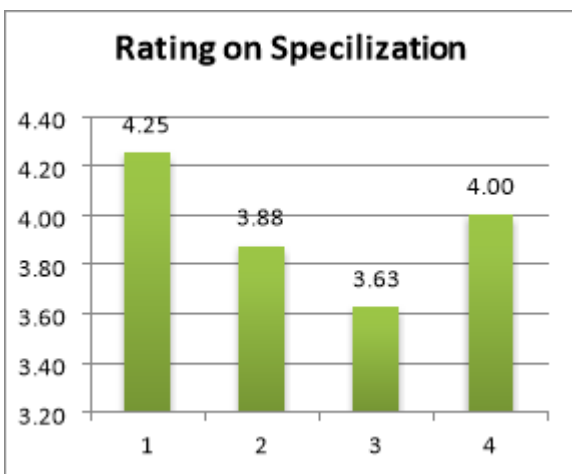


Table 5: Rating of the 5 assessment elements relating to Assessment Methods

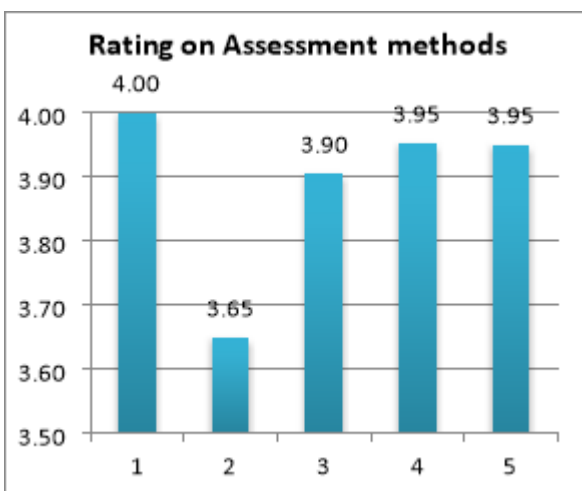


Table 6: Rating of the 9 assessment elements relating to Specialization

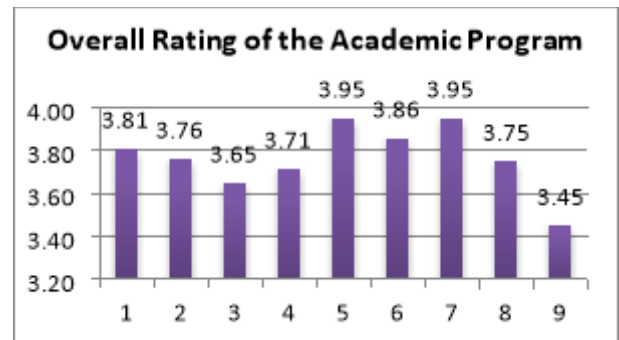


Table 7: Rating of the 4 assessment elements relating to Specialization

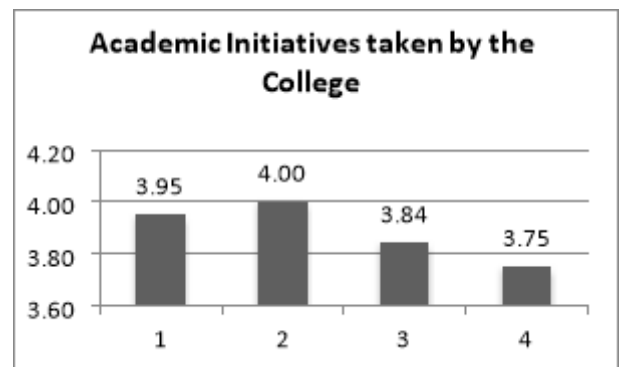


Table 8: Number of respondents for Individual Assessment Items

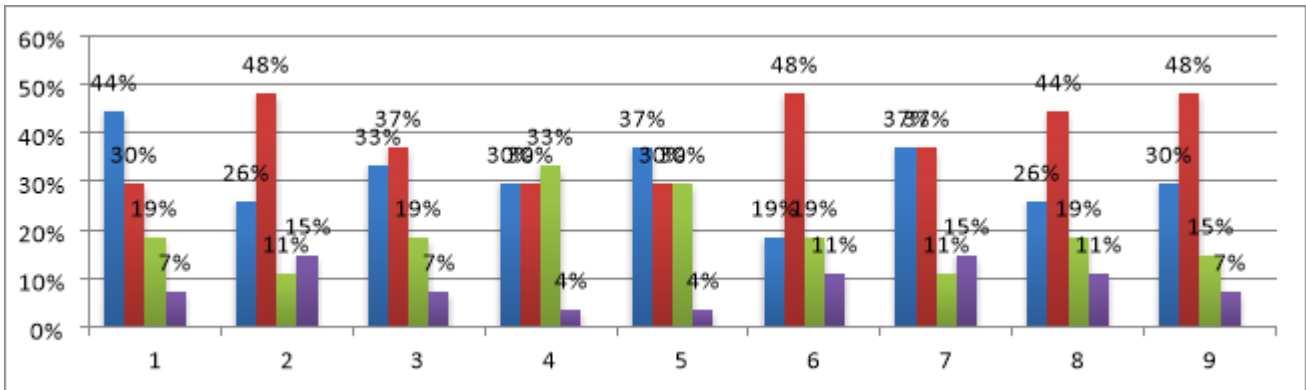


Table 9: Multiple bar graph for number of respondents for Individual Assessment Items

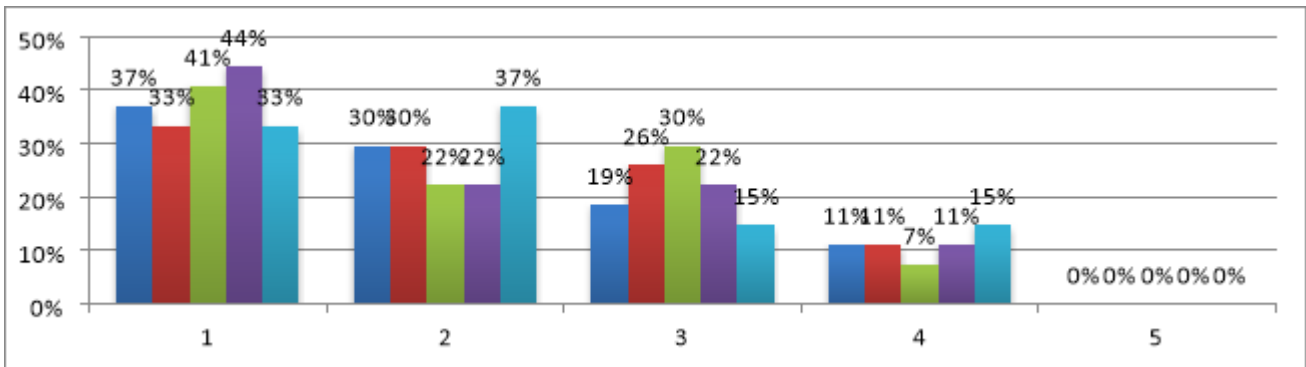


Table 10: No of respondents for Individual Assessment Items

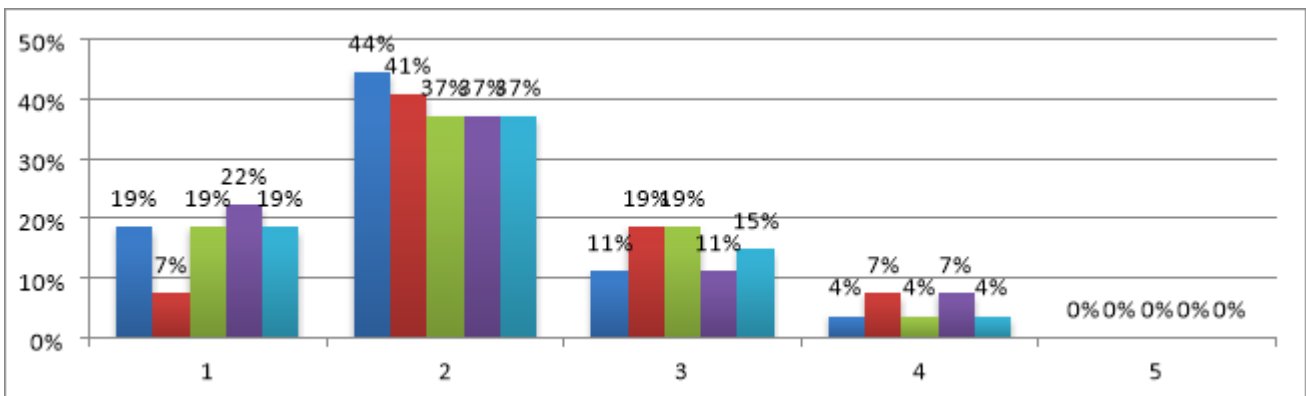


Table 11: Multiple bar graph for number of respondents for Individual Assessment Items

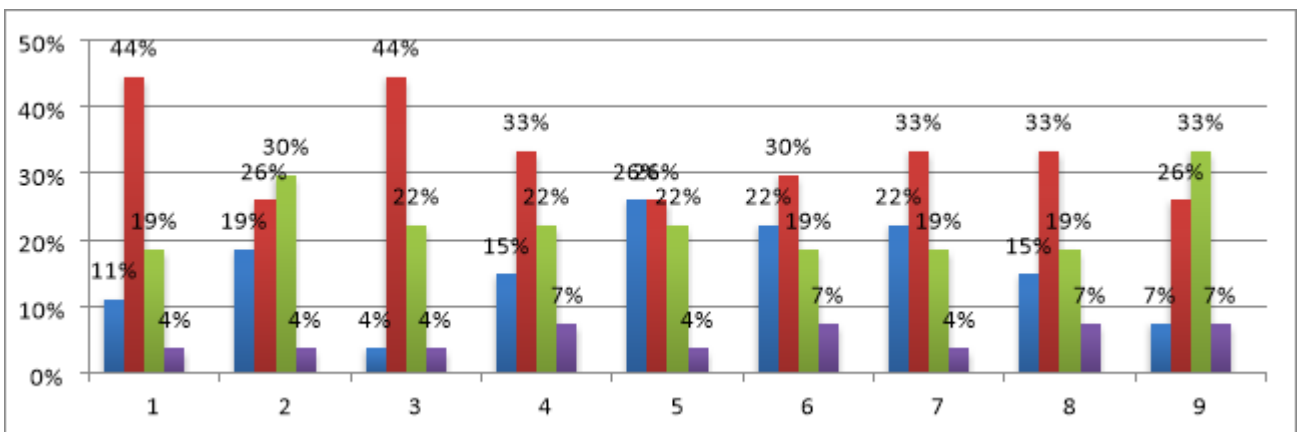
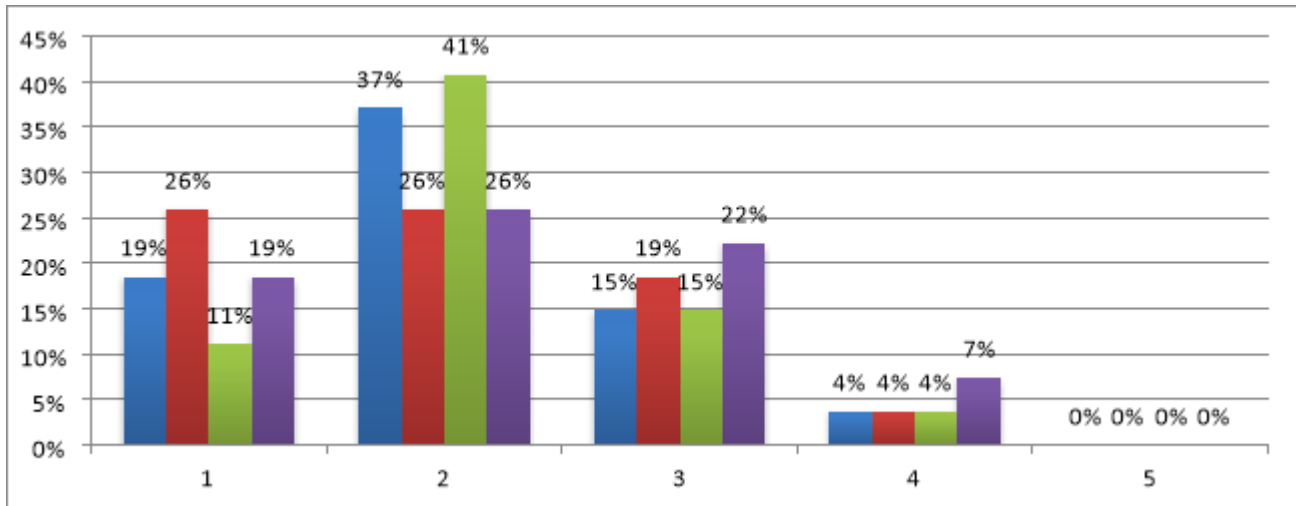


Table 12: Multiple bar graph for number of respondents for Individual Assessment Items



Z- test for means was conducted comparing the mean of assessment items for all the thirty-six (36) survey items of AY 2017-18 with the respective mean of the survey items are as follows in Table 13.

Table 13: Survey items with mean (M), Variance and Z test data (Z values which showed statistical significant variation compared to the critical values)

S. N	Assessment Elements	Mean	Variance	z	P(Z<=z) one-tail	z Critical one-tail	P(Z<=z) two-tail	z Critical two-tail
A	Department							
1	The department management is very helpful and cooperative.	4.111111	0.948718	0.00059	0.499763531	1.644853627	0.999527062	1.959963985
2	The department has well experienced staff to teach different specialization.	3.851852	0.977208	-7.787	0.499999689	1.644853627	0.999999379	1.959963985
3	The department staff are very helpful, cooperative and provide individual attention.	4	0.88	0	0.5	1.644853627	1	1.959963985
4	The department staff are the reasons for some part of my success.	3.884615	0.826154	2.1576	0.499999139	1.644853627	0.999998278	1.959963985
5	The department staff have assisted me in learning skills that will enhance my job performance.	4	0.846154	0	0.5	1.644853627	1	1.959963985
6	The obtained education as well as skills is useful and relevant to my present job.	3.769231	0.824615	-1.295	0.499999483	1.644853627	0.999998966	1.959963985
7	I have gained great practical experience from various students' activities	3.962963	1.11396	-1.8233	0.499999927	1.644853627	0.999999855	1.959963985

	(such as seminars, workshops, academic competitions, special training programs, industrial visits, and etc.)							
8	How do you rate development activities organized by the Department for your overall development	3.851852	0.900285	-8.11	0.499999676	1.644853627	0.999999353	1.959963985
9	IT club activities in the department helped me to develop leadership skills for use in my working environment.	4	0.769231	0	0.5	1.644853627	1	1.959963985
B	On Job Training							
10	I am fully satisfied with the services provided by OJT department.	3.961538	1.078462	2.266	0.499999096	1.644853627	0.999998192	1.959963985
11	OJT department has provided me a platform to have link with industry.	3.851852	1.054131	-7.49	0.499999701	1.644853627	0.999999402	1.959963985
12	The OJT program has helped me to obtain hands-on experience through reinforcing my theoretical knowledge.	3.962963	1.037037	-1.889	0.499999925	1.644853627	0.999999849	1.959963985
13	This enhanced my knowledge of instructional strategies for engaging subordinates.	4	1.153846	0	0.5	1.644853627	1	1.959963985
14	It enhanced my ability to positively impact job motivation and/or confidence.	3.888889	1.102564	-0.0005	0.499780648	1.644853627	0.999561295	1.959963985
C	Rating on Specialization							
15	Learning value (in terms of skills, concepts, knowledge, analytical abilities, or broadening perspectives)	4.25	0.5	0	0.5	1.644853627	1	1.959963985
16	Applicability/relevance to real life situations	3.875	0.696429	0	0.5	1.644853627	1	1.959963985
17	Depth of the course content	3.625	1.125	0	0.5	1.644853627	1	1.959963985
18	Relevance/learning value of project/report	4	0.571429	0	0.5	1.644853627	1	1.959963985

D	Rating on Assessment methods							
19	Understanding the course	4	0.6	0	0.5	1.644853627	1	1.959963985
20	Early discovery of difficulties	3.65	0.660526	0	0.5	1.644853627	1	1.959963985
21	interaction with the teacher	3.904762	0.690476	-5.252	0.49999979	1.644853627	0.999999581	1.959963985
22	regular work	3.952381	0.847619	-2.37	0.49999905	1.644853627	0.999999811	1.959963985
23	continuous self-assessment	3.95	0.681579	0	0.5	1.644853627	1	1.959963985
E	Overall Rating of the Academic Program							
24	Academic content	3.809524	0.561905	-1.164	0.499999535	1.644853627	0.999999071	1.959963985
25	Fairness of evaluation	3.761905	0.790476	-1.227	0.49999951	1.644853627	0.999999021	1.959963985
26	Interaction with faculty	3.65	0.45	0	0.5	1.644853627	1	1.959963985
27	Interaction with administration	3.714286	0.814286	-1.45	0.499999421	1.644853627	0.999998842	1.959963985
28	Library facilities	3.952381	0.847619	-2.37	0.49999905	1.644853627	0.999999811	1.959963985
29	Computer facilities	3.857143	0.928571	-6.79	0.499999729	1.644853627	0.999999458	1.959963985
30	Recreational facilities	3.952381	0.747619	-2.523	0.499999899	1.644853627	0.999999799	1.959963985
31	Extra-curricular activities	3.75	0.828947	0	0.5	1.644853627	1	1.959963985
32	Sports facilities	3.45	0.681579	0	0.5	1.644853627	1	1.959963985
F	Academic Initiatives taken by the College							
33	Industry oriented projects	3.95	0.681579	0	0.5	1.644853627	1	1.959963985
34	Seminars and workshops	4	0.842105	0	0.5	1.644853627	1	1.959963985
35	Online Examinations	3.842105	0.584795	1.4999	0.499999402	1.644853627	0.999998803	1.959963985
36	Special Training Classes for bridging Industry Academic gap	3.75	0.934211	0	0.5	1.644853627	1	1.959963985

The mean comparison data (refer table 13) shows that ten (10) items of the survey for AY 2017-18 shows the mean value to be 3.88 and the result of comparison was statistically significant with Z statistic falling in the rejection area above critical value of 1.96 (refer table 13). Hence, the null hypothesis is rejected indicating the increase in mean value to be significant. This indicates that the student rating for all the listed areas in the table-13, has to show the improvement. While, other items of the analysis in the table-13, indicates the acceptance of the hypothesis.

Table 14: Survey items with mean (M), Variance and Z test data (Z values which showed statistical significant variation compared to the critical values)

S. N	Assessment Elements	Mean	Variance	z	P(Z<=z) one-tail	z Critical one-tail	P(Z<=z) two-tail	z Critical two-tail
26	Interaction with faculty	3.65	0.45	0	0.5	1.644853627	1	1.959963985

The mean comparison data (refer table 14) shows that one (1) item of the survey viz., 26, for feedback, showed decrease in the value of variance showing it to be relatively efficient estimator and the result of comparison was also statistically significant with Z statistics falling in the acceptance area (refer table 14). Based on this, the null hypothesis is accepted indicating the variation in mean value to be significant.

4. HYPOTHESIS TESTING

Hypothesis testing is a decision – making process for evaluating claims about a population. In hypothesis testing, the researcher must define the population under study, state the particular hypotheses that will be investigated, give the significance level, select a sample from the population, perform the calculations required for the statistical test, and reach a conclusion.

Every hypothesis – testing situation begins with the statement of a hypothesis.

A **statistical hypothesis** is a conjecture about a population parameter. This conjecture may or may not be true.

There are two types of statistical hypotheses for each situation: the **null hypothesis** and the **alternative hypothesis**.

The **null hypothesis** symbolized by H_0 , is a statistical hypothesis that states that there is no difference between a parameter and a specific value, or there is no difference between two parameters.

The **alternative hypothesis** symbolized by H_1 , is a statistical hypothesis that states the existence of a difference between a parameter and a specific value, or states that there is a difference between two parameters.

4.1 Tests for Mean

- **Z test for Mean** (for $n \geq 30$ or when the population is normally distributed and σ is known)
- **t-test for Mean** ($n < 30$, the population standard deviation σ is unknown, and the population is known to be normally distributed)

4.1.1 Z test for Mean

Many hypothesis are tested using a statistical test based on the following general formula

$$\text{Test Value} = \frac{(\text{Observed Value}) - (\text{Expected Value})}{\text{Standard Error}}$$

The observed value is the statistics that is computed from the sample data. The expected value is the parameter that one would expect to obtain if the null hypothesis were true. The denominator is the standard error of the statistic being tested.

The Z test is a statistical test for the mean of a population. It can be used when $n \geq 30$, or when the population is normally distributed and σ is known.

Table 14: z-Test: One Sample for Mean

	Variable 1
Mean	3.881770368
Known Variance	0.022576
Observations	36
Hypothesized Mean Difference	4
z	-4.719337365
P(Z<=z) one-tail	0.000001183
z Critical one-tail	1.644853627
P(Z<=z) two-tail	0.000002366
z Critical two-tail	1.959963985

here p value = 0.0000011 and $\alpha = 0.05$

Since p value is less than α , the data is statistically significant different.

5. CONCLUSIONS/ RECOMMENDATION

- The department must have well experienced faculties who regularly update the required technologies in different specialization.
- The department staff should become the reasons for the student's success, in academic achievement and also in his industrial growth.
- Development activities organized by the Department should help the student for their overall development.
- Services provided by OJT department to be according to the marketing strategies.
- OJT department has provided a platform to have link with industry and the Alumni.
- The interaction between student and teacher should increase, and must follow Student Centered Learning process rather than Program Learning.
- The SCL approach makes the student more focused and responsible.
- The SCL approach will help the student to think critically, to acquire the reading habit and a continuous thirst for knowledge, which is needed and necessary for the changing market trends.

- i) Library, Lab and Recreational facilities must be modified up to the students' requirements.

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