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ANALYSIS OF STAKEHOLDER'S FEEDBACK ON CURRICULUM DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING ACADEMIC YEAR 2019-20

Feedback from different stakeholders namely students, teachers, alumni and employers were collected to rate the standards of the curriculum. Analysis was performed to identify the opinion and suggestion of the stakeholders.

STUDENTS FEEDBACK ON CURRICULUM

The students are the most important stakeholders of higher education. The support and interest of students at all levels play a key role. Google forms were used for the collection of feedback on curriculum by the students.R15 (JNTUA) curriculum was rated by II, III and IV year students. Individual analysis was carried out for both the curricula. As listed in table 1, ten standard questions were framed on curriculum aspects. Total number of responses received from the students was 340. The consolidated analysis of the responses is presented in Table 2 and Figure 1.

Table 1: List of questions

Q No	Questions
Q1	How will you rate the Curriculum in terms of structure, comprehensive, relevance and arrangement?
Q2	How will you rate the Allocations of the hours and credits to the courses?
Q3	How will you rate the relevance of electives to the technological advancements?
Q4	How will you rate the availability of textbooks/reference books as recommended in the syllabus?
Q5	How will you rate the composition of the Courses in terms of Basic Sciences, Engineering Sciences, Humanities, and Core?
Q6	How will you rate the activities such as Guest Lecture and Industrial Visit for bridging the gap between academic and industrial needs?
Q7	How will you rate the relationship of experiments in the lab courses to the real life applications?
Q8	How will you rate the skill development courses in your curriculum?
Q9	How will you rate the Quality of Internships provided by the Department/ College?
Q10	How will you rate the relevance of courses from the point of employability?

Table 2: Consolidated analysis for student's feedback on curriculum

Q No	Excellent	Good	Moderate	Poor	Scale of opinion	% of opinion
Q1	37.9	47.4	9.7	5.0	Excellent & good	85.3
Q2	45.9	31.5	17.9	4.7	Excellent & good	77.4
Q3	42.4	41.8	10.3	5.6	Excellent & good	84.2
Q4	39.7	47.1	8.8	4.4	Excellent & good	86.8
Q5	45.6	30.6	19.4	4.4	Excellent & good	76.2
Q6	41.5	35.0	13.2	10.3	Excellent & good	76.5
Q7	33.2	51.8	8.5	6.5	Excellent & good	85.0
Q8	37.6	43.2	13.2	5.9	Excellent & good	80.8
Q9	41.5	35.6	17.9	5.0	Excellent & good	77.1
Q10	38.5	44.1	9.4	7.9	Excellent & good	82.6
Average(%)	40.4	40.8	12.8	6.0		81.2

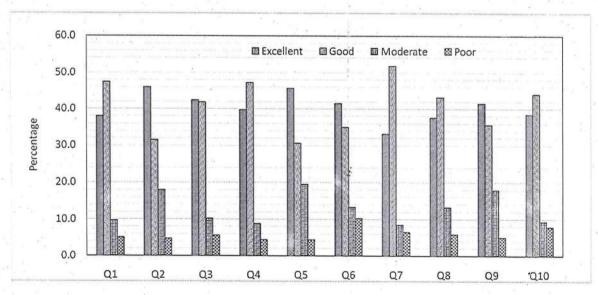


Figure 1: Consolidated analysis for student's feedback on curriculum

From the table 2, it is observed that 47.4 % of the students rated "good" for the question "curriculum in terms of structure, comprehensive, relevance and arrangement". 45.9% of the students rated "excellent" for the question "allocations of the hours and credits to the courses". 42.4% of the students rated "excellent" for the question "relevance of electives to

the technological advancements". 47.1 % of the students rated "good" for the question "availability of textbooks/reference books as recommended in the syllabus". 45.6 % of the students rated "excellent" for the question "composition of the courses in terms of Basic Sciences, Engineering Sciences, Humanities, and Core". 41.5% of the students rated "excellent" for the question "activities such as Guest Lecture and Industrial Visit for bridging the gap between academic and industrial needs". 51.8% of the students rated "good" for the question "relationship of experiments in the lab courses to the real life applications". 43.2 % of the students rated "good" for the question "skill development courses in your curriculum". 41.5 % of the students rated "excellent" for the question "Quality of Internships provided by the Department/ College". 44.1 % of the students rated "good" for the question "relevance of courses from the point of employability".

From the analysis, the scale of student's opinion for all the questions falls in the "excellent" and "good" categories. The average percentage of opinion is found to 81.2 %.

The critical suggestions are as follows:

- 1. Need industrial visits on space technological centres.
- 2. Require workshops on Internet of things (IOT).

TEACHER'S FEEDBACK ON CURRICULUM

Teacher feedback is an important parameter for the quality improvement of the curriculum. Google forms were used for the collection of teacher feedback on curriculum. The teachers were asked to rate the R15 (JNTUA) curriculum. Individual analysis was carried out for both the curriculum. As listed in table 3, ten standard questions were asked for the responses from the teachers. Total number of responses received from the teachers was 40. The consolidated analysis of the responses is presented in Table 4 and Figure 2.

Table 3: List of questions

Q No	Questions
Q1	How will you rate the Curriculum in terms of structure, comprehensive, relevance and arrangement?
Q2	How will you rate the Allocations of the hours and credits to the courses?
Q3	How will you rate the relevance of electives to the technological advancements?
Q4	How will you rate the availability of textbooks/reference books as recommended in the syllabus?
Q5	How will you rate the composition of the Courses in terms of Basic Sciences, Engineering Sciences, Humanities, and Core?
Q6	How will you rate the activities such as Guest Lecture and Industrial Visit for bridging the gap between academic and industrial needs?
Q7	How will you rate the relationship of experiments in the lab courses to the real life applications?
Q8	How will you rate the skill development courses in your curriculum?
Q9	How will you rate the Quality of Internships provided by the Department/ College?
Q10	How will you rate the relevance of courses from the point of employability?

Table 4. Consolidated analysis for teacher's feedback on curriculum

Q No	Excellent	Good	Moderate	Poor	Scale of opinion	% of opinion
Q1	45.0	42.5	12.5	0.0	Excellent & good	87.5
Q2	32.5	45.0	22.5	0.0	Excellent & good	77.5
Q3	65.0	30.0	5.0	0.0	Excellent & good	95.0
Q4	50.0	42.5	2.5	£ 5.0	Excellent & good	92.5
Q5	57.5	40.0	2.5	0.0	Excellent & good	97.5
Q6	50.0	30.0	17.5	2.5	Excellent & good	80.0
Q7	42.5	37.5	15.0	5.0	Excellent & good	80.0
Q8	32.5	50.0	10.0	7.5	Excellent & good	82.5
Q9	25.0	57.5	17.5	0.0	Excellent & good	82.5
Q10	52.5	42.5	2.5	2.5	Excellent & good	95.0
Average(%)	45.3	41.8	10.8	2.3	7.00	87.0

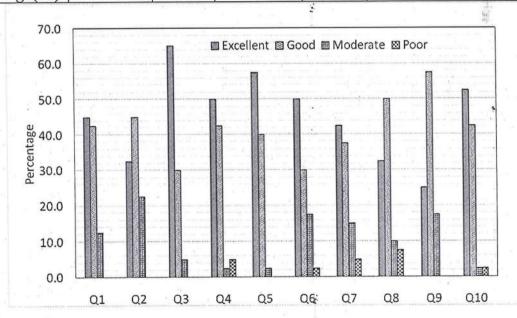


Figure 2: Consolidated analysis for teacher's feedback on curriculum

From the table 4, it is observed that 45 % of the teachers rated "excellent" for the question "curriculum in terms of structure, comprehensive, relevance and arrangement. 45% of the teachers rated "good "for the question "allocations of the hours and credits to the courses".65 % of the teachers rated "excellent" for the question "relevance of electives to the

technological advancements". 50 % of the teachers rated "excellent" for the question" availability of textbooks/reference books as recommended in the syllabus". 57.5% of the teachers rated "excellent" for the question "composition of the Courses in terms of Basic Sciences, Engineering Sciences, Humanities, and Core". 50 % of the teachers rated "excellent" for the question "activities such as Guest Lecture and Industrial Visit for bridging the gap between academic and industrial needs". 42.5 % of the teachers rated "excellent" for the question "relationship of experiments in the lab courses to the real life applications". 50 % of the teachers rated "good" for the question "skill development courses in your curriculum". 57.5 % of the teachers rated "good" for the question "Quality of Internships provided by the Department/ College". 52.5 % of the teachers rated "excellent" for the question "relevance of courses from the point of employability".

From the analysis, the scale of teacher's opinion for all the questions falls in the "excellent" and "good" categories. The average percentage of opinion is found to 87 %.

The critical suggestion are as follows:

1.Add Basics of python programming course.

2. Require additional knowledge on applied machine learning.

ALUMNI FEEDBACK ON CURRICULUM

Our alumni feedback is valuable for us by providing valuable inputs regarding employability of our students. Offline mode was followed to collect the alumni feedback .Total number of responses received from the alumni's was 16. As listed in Table 5, eight standard questions were asked for the responses from the alumni. The consolidated analysis of the responses is presented in Table 6 and Figure 3.

Table 5: List of questions

Q No	Questions
Q1	How will you rate the Curriculum in terms of structure, comprehensive, relevance and arrangement?
Q2	How will you rate the relevance of electives to the technological advancements?
Q3	How will you rate the composition of the Courses in terms of Basic Sciences, Engineering Sciences, Humanities, and Core?
Q4	How will you rate the activities such as Guest Lecture and Industrial Visit for bridging the gap between academic and industrial needs?
Q5	How will you rate the relationship of experiments in the lab courses to the real life applications?
Q6	How will you rate the skill development courses in your curriculum?
Q7	How will you rate the Quality of Internships provided by the Department/ College?
Q8	How will you rate the relevance of courses from the point of employability?

Table 6: Consolidated analysis for alumni feedback on curriculum

Q No	Excellent	Good	Moderate	Poor	Scale of opinion	% of opinion
Q1	68.8	18.8	12.5	0.0	Excellent & good	87.5
Q2	37.5	37.5	25.0	0.0	Excellent & good	75.0
Q3	37.5	43.8	18.8	0.0	Excellent & good	81.3
Q4	62.5	25.0	6.3	6.3	Excellent & good	87.5
Q5	43.8	37.5	18.8	0.0	Excellent & good	81.3
Q6	37.5	31.3	31.3	0.0	Excellent & good	68.8
Q7	62.5	31.3	0.0	6.3	Excellent & good	93.8
Q8	50.0	50.0	0.0	0.0	Excellent & good	100.0
Average (%)	50.0	34.4	14.1	1.6		84.4

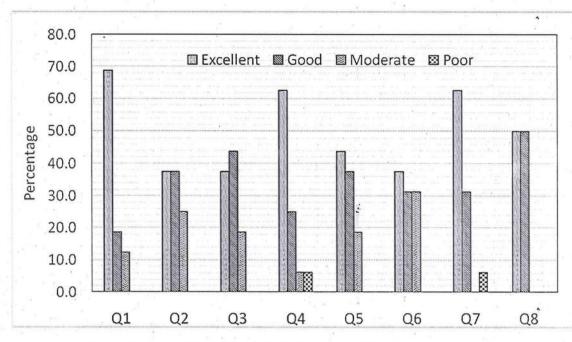


Figure 3: Consolidated analysis for alumni feedback on curriculum

From the table 6, it is observed that 68.8 % of the alumni rated "excellent" for the question "Curriculum in terms of structure, comprehensive, relevance and arrangement". 37.5 % of the alumni rated both "excellent" and "good" for the question "relevance of electives to the technological advancements". 43.8% of the alumni rated "good" for the question composition of the Courses in terms of Basic Sciences, Engineering Sciences, Humanities, and Core". 62.5 % of the alumni rated "excellent" for the question activities such as Guest Lecture and Industrial Visit for bridging the gap between academic and industrial needs". 43.8 % of the alumni rated "Excellent" for the question "relationship of experiments in the lab courses to the real life applications". 37.5 % of the alumni rated "excellent" for the question" skill development courses in your curriculum. 62.5 % of the alumni rated "excellent" for the question "Quality of Internships provided by the Department/ College".50 % of the alumni rated both "Excellent & "good" for the question" relevance of courses from the point of employability".

From the analysis, the scale of alumni opinion for all the questions falls in the "excellent" and "good" categories. The average percentage of opinion is found to 84.4%

The critical suggestion is as follows:

-Expose to practical applications of IOT.

EMPLOYER FEEDBACK ON CURRICULUM

Employer feedback is the most important determinant to evaluate the curriculum from the point of quality graduates. Offline system was used to collect the employer feedback for the academic year 2019-20. Six employers participated to rate the curriculum. Table 7 presents the list of questions. The consolidated analysis of the responses is presented in Table 8 and Figure 4.

Table 7: List of questions

Q No	Questions
Q1	How will you rate the Curriculum in terms of structure, comprehensive, relevance and arrangement?
Q2	How will rate the exposure of curriculum to relevant softwares
Q3	How will you rate the relevance of electives to the technological advancements?
Q4	How will you rate the practical exposure of graduate to undertake real time projects?
Q5	How will you rate the composition of the courses in terms of Basic Sciences, Engineering Sciences, Humanities, and Core?
Q6	How will you rate the presence of analytical / problem solving / critical thinking / innovative skills in the courses?
Q7	How will you rate the quality of internships undergone by the students?
Q8	How will you rate the relevance of courses from the point of employability?

Table 8: Consolidated analysis for employer's feedback on curriculum

Q No	Excellent	Good	Moderate	Poor	Scale of opinion	% of opinion
Q1	33.33	50	16.67	0	Excellent & good	83.3
Q2	50	50	0	£ 0	Excellent & good	100.0
Q3	66.67	33.33	0	0	Excellent & good	100.0
Q4	33.33	50	16.67	0	Excellent & good	, 83.3
Q5	50	33.33	16.67	0	Excellent & good	83.3
Q6	50	33.33	16.67	0	Excellent & good	83.3
Q7	33.33	33.33	33.33	0	Excellent & good	66.7
Q8	50	33.33	16.67	0	Excellent & good	83.3
Average (%)	45.8	39.6	14.6	. 0.0	# # ₂ j)	85.4

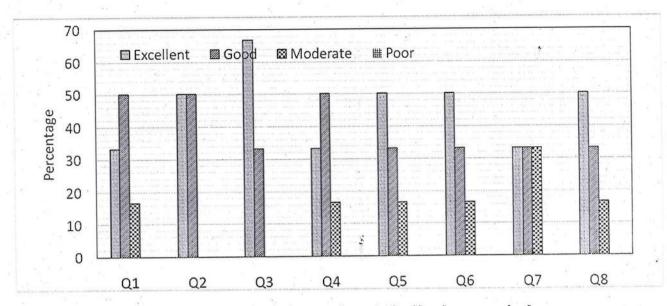


Figure 4: Consolidated analysis for employer's feedback on curriculum

From the table 8, it is observed that 50 % of the employers rate "good" for the question" curriculum in terms of structure, comprehensive, relevance and arrangement". 50% of the employers rated both "Excellent" and "good" for the question "exposure of curriculum to relevant softwares".66.67 % of the employers rated "excellent" for the question "relevance of electives to the technological advancements". 50 % of the employers rated "good" for the question" practical exposure of graduate to undertake real time projects". 50 % of the employers rated "excellent" for the question "composition of the courses in terms of Basic Sciences, Engineering Sciences, Humanities, and Core". 50 % of the employers rated "Excellent" for the question "presence of analytical / problem solving / critical thinking / innovative skills in the courses". 33.3 % of the employers rated both "excellent" and "good" and also" moderate" for the question "quality of internships undergone by the students". 50 % of the employers rated "excellent" for the question "relevance of courses from the point of employability".

From the analysis, the scale of employers opinion for all the questions falls in the "excellent" and "good" categories. The average percentage of opinion is found to 85.4%

The critical suggestion is as follows:

-Require Internships on VLSI & Embedded system domains.

Feedback Coordinator