



Sayaji Singh Charitable Trust's (Mgt.)

THAKUR COLLEGE OF ENGINEERING & TECHNOLOGY

(Approved by AICTE, Govt. of Maharashtra & Affiliated to University of Mumbai*)
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* Permanent Affiliated UG Programmes : Computer Engineering • Electronics & Telecommunication Engineering • Information Technology (w.e.f. A.Y.2015-16 onwards)
** Technical Accredited UG Programmes : Computer Engineering • Electronics & Telecommunication Engineering • Information Technology (3 years w.e.f. 16-09-2011)
*** And the Accredited UG Programmes : Computer Engineering • Electronics & Telecommunication Engineering • Information Technology • Electronics Engineering (3 years w.e.f. 01-07-2016)

Ref: TCET/COMP/35of2021

Date: 03/08/2021

Report on

Research Based Learning I Activities (14th July – 17th July 2021)

1. **Event:** Research Based Learning (RBL I) activities
2. **Date:** 14th July – 17th July
3. **Time:** 12.00 p.m. to 2.30 p.m. (Weekdays) and 10.00 a.m. – 1:00 p.m.(Saturday)
4. **Venue:** All Meetings is conducted on online Zoom Platform.
5. **Participants:** All TE students of all branches.
6. **Objectives:**

The objective of the event was focused to engage the learner in research through participating in different RBL activities like technical quiz based on their previous year subjects, technical debate on current topics, personality test and innovative idea generation. Objectives activity wise are given below:

RBL Activity	Objectives
Technical Quiz	<ol style="list-style-type: none"> 1. To assess knowledge gained in previous years about applications of subjects. 2. To measure skills of using various tools 3. To measure growth in abilities with ethical values.
Personality Test	<ol style="list-style-type: none"> 1. To assess the personality aspects through different parameters involving their strength and weaknesses. 1. To measure the behavior and social aspects of it.
Debate	<ol style="list-style-type: none"> 2. To gain broad, multi-faceted knowledge across several disciplines outside the learner's normal academic subjects. 3. To increase learners' confidence, poise, and self-esteem. 4. To provide an engaging, active, learner-centered activity. 5. To improve rigorous higher order and critical thinking skills.
Idea	<ol style="list-style-type: none"> 1. Coming up with a variety of approaches for problem solving.



Generation	<ol style="list-style-type: none"> 2. Thinking 'outside the box' and design thinking principles 3. Understanding and utilizing technology to improve work processes (human centric) 4. Reading and talking to people in related fields to discover innovations or current trends in the field. 5. Working with others and seeking the opinions of others to reach a creative solution.
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7. Faculty Involved:

Dr. Kamal Shah, Dean (R & D) has given guidelines for RBL conduct. Dr. Rekha Sharma, Activity Head (R & D) and all R & D coordinators have implemented RBL 1 for TE Semester V students in virtual mode. All faculty involved is given in individual reports of all branches (*Annexure 1 to Annexure 6*).

Plan (Approach):

8. Plan and Schedule:

1. Dr. Kamal Shah, Dean (R&D) and Dr. Rekha Sharma Activity (R&D) conducted a series of meetings of all R & D Coordinators all the departments on Zoom platform explained about planning, scheduling, duty allocation, evaluations and monitoring.
2. On the first day of RBL activities an orientation was given to all students by R&D coordinators of respective braches. Students were briefed about the schedule and all the activities to be carried out from 14th July 2021 to 17th July 2021.
3. The notices, instructions, batch and group details, meeting links and teaching material were posted on Google classroom on day to day basis.

Schedule and faculty responsibilities are given in branch wise reports.

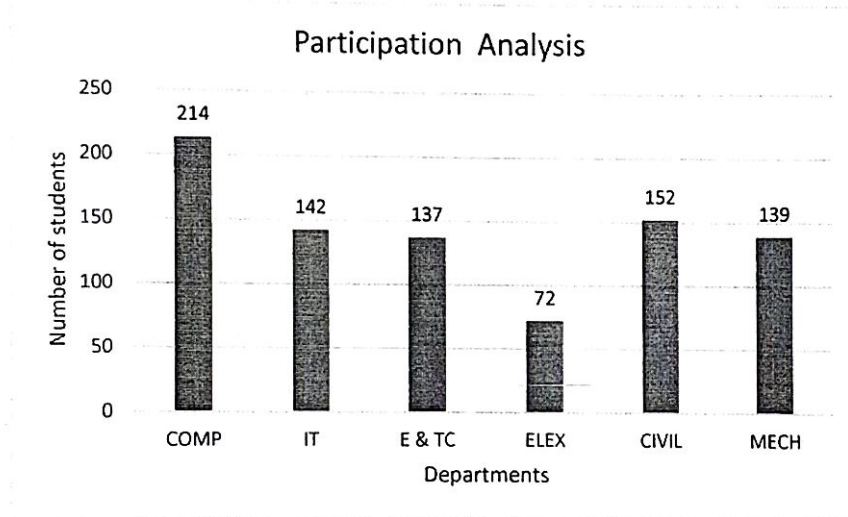
Do (Deployment)

9. Highlights of the Activities Conducted:

RBL activities of the dept. were conducted for all the branches by following same set of guidelines for all the days. Details can be found in branch wise reports (*Annexure 1 to Annexure 6*).

10. Participation Analysis:

List of students' participated division wise from all the departments is given in branch wise reports (*Annexure 1 to Annexure 6*).



Note: ELEX department have 1 division and COMP department have 3 divisions.

Check (Learning)

11. Learning for Stakeholders

Students understood the important aspects through RBL activities as given below:



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1. Students gained the knowledge through subject revision of different subjects of Semester 3 and Semester 4. Their knowledge is evaluated through conduction of Technical Quiz on google classroom.
2. Students have assessed their individual personality traits, aptitude, intelligence, abilities and behavioral styles.
3. Doing research on debate topics thereby upgrading the understanding about latest trends on given topics.
4. Their understanding about selecting ideas for projects and their ideas validation tools improved and they understood why project selection at early stage will lead to quality in project thereby giving a product for use.
5. Process of Identification of problem definition of project.
6. They have understood the needs of RBL activity for development of student's research ability.

Not only the students but teachers also learned new things through the conduct of RBL activities as given below:

1. Proper planning for research activities with respect to variety of activities in online and offline mode.
2. A platform was provided for faculty to share their project ideas and to visualize them in the form of product.
3. What parameters to consider while allocating titles for projects. How to correlate them with institutional and national initiatives. Guidelines were given to include ideas from technology vision 2035, NEP 2020 and various government initiatives.
4. Faculty has played diversifying roles on different days (Speaker, Observer, Evaluator, etc.) thereby taking experience of different roles and responsibilities.
5. They gained experience of conducting RBL activities in online mode



Act (Integration)

12. Learning and Corrective Actions

Sr. No.	Learning	Corrective action taken
1.	Due to various issues such as poor net connectivity few students were unable to join in online meetings	Their evaluations will be taken using alternative means.
2.	Monitoring of activities was difficult in case of four meetings conducted in parallel.	This problem could be solved by engaging more faculty for RBL and student coordinators. At times monitoring was done through connecting by different devices.
3.	Challenges were faced for preparing idea list.	Faculty were told to correlate their project ideas with topics like TV 2035, NEP etc. Also they were told to take problem definitions from industry if possible.

13. Feedback Analysis

1. Validation of activities was done on the basis of their performance on daily basis and as per rubrics shared.
2. Effectiveness of the learning is also checked through student's feedback.

Some of the feedback shared by students are given below.

Sr. No.	Students Feedback
1	We were made aware about the RBL activities and were given a lecture revision based on the previous semesters.
2	Today session was excellent and the explanation of database was also impressive
3	It was a nice revisit to the semester 3 subjects where I recollected a lot of important topics
4	Activity was good. Brush up of subject were necessary
5	Good revision of Sem 4
6	Revision of the Sem 4 subjects was conducted. We were introduced to personality tests and its importance.
7	Help to understand the strong and weakness in ourselves. Revision of SEM 4 was also useful.

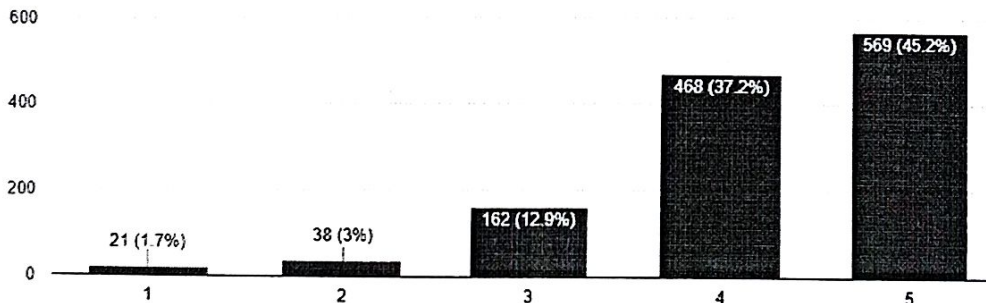


8	A good throwback on the important subjects covered in Semester 4 and insights on how to further grow knowledge in these domains.
9	Debate was really amazing.
10	We had to do a debate on Android vs Apple in teams of 8. We got to learn a lot of soft skills and technical knowledge on the topic. The activity was very fruitful.
11	An interactive debate competition, which helped us to be more knowledgeable.
12	Today's activity was informative and we researched and also got to know our peers views
13	The activity which was conducted today was very much helpful as it helped me to grow my self esteem, put my thoughts together and present them forward nicely.
14	Helpful ideas given for projects It was Great
15	Eye opening session on various ideas that can be implemented and thought of.
16	Various ideas were presented by faculty members which would definitely help us in selecting a project idea.
17	Orientation on RBL was done and all faculty members gave 4 ideas that can be used by students for doing their projects based on different domains.
18	Learned a lot about the procedure of topic generation. And got to know some innovative ideas.

Additionally a common form for all depts. was made and feedback was also taken from students by considering the following points:

I. Time Management of the activity was appropriate

1,258 responses





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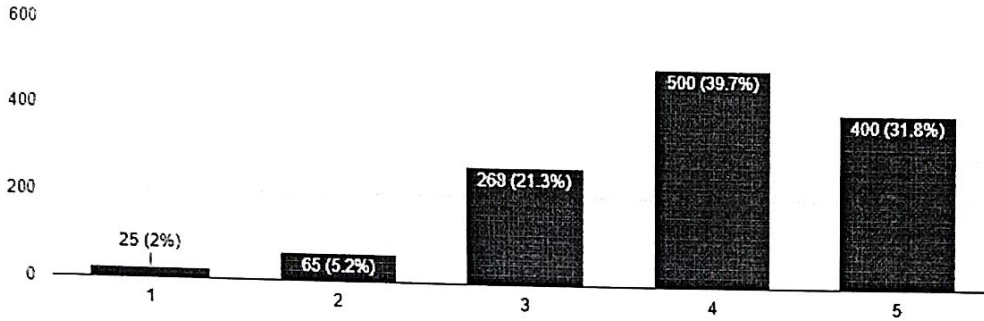
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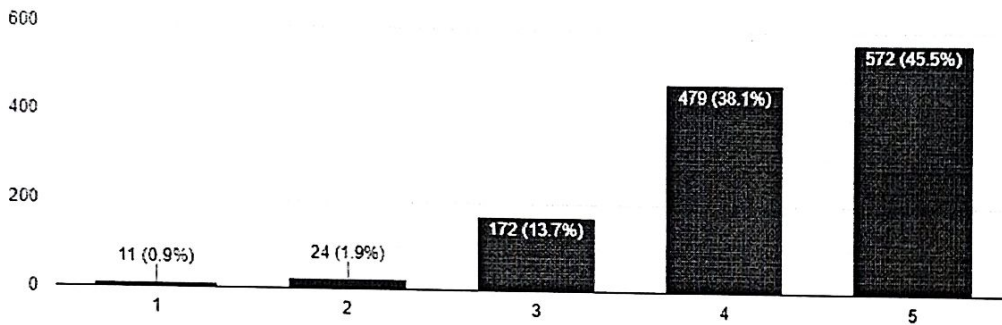
2. Select the Technical difficulty level for the activity

1,258 responses



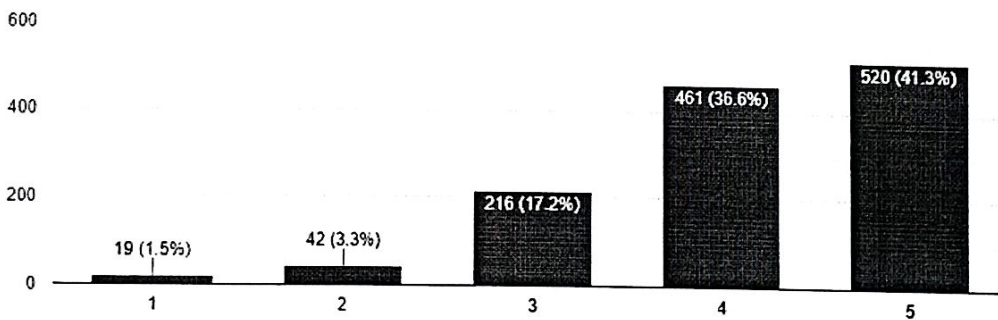
3. Quality of the content delivered in the activity was good

1,258 responses



4. Innovative approach was followed in the activity undertaken

1,258 responses

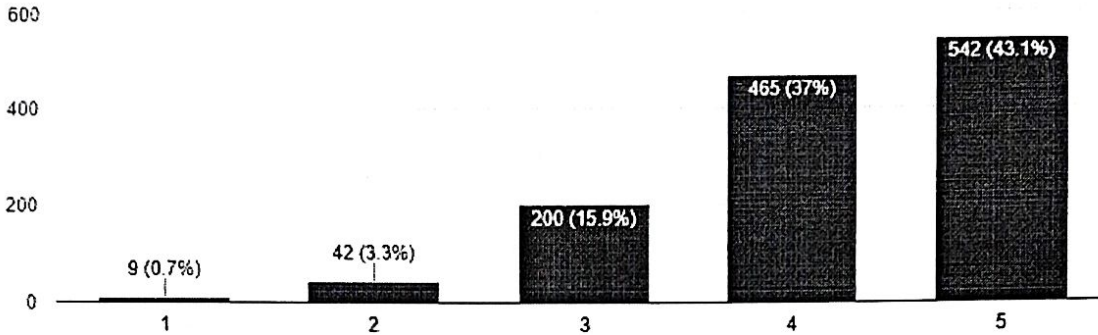


5. The activity conducted helped to improve our Knowledge, Skills and Attitude



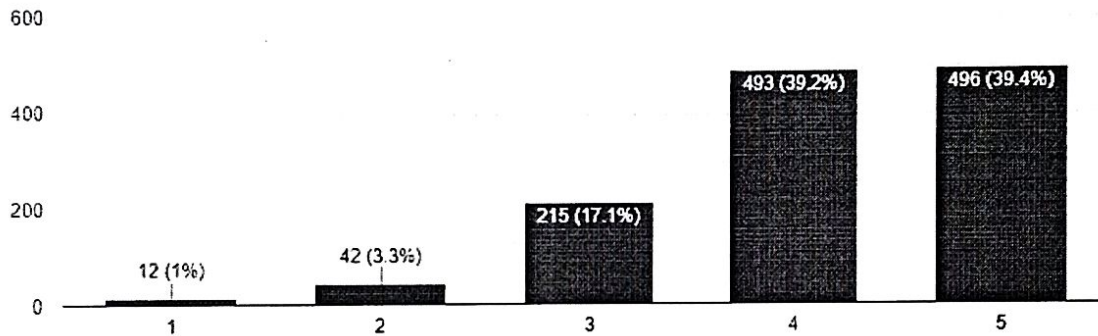
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1,258 responses



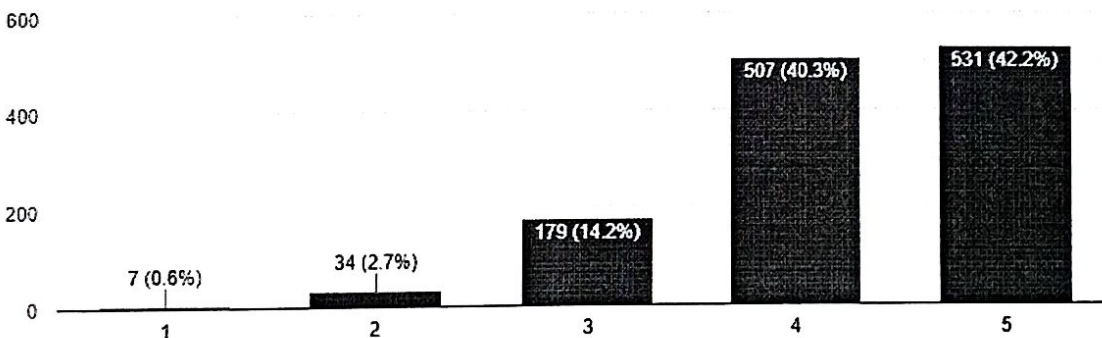
6. Rate the activity on the scale of 5

1,258 responses



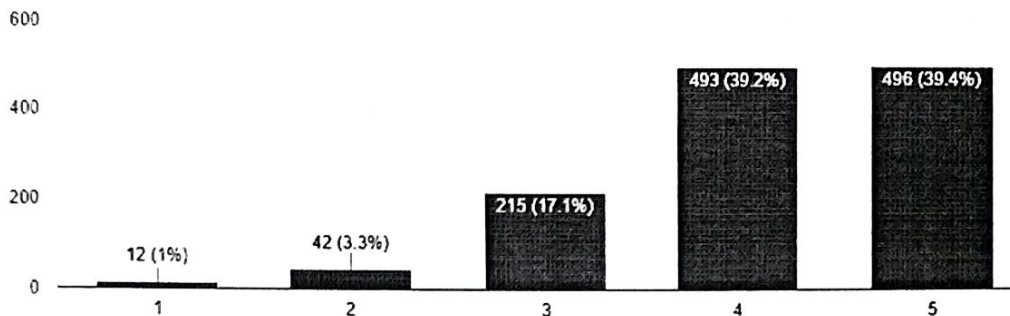
7. Provide your satisfaction level for the activity

1,258 responses



8. Rate the evaluation of Rubrics method

1,258 responses



The feedback reflects that RBL activities are appreciated by students in general.

14. Risks & Mitigations:

Sr. No.	Risks	Mitigations
1.	Low Attendance of students	Attendance and feedback were taken for all the sessions. All the session were monitored by RBL in-charge. Adding student co coordinator will help to co-ordinate with students.
2.	Time delay for evaluations	Parallel meetings were conducted based on faculty availability. Student's batches were formed and they were allowed to join in batches mainly for debate conduct.

15. Outcomes:

- Total 856 students participated and evaluated for RBL activities. Attendance was consistent on all the days which shows the success of the program. Total students participated is given Branch-wise as follow:

S.N.	Branch	Total No of Students
1.	COMP	214 (3 Div)
2.	IT	142 (2 Div)
3.	E & TC	137 (2 Div)
4.	ELEX	72 (1 Div)
5.	CIVIL	152 (2 Div)



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6.	MECH	139 (2 Div)
Total		856

2. Faculty and Students are motivated to effective Implementation of RBL.
3. Understand needs of RBL activity for development of student's research ability.
4. Student are got an insight for participation in various idea presentations.
5. Research culture initiated among stakeholders.

16. Scope for Improvement

- I. Sessions could be made more interesting by adding some tools for interactions.
- II. All students can be considered by planning for evaluations students having connectivity issues.
- III. If more time is allocated at the beginning of the semester we would have conducted a few important RBL activities at institute level.

17. Conclusion

RBL activities were conducted for Semester V students in virtual mode. Their knowledge about research was upgraded through conduction of a variety of sessions and evaluations. RBL activity helped in improving knowledge for various domain. Students were able to self-evaluate through personality test. Students were made aware of various project ideas.

18. SWIH Analysis:

Who	Principal, Vice-Principal, Dean R & D, Activity Head(R & D), RBL coordinators of all branches, Project Mentors and TE Students.
What	Research Based Learning Activities
Where	Online Platform (Zoom)
When	14 th July 2021 – 17 th July 2021
Why	<ol style="list-style-type: none"> 1. To inculcate research culture among students. 2. Compliance of RBL I syllabus under autonomy. 3. Effective implementation of RBL activity on online platform



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How	<ol style="list-style-type: none"> 1. To improve research culture and awareness in the institute. 2. Holistic development of students with Autonomy scheme.
	<p>Steps to improve the process:</p> <ol style="list-style-type: none"> 1. Planning of activities by considering proper time frame and online constraints. 2. Timely and alternate planning and resource allocation with desired outcome of activity. 3. Effective planning of RBL activity before starting of the actual curriculum. 4. Reviewing Rubrics for evaluations and explaining it to the evaluators will help in unbiased evaluations. 5. Quality RBL activities can be increased based on the previous year experience.

Prepared by:

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11/08/21

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Activity Head (R & D)

Reviewed by:

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Dean-R & D

Recommended By:

Dr. Deven Shah

Dr. Deven Shah
Vice-Principal

Approved By:

Dr. B.K. Mishra
12/8/21

Dr. B.K. Mishra
Principal

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