

**“TALENT TRAILS” AS AN INNOVATIVE ACTIVE LEARNING TOOL TO
ENHANCE TEACHING LEARNING PROCESS FOR CLASSROOM SESSIONS OF
AUTOMOBILE ENGINE COURSE**

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ABSTRACT:

The major challenge in diploma engineering education is to evaluate and examine the students in an efficient way of Teaching-Learning process in order to determine the notable skills to understand the basic concept to solve real time problems. The process has to be defined in such a way that it should make the students to explore their knowledge with adaptable remembering and thinking skills. The actual target in teaching learning process is to make all the students to have a good exploration on the domain knowledge with success ratio. This work focused on one active learning technique which is intended for enhancing culture of sharing and discussion answers related to particular study point and problems. It is suitable for theoretical course like Automobile Engine from third semester of Diploma Automobile Engineering. The purpose of this is to develop the healthy competition and analysis the student's skills (like remembering, communication and individual and team skills) The participants included 40 students from second year engineering diploma course. We examined the activity on the questions asked and answer delivered during process and evaluate their remembering skill on the basis of points. The statistical analysis is carried out for each question answer asked during activity and displayed in front of students immediately which helps them to improve their and team performance. Students will get idea about their preparation for upcoming exams or aptitude test for campus drive. This research work focus towards the applicability of active learning techniques with an aim to measure the learning performance of the diploma students upon statistical evaluation, with an intention to propose a remedial measure to enhance the teaching learning process.

INTRODUCTION

Active learning is one of the newest a version of teaching - learning in which teaching attempts to encompass students in the learning process more directly than in other regular methods.

A talent trails is an effective way for a pair of students to learn together. It is an active learning strategy. A talent trails is a process of learning and understanding where two students or group of students alternate asking and answering question on commonly read topic or points. Talent Trails is a learning resource that is open, generative, evolvable, connected, cohesive, intelligent.

The talent trails was modified version of learning cell activity which was developed by Marcel Gold schemed of the Swiss Federal Institute of Technology in Lausanne in 1971. Learning Cells were proposed to address certain demands of ubiquitous learning for learning resources to be generative, evolving, intelligent and adaptive.

WHY THIS IS USED?

Talent Trails integrates content, activities and practices and builds up a larger knowledge network. Talent Trails is open structured and can communicate with other applications and share information. Elements of Talent Trails includes current version information, editing process description (e.g.: notes or revisions) and past versions.

It includes not just content learning but also learning cognitive wisdom.

This technique is designed to encourage students to share and discuss answers around a particular topic, issue or problem.

It is suitable for theoretical topics from Automobile Engine (AE3I) like Fundamentals of I.C. Engine and Construction Feature of Automobile Engine Components.

These two topics carries 26 marks out of 70 marks near about 40% of total marks of total syllabus.

These two topics have total theoretical part of study, so it is quite difficult to memorize until more practice.

PROCEDURE OF IMPLEMENTATION:

1. Let your students know that you will be using the technique and provide them with instructions.
2. Plan the activity in advance of the lecture.
3. Divide class into two equal groups.
4. Provide different question banks with model answer to each group.
5. Give at least 20 mins to read and understand provided question bank with model answers.
6. Now the actual activity gets started.
7. Group Number 2 gets an opportunity to ask any questions to group number 1 from their provided question bank.
8. Now any participant from group number 1 gives answer then group number 1 will get marks out of 4 on the basis of its correctness.
9. If the same participant from Group No 1 fails to give correct or sufficient answer or same question passed to another member from same group then marks will be given out of 3.
10. Same procedure will be followed in case of group number 2.
11. Max. 5 questions will be asked during whole session by each group.
12. Max. Scored group will be elected as winner.

ADVANTAGES

1. In the process of talent trails, learning is done in pairs or in groups it can be done anywhere.
2. Time limit is set for this type of learning. Paired students can discuss and finalize their conclusions and share it with others in their time.
3. Accepts content from different types of learners and of different level of learners and incorporates it.
4. Talent trails can be adapted in informal learning environment also.

RECOMMENDATION:

For the active participation of students in discussion the notes of all the topics must be already fulfilled. If the pre-requisites of the topics are not fulfilled in that case subject incharge need to take some introductory classes on these topics, so that students will be in position to discuss the topics.

Some groups are not going to take proper direction toward achieving the outcomes of learning of that topic, in that case interruption and assistance might support the students to divert in correct direction towards achieving the learning goal.

By doing this teacher or instructor becomes the facilitator who guides and gives proper direction for achieving the learning goal.

Some Snaps:

1. Discussion and Sharing of given topic



2. Question – Answer Session



FEEDBACK SYSTEM:

To understand the influence of this active learning activity on students, feedback was collected in the form of questions and ratings (refer second table). It is observed that students were contented and motivated to adapt this active learning method for further topics

Sr. No.	Feedback Questions	Poor (1)	Average (2)	Good (3)	Excellent (4)
1	Rate the Talent Trials active learning activity				
2	Rate this learning style over traditional teaching style				
3	Do you think each step in this activity is important? Rate it accordingly. (Topic Selection > Group Formation > Results)				
4	Does this activity motivate to study the entire topic in detail? Rate it accordingly				
5	Have you developed some skills or enhanced				

	skills you already possessed due to this activity? Rate it accordingly				
6	Rate this activity in terms of fulfilment of learning objectives				
7	Rate this activity according to the understanding of topics were developed				
8	Rate this activity in a way it helped you to realized the importance of these skills	Participation			
		Leadership			
		Team work			
		Creativity / resources			
		Relevancy to topic			
		Problem solving skill			
		Time management			
9	Rate this activity good enough to perform on regular basis				

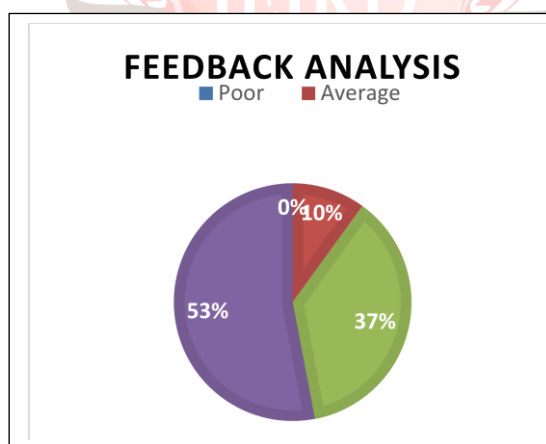
FEEDBACK ANALYSIS:

From the statistics observed and collected in the feedback report, it is also marked that students agreed to the fact that not only this activity helps to accomplish the learning objective but also it encourages to study the same topics in depth

Sr. No,	Feedback Questions	Rating given by students for Talent Trials learning activity in percentage of students			
		Poor (1)	Average (2)	Good (3)	Excellent (4)
1	Rate the Talent Trials active learning activity	0	12	53	35
2	Rate this learning style over traditional teaching style	0	18	36	46
3	Do you think each step in this activity is important? Rate it accordingly. (Topic Selection > Group Formation > Results)	0	0	47	53
4	Does this activity motivate to study the entire topic in detail? Rate it accordingly	0	12	30	58
5	Have you developed some skills or enhanced skills you already possessed due to this activity? Rate it accordingly	0	12	41	47
6	Rate this activity in terms of fulfilment of learning objectives	0	5	53	42
7	Rate this activity according to the	0	12	53	35

	understanding of topics were developed					
8	Rate this activity in a way it helped you to realize the importance of these skills	Participation	0	0	41	59
		Leadership	0	5	47	47
		Team work	0	5	17	78
		Creativity / resources	0	35	35	30
		Relevancy to topic	0	5	17	78
		Problem solving skill	0	5	35	60
		Time management	0	17	12	71
		Proper planning /strategy	0	5	35	60
9	Rate this activity good enough to perform on regular basis	0	12	30	58	
Average (%)		0	10	37	53	

Students were asked to rate Talent Trials activity to conduct this activity on regular basis and 53% students rated this activity as excellent as shown in above table. Only 10% student rated activity as average and no students gave the rating as poor whereas as 37% student rated this activity good enough to conduct on regular basis. This statistic not only shows that the Talent Trials method is effective but also the students are willing to adapt the active learning method on a regular basis.

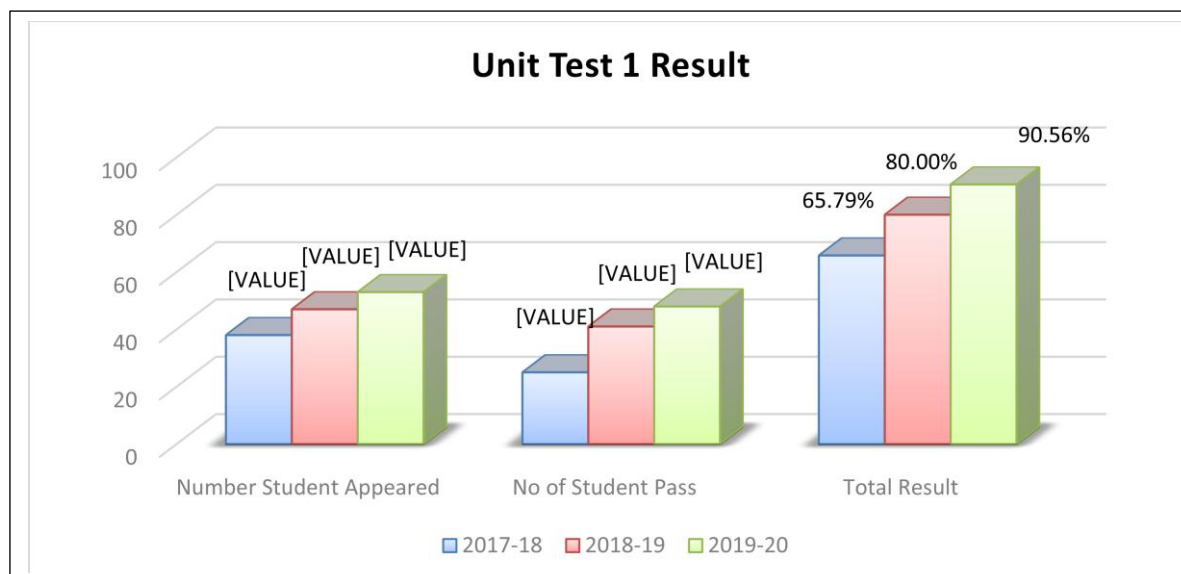


RESULTS:

From the figures given in the feedback report, it is also evident that students agreed to the fact that not only this activity helps to fulfill the learning objective but also it encourages to study the same topics in depth.

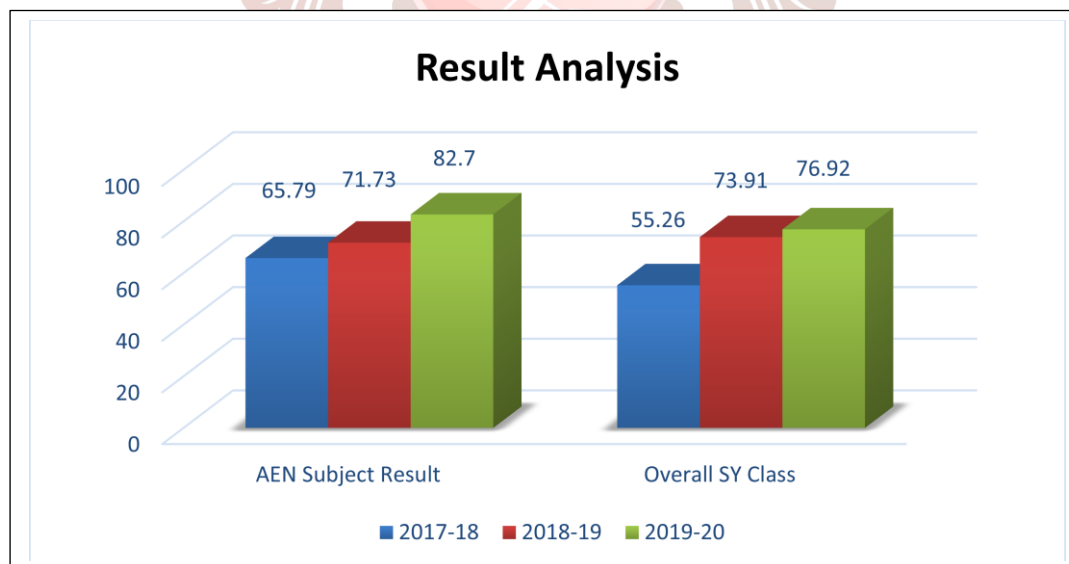
Unit Test Result:

Sr. No.	Unit Test 1	Academic Year		
		2017-18	2018-19	2019-20
1.	Number Student Appeared	38	47	53
2.	No of Student Pass	25	41	48
3.	Total Result	65.79 %	80.00 %	90.56



Overall Results:

Sr. No.	Academic Year	AEN Subject Result	Overall SY Class Result
1.	2017-2018	65.79 %	55.26 %
2.	2018-2019	71.73 %	73.91 %
3.	2019-2020	82.70 %	76.92 %



OUTCOME:

1. Students can get a chance to study a particular topic or point of syllabus in depth.
2. Students can get self-tested for their fundamental concepts understandings.
3. Students will get idea about their preparation for upcoming exams or aptitude test for campus drive.
4. Course teacher can get idea for class tracking and understandings.

CONCLUSION:

The whole idea of talent trails is to give the student a chance to study a particular topic or point of syllabus in depth. Ideally there should be between two and five members in each group so that we can judge them and track their performance. It takes in collective intelligence and helps the students to identify and solve real world problems. Talent trails is a important element in future learning space where learning takes place anytime or anywhere through any platforms. Learning can be anything about everything. Talent trails will be the cornerstone in universal learning. Since talent trails is modified version of Learning Cell which is generative, open, connective, evolving, intelligent, cohesive, and self-tracing learners can benefit from collective information and knowledge in the student's community.

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