EFFECT OF AVAILABILITY OF ADDITIONAL TEACHING AND LEARNING RESOURCES IN CLASSROOM.

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ABSTRACT:

The teaching – learning technique called as the jigsaw method of teaching is a method of organizing classroom activities that make students dependent on each other to succeed their individual learning methodology. This learning technique breakdowns the classes into various groups and also divides assignments into pieces that the group assembles to complete the overall (jigsaw) puzzle. The foremost problems which arise in Jigsaw classrooms are that, there is a prerequisite to arrange for extra course material for the students to use in the classroom, It is observed that many faculty members hesitate to have a belief in their students in attaining the required knowledge by themselves, anxiety among faculty of syllabus coverage, Dearth of acquaintance with the Jigsaw classroom method of cooperative learning methods and shortage of students abilities and talents need to work in a group environment. Through this paper the researcher tried to understand and study the main problems of using Jigsaw teaching method in an Engineering classroom. This article analyzes the results of this study. The study sample included 20 students in the Diploma in Engineering (Polytechnic) Program at Rajarambapu Institute of Technology affiliated with Shivaji University, Kolhapur, located in Maharashtra. The present study reveals that the Jigsaw classroom of cooperative learning could be an operational mode of instruction for higher level thinking tasks. This can be explained as, there persists an optimistic interdependence and a discrete answerability created due to the circumstances for groups to think together and it also upgraded the individual presentation, as the discussion always leads to a considerable degree of clarity of concepts.

Keywords: Jigsaw, cooperative learning, interdependence, accountability.

Introduction:

The education nowadays is dependent upon the quality of knowledge and skills a faculty member possesses. Hence, it is to be understood that to bring out the best in a student and to make him industry ready, to face the global challenges, a teacher should possess the requisite skills and ensure about her / his effective teaching – learning skills. Students need to be possessing skills to perform as a successful individual of tomorrow. Faculty need to be updated with today's students learning skills and also be aware of the environment in which

the student will learn the most. Today's education possesses a very big challenge regarding the students of varied capability and divergent proportions of learning abilities.

Incorporating jigsaw method of cooperative learning in an engineering teaching space is not without challenges. Teachers and students both have to face several encounters to bring quality education to their table. The main complications which arise is the need to prepare additional learning resources for class teaching use, anxiety among faculty of syllabus coverage, and lack of trust in students in acquiring knowledge by themselves, Students lack the skills to work in groups, as well as it is observed that there is a lack of familiarity with jigsaw method of co operative learning.

Objectives: In existing article the purposes are as below-

1. Why is there a prerequisite to prepare additional learning resources for class teaching use?
2. To study the anxiety of faculty about content coverage.
3. To study how to enhance students learning in individual method.
4. To understand the student's abilities to work in cluster.
5. To study familiarity with jigsaw method of co operative learning.

Assumption:

In present study the assumptions are as below -

Regarding with this study, All the teachers teaching the Diploma in Engineering (Polytechnic) Program-

a) Necessity to prepare additional learning resources.
b) Have the anxiety of faculty about content coverage.
c) Knows how enhance students learning in individual method.
d) Knows what the student's abilities to work in cluster are.
e) Faculty members are not accustomed with jigsaw technique of education.

Methodology:

The study used for this article is of a descriptive nature the Survey method of research methodology is used for data collection.

Population: The total of 20 teachers, in various Diploma in Engineering (Polytechnic) Program institutes in Sangli District in Maharashtra.

Sample size for study:

The total of 20 teachers were selected randomly from the selected 06 Diploma in Engineering (Polytechnic) Program in Sangli District in Maharashtra.

Sampling Techniques:

Simple Random sampling design

The Scope: The present study is about 20 teachers in various Diploma in Engineering (Polytechnic) Program institutes in Sangli District of Maharashtra.

The tool: The Questionnaire which is standard by experts is used for data collection.

Data Analysis: The present study has used the data by collecting information through survey method by using developed and standardized Questionnaire by researcher particularly.

Table 1: Need to prepare extra study materials

Question	No of teacher's response (%)	
	Yes	No
For preparing extra study materials, do you require a lot of effort?	12	88
Is it a burden to prepare new materials?	33	67

Observation:

From above table, 12% teachers responded that for preparing learning resource material, require a lot of work while 88% teachers responded not many efforts are required and 33% teachers responded that it is an encumbrance to prepare new materials while 67% teachers responded that they do not consider this as a burden.

Conclusion: The necessity to prepare extra study materials require a lot of work efforts by the teachers, but looking at the benefits of the same, teachers are happy to devote their time and energy in preparing the extra study material for the class. Also it does not seem to be a burden to prepare new materials.

Table 2: The anxiety of faculty about content coverage

Question	No of teacher's response (%)	
	Yes	No
Can this technique of learning often take extended time then lectures?	92	08
Is this learning technique time consuming?	11	89

Observation:

From above table, 92% teachers responded that the said learning methods takes a lengthier time than the regular lectures while 8% teachers responded that Cooperative learning methods do not take much time than lectures and 89% teachers responded that Cooperative learning method is not a waste of time while 11% teachers responded that Cooperative learning method is a waste of time. Teachers accepted that cooperative learning help students do their best work, share ideas and help group function effectively.

Conclusion: Cooperative learning methods often take longer than lectures but it is not a waste of time. Cooperative learning reflects a positive interdependence. Students work as cohesive groups to achieve shared learning objectives.

Table 3: Students lack in acquiring knowledge by themselves

Question	No of teacher's response (%)	
	Yes	No
Do you need to tell your students what and how to learn?	83	17
Do you have the knowledge and expertise?	70	30

Observation:

From above table, 83% teachers responded that students need to be told what and how to learn while 17% teachers responded that they need not to tell what and how to learn and 70% teachers responded that have the knowledge and expertise while 30% teachers responded that they do not have the required knowledge and expertise.

Conclusion: Teachers must tell their students what and how to learn. Only the teachers have the knowledge and expertise. In Cooperative learning students assist and interact with each other to solve problems.

Table 4: Students lack the abilities to work in cluster

Question	No of teacher's response (%)	
	Yes	No
Is there a deficiency among students for peer learning?	72	28
Do you cater to the unknown skills among students?	83	27

Observation:

From above table, 72% teachers responded that students lack the necessary skills to work in group, while 28% teachers responded that students did not lack the necessary skills to work in group and 83% teachers responded that teachers teach the missing skills and reinforce the skills that students need while 27% teachers responded that teachers did not teach the missing skills and reinforce the skills.

Conclusion: Teachers are often concerned with students' participation in group activities. While students lack the necessary skills to work in group.

Table 5: Familiarity with Jigsaw method of co operative learning

Question	No of teacher's response (%)	
	Yes	No
Is this jigsaw technique of learning a novel approach?	95	05
Do you need time to get acquainted with the jigsaw technique of learning?	97	03

Observation:

From above table, 95% teachers responded that the jigsaw method of Cooperative learning is new while 5% teachers responded that the jigsaw method of Cooperative learning is not new and 97% teachers responded that some amount of time is needed to get familiar with the jigsaw method of Cooperative learning while. 3% teachers responded that teachers need not want times to get familiar with the jigsaw method of Cooperative learning

Findings: We conclude that,

1. The need to prepare extra study materials require a lot of work efforts by the teachers, but looking at the benefits of the same, teachers are happy to devote their time and energy in preparing the extra study material for the class. Also it does not seem to be a burden to prepare new materials. The jigsaw method of Cooperative learning often takes longer than lectures and it is a waste of time.

2. Faculty members need to orient the learners on the ways and methods of learning. Faculty members often worry about student's participation in the group activity, so they need to do a little bit of handholding.
3. This method of jigsaw learning is a novel method to most of the faculty members hence some amount of faculty development training need to be organized to them to be familiar with this technique.
4. It is observed that students can shape up their interpersonal skills and communal skills, this helps them to gel together, and solve any clashes within themselves.

Conclusion:

The Jigsaw technique used is a novel method of teaching learning. Majority of teachers are yet to get familiar with this technique. Learning basically happens in group and interaction of students between their peers. This method demands for peer learning technique. Jigsaw technique allows students to form groups, collaborate within groups and build interpersonal skills among themselves. This technique also helps teachers to enjoy their journey of teaching leaning as it gives good result. Faculty can design different modes and methods of teaching strategies.

Even though there are a few hurdles in implementing the jigsaw technique, like few students may be dominant over other peer members. Such obstacles should be debarred by appointing a student leader and instructing him to balance the learning methodology. Hence a group forum is balanced and learning happens in a smoother way. All students realize the importance of peer learning and eventually the group succeeds in learning as a whole.

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