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Examining Resource Based Learning and Individual Learning Capabilities in Today's Scenario

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Abstract. The immense use of web based resources is an undeniable truth in today's learning scenario. Resource-based learning has gained momentum in leaps and bounds. Resource-based learning aids in the academic and holistic development of students by taking into account their capabilities, their styles of learning and their needs. RBL empowers the student to analyze and organize digital material. It also enables the learner to develop critical thinking skills and gives them the confidence to sift from the plethora of information available, the skill to ferret out what they need and what is needed for them. This skill will go a long way in empowering them to utilize the varied resources that is available on hand in various forms be it print or electronic. Such training in thinking will help them to approach any topic in a number of learning styles. The authors of this research paper, have attempted to understand the impact of resource based learning on teachers, keeping in view Gagne's (1985) theory of levels of learning. Teachers from traditional background of teaching methods involving classroom interface, were approached and their views on the new methods popularized by RBL were obtained by means of a self-administered online questionnaire. The objective of the study was to analyze the attitudinal responses of the teachers towards RBL and whether they viewed it as a beneficial exercise for students as against traditional methods of learning.

Key words- Learning theories, learning styles, teacher attitude, traditional teaching, web resources.

1. Introduction

Resource based learning is an exciting option for teachers who are poised at the threshold of new learning and teaching styles. Traditional methods of learning that have been tried and tested have been around for eons of time. It is time for some changes to come in. Teaching experts have explored the various learning styles of students, and this study has thrown up innovative and experimental opportunities in the teaching learning process, not attempted earlier. Computer software has been designed to aid the student in a number of ways and it is naturally a resource that has to be tapped when it offers such a rich array of learning. Teachers who are need to handle this type of technical way of expounding knowledge have to be equipped with the technical skill to navigate their way in the abyss of cyber world. Lessons have to be naturally linked in to this process, as RBL involves independent thinking and the lessons have to be designed to meet these criteria to promote lifelong learning. Instant gratification is the way the student of today is channeled and RBL offers just this kind of stimuli. Instant assessment, instant feedback



and the ability to see your creativity on screen and share it with your peers instantaneously, all these aspects make RBL really likable, forget the efforts taken to create the lessons and the time taken to think up creatively motivating lessons for young minds. The feeling that the 'mousepad' gives you is immeasurable. Teachers and students are enjoying this new found freedom and power at their finger tips. While promoting the gains to be got from RBL, the problems involved in implementing the use of RBL cannot be ignored. Websites are updated frequently and so the information may not be reliable. Some information may have been removed or edited. Students can cleverly conceal their mistakes by resorting to unfair means of copy and pasting others work as their own as cross checking for plagiarism is not so easy, though software has been programmed for the same. Still RBL cannot be ignored as it helps in fostering problem-solving and thinking skills. Students are expected to move beyond being passive listeners lapping up what the teacher hands out to them. They have to be actively involved in this interactive, activity based learning style. Another undeniable advantage of RBL is that it allows flexibility. The learner can work in groups, in pairs or individually. Students have the flexibility of choosing their own resources. RBL is not tightly compartmentalized. It can be used in addition to, or together with, other teaching models.

2. Review of literature

The learning outcomes and methodology of RBL are very clear. The facilitator of RBL has to be an effective communicator and understand the teaching objectives and learning outcomes clearly. The facilitator must select the appropriate texts from a wide range of literature, audio and visual texts. The facilitator must interpret information using a variety of technologies. The facilitator also has to be actively engaged in the process by creating texts collaboratively and independently, and customize it to the specific audience.

Beswick, (1977) feels that the learning is reciprocal with both teacher and learner involvement. While teachers are spending a lot of thinking and effort into designing the resources, students are forced to fully participate in the learning encounter. Teachers have to be on their toes asking right questions at the right intervals so that students don't just sit back and watch the video content as if it is just some happy pastime. Insightful teachers have recast the role of the instructor from providers of information to facilitators who ensure that learning occurs. Both teacher and student have to cooperate if any learning is to take place.

Bell (1986) gives paramount importance to planning. Planning aspect of RBL is not a simple task. Students come from different backgrounds and the right materials should be used to promote literacy skills in the learner as well as aiding them in acquiring intellectual independence. The educational system must offer opportunities equally to all students. If they fail to do so they will be unconsciously promoting a new type of class culture, and unknowingly developing a new elite—the information elite.

Will RBL replace traditional systems of teaching? Traditional teachers who are trained for 'Fast-Food' type of using media resources will not be able to really deliver. With more and more emphasis on digital type of learning, conventional approaches to teaching have come under criticism. Considering the enormous economic and time involved in producing material does not justify the use of renovated material. A re hash of old material will not suffice. Authorities must go the extra mile in ensuring the teachers are equipped to prepare and teach with newly prepared, customized material using digital media, so that the beneficiary is the learner as well as the teacher.

Hooper & Hannafin, (1991) feel that knowledge and skill will be transferred to more complex learning and performing tasks as the need and situation demands it. This involves the adaptation of tactics to new systems which resemble earlier systems in a lot of features. Perusing the results of the usage of prerequisite knowledge and skill in previously accepted domains, show encouraging results.

Wiley (2000) has popularized the use of the word 'learning objects' while speaking about instructional aids. He defines learning objects as "any entity, digital or non-digital, which can be used, re-used or referenced during technology supported learning". Some of these can be listed as are interactive and intelligent instruction systems, distance learning systems, and collaborative learning environments. His definition does not include things or people or ideas that existed previously in history of mankind as any of these could be "referenced during technology supported learning."

This model also does not provide a solution for many current learning environmental issues. Educational demands on students today is very different from yester years when a degree was a guarantee to a job. Today the HR professionals are looking for students who can solve problems, who can analyze, who can communicate and also possess a professional attitude. They are looking for people who are good at learning.

Brown (2000) and Duffy and Cunningham (1996) have said that we should focus on creating environment for learning that allow students to perform because only in actually performing a task can they really learn something.” (Schank et al., 1999, p. 165). Students need to engage in authentic activities and situations that they might face in their workplaces. These learning opportunities have to be made progressively closer to work place situations so that by thinking higher on the scale of critical thinking, the learner is prepared to face actual scenario that exists in the world outside that they are likely to enter on employment. (Lave & Wenger, 1991). The learner should be taught with real world problems given as case studies so that they can obtain proximal development. (Vygotsky, 1978).

Hodgins (2000) declares that the skill and knowledge acquired in this manner will develop a spiral of more new knowledge creation. The right information flowing to the right place, person and time, is of paramount importance according to him. Hitherto each information piece existed as a separate entity. Now with this massive spread of RBL all knowledge leaning will converge into one spiral of learning which he terms as learnativity. The learnativity spiral can be seen in figure 1.



Figure 1. Learnativity Spiral

Performing involves application of knowledge. Capturing involves comprehending this knowledge. Managing is the sharing of this knowledge with other learners. Learning involves the inter relationship of all the components.

Robert Gagné’s (1985) conditions of learning includes nine events of instruction. The focus is on purposeful learning where events in the environment influence the learning process. A learner who is participating in a situation where the right conditions for learning are invoked, will in different levels experience intellectual skills, verbal information, cognitive strategies, motor skills, and attitudes, which he calls as five categories of learning. Gagné developed his theory according to what the learner must learn. According to him two different types of conditions exist in learning: internal and external.

Internal capabilities in a learner are the skills inherent in him that induces learning. External conditions are the external situations that control the learning environment in different degrees, such as the learning situation, the teacher and the psychological factors that are existing at that point of time. According to Gagné each learning situation begins anew. It starts from a different point in the learning curve. This depends on the external situation, the learner and the environment that the learner finds himself in at that present moment of time. Each new learning will start from a different point of prior learning and will consist of a different external situation. His nine events of instruction have been presented in the form of a diagram given below as shown in fig. 2. (<https://blog.commlabindia.com/elearning-design/gagne-events-instruction-infographic>)

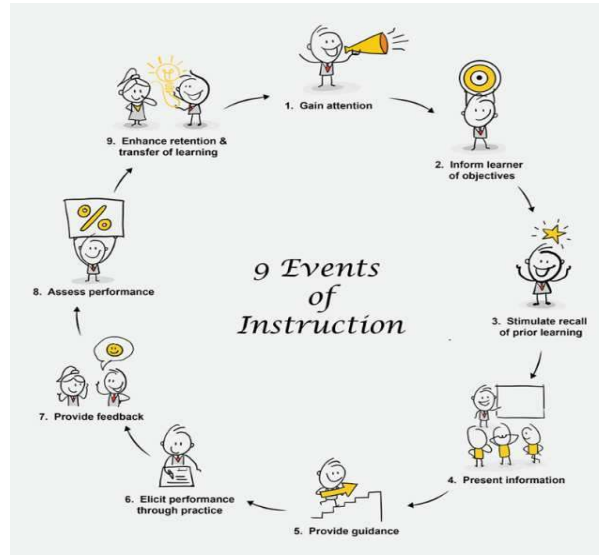


Figure 2. 9 Events of Instruction

3. Objectives of the research

Teachers are a worried lot as they are faced with the daunting picture of change or quit. This is because they have to do a complete rethink on the type of resources, they had been using in their classes so far. They have to learn to master the weapon called RBL which is difficult to master at first, but once they have learnt it, they can use it and re use it multiple times. They have to grapple with the fact that by accepting to use RBL tools, they must be involved in the selection and the organization of the content of learning materials, use of such materials, and ways to assess learning. They must be involved in technical and professional issues, which include - the design and production of materials and the appropriate use of the various media.

Table 1. Research question

Sl.No	Research Question	Motivation
1	Will students learn independent thinking skills and cognitive skills?	views and options
2	Does RBL foster deep learning in students?	views and options
3	Does RBL improve work study skills and vocabulary by using multi-media?	effectiveness
4	Will future teachers need to be media specialists?	awareness
5	Will Resource Based Learning replace Traditional teaching?	level of acceptance

4. Methodology

To understand the views of teachers regarding the efficacy of Resource Based Learning methods, some of their thoughts on the matter, a questionnaire was administered to teaching faculty, to see what their views were on RBL, and what were their feelings towards the efficacy and effect of RBL on students and what would be the position of traditional learning methods. The respondents were about 165 teachers from schools and colleges in the city of

Chennai. The questionnaire was distributed online through Google forms and the results were tabulated. A detailed analysis of the results follows.

4.1 Analysis of data

Analysis of data of questionnaire administered to faculty on opinion of teachers on RBL and traditional learning. The objectives of the survey was as follows

- The faculty survey was conducted precisely to know the views and opinions of teachers on resource based learning (RBL), its outcomes and the traditional method of teaching.
- From the data collected and processed the effectiveness of introducing RBL can be understood
- The level of acceptance of RBL among teachers is also seen.

According to our objectives, the responses received from the faculty has been divided into four groups namely views and options, effectiveness, awareness, level of acceptance. The questionnaire used for the survey is represented in Table 1, based on which the questions have been grouped into 4 different categories in comparison with our objectives. The grouping has been done for better analysis of the data obtained as responses for the questionnaire. The responses obtained has been grouped and represented in Table 2.

Table 2. Grouping

Research Question	Maybe	No	Yes	Grand Total
RBL foster deep learning in students	51	18	96	165
Objective of RBL is development of subject and information	32	12	121	165
RBL promote problem solving and reasoning skills	39	12	114	165
Resource Based Learning (RBL) as a beneficial exercise for students	31	9	125	165

Based on the responses received from the faculty on the questionnaire on resource based learning the correlation is calculated and represented in fig. 3.

	Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7	Column 8	Column 9	Column 10
Column 1	1									
Column 2	0.964429	1								
Column 3	0.997918	0.993717	1							
Column 4	-0.10136	0.075094	-0.93694	1						
Column 5	0.954579	0.992091	0.971809	0.199667	1					
Column 6	0.546648	0.390943	0.491502	-0.83546	0.272819	1				
Column 7	0.965924	0.996381	0.980806	0.159586	0.99917	0.311289	1			
Column 8	0.967535	0.996896	0.961821	0.153366	0.998894	0.317268	0.99998	1		
Column 9	0.916653	0.832124	0.888966	-0.49054	0.755929	0.635766	0.761969	0.78588	1	
Column 10	0.9301	0.851051	0.904473	-0.45969	0.778411	0.816006	0.803337	0.807072	0.999386	1

Figure 3. Correlation of responses received

As shown in fig. 3, the column 1 represents the questionnaire on whether RBL fosters deep learning in students. Column 2 represents the variable obtained for the question if RBL promotes problem solving and reasoning skills. Column 3 represents the question, if Future teachers need to be media specialists. Column 4 represents the question if Resource Based Learning (RBL) replace Traditional teaching. Column 5 represents the question, Will implementing of RBL instill self confidence in students. Column 6 represents the question, Will students learn independent thinking skills and cognitive skills. Column 7 represents the responses to the question if RBL is development of subject and information literacy. Column 8 represents the responses received to the question on whether RBL is a beneficial exercise for students. Column 9 represents shows that RBL improves work study skills and vocabulary by using multi-media. Column 10 represents the responses to the question on whether RBL mainly focuses on process not product. Is this good.

From the table as shown in figure 3, we can see that the number of variables are correlated with one another. The red colored boxes represents the negatively correlated variables and the blue colored boxes shows the positively correlated variables. Negative correlation indicates that there is a negative relationship between the variables and positive correlation ie it indicates that the variables are highly related with one another. The purpose of finding correlation for the responses obtained from our sample questionnaire is to find if there exists a relationship between the variables. In our data, we can see that many variables shows positive correlation which means many among the variables are highly correlated.

4.2 Findings

From the responses received, we can say that to some extent many teachers have accepted that one of the objective of RBL is development of subject and information literacy. It can also be summed up from the previous tables and graphs that faculty are likely to accept that RBL is no less effective than traditional learning. This graph represented in figure 4 shows the interests of faculties into the emerging field of teaching called Resource based learning. We

can see that nearly 90 – 120 faculties have agreed that RBL is a good source of learning which promotes problem solving and reasoning skills, foster deeper learning in students, develops subject and information literacy and it is also considered as a beneficial exercise for students.

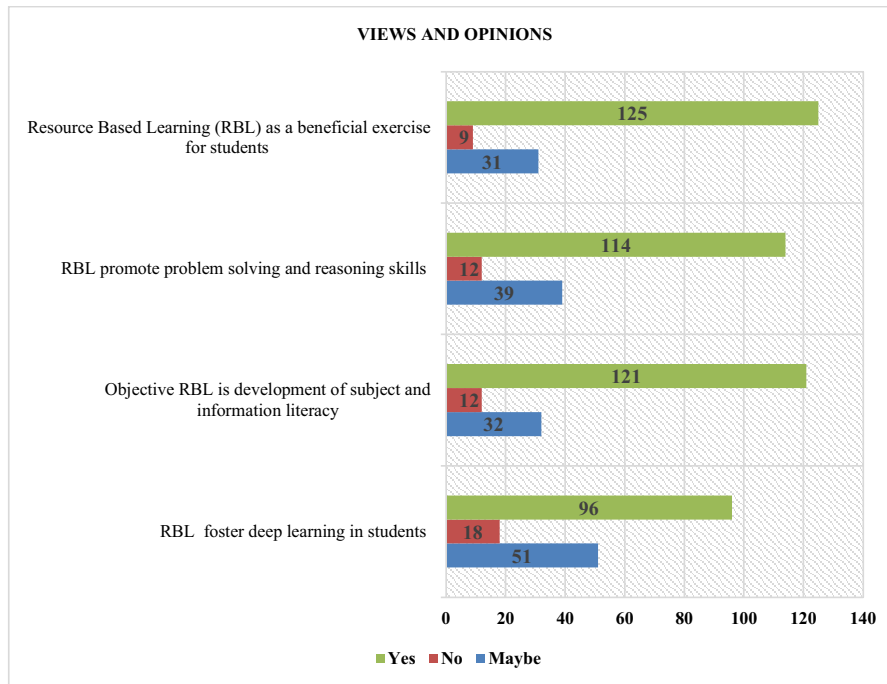


Figure 4. Views and Opinions

Another finding is that Faculty are more aware of the fact that there is a high chance of RBL becoming the future of education system itself. The next finding is that though faculty have agreed that RBL is no less effective than traditional learning methods still they would strongly like to prefer traditional learning methods instead of resource-based learning based on figure 5.

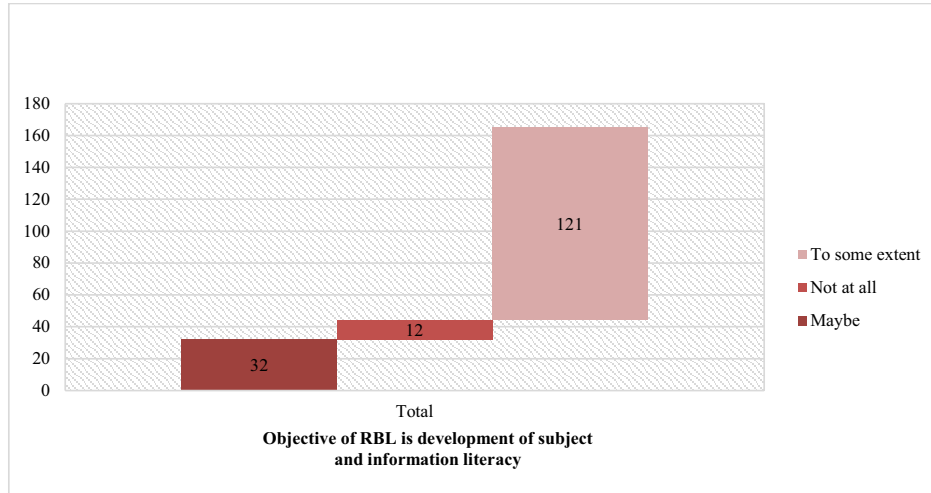


Figure 5. RBL is development of subject and information literacy

From figure 5, we can say that to some extent many faculties have accepted that one of the objective of RBL is development of subject and information literacy, summing up from the previous tables and graphs we can conclude that faculties are likely to accept that RBL is no less effective than traditional learning.

The last finding from the given data is that teachers aren't really willing to accept the fact that traditional learning is slowly being replaced by Resource Based Learning.

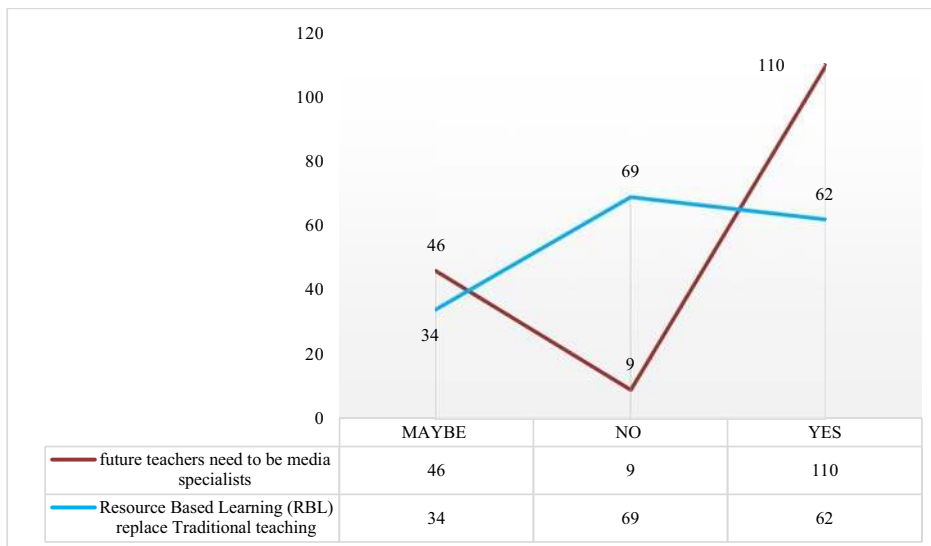


Figure 6. Awareness

In this graph shown in figure 6, we have represented the two variables that are negatively correlated. On contrast, we can see that both the variables leads to a similar result that the faculties are more aware of the fact that there is a high chance of RBL becoming the future of education system itself. From the analysis of the responses we can see that majority of teachers firmly believe that students will learn independent thinking skills and cognitive skills. Faculty also are of the opinion that RBL will foster deep learning in students and that work study skills and vocabulary of students will be improved using RBL. Without any doubt future teachers need to be media specialists.



Figure 7. Response Distribution

From this distribution chart shown in figure 7, we can see that though faculties have agreed that RBL is no less effective than traditional learning methods still they would strongly like to prefer traditional learning methods instead of resource based learning.

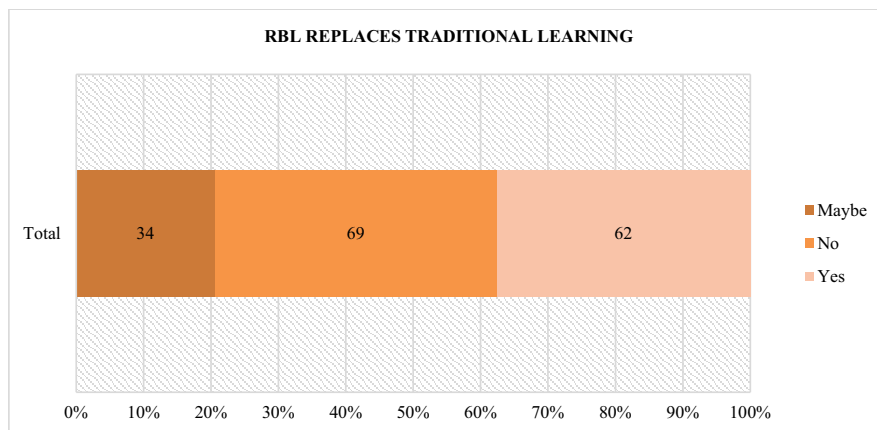


Figure 8. Distribution of Faculty response

Based on the distribution shown in figure 8, we can say that the teachers aren't really willing to accept the fact that traditional learning is slowly being replaced by Resource Based learning.

5. Conclusion

The teacher has to play a crucial role in identifying resources, planning lessons and implementing the lesson. So it is necessary that some amount of media literacy is required. Knowledge of little technical details will give them an edge and increase their confidence level. They should attend workshops and faculty development programmed purposefully for this and learn how to find appropriate information, from the plethora of resources that are available. They should learn to quickly surf channels or websites and have an alternate ready just like they go prepared in a traditional classroom situation, with only a blackboard and an innovative teacher. Of course technical glitches will happen but they will soon become few and far between.

Teacher should learn to don several hats - coach, facilitators, analysts, assessment experts, media guides, technical experts, language guides, and also learner. This is imperative, as students are learning in a new and invigorating environment. Teachers too are beginning to like this new learning ambience which is far removed from the traditional chalk and talk method. Traditional approaches to teaching can never be replaced by modern multimedia approaches but when change is the need of the hour, adapting to existing situations becomes unavoidable and inevitable.

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