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Effectiveness of Blended Learning Using LMS-Edmodo in Teaching Economics at Higher Secondary Level

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ABSTRACT

Teaching is not a mechanical process. It is an intricate, exacting and a very challenging one. The demand of new technology and uninterrupted global environment could not be met with the only source of classroom instruction. Blended learning is a formal education program in which a student learns at least in part through delivery of educational content with the best features of classroom instruction via digital and online media to personalize learning and to facilitate some element of student control over time, place, path, or pace. Educational methods have become advanced and changed dramatically in the last decade. The revolution in communication technologies, especially after the invention of the internet, has introduced new methods of teaching and new ways of managing education. Various Learning Management Systems, such as WebCT, Black Board and Learning Spaces are now available for these purposes. Both open source and commercial versions of these Learning Management Systems offer combined services such as creating learning material online and its distribution, facilitating communications between various users etc. The availability of Learning Management Systems has enabled stakeholders in creating a platform that aids in web-based teaching in a convenient and flexible manner. The present paper is an experimental study where participants are 80 students from 4 different schools of Trivandrum district of Kerala. 80 students were distributed into two groups, one experimental group consisting of 40 students and another group having the same number of students to be treated as the control group. Pre and post achievement test was conducted in both the groups to know the effectiveness of teaching Macroeconomics at Higher Secondary level using LMS: Edmodo. After analysis researcher found that teaching Economics using LMS: Edmodo is effective as academic achievement of the experimental group in the study is more than the control group.

Keywords: *LMS, Edmodo, ICT, Face-to-Face Interaction, Online Learning, Blended-Learning.*

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As a teacher I can say that today a student wants to study according to his/her need/choice, at his/her own rate and place. Last and not the least he/she wants a teacher of his/her own choice. So, it is our duty to keep ourselves updated about current trend of market to deliver latest knowledge to this class known as the "young force". For the purpose ICT can be used to facilitate a pupil centered approach by appealing to different learning styles. By increasing the exposure of ICT within both- theory and practical lessons, it will improve the teaching and learning standard. By selecting appropriate teaching strategies to achieve intended learning objectives, applying differentiation into lessons and incorporating the use of ICT effectively, one can make teaching learning more effective. It has the potential to transform the nature and process of the learning environment and envisioning a new learning culture. Use of ICT in teaching-learning brought the paradigm shift. Its use has changed the role of students and teachers. There has been a change in curricula and its delivery. Entire is summarized below:

TRANSFORMATION IN ROLE OF TEACHER		
Transmitter of Knowledge	*to*	Guide & Facilitator of Knowledge
Controller of Learning		Creator of Learning Environment
Always Expert		Collaborator & Co-learner
Learning to use ICT		Using ICT to Enhance Learning
Didactive/ Expository		Interactive/Experiential/Exploratory
TRANSFORMATION IN ROLE OF STUDENT		
Reproducer of Knowledge	*to*	Producer of Knowledge
Dependent Learner		Autonomous Learner
Solitary Learner		Collaborative Learner
Solely Learning Content		Learning to Learn/Think/Create & Communicate
TRANSFORMATION IN CURRICULA AND ITS DELIVERY		
Memorising Facts	*to*	Inquiry Based
Artificial Teaching Exercises		Authentic Learning
Rigid Delivery (Fixed Time & Space)		Open & Flexible Delivery (Any Time & Anywhere)
Single Path Progression		Multi Path Progression

TEACHING ECONOMICS IN CLASS ROOM SETTING:

Economics is a dynamic subject which touches our lives daily. Economics is an important subject to deal with day to day real problems. But most of students find the subject boring at the Higher Secondary Level because it requires to be rote learnt. Earlier it was thought to be without any insights into the real world. The traditional school setting is based on axioms that are

outdated and mismatched to current situation. It is our duty as educators to make Economics teaching learning more interesting and practical.

While teaching Economics various principles of teaching have been laid down eg. learning by doing, enhancing motivation, co-ordination with life, correlation, individuality, socialisation, revision etc. On the basis of the above discussed principles various methods of teaching Economics have been evolved- text-book method, lecture method, project method, analytic and synthetic method, problem method, supervised study method, socialisation recitation method, laboratory and logical method.

Above mentioned methods followed by Economics teachers are considered to be conventional method. Conventional method of teaching is considered to be teacher centered. Need is to mix the traditional method of teaching with the modern one which will include role playing, independent study, demonstration, problem based learning and two way effective communication. With a little planning, organisation and implementing one strategy at a time along with refining old strategies will enrich our curriculum. Economics teachers should break away from the shackles of traditional teaching methods and take bold steps towards making the teaching of Economics more interesting and alive for our children. All this can be done with the integration of ICT while teaching Economics in classroom settings.

BLENDED LEARNING:

Above mentioned need gives rise to a new approach of teaching-learning called as Blended learning. In BL classrooms there is an integration of synchronous and asynchronous learning approaches. Synchronous Learning is an online classroom environment, in which many of the learning activities and expectations are similar to those found in a traditional classroom. These learning environments offer meaningful interactions in a face-to-face setting and are most commonly referred to as synchronous learning activities (Hrastinski, 2008; Harris et al., 2009; Simonson et al., 2012). Lectures, discussions and lesson presentations occur at a specific point in time with the expectation that all students will be available to participate. Synchronous learning environments support learning as well as teaching, offer students and teachers with multiple ways of interacting, sharing, and the ability to collaborate and ask questions in real-time through synchronous learning technologies. Examples of synchronous online technology types include video conferencing, webcasts, interactive learning models and telephone conferences (eLearners.com, 2012). Whereas, asynchronous learning can be carried out even while the student is offline. Asynchronous e-learning involves coursework delivered via web, email and message boards that are then posted on online forums. In such cases, students ideally complete the course at their own pace, by using the internet merely as a supportive tool. BL uses the supporting technologies, which can be integrated in the classroom or in online learning environments.

The transformative potential of a blended classroom is tremendous as it not only addresses the shortcomings of the traditional environments but at the same time it also equips the teacher with the desired tools to deliver the content in a manner as they want.

LITERATURE REVIEW:

Educators have combined face to face instruction with online learning components and online course management tools in a blended learning format in order to join the best features of in-class teaching and to promote active and self-directed learning opportunities with added flexibility (Garnham & Kaleta, 2002). In 2003, the American Society for Training and Development identified BL as one of the top ten trends to emerge in the knowledge delivery industry (cited by Rooney, 2003). In fact, BL has been implemented with various designs and has shown a considerable positive effect on the learning process (Alebaikan, 2010). Apparently, BL, which combines the strength of face-to-face and technology-enhanced learning, is increasingly being seen as one of the most important vehicles for education reforms today (Picciano et al, 2013). It is one of the best option for this new generation to make blended learning as a part of their teaching-learning process. Therefore, we must facilitate the growth and promotion of this blended learning approach by considering its positive impact and effectiveness in the current teaching- learning process (Himanshu Tripathi, 2016).

Need:

There are many online tools and services that teachers use, from systems specially designed for teaching to social networking sites. But the learning platform or LMS (learning management system) remains the most suitable alternative. Learning platforms are used by teachers because:

1. They are designed to suit the processes of teaching and help teachers manage the 'logistics' of teaching.
2. They give teachers a holistic view of student's achievement across all courses, subjects and skill areas.
3. They organise work so that students can reflect on their progress and learn from each other.
4. They are secure. No student work or information enters the public sphere.

Statement Of The Problem:

"Effectiveness of Blended Learning using LMS-Edmodo in teaching Economics at Higher Secondary Level."

Variables:

(i) Independent variable is the LMS-Edmodo used in BL approach.

(ii) Dependent variable is the academic achievement of Economics students of Higher Secondary Classes.

Objectives:

To compare the effectiveness of Edmodo with that of conventional method of teaching Economics to students of Higher Secondary Classes with respect to instructional objectives- remembering, understanding, applying, analysing and evaluating.

Hypothesis:

There is no significant difference between gain mean scores of achievement of Economics students taught with Edmodo and conventional method with respect to instructional objectives.

METHODOLOGY:

Participants: 80 participants from 04 different schools of Trivandrum district in Kerala were selected. Economics students were considered as the population of the study. 04 different schools were purposively selected. Out of these four schools two were having the facility of providing online learning through www.edmodo.com while the rest two were not having that facility. 80 students were distributed into two groups, one experimental group consisting of 40 students and another group having the same number of students to be treated as control group.

Instruments: Pretest Achievement was test taken on paper and posttest Achievement test-which was tested on Edmodo platform.

In this study, researcher adopted the quasi experimental approach. 80 participants from 04 different schools of Trivandrum district in Kerala were selected. Investigator selected intact groups rather than randomly assigned participants to the experimental or control groups because assigning participants randomly to the groups will disturb the routine of the class schedule. Those 40 students in two schools who do not have online learning facility were treated as the the control group. They were tested and taught with conventional method of teaching. Their achievement was tested on paper using achievement test which was prepared on questions of Macroeconomics covering five aspects- remembering, understanding, applying, analyzing and evaluating. While 40 students from other two schools, having the facility of online learning were considered as the experimental group. They were taught Macroeconomics using Edmodo platform. The group was given a training of one week on Edmodo manual. This group was tested on achievement test on Edmodo platform itself. The experimental group was taught Economics using Edmdo as Blended Learning, while the control group was taught through conventional method. Experiment was performed for twelve weeks. Both groups were taught by same teachers covering same topics of Macroeconomics at Higher Secondary Level.

Preparation of Instruments:

As a Teacher:

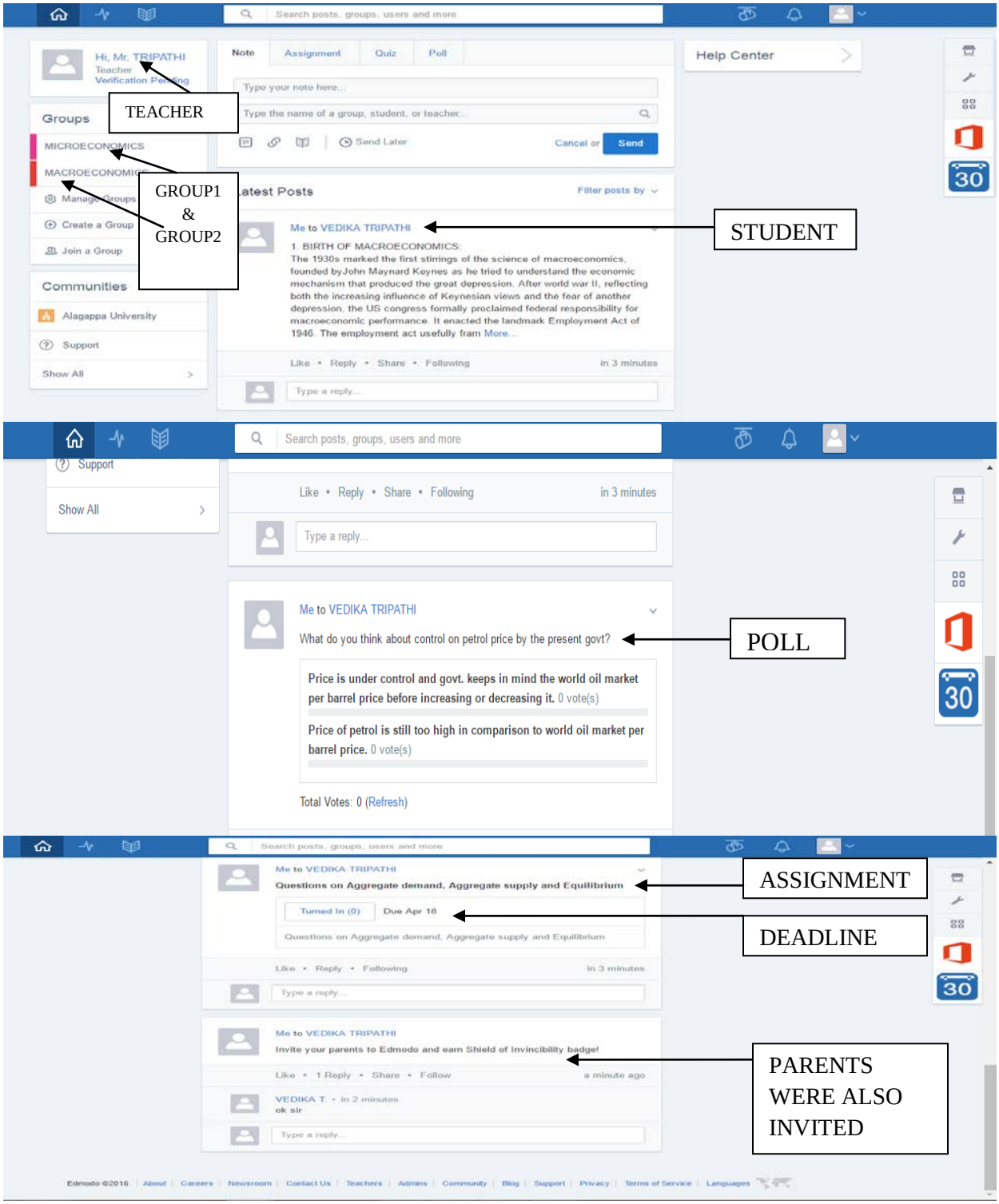
Account was created in Edmodo. Group on Macroeconomics was created. Group code was sent to students. Students as members joined the group. Material related to Aggregate Demand and Aggregate Supply as well as Equilibrium Position was uploaded. Later assignment related to the topic was also uploaded mentioning the due date to complete it.

As a student:

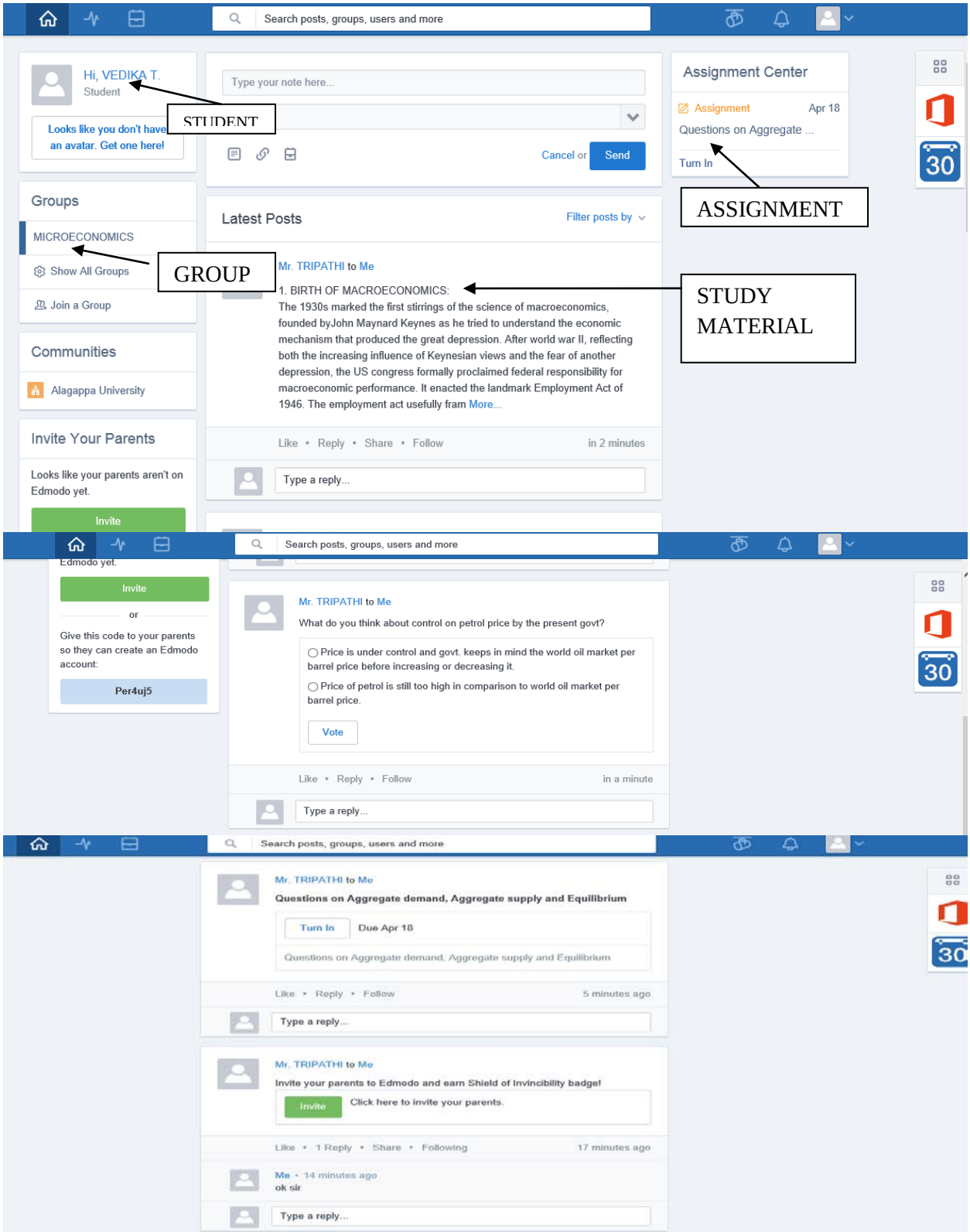
All 40 students were invited to join the group. All of them accepted the invitation of the teacher and joined the group. Later all of them went through the material uploaded on Macroeconomics. They submitted the assignment in time. An opinion poll on the performance/ control of the current government regarding oil price in the country was raised. It was also responded by all of them (40 in numbers). Later their parents were also invited in the classroom to have an overview of the ongoing class as well as performance of their ward in the class.

Further screenshots of Edmodo account created by the teacher and one of the students name Miss. Vedika Tripathi is also shown in the following pages.

As a teacher:


TEACHER
GROUP1
&
GROUP2
STUDENT
POLL
ASSIGNMENT
DEADLINE
PARENTS
WERE ALSO
INVITED

As a student:


Search posts, groups, users and more
Hi, VEDIKA T.
Student
STUDENT
Looks like you don't have an avatar. Get one here!
Type your note here...
Cancel or
Send
Assignment Center
Assignment
Apr 18
Questions on Aggregate ...
Turn In
ASSIGNMENT
Groups
MICROECONOMICS
Show All Groups
Join a Group
GROUP
Latest Posts
Filter posts by
Mr. TRIPATHI to Me
1. BIRTH OF MACROECONOMICS:
The 1930s marked the first stirrings of the science of macroeconomics, founded byJohn Maynard Keynes as he tried to understand the economic mechanism that produced the great depression. After world war II, reflecting both the increasing influence of Keynesian views and the fear of another depression, the US congress formally proclaimed federal responsibility for macroeconomic performance. It enacted the landmark Employment Act of 1946. The employment act usefully fram More...
STUDY MATERIAL
Like • Reply • Share • Follow
in 2 minutes
Type a reply...
Communities
Alagappa University
Invite Your Parents
Looks like your parents aren't on Edmodo yet.
Invite
or
Give this code to your parents so they can create an Edmodo account:
Per4uj5
Search posts, groups, users and more
Mr. TRIPATHI to Me
What do you think about control on petrol price by the present govt?
Price is under control and govt. keeps in mind the world oil market per barrel price before increasing or decreasing it.
Price of petrol is still too high in comparison to world oil market per barrel price.
Vote
Like • Reply • Follow
in a minute
Type a reply...
Search posts, groups, users and more
Mr. TRIPATHI to Me
Questions on Aggregate demand, Aggregate supply and Equilibrium
Turn In
Due Apr 18
Questions on Aggregate demand, Aggregate supply and Equilibrium
Like • Reply • Follow
5 minutes ago
Type a reply...
Mr. TRIPATHI to Me
Invite your parents to Edmodo and earn Shield of Invincibility badge!
Invite
Click here to invite your parents.
Like • 1 Reply • Share • Following
17 minutes ago
Me - 14 minutes ago
ok sir
Type a reply...

DATA ANALYSIS:

Achievement test was conducted. It consists of 50 questions on Aggregate Demand, Aggregate Supply and Equilibrium. All questions were under the umbrella of five categories. Each category covered 10 questions. Control group gave test on paper while experimental group on Edmodo. Means of control and experimental group for pre test and later means of control and experimental group for post test was analysed using t-value:

Categories		Control Group=40		Experimental Groups=40		t-value		Significance	
		Pre test	Post test	Pre test	Post test	Pre test	Post test	Pre test	Post test
Remembering	Mean	4.2	5.7	4.1	8.1	0.85	15.54	Not Sig	Sig
	SD	0.51	0.67	0.53	0.71				
Understanding	Mean	1.9	2.9	2.1	4.2	0.88	4.8	Not Sig	Sig
	SD	0.91	0.81	1.1	1.5				
Applying	Mean	2.1	3.1	2.2	5.7	0.28	6.8	Not Sig	Sig
	SD	1.4	1.8	1.7	1.6				
Analysing	Mean	4.2	6.1	4.9	8.5	1.56	4.9	Not Sig	Sig
	SD	1.9	2.1	2.1	2.2				
Evaluating	Mean	2.7	3.9	2.9	5.7	1.03	7.3	Not Sig	Sig
	SD	0.71	0.97	0.99	1.2				
Creating	Mean	1.7	3.7	1.9	5.8	0.80	6.8	Not Sig	Sig
	SD	1.0	1.1	1.2	1.6				

From the table it can be analysed that there was a significant difference in the achievement between the pre and post test of the experimental group in all the categories. While there was no significant difference in pre and post test of the control group in all the categories. From the mean value it can be concluded that although there was a significant difference in academic achievement of students after intervention in both the cases. But it is extremely significant after Edmodo intervention in teaching Macroeconomics.

CONCLUSION:

Though online resources cannot fully replace a teacher in a classroom but if it is integrated in a planned way with the conventional method of teaching it will have a positive impact on the academic achievement of the student. If Blended Learning is given an appropriate platform it can lead to development of an efficient BL model. In today's context an efficient teaching model is based on BL approach and Edmodo is the platform where we can integrate every element of an

effective classroom teaching. Moreover, a student can participate in the technological classroom as per his choice of time and can learn at his own pace.

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