AN EXPERIMENTAL STUDY ON IMPACT OF POWERPOINT TEACHING ON STUDENT ENGAGEMENT IN ONLINE LEARNING IN VIRAR REGION

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ABSTRACT
Covid has shifted traditional learning into E-learning. The purpose of this study is to examine impact of PowerPoint teaching method on student’s engagement. Pretest-Posttest control group design is used on 20 students out of which 10 belongs to experimental group and 10 belongs to control group. It is seen that there is increase in the student’s engagement post PowerPoint teaching. Thus it can be concluded that PowerPoint teaching method is the medicine to improve student’s E-learning engagement.

Keywords: E-learning, Student’s engagement, PowerPoint.

INTRODUCTION
Student engagement refers to the involvement of the students in their learning process. The dedication they have in their learning process reflects the intensity of the students. The higher is the engagement of students the higher is the clear understanding of the concepts they have in their subject. Higher student engagement enables increase in the level of satisfaction, enhanced motivation level, lower sense of isolation and improvement in the performance of the students in the online lectures. Because of the pandemic, the educational institutions have shifted their base to online lectures, which has led to increase in the efforts of the teachers in enhancing the level of student’s engagement in online learning.

Student engagement refers to the situation wherein the students are grossly and totally involved in their learning. They make an attempt at what the school offers them to learn. It refers to the willingness and desire by the students in learning and the level of participation which a student’s shows by increasing their involvement in the learning environment created which in turn increases their understanding.

Online Learning refers to the creation of or formation of such a surrounding which is feasible for the learning environment for the students amidst such challenging times and forming an atmosphere wherein the students can continue with their academics easily at the comfort of their place. This refers to a process which is being created with the help of Information & Communication Technologies (ICT) which is being applied for disseminating education for the purpose of learning. The usage of digital technology for enabling learning activities has taken utmost importance in today’s pandemic phase. Educational Institutions have themselves being tuning themselves with this changed environment by bringing themselves to this online platform. Online Learning is a means by which education is being rendered on technological resources. The classrooms are shifted on the virtual platform.

Experimental research refers to research which is attached to particularly a specific scientific research pattern or design. It involves a theory as well as a variable which could be influenced and which can be calculated, compared as well as measured by the analyst. Experimental Research is executed and achieved in controlled environment.

Experimental Research is grouped under two categories one which is experimental group and the other one is control group. Experimental Group means involvement of Treatment so as to Measure the effectiveness of the programme/medicines. Control Group means measurement by given them placebo.
COGNITIVE AFFECTIVE AND BEHAVIOURAL SCALE

Student Engagement Scale involves three varied aspects. They are being developed by Krause and Coates wherein they defined the student engagement as in which the students immerse themselves into the educational activities wherein they are bound to receive direct returns for the same.

Cognitive engagement refers to a state in which the students attempt in putting a lot of efforts in the classrooms in order to learn and actually in a true sense try to understand the topic and they are persistent in learning a particular topic over a longer period of time.

Affective engagement refers to the emotional attachments of the students linked to a particular task. The higher is the level of student’s involvement the greater and positive is the attitude of student pertaining to that particular task and subsequently lower is the stress and anxiety level among the students.

Psychomotor/ Behavioral engagement refers to involvement of hand-eye co-ordination and use of physical activities to a particular task. In this the students are given particular task which they need to perform which helps them increase their level of participation and enthusiasm in varied activities.

PowerPoint Presentations refers to the use of presentations for enhancing the learning in the online classes that are being conducted by the schools and the colleges. It is a useful tool that helps both the teacher and students during the online lectures. In this manner the students are also able to better understand the concepts clearly.

PowerPoint Presentations is an integral part of MS Office Suite which is launched by Microsoft intended for the objective of creation of presentations foraying different situations. The concept of this PPTs is being applied to various different sectors, most probably in the field of education and business wherein with the help of presentations they can enable an efficient method to put forward the ideologies or concepts in front of the audiences. It is being considered as an efficient manner through which it is easy to convey the ideas or the learning material up on the subject to the students in the class. Also it is being seen that the usage of PPT-audios could help in stimulating the listening as well as the reading skills and talents of the students at the same given time. This concept helps us introduce the theory of dual-coding proposed by Paivio wherein the theory opines that in two methods the students could expand their learning process which is visual imagery and non-verbal associations.

The Corona outbreak has created an emphasis on the importance of introducing the method of online learning to the students with the use of PPT presentations in order to make the entire process submissive and interactive. It helps the teachers to introduce the concept that they want to cover in the lecture through use of useful pictures, graphs, statistics and graphic visuals so as to make the students involved in the whole learning process. Students are also fascinated by moving pictures and graphics that help them have a better understanding of the entire process. PPT-audio has become an alternative kind of offering media which encompasses a learning through interactive methodology that helps the students develop their creativity, imagination power and help them motivate to learn and grow with interactive narration process.

REVIEW OF LITERATURE

1. Kahu E. (2013) analysed in the study that student engagement is a well-known concept and is of greater importance in higher education learning process. The paper analyses and critiques 4 main aspects regarding student engagement which is the psychological perspective, holistic perspective, socio-cultural perspective and behavioural perspective. The paper identifies the main problems which leads to lack of student engagement, factors which can influence it and its consequences on larger scale.

2. Czerkawski B. et al (2016) pointed out in their study that many factors, frameworks and model are being developed for enhancing the quality of online learning experiences. Such framework and approach helps the instructional designer in developing the online platform by properly analysing, designing, implementing and evaluating the scope of e-learning. It is also being analysed that some of the frameworks involve the participation of the students wherein by
motivation or through the success of students. It is being examined that all this variables affect the active participation among the students and the level of student engagement but apart from this the main concern lies with the pattern which should be adopted for designing the online platform with relation to the higher level of student engagement. The research study puts forth an instructional design model with some strategies which can help them develop student engagement through online learning. The model aims on analysing and summarize the conclusions in a cohesive manner. So as to ensure success of the e-learning platform, the instructors need to use better approach for enhancing the engagement of student learning and the researchers think that this approach will help them with that.

3. Dahalan N. et al (2012) surveyed in their research study that the main aim of the study is investigating the learner’s approach towards online learning. Also the study is aimed at examine the learner’s attitudes toward e-learning. It is done so as to ensuring that the learner’s can the advantages of this pattern of learning which is being introduced to the students. For conduct of this study a survey analysis was done. Around 250 participants were told to answer the questions being framed in the questionnaire. The multiple regression method and factor analysis method was being carried out. Through factor analysis, it was being found out that there exists around two distinguished groups of attitude of learner which is teachers acting as assisted tutors and the second one being the learner’s autonomy. The conclusions of the study depicted that learner's attitudes play a role in predicting e-mentoring. To ascertain the successful of e-mentoring program, this research provide evidence learner's attitude are critical factors to ensure students would stay involve with their mentor.

4. Syafril E. et al (2021) described that because of the outbreak of the Corona Virus has hugely and widely affected the process of the learning. It has resulted in encountering problems from various-sides both from the point of the view of the parent-student and the teacher’s side. From this study, the researchers are trying to apply the method of the PPT-Audio in the process of learning. They use a qualitative design approach which includes a semi-participatory concept of interviews as well as observations through groups created on WhatsApp at the time of May-July 2020. The study highlights the concepts and the conditions related to the learning through audio-visual concept. The conclusions derived from the study highlights that the teachers are using the PPT presentations for giving assignments. It is being seen that the usage of the PPT has been very useful for the teachers to explain the subject or the point of content that they want to cover. It becomes an attractive method of letting the students learn and develop their skills of creativity and adding unique and interesting narration as well as pictures, visuals and graphics.

5. Stone N. (2018) mentioned in the research study that they conducted a research where the students were presented with a video online tutorial where they were shown visuals of a room with or without window with draperies of different colours such as red, blue, white or green for determining the effect of environment on digital learning. It showed that there was an improvement in the scores of the students as comparison to their before and after tests. The conclusions derived from the study shows that the use of this method is impacting the learning ability of the students in the online learning.

6. Brown A. et al (2009) highlighted in the study that they had conducted over a period of over a one long year inquiry study that included a total of 11 members of the faculty of the Southeastern University which examines the different use of podcasting for disseminating instruction. The faculty members through the participation made in the study are of the opinion that the use of technology is highly appreciated for production of podcast and for disseminating the instructions and the messages to the students. It is a new way of teaching method that can be applied to teaching. The students can also be interested in the whole learning process in the on sight.

7. Tello A. et al (2015) conducted in their study that the method of online teaching has become a very useful and convenient technique for providing education. This new innovative medium has become quite popular among the teaching faculties and students. Both the parties are taking the
advantage of this deep and rich academic content without the need of conducting and heavy lectures. Thus this research paper emphasis on creation of an interactive platform for online learning.

**OBJECTIVE OF THE STUDY**
1. To examine impact of PowerPoint teaching method on students engagement in online learning.

**HYPOTHESES**

**Hypothesis1**
Ho: There is no significant difference in the mean rank of pre score of control and experimental group.
H1: There is a significant difference in the mean rank of pre score of control and experimental group

**Hypothesis2**
Ho: There is no significant difference in the mean rank of post score of control and experimental group.
H1: There is a significant difference in the mean rank of post score of control and experimental group.

**MATERIAL AND METHODS**

**Pretest – Posttest control group design**

<table>
<thead>
<tr>
<th>Experimental Group</th>
<th>R</th>
<th>O1</th>
<th>X1</th>
<th>O2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control Group</td>
<td>R</td>
<td>O3</td>
<td>O4</td>
<td></td>
</tr>
</tbody>
</table>

Experimental research design is executed by selecting 20 TYBCOM students of Virar region and are bifurcated randomly in control and experimental group of 10 each. The students of treatment group are delivered online lecture through PowerPoint teaching method and the students of control group are delivered lecture through E-textbook method. Non - Parametric Two independent sample test is applied using SPSS 26 to examine significant difference in pre student’s engagement and post student engagement of both control and experimental group

**Table No-1 Reliability Statistics**

<table>
<thead>
<tr>
<th>Dimensions of student engagement scale</th>
<th>Pre score reliability</th>
<th>Post score reliability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cognitive</td>
<td>0.718</td>
<td>0.854</td>
</tr>
<tr>
<td>Affective</td>
<td>0.816</td>
<td>0.732</td>
</tr>
<tr>
<td>behavioral</td>
<td>0.719</td>
<td>0.722</td>
</tr>
</tbody>
</table>

Pallant(2005) suggested above .70 as acceptable level of internal consistency. as all the Cronbach’s alpha values are above .70 indicating high level of internal consistency.

**Table No-2 Mean 2rank**

<table>
<thead>
<tr>
<th>group</th>
<th>N</th>
<th>Mean Rank</th>
<th>Sum of Ranks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prescore</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>experimental</td>
<td>10</td>
<td>12.15</td>
<td>121.50</td>
</tr>
<tr>
<td>control</td>
<td>10</td>
<td>8.85</td>
<td>88.50</td>
</tr>
<tr>
<td>Total</td>
<td>20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Postscore</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>experimental</td>
<td>10</td>
<td>15.05</td>
<td>150.50</td>
</tr>
<tr>
<td>control</td>
<td>10</td>
<td>5.95</td>
<td>59.50</td>
</tr>
<tr>
<td>Total</td>
<td>20</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Table No-3 Mann-Whitney U Test**

<table>
<thead>
<tr>
<th></th>
<th>prescore</th>
<th>postscore</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mann-Whitney U</td>
<td>33.500</td>
<td>4.500</td>
</tr>
<tr>
<td>Wilcoxon W</td>
<td>88.500</td>
<td>59.500</td>
</tr>
<tr>
<td>Z</td>
<td>-1.279</td>
<td>-3.483</td>
</tr>
<tr>
<td>Asymp. Sig. (2-tailed)</td>
<td>.201</td>
<td>.000</td>
</tr>
<tr>
<td>Exact Sig. [2* (1-tailed Sig.)]</td>
<td>0.218</td>
<td>0.000</td>
</tr>
</tbody>
</table>
Non-parametric Mann Whitney u test is applied as the sample size is less than 30 to examine the significant difference in online student engagement of control and treatment group. It is seen that pre mean score of experimental group = 12.15, pre mean score of control group = 8.85 and p value of Mann Whitney U test = 0.201 indicating insignificant difference in the pre mean scores of experimental and control group. It can be also seen that post mean score of experimental group = 15.05, pre mean score of control group = 5.95 and p value of Mann Whitney U test = 0.000 indicating significant difference in the post mean scores of experimental and control group.

CONCLUSION
It can be clearly seen that PowerPoint teaching method is effective in enhancing the student’s engagement in online learning. Innovative slides not only enhance the student’s engagement with respect to cognitive, behavioral and affective but it also helps in improving the overall performance of the students during the exam. Thus similar techniques can also be used in offline teaching to increase the student’s engagement in offline learning. Focus must be given on teaching through innovative slides and not E-book Videos related to the content can also be shown to the students to motivate them in learning.

REFERENCES