

# Usage of the ‘Tools and Techniques’ in ‘Online Teaching and Learning’ becomes more productive & effective, when right pedagogy is chosen based on students’ Learning abilities and styles

Prof. Dr. K. Geetha<sup>1</sup>, Bareena M Leo<sup>2</sup>

<sup>1</sup>*Principal, Department of Education, Dr. MGR Educational & Research Institute, (Deemed University), Maduravoyal, Chennai, India.*

<sup>2</sup>*Research Scholar, Department of Education, Dr. MGR Educational & Research Institute, (Deemed University), Maduravoyal, Chennai, India.*

*Email: <sup>1</sup>geetha.bed@drmgrdu.ac.in, <sup>2</sup>bareenaleo1123@gmail.com,*

## Abstract

The paper is focused on to disclose the factors that actually make the usage of **Tools and Techniques in ‘online teaching and learning’** to work for the best possible learning to happen. The authors believe that only the **right pedagogy** (together with the **right content**) chosen based on **Student’s learning abilities and styles**, makes the learning better. Thus it is to say that the student should get the choice of appropriate way to learn and the style that suits him/her better for better learning to happen; and it is the learning process that has to be more important, and the teacher’s involvement in the process should be only to the extent of **facilitation, moderation and intervention** to correct and clarify, where the students go wrong or land in confusion in learning to understand. While the **Tools and Techniques in Online Teaching & Learning** are very essential, their quality gets expressed through catalyzing the learning process. Towards this the teacher has to play the appropriate role as mentioned - the **facilitator, moderator and intervener** - and should **not just be a deliverer of knowledge**, which is only a role of content deliverer. Such a delivery of knowledge-content through lecture, in most of the cases, is **not received, absorbed, assimilated and adopted** to attain the knowledge level, which enables **analysis, application and evaluation in a contextual canvas**, possible. The discussions enabled in the paper, hence, are more directed on how to make the students get **emotionally interested, intellectually involved, consistently focused in order to learn and understand to analyze, apply and evaluate**, with the knowledge facets being focused upon, using his existing knowledge interacting, so as to make the learning attain fruition.

**Keywords**—Online Teaching & Learning - Learning Content - Pedagogy - ICT Tools; Student Engagement - Students Learning modes and styles - Understanding to learn to analyze, apply and create to innovate.

## I. METHODOLOGY

The paper focused on usage of **Pedagogical techniques and ICT tools** is based on a descriptive study taking references from the pre-existing secondary data that is found to be relative to the current period of time. The techniques and tools referred and discussed about are relevant to the current learning environment in India and hence the reader

could find them useful and appropriate with certain limitations on the choice of ICT tools which may be further useful and catering to the needs of ease of usage.

## II. INTRODUCTION

Online ‘Teaching and Learning’, though looks productive and effective, one cannot accept that it delivers the best and that it enables students to learn and understand to analyze, apply and

evaluate the learned concepts in a contextual canvas. For the said level of learning and understanding to happen, there is much more that the process is expected to do to the learner. It is from the point of view of the learner that the process has to get its needed improvements.

**Online Teaching and Learning is actually evolving still.** While the right content is available, it is still in standard formats. The crux of the problem is that the method of teaching is still to gear up to cater to the customized needs of largely different students with different modes of learning abilities.

It is generally felt that we had come a long way in developing 'Teaching & Learning' formats of varied nature and that there is not much to do. But the fact is that there is widening gap between the teacher and the taught (learner). The gap could be reduced only through a transformation which needs to happen in the learning mode, which means that there should be a positive change in teaching side. In fact, the teaching, the very term has to change and it is not the teacher, but it should be the informed facilitator. The whole process should be more customized addressing the issues in learning styles, as there cannot be a common and consolidated process of teaching with 'one all, fit all' format. Only customized process which is individualistic in nature has to be adopted. That is, if there are 40 students in a class, there could be, hypothetically, 40 different ways needed for all of them, not just to learn, but to understand to analyze, apply and evaluate, in a contextual canvas, which is not possible through a formatted teaching process. And the teacher has to take the role of a facilitator, moderator and intervener, supported by the teacher's knowledge as resource to enable the students to **get interested** with the contextual elements which they like, with the **supportive narratives** that are attracted to, with the **associative knowledge** that their intellect feeds them and the **chosen time for their study** which for them is ripe and receptive. While there cannot be great differences among the students in each of these components, the differentials though minor and subtle, make a

big difference for each of them to turn on to read or listen, as they like, to understand newer knowledge facets with their existing knowledge as back-ground and at a place and time that they find more convenient to them. The question here is 'When would all that work together?'

All these can be made to happen with a task given to the students, the completion of which will give opportunity for their **own expression, supportive narratives** and a **feeling of discovery** which each of them would experience. Ideally it is to feed to the 'individual' as a person - 'the ego'. So here, if we closely analyze, majority of the learning to understand happens through the *students' own choices, efforts and narratives, which become motivators and activators for the students to get engaged with the tasks.* Every student should have the feeling of 'I did it'. The 'I did it' factor is very essential for every student, as no one, generally, will be willing to just accept what others profess. It is the people's tendency to project their personal expression in words and deeds. The students, more especially, Matriculates, due to the age as an additional factor, will be more emotionally charged to make it (I did it) happen anytime and every time. And further they are of the age group which attains certain level of basic knowledge and would yearn to upgrade it. It is self-learning that suits better and makes learning happen, and the teacher's facilitation, moderation and intervention for corrections and clarifications, have to be the cues that need to work for the 'learning' to attain the required levels of fruition.

### III.RESULTS & DISCUSSIONS

There are two major things which are responsible for 'in-attention', disinterest and 'distraction' coming in the way of the students' wholistic engagement in effective learning (done generally through reading and listening, as experiential learning does not form a part of student's learning life, except in internships or industry-engagement). (Ref.No.1) The whole problem, in a significant percentage of students facing set back in their learning, is "they join a program keeping in mind a job that could be a

probability at the end of graduation’. But the student having absolutely no interest in pursuing that program, which he/she joined, due to lack of basic knowledge in the particular program (which if exists will give a feeling to the students that ‘I know it’ or ‘I am aware of it’) cannot at all move ahead and it will therefore be a failed choice and attempt. **We are not discussing this issue here in this paper.** It is planned to discuss here only on the issues of the students, who consciously join a program (having the basic knowledge required) which they want to pursue, but are unable to catch up with the learning - online.

So it is a case of students in a classroom who chose to study a program and gain knowledge and skills in the program’s purview. And it is again a case of their **inability to learn and understand to analyze, apply and evaluate in a contextual framework.**

*“Below, we provide specific ideas for how to teach students to analyze and critically evaluate ideas and assess their abilities to do so. These activities and assessments require students to identify assumptions, weigh competing evidence, make decisions, imagine alternatives, and build arguments.”*

#### **Ref.No.2**

What is that the teacher could do in a situation like this? The teacher could perhaps also assume that the teaching of a lesson through a lecture done, did not reflect the level of learning across all students of the class, that the teacher expected. In a situation like this, the challenges before the teachers are more on the pedagogy side, rather than on the content side. The freshly inducted teachers, specially, and others considering the needs, have to be trained periodically, more in a bid to connect to the psyche of the different types of students to find the individual styles of learning to adopt the pedagogical modes that are more rewarding in terms of learning by students. The teaching, then, has to be modified adopting the pedagogical ways that help learning more through learning rather than through the

teaching. So the teachers have to be more facilitative rather than in the knowledge delivering mode through lecturing.

***“With large classrooms, it’s not always easy to personalise lessons, but using a mixed learning approach throughout coursework can help you cater to each type of learning style. You may decide to focus on a particular learning type each lesson, or incorporate multiple strategies within each lesson. The most important element is first recognizing the differences in student learning – the rest will flow from there”.***

#### **Ref. No. 3**

If a serious psychological study is done on the learning process, it would be vividly clear that students learn, when they want to learn, and they would learn the way, they would like to learn. So, here, the psyche of students matter more which will be indicative of the fact that learning has to be more pronounced and focused, rather than jumping into the process of teaching. The interest and the need are closely associated terms. The interest will ignite and engage the students mind to get in to an activity. Similarly, the need will force the students to create interest in a particular learning, which they will pursue. So interest and / or the need become the cause for learning, which is the first thing to ensure. Then there should be an **achievable challenge** and the **quantum of time and effort should be appropriate** enough to suit the **student’s capabilities**. And while in evaluation, the **student should feel that he has discovered, learnt and attaches a pride in knowing or learning.**

So the techniques adopted by the teacher should address the psyche and satisfy the student so that there is a positive engagement, focus and thereby learning that is conceptual initially and associatively supportive and relative to expand the knowledge sphere, so that the student has definitive expression, supportive narratives and a summary that goes to form a gamut of information which can make the

student speak about with confidence and competence with the associative and corroborative narratives.

Generally students turn in to study, when there is a basic interest, when there is a challenge, a definite possibility to learn a concept or a lesson, conceptually useful and essentially applicable and largely helpful for further study, for an analysis for wider application and evaluation. Further the time convenient and comfortable for such an engagement also weighs in the minds of students. So the students have to be emotionally pulled towards the objective, they have to be provided with a calibrated challenge, for an attainment of learning with a reasonable effort, having a wider application, being able to evaluate for a documented future usage or application.

*Calibration concerns (a) the deviation of a person's judgment from fact, introducing notions of bias and accuracy; and metric issues regarding (b) the validity of cues' contributions to judgments and (c) the grain size of cues. Mis-calibration hinders self-regulated learning (SRL). Considering calibration in the context of Winne and Hadwin's [Winne, P.H., & Hadwin, A.F. (1998). Studying as self-regulated learning. In D.J. Hacker, J. Dunlosky, & A.C. Graesser (Eds.), Metacognition in educational theory and practice (pp. 277–304). Mahwah, NJ: Erlbaum.] SRL model and Winne's [Winne, P.H. (2001). Self-regulated learning viewed from models of information processing. In B.J. Zimmerman & D.H. Schunk (Eds.), Self-regulated learning and academic achievement*

#### Ref.No.4

Objectives	Personal attainments	Pedagogical Techniques	ICT Tools	Evaluation in Marks / Grades / Prizes
Create Interest - emotional pull	Feeling of achievement (Ego satisfaction)	Offering of choices to learn, Open contexts, visible scope for achievement. <u>Questioning</u> , <u>Quiz</u> , <u>Scope for speaking</u> (Student seminars or presentations)	<u>Questionnaire (Reading Comprehension)</u> PDF File - Reading Passage to answer a set of Questions at the end ----- <u>Quiz</u> (Google form) ----- <u>Presentation</u> Power Point Presentation	Percentages of Marks <u>A, B, C</u> <u>Grades</u> Objects of Value
Challenge - pride of encountering	Projection of personal ability. Feeling of achievement	<u>Presentations</u> , <u>Quiz</u> , <u>Evaluation of Reading Comprehension</u>	<u>Questionnaire (Reading Comprehension)</u> PDF File - Reading Passage & a set of Questions ----- <u>Quiz</u> (Google form) ----- <u>Presentation</u> Power Point Presentation	Percentages of Marks <u>A, B, C</u> <u>Grades</u> Objects of Value

Definitive possibility of attainment	Assurance of favourable result with the time and effort put	<u>Reading and Writing scope</u> (Reading & Note taking), <u>Listening and answering</u> , All activities with achievable objectives	<u>Reading &amp; Writing Assignments</u> <u>Listening Audio Clippings &amp; Answering</u>	Percentages of Marks <b>A, B, C</b> <b>Grades</b> Objects of Value
Evaluation & measurement possible	Estimation, projection and creativity	<u>Mark based assessments</u> , <u>Levels of achievements</u> , <u>Self assessments</u>		Percentages of Marks <b>A, B, C</b> <b>Grades</b> Objects of Value

Techniques that the teachers / Facilitators should employ should be to make the students engage in activities that enhance their personal images, abilities, achievements thus making them not only interested, but also making them actively engaged, highly focused, learn to express and display their capabilities such that all the processes at the end of each give them personal satisfaction.

***“The important features of Blended Learning environment with the right pedagogical techniques and ICT tools are:***

- ☐ Increased student engagement in learning.
- ☐ Enhanced teacher and student interaction.
- ☐ Responsibility for learning.

- ☐ Time management and flexibility
- ☐ Improved student learning outcomes
- ☐ Enhanced institutional reputation.
- ☐ More flexible teaching and learning environment
- ☐ More amenable for self and continuous learning
- ☐ Better opportunities for experiential learning

***The advantages of Blended Learning for students include increased learning skills, greater access to information, improved satisfaction and learning outcomes, and opportunities both to learn with others and to teach others.”***

#### **Ref.No.5**

***The table below is to enlighten on the processes and achievements:***

<b>Pedagogical Techniques</b>	<b>ICT Tools</b>	<b>Processes of Learning</b>	<b>Type of personal gratification</b>
Scope for checking alertness & Accuracy <b>Quiz</b>	<b>Google form</b>	Recall the learning; Mentally checking the correctness; Ascertain the correctness	A feel of the ability to have known the right answer / solution
Scope for Reading & Questioning	<b>E-books / PDF File</b>	Ability to read and understand, ascertain the correct answers; doubly clarifying by reading the passage again if required.	Feel of having known better reading technique and understand the meaning and ascertaining the correct answer and solution.

Scope for Listening & Questioning	Listening to Audio File with a long pause to check answers	Ability to listen and understand, ascertain the correct answers; doubly clarifying by listening once again the audio file, if required	Feel of having known better Listening techniques and understand the meaning and ascertaining the correct answer and solution.
Scope for Speaking	Power Point Presentations	Ability to Speak and explain, what is understood and learned and seeking a feedback	Feel of having known the skill to speak and use the techniques for better expressions
Scope for Writing	Power Point Presentations	Ability to learn and write brief points covering key aspects of the learnt lesson, which can enable a better presentation	Feel of having known the skill to write effectively to aid better presentation possible, without leaving any essential points of key aspects.

Assignments For better learning	Tools / Online Platform	Processes of Learning	Type of personal gratification
Quizzes	Google form Google Classroom	Recall the learning; Mentally checking the correctness; Ascertaining the correctness	A feel of the ability to have known the right answer / solution
Reading & Questioning	E-books / PDF File Google Classroom	Ability to read and understand, ascertain the correct answers; doubly clarifying by reading the passage again if required.	Feel of having known better reading technique and understand the meaning and ascertaining the correct answer and solution.
Listening & Questioning	Listening Audio File with a long pause to check answers Google Classroom	Ability to listen and understand, ascertain the correct answers; doubly clarifying by listening once again the audio file, if required	Feel of having known better Listening techniques and understand the meaning and ascertaining the correct answer and solution.
Speaking	Power Point Presentations Google Meet and other platforms	Ability to Speak and explain, what is understood and learned and seeking a feedback	Feel of having known the skill to speak and using the techniques for better expressions



Writing	Power Point Presentations Google Classroom Google Meet	Ability to learn and write brief point covering key aspects of the learnt lesson, which can enable a better presentation	Feel of having known the skill to write effectively to aid better presentation possible, without leaving any essential points of key aspects.
Visual and spatial learner	Video Clippings, Reels WhatsApp, etc.,	Learning through visual instructions and demonstration	Feel of having the ability to imitate and improvise, Updating through instructions and interaction

### PEDAGOGICAL TECHNIQUES & ICT TOOLS IN SUPPORT OF EFFECTIVE ONLINE LEARNING

In order to make the On line learning better and more effective, the Techniques chosen have to be more pedagogically appropriate and the Tools more facilitating, clear, effective, easy and faster for use. Better pedagogical techniques chosen and most appropriate Tools employed for usage will make the Online Learning most productive & effective.

**Perceived usefulness** - It actually depends on the degree to which the teachers have a belief that their using the technology has a direct link to their improved performance. If they feel it would be useful and start using the ICT tools, then they would have positive attitude to effectively use ICT in the classroom. Use of ICT tools with different pedagogical techniques and methods is the game changer in Online Teaching and Learning.

**Ref.No.6**

### CONCLUSION

With the Online Teaching & learning becoming more pressing need of now and future too, it is important to know what should be the Pedagogical Techniques to be adopted and ICT tools to be used. With better and better usage of the pedagogical techniques and ICT tools of appropriate nature, there is a greater possibility of making the Online Teaching & learning, more productive and effective. It can be conclusively stated through different instances

of supporting features and references that the usage of appropriate Pedagogical techniques and effective ICT tools are important for the Online Teaching & learning to be more and more productive and effective.

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SiminGhavifekr[1],

ThanushaKunjappan[2]

, LogeswaryRamasamy [3], Annreetha

Anthony [4]