विद्यया ऽ मृतमश्नुते

एन सी ई आर टी
NCERT

ISBN 978-81-952542-3-1

ACCREDITED WITH GRADE A+ NAAC

Proceedings of the 9th National Conference on Mathematics Education

NCME 2020

Edited by

Dr. Ashwani Kumar Garg

Mr. Aji Thomas

Regional Institute of Education, Bhopal

National Council of Educational Research and Training

Proceedings of the 9th National Conference on Mathematics Education

NCME 2020

Editors

Dr. Ashwani Kumar Garg
Associate Professor, Mathematics, RIE, NCERT, Bhopal

Mr. Aji Thomas
Assistant Professor, Mathematics, RIE, NCERT, Bhopal

REGIONAL INSTITUTE OF EDUCATION, BHOPAL
National Council of Educational Research and Training

Proceedings of the 9th National Conference on Mathematics Education

Editors : **Dr. Ashwani Kumar Garg**

Mr. Aji Thomas

Published By : Regional Institute of Education, NCERT,
Shyamla Hills, Bhopal (M.P.) – 462002

ISBN No. **978-81-952542-3-1**

First Published: 2021

Prerna Publications
Deshbandhu Bawan, 26-B, Press Complex,
M.P. Nagar, Bhopal (M.P.)-462011
Tel : 0755-4940788, Email : prernapublicationbpl@gmail.com

Proceedings of the 9th National Conference on Mathematics Education, NCERT, RIE, Bhopal, December 2020.
ISBN No. 978-81-952542-3-1

Critical Analysis of the Online Learning Environment

Vini Sebastian
Associate Professor, St. Xavier's Institute of Education, New Marine Lines, Mumbai

ABSTRACT

Mathematics as a subject consists of abstraction as well as generalisation as its content requirements. In order to achieve mastery in Mathematics subject, the teacher puts in effort to provide sensory concrete knowledge by using teaching-learning resources that the child can touch and feel and develop integrated concrete knowledge where concrete experiences are then connected to abstract knowledge. A Mathematics teacher has to thus fulfil the requirements of not only completing the portion by solving the problems but also ensuring that sufficient pupil interaction is taking place to solve the difficulties in Mathematics. Mathematics teaching has changed its platform from a face to face mode to an online mode. The online mode of teaching has heightened the anxiety of Mathematics teachers. It has also made students' and parents' anxious A subject that was typically transacted through chalkboard is now done on whiteboard/online boards. The skills required are now different and all teachers had to acquire those skills. These and many more aspects are discussed in the study conducted to understand the challenges that teachers face in creating an appropriate online learning environment. The TPACK model help in understanding the online situation and also help in critical analysis of the whole situation to understand the challenges and also the anxieties which the challenges would cause. The paper thus highlights the various areas of the online situation and analyses the three aspects – content, technology and pedagogy to throw more light on the online learning environment for Mathematics teaching-learning.

***Keywords**: Online skills, Online learning environment, Digital tools, TPACK model, Challenges in Mathematics learning.*

Introduction

Mathematics is known as abstract Science consisting of signs, symbols, numbers, quantities and shapes. Since Mathematics is an abstract concept, teaching the subject requires concerted efforts on the part of the teacher and students. For generations Mathematics is considered as a difficult subject and a lot of effort is put in by teachers and students to improve the performance. Mathematics is not devoid of problems that all other subjects face, that is difficulty in understanding concepts, learning difficulties and anxieties that are specific to this subject. The subject also has a psychomotor dimension to it, which is unless you don't do it; you will not understand it or master it. It is purely a psychomotor domain subject. In the COVID-19 situation we are all under lockdown and the teaching-learning has been conducted online. The present study has focused upon the state of Mathematics learning and the anxieties of its learning, under this circumstance.