

# Report on OneDay International Symposium on STEM EDUCATION

IQAC, West Guwahati College of Education in collaboration with **CEAM** organised a One -day Virtual International Symposium which was graced by the presence of eminent personalities with expertise on the various fields of education and academics.

It was joined by participants and distinguished personalities from all over the globe holding expertise in various fields.

The proceedings of the meetings began with the Welcome address by Dr. V.M Sasikumar, President CEAM, keynote address was delivered by the Principal of West Guwahati College of Education.

The first session started with Dr.M.S Geetha, Former Dean Faculty of Education, University of Kerela who delivered and enlightened the participants on STEM & NEP 2020. She highlighted on the following key points-

- 1) New Education Policy 2020
- 2) Characteristics of STEM Lesson
- 3) How STEM Education helps the child
- 4) Ways through which an Institution can become a STEM Educational Institution
- 5) Necessity & Importance of STEM
- 6) Methods of teaching STEM Education

She concluded her session with the necessity of Integrating STEM Education into the curriculum

Prof. Protiva Rani Karmaker, Institute Of Modern Languages, Jagannath University of Dhaka added further information on STEM & PSYCHOLOGY in the second session.

She highlighted on the following points-

- 1) Life Skill Education.
- 2) Communication facility.
- 3) Critical Thinking.

- 4) Ethical, imaginative, skills.Etc.
- 5) Educational Resources.
- 6) Curiosity.
- 7) Behavioural and psychological changes.

Prof. K.Y Benedict, Mar Theophilus Training College, Kereladelivered on the third session of the day where he discussed on the key points-

- 1) History of STEM.
- 2) Definition of STEM.
- 3) Why STEM matters?
- 4) What is STEM Curriculum?
- 5) What can we do with STEM?
- 6) Why STEM matters?
- 7) Teachers'role in STEM.

Dr. Adit Gupta, Director, Modern Institute of Education, Jammu further added his valuable inputs in the fourth session. He highlighted the key points-

- 1) Teachers' work load and technology
- 2) Policy Implementation.
- 3) Socio-Economic Disparities.
- 4) Challenges for Implementing STEM Education.
- 5) Technological Division.
- 6) Limited Access to Cutting Edge Technology.
- 7) Standardised Technology Pressure.

The resource person for the final session of the symposium was Prof. Mohamadunni Alias Mustafa, Central University of Kerela. He delivered on points such as-

- 1) Meaning of Different branches of STEM
- 2) Various branches of Education
- 3) Evolution of STEM Education
- 4) Stem Education Levels and Thinking degrees

5) 21<sup>st</sup> Century skills through STEM etc.

The Vote of Thanks was delivered by Dr. Priyanki Barpujari, Assistant Professor, West Guwahati College of Education and the day concluded with the valedictory session from Mr. Mrityunjoy Das Gupta, Assistant Professor West Guwahati College of Education where he concluded the virtual One-day International Symposium, thanking the organising team along with the Principal Dr. Gitanjali Choudhury and the IQAC Coordinator Barsita Sarkar and the collaborating team headed by the President of CEAM, Dr. V.M Sasikumar. He extended his gratitude towards the resource persons of the symposium and all the participants present in the sessions.

The meeting came to an end followed by an interactive session with the resource persons. The event proved to be a successful one.

## Archives from the Event-

### Promotion of the Symposium



The poster features two circular logos at the top: the West Guwahati College of Education logo on the left and the Council for Educational Administration & Management (CEAM) logo on the right. The main title is "ONE DAY INTERNATIONAL SYMPOSIUM ON STEM EDUCATION". Below this, it states "Organised by IQAC, WEST GUWAHATI COLLEGE OF EDUCATION" and "In collaboration with COUNCIL FOR EDUCATIONAL ADMINISTRATION & MANAGEMENT (CEAM)". The date is "DATE : 18<sup>TH</sup> DECEMBER 2023". At the bottom, it lists the registration fees: "REGISTRATION FEE (First come first service) FOR STUDENTS- RS.100/, FOR TEACHERS- RS.500/". The platform is "PLATFORM-GOOGLE MEET" with a small 3D cube icon.

**ONE DAY INTERNATIONAL SYMPOSIUM ON STEM EDUCATION**

*Organised by*  
**IQAC, WEST GUWAHATI COLLEGE OF EDUCATION**

**In collaboration with**  
**COUNCIL FOR EDUCATIONAL ADMINISTRATION  
& MANAGEMENT (CEAM)**

**DATE : 18<sup>TH</sup> DECEMBER 2023**

REGISTRATION FEE (First come first service)  
FOR STUDENTS- RS.100/, FOR TEACHERS- RS.500/

**PLATFORM-GOOGLE MEET**

# DISTINGUISHED RESOURCE PERSONS

## INAUGURATION 9.30am-9.40am



WELCOME SPEECH  
**DR. V. M. SASIKUMAR**  
PRESIDENT, CEAM



KEYNOTE ADDRESS  
**DR. GITANJALI CHOUDHURY**  
PRINCIPAL, WGCE

## RESOURCE PERSONS



**DR. M. S. GEETHA**  
FORMER DEAN FACULTY OF EDUCATION  
UNIVERSITY OF KERALA  
TOPIC : STEM & NEP 2020

SESSION 1  
TIME : 9.45am-10.45am



**PROF. PROTIVA RANI KARMAKER**  
INSTITUTE OF MODERN LANGUAGES,  
JAGANNATH UNIVERSITY, DHAKA, BANGLADESH  
TOPIC : STEM EDU. AND PSYCHOLOGY

SESSION 2  
TIME : 11.00am-12.00pm



**PROF. MOHAMADUNNI ALIAS MUSTHAFA**  
PROFESSOR & DEAN, CENTRAL UNIVERSITY OF KERALA  
TOPIC : INTEGRATION OF STEM IN PEDAGOGY

SESSION : 3  
TIME : 12.10pm-1.00pm



**Prof. Dr. K. Y. BENEDICT**  
PRINCIPAL (Rtd.)  
Faculty of Physical Science Education  
Mar Theophilus Training College  
Nalanchira, Thiruvananthapuram Kerala  
TOPIC : USE OF TECHNOLOGY IN STEM

SESSION : 4  
TIME : 2.00pm-3.00pm



**DR. ADIT GUPTA**  
DIRECTOR, MODEL INSTITUTE OF EDUCATION  
& RESEARCH, JAMMU  
TOPIC : STEM & CHALLENGES IN TEACHING  
LEARNING PROCESS

SESSION : 5  
TIME : 3.00pm-4.15pm

# AGENDA OF THE EVENT

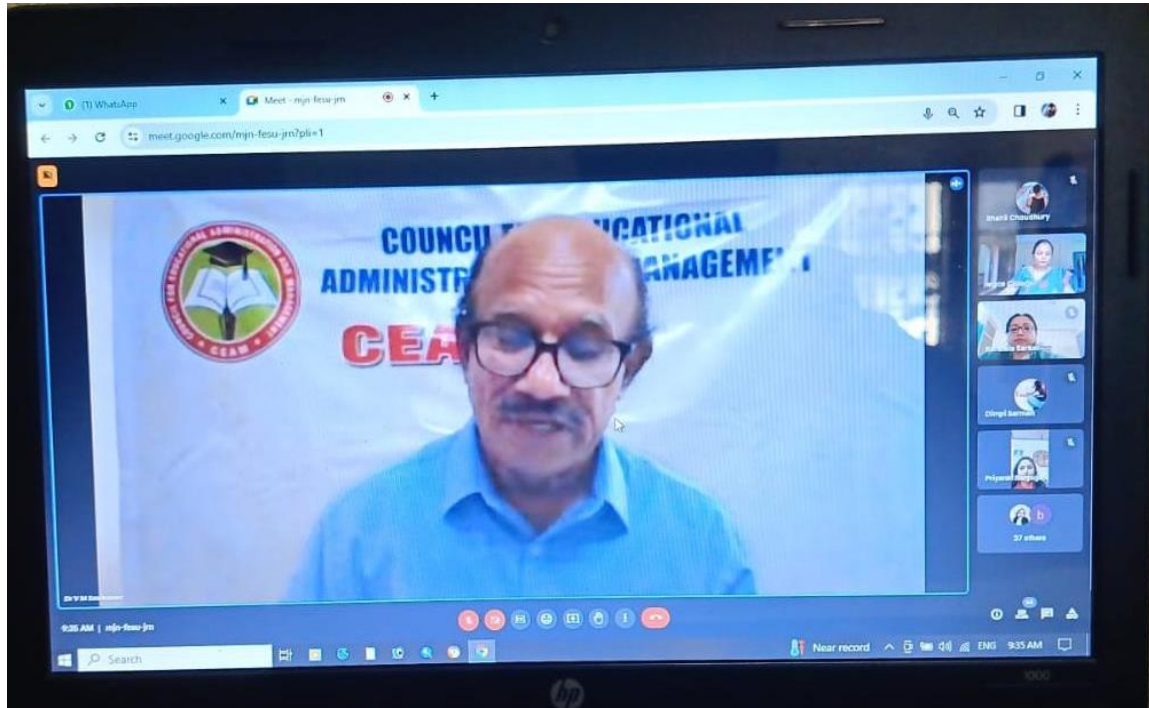
## AGENDA

- ➔ 9.30am-9.40am .....INAUGURATION  
WELCOME SPEECH  
**DR. V. M. SASIKUMAR**, President, CEAM  
KEYNOTE ADDRESS  
**DR. GITANJALI CHOUDHURY**,  
PRINCIPAL  
WEST GUWAHATI COLLEGE OF EDUCATION
- ➔ 9.45am-10.45am.....STEM & NEP 2020  
**DR. M. S. GEETHA**  
FORMER DEAN FACULTY OF EDUCATION,  
UNIVERSITY OF KERALA
- ➔ 11.00am-12.00pm.....STEM EDUCATION AND PSYCHOLOGY  
**PROF. PROTIVA RANI KARMAKER**  
INSTITUTE OF MODERN LANGUAGES , JAGANNATH  
UNIVERSITY, DHAKA, BANGLADESH
- ➔ 12.10pm-1.00pm.....INTEGRATION OF STEM IN PEDAGOGY  
**PROF. MOHAMADUNNI ALIAS MUSTHAFA**  
PROFESSOR & DEAN, CENTRAL UNIVERSITY OF KERALA
- ➔ 1.00PM.....**BREAK TIME**
- ➔ 2.00pm-3.00pm.....USE OF TECHNOLOGY IN STEM  
**Prof. Dr. K. Y. BENEDICT**  
PRINCIPAL (Rtd.)  
Faculty of Physical Science Education  
Mar Theophilus Training College Nalanchira,  
Thiruvananthapuram Kerala
- ➔ 3.00pm-4.15pm.....STEM & CHALLENGES IN TEACHING LEARNING PROCESS  
**DR. ADIT GUPTA**  
DIRECTOR, MODEL INSTITUTE OF EDUCATION AND  
RESEARCH, JAMMU
- ➔ 4.15pm.....**VELEDICTORY WITH VOTE OF THANKS**

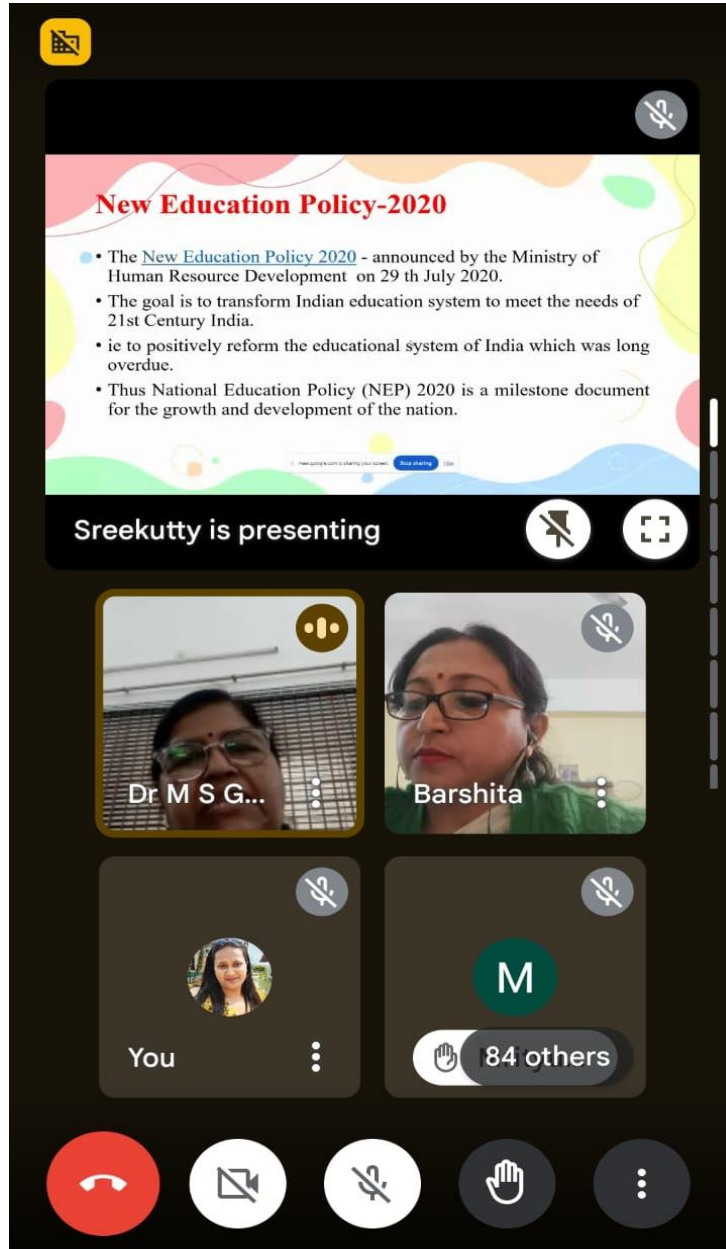
## OBJECTIVES

- TO IDENTIFY STEM EDUCATION IN SCHOOL LEVEL.
- TO ENGAGE STUDENTS IN EXPERIENTIAL LEARNING THROUGH STEM.
- TO PERSIST IN PROBLEM SOLVING METHODOLOGY.
- TO ENHANCE INSTRUCTIONAL TECHNOLOGY IN TEACHING & LEARNING.
- TO INCULCATE THE POSITIVE ATTITUDE TOWARDS STEM EDUCATION.
- TO EMBRACE COLLABORATION.

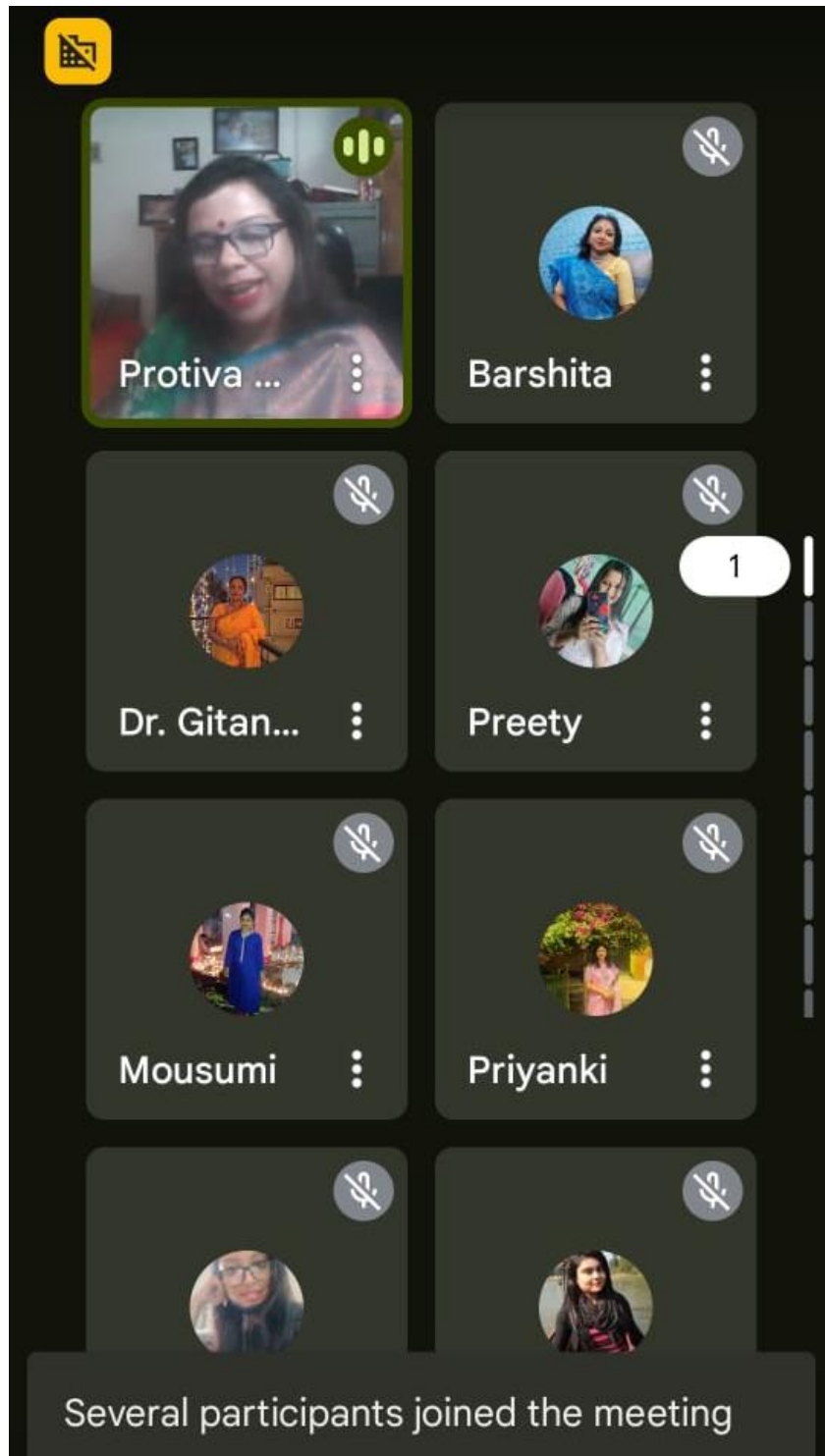
## DR. V.M Sasikumar:



# M.S Geetha:



Dr. Protiva Rani Karmaker:





# Dr. K.Y Benedict:

The screenshot displays a Zoom meeting interface. At the top, a presentation slide is visible with the title "TRANSDISCIPLINARY ROLE OF TECHNOLOGY IN STEM". The slide content includes a diagram with four levels: Level 1: Disiplinary, Level 2: Multidisciplinary, Level 3: Interdisciplinary, and Level 4: Transdisciplinary. Below these levels is a central box labeled "Role of Transdisciplinary Role" containing the following categories: PLANNING (with sub-points: Problem Solving, Research, Innovation, Creativity, Critical Thinking, Communication, Collaboration, Teamwork, Leadership, Project Management, Time Management, Resource Allocation, Risk Management, Quality Control, Customer Satisfaction, Employee Engagement, Diversity and Inclusion, Sustainability, and Social Responsibility); EXPERTISE (with sub-points: Technical Skills, Industry Knowledge, Problem Solving, Innovation, Creativity, Critical Thinking, Communication, Collaboration, Teamwork, Leadership, Project Management, Time Management, Resource Allocation, Risk Management, Quality Control, Customer Satisfaction, Employee Engagement, Diversity and Inclusion, Sustainability, and Social Responsibility); IMPLEMENTATION (with sub-points: Technical Skills, Industry Knowledge, Problem Solving, Innovation, Creativity, Critical Thinking, Communication, Collaboration, Teamwork, Leadership, Project Management, Time Management, Resource Allocation, Risk Management, Quality Control, Customer Satisfaction, Employee Engagement, Diversity and Inclusion, Sustainability, and Social Responsibility); ETHICS (with sub-points: Integrity, Honesty, Transparency, Accountability, Confidentiality, Data Privacy, Cybersecurity, Intellectual Property, Environmental Stewardship, and Social Impact); and EVALUATION (with sub-points: Performance Metrics, Customer Feedback, Employee Satisfaction, Innovation Pipeline, and Social Impact). The slide also features three callouts: "Role 1: Interdisciplinary Role", "Role 2: Multidisciplinary Role", and "Role 3: Transdisciplinary Role".

Below the slide, the text "Dr. K. Y. is presenting" is displayed. The participant list at the bottom shows "Dhruba ..." (with a green circle containing 'D'), "You", "Dr. K. Y." (with a video feed), and "Deba 53 others".

## Dr. Adit Gupta:

The image shows a Zoom meeting interface. At the top, a yellow icon with a grid pattern is visible. Below it, a presentation slide is displayed with the title "Challenges for Implementing STEM Education". The slide lists three items: "Teacher Workload", "Policy Implementation", and "Socio-Economic Disparities". Below the slide, the text "Adit is presenting" is shown. The bottom part of the screen shows a gallery view of participants. There are four visible tiles: "Adit" (a man in a black jacket), "wgce" (a blue circle with a white 'W'), "You" (a woman with glasses), and "Bars | 51 others" (a woman in a blue sari). Each tile has a mute icon in the top right corner and a three-dot menu icon in the bottom right corner.

**Challenges for Implementing STEM Education**

- Teacher Workload
- Policy Implementation
- Socio-Economic Disparities

Adit is presenting

Adit

wgce

You

Bars | 51 others

## Prof. M. N Musthafa:

The screenshot shows a Zoom meeting interface. At the top, there is a yellow icon in the top-left corner and a mute icon in the top-right corner. The main content is a presentation slide titled "STEM stands for:" with the following text:

- Science**: Science is about exploring and discovering how things work in the world around us.
- Engineering**: Engineering is using creativity and knowledge to solve problems and make cool things.
- Technology**: Technology is like magic made by humans. It's using clever tools and machines to do amazing things.
- Maths**: Math is like a puzzle. It helps us count, add, subtract, multiply, and divide.

The slide also features mathematical formulas like  $(a+b)^2$ ,  $ax^2+bx+c=0$ , and  $x^2 = \frac{a^2+b^2}{2}$ , along with icons of a lightbulb, gears, and a pi symbol.

Below the slide, the name "Professor M N Musthafa is..." is displayed with a mute icon and a full-screen icon. Below this, there are four participant cards:

- Professo...**: A card showing a video feed of Professor M N Musthafa, with a mute icon and a three-dot menu.
- Barshita**: A card showing a profile picture of a woman, with a mute icon and a three-dot menu.
- You**: A card showing a profile picture of the user, with a mute icon and a three-dot menu.
- Priya 46 others**: A card showing a profile picture of a woman, with a mute icon and a three-dot menu.

