Workshop on

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WHAT

'Easy 3 Dimensions and Augmented Reality (STEAM Education)'



Date & Venue: 30 June 2022 SEAMEO Hall, SEAMEO RECSAM, Penang, Malaysia

Facilitators:

Ts. Dr. Nur Azlina Mohamed Mokmin Mr. Ku Muhammad Zafri Bin Ku Wadzer Ms. Nurul Aisyah Binti Bakri & Mr. Muhammad Aminuddin Akmal Bin Mohd Hamizi Universiti Sains Malaysia

> Ms. Thong Ying Li SEAMEO RECSAM

Target Participants:

Primary / Secondary Science and / or Mathematics Teachers &

Secondary / University / Institute of Teacher Education / Matriculation Students

Organised by:

Southeast Asian Ministers of Education Organization Regional Centre for Education in Science and Mathematics

www.recsam.edu.my

Rationale

Classroom education is evolving at a faster pace and there's a growing awareness among educators that today's curriculum needs to evolve to meet tomorrow's reality. Beyond tools and technology, students need to develop new skills to solve tough problems, collaborate effectively and express ideas in new ways. To better understand these changes and evidence-based shifts in future classroom education, learning 3 Dimensions (3D) Augmented Reality (AR) / 3D can develop computational thinking, problem-solving, coding, and Science, Technology, Engineering, Arts, and Mathematics (STEAM) subjects to help to prepare students to address future challenges.

AR / VR are immersive technologies that are transforming the education field rapidly. AR / VR solutions can enhance classroom experiences and expand opportunities at all learning levels, and they have shown promising teaching and learning resource, particularly for education in STEAM. Further innovation can be done by investing in research, skill-building, content development, and equitable adoption of immersive technologies to improve the teaching and learning process. Virtual textbooks, classrooms, space education hubs, science laboratories, hospitals, operating rooms, etc. can be built using 3D AR.

This workshop consists of Introduction to 3D Object, 3D Animation, and Easy AR experience and technology. VR / 3D AR learning through this hand-on workshop is a great hands-on guide for the basics of VR and helps to get a better understanding of AR / VR design, 3D graphics, and Unity 3D. In this workshop, the Active Learning method is served as a catalyst for the skills development of the participants and is implemented for the teaching and learning of STEAM subjects and provides a more holistic and engaging education. It can be embedded into the regular curricula, not just as an extracurricular activity to provide an overview of the involved teaching and learning units and rationale. This hand-on lesson is enjoyable and the 3D AR technology can enhance their learning experience through working with a physics simulation engine.

Learning Objectives:

At the end of the workshop, participants will be able to:

- Learn the software and hardware related to 3D and AR.
- Learn about 3D printing.
- Build up a well-rounded skill set for creating graphically driven 3D applications with Unity experience or AR development knowledge.
- Learn how to create 3D features.
- Explore through examples of real applications using Unity to master essential digital art and design principles while learning the necessary skills to build interactivity into the projects.
- Deploy this new medium in the classroom directly and benefit from the AR-enriched offers
- Build an AR application and 3D virtual working applications.

Equipment

Equipment / material needed for the workshop will be provided by the organiser. Participants are required to bring their own laptops and smartphones for the workshop activities.

Workshop Programme (30 June 2022, Thursday)

Time	Activity
8.00 – 8.15 a.m.	Registration
8.15 – 8.30 a.m.	Briefing
8.30 – 10.30 a.m.	Introduction to 3D Object
10.30 – 11.00 a.m.	Group Photo & Morning Tea
11.00 a.m. – 1.00 p.m.	3D Animation
1.00 – 2.00 p.m.	Lunch
2.00 – 4.30 p.m.	Easy AR Experience and Technology
4.30 – 5.00 p.m.	Evaluation Closing & Certificate Presentation Ceremony

Note: This programme schedule may be subjected to changes without prior notice

Facilitators

- 1) **Ts. Dr. Nur Azlina Mohamed Mokmin**, *Centre for Instructional Technology & Multimedia, Universiti Sains Malaysia*
- 2) Mr. Ku Muhammad Zafri Bin Ku Wadzer (AR Developer), School of Computer Science, Universiti Sains Malaysia
- 3) Ms. Nurul Aishah Binti Bakri (AR Developer), Centre for Instructional Technology & Multimedia, Universiti Sains Malaysia
- 4) **Mr. Muhammad Aminuddin Akmal Bin Mohd Hamizi** (VR Developer), *Centre for Instructional Technology & Multimedia, Universiti Sains Malaysia*
- 5) Ms. Thong Ying Li, Education Specialist, Training & Research Division, SEAMEO RECSAM

Participation Fees

- Type 1 : RM 80 per student (Without Accommodation. For students only. *Please show student card)
- Type 2 : RM 90 per participant (Without Accommodation)
- Type 3 : RM 145 per participant (Twin Sharing)
- Type 4 : RM 195 per participant (Single Occupancy)

Accommodation at RECSAM International House

Check-in: 29 June 2022, 2.00 p.m. onwards Check-out: 30 June 2022, after the workshop

Food

Morning tea & lunch will be provided by SEAMEO RECSAM during the workshop sessions. For stay-in participants (Type 3 & Type 4), breakfast will be provided too.

Registration, Payment & Closing Date

Places are limited to a maximum of **50 pax** and will be given on a first come, first served basis.

To enroll, please register and pay online by **23 June 2022** via **shorturl.at/fkpyB** or scan the following QR code. Upload your payment slip for confirmation of registration.



Payment (Internet Banking)

Pay to: SEAMEO RECSAM Bank: MAYBANK GELUGOR BRANCH, PENANG Account Number: 5571 5700 0647

For Enquiries

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