Training on 360 Virtual Reality (VR) Educator

Organised by
Commonwealth Educational Media Centre for Asia (CEMCA), New Delhi
and
HELP University, Kuala Lumpur, Malaysia

Introduction

The concept of virtual reality (VR) has been known since the 1960's, however, with new technology inventions, VR has expanded its variety and scope. Currently, VR can be classified into two kinds, 1) desktop VR, also known as non-immersive VR and 2) non-desktop VR, which is immersive VR. Compared to the desktop VR characterised by virtual 3-dimensional (3D) games and simulations such as Minecraft, immersive VR uses 360° images and a head-mounted display (HMD) such as Google Cardboard or Oculus Lift for viewing. Immersive VR thus has a lower barrier and more flexibility for teachers to design and implement VR-based instructional activities in their own classrooms.

VR learning experiences are engaging and allow students to immerse themselves in content beyond what is possible in the real world. 360° VR is an immersive type of video content, allowing users to look around in all directions, and giving them the opportunity to control what they want to see. Presenting learning content through 360-degree spherical images or videos is not only more realistic than 3D animations, but also greatly reduces the cost and time of developing the VR content. More importantly, the production of 360° VR content does not require high-tech capabilities, implying that most school/university teachers might be able to develop the learning content on their own.

With a proper learning design, VR can help students develop more complex and higher order thinking. 360° VR solves the problems of using conventional 3D graphic-based VR, which is highly technical and is expensive in terms of both time and money. The idea is to develop a platform for teachers or industrialists to create 360-degree VR experiences which can then be consumed by the target learners. This platform needs to allow more than the freely available platform from Google (Google expeditions; 360 images with superimposed text, audio, videos and pictures).

Objectives:

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

- Use effectively the flexible and portable VR education system that can be accessed through various devices.
- Create 360-degree learning content and share it with their students.
- Implement various game elements to enhance the learning experience.
- Teach learners to download and engage through the learning contents.

Participants

The Online Capacity Building Programme was attended by the 48 faculty members of HELP University using self-enrolment in the university's Learning Management System. (See Annexure 1).

Resource Person

Dr. Kaushal Kumar Bhagat and his team
Indian Institute of Technology (IIT)
Kharagpur, India

Duration: 3 sessions x 2 hours/session (See Annexure 2).

Training mode: Online synchronous

Platform: Microsoft Teams

Day 1 (20/08/2021)

About 50 faculty members of HELP University attended. The training programme was inaugurated on August 20, 2021 by Prof. Datuk Paul Chan, Vice Chancellor, HELP University in the presence of Prof. Andy Liew, DVC. Dr. Manas Ranjan Panigrahi from CEMCA facilitated and coordinated the programme. Dr. Kaushal Kumar Bhagat from IIT Kharagpur explained the concept of 360 virtual reality and advantages of using 360 VR in the teaching and learning process. Then his team demonstrated different features of 360 VR Educator which is developed by Dr. Bhagat and his team in collaboration with CEMCA. Day 1 ended with Q&A session. The programme was conducted in synchronous mode through Microsoft Teams.

Day 2 (21/08/2021)

About 48 participants were trained to develop VR contents using 360 VR Educator. Dr. Bhagat and his team provided all support during the hands-on activity to all participants. The participants were engaged to develop one content using 360-degree VR platform as output and outcome. This session was conducted synchronous mode through Microsoft Teams.

Day 3 to Day 8 (22/08/2021-27/08/2021)

The participants were engaged to develop one content using 360-degree VR platform as output and outcome. This session was conducted asynchronous mode through a WhatsApp group. Participants were asked to submit an assignment at HELP LMS.

Assignment

Design and develop a 360 VR content using **360 VR Educator**. The participants are expected to use all the functionalities of the 360 VR Educator that were demonstrated on Day 1. The participants can choose the topic of their choice

Day 9 (28/08/2021)

Participants demonstrated their 360 VR content developed by them. Feedback were provided by the resource persons to the participants. Then Q&A sessions was conducted to understand users experience with 360 VR Educator. The resource person and his team noted all the concerns and problems faced by the participants. The closing ceremony was graced with the

presence of Prof. Madhu Parhar, Director, CEMCA. She emphasized the implementation of 360 VR Educator.

Annexure 1: List of participants

NO.	DEPT	NAME
1	A LEVELS	Anuar Shamsudin
2	A LEVELS	Aw Seng Hong
3	A LEVELS	Jaslinder Kaur Dhillon
4	A LEVELS	Kanagambigai
5	A LEVELS	Pang Huey Shen
6	ACC	Gopal Krishna a/l Veeriah
7	ACC	Mohd Jamil b Jelani
8	ACC	Chithra Latha
9	BUSINESS	Leu Fong Yuan
10	BUSINESS	Liew Huey Min
11	BUSINESS	Lim Kok Seng
12	BUSINESS	Ooi Kok Kee
13	BUSINESS	Simon Lim
14	BUSINESS	Vignes a/l Gopal
15	BUSINESS	K. Chandran
16	BUSINESS	Harjeet Kaur
17	CAREERSENSE	Tong Li Fern
18	COMM	Andy Hickson
19	COMM	Lai Jia Weng
20	COMM	Nur Farah bt Elias
21	COMM	Wong Zhi Wen
22	EDUC	Elis Johanes
23	EDUC	Priyadarshini
24	EDUC	Sylvia Ng Poh Yoke
25	ELMGS	Chung Tin Fah
26	ELMGS	Yan Huey Jiuan
27	HMC	Iskandar Dzulkarnain
28	HMC	Syafiq Amri
29	HMC	Dharminder Singh
30	HMC	Yu May Leen
31	HMC	William Qualbert Quah
32	HMC	Siva Subramaniam
33	ICT	Abdul Qayoom
34	ICT	Fong Pui Kwan
35	ICT	Naline Shanmugam
36	LANG	Anne Beatrice
37	LANG	Frankie Subon
38	MARKETING	Chang Te Hua
39	MGT STUD	Joel Guprit Singh
40	MGT STUD	Renee Pramila

41	MGT STUD	Vikneswari
42	PROVC	Gerard Louis
43	PSY	Goo Lyann
44	PSY	Ng Hui Wen
	PSY	Prihadi
	PSY	Tan Ze Wei
	SHOT	Hairul Hisam
	UOL	Choo Yeong Khong

ABBREVIATIONS	
ACC	Accounting & Finance
COMM	Communication
EDUC	Education
ELMGS	Entrepreneurship, Leadership & Management Grad School
HMC	HELP Matriculation Centre
LANG	Languages
MGT STUD	Management Studies
PSY	Psychology
SHOT	School of Hospitality & Tourism
UOL	University of London Programmes

Annexure 2: Workshop Schedule

S. No	Date/Session	Time MST	Activity	Outcome
Day 1 (Friday, 20 August 2021) 2.00 pm – 4.00 pm				
1	Inauguration	02:00pm to 02:20pm	**Introduction of Resource Person by:** Dr. Manas Ranjan Panigrahi, SPO, CEMCA **Welcome address by**: Prof. Andy Liew, DVC HELP University **Address by**: Prof. Madhu Parhar, Director, CEMCA **Address by**: Prof. Paul Chan, VC HELP University	
2	Session 1	02:20pm to 02:40pm	Use of VR in teaching and learning Concept of 360-degree VR educator	Describe the importance of VR in the changing scenario. Explain the use of 360-degree VR.
3	Session 2	02:40pm to 03:30pm	Demonstration 360-degree VR content/Course creation and Structure	Design and develop a content/course using 360-degree VR platform
4	Session 3	03:30pm to 04:00pm	Q&A and Discussion	Discussion and reflections by the participants

			Assignment to the participants	Content/course creation
**Day 2 (Saturday, 21 August 2021)  ** **12.00 pm – 2.00 pm**
5	Session 4	12:00pm to 01:00pm	Show Case sample content/course using 360-degree VR platform. Connecting with Resource Persons	Participants shared their work preparing at least one course/lessons.
6	Session 5	01:00pm to 02:00pm	Interaction and Discussion Q&A and Discussion	Finalising the contents prepared by the partcipants
**Day 3 (Saturday, 28 August 2021)  ** **2.00 pm – 4.00 pm**
7	Session 6	02:00pm to 03:00pm	Presentation by the Participants and reflection by the Resource Persons	Presentation of the content
8	Session 7	03:00pm to 03:45pm	Q&A and Discussion	Discussion and reflections by the participants
9	Session 8	03:45pm to 04:00pm	Closing and Way Forward	Future Action Prepared