# VR and Language Education – Program
Saturday 17th October 2020

| Welcome (3:00pm-3:10pm): | Simon Haberle  
(Director, School of Culture, History and Language, Australian National University) |
|--------------------------|------------------------------------------------------------------------------------------------|
| Introduction (3:10pm-3:20pm): | Education and our imaginary  
(Duck-Young Lee, Australian National University) |
| Presentation 1 (3:20pm-3:50pm): | An introduction to VR and AR, basic feature and possible uses  
(Ethan Zhang and Grazia Scotellaro, Australian National University) |
| Presentation 2 (3:50pm-4:20pm): | VR and its application in language education  
(Sungjo Kim, Yonsei University) |
| **Break (4:20pm-4:30pm)** | |
| Presentation 3 (4:30pm-5:00pm): | Torres Strait Virtual Reality: Reflections on Cultural Virtual Reality Game  
(Rhett Loban, Macquarie University) |
| Presentation 4 (5:00pm-5:30pm): | Web-based VR for teaching Korean  
(Carlos Dominguez, University of New South Wales) |
| Presentation 5 (5:30pm-6:00pm): | The Application of 360° Virtual Tour with Foreign Language Learning  
(Sureenate Jaratjarungkiat and He Xialing, Nanyang Technological University) |
| Closing (6:00pm-6:10pm): | Duck-Young Lee |
**Abstracts & Bios**

**Opening Remark: Imaginary and language education**

**Duck-Young Lee**  
(Australian National University)


**VR and its application in language education**

**Sungjo Kim**  
(Yonsei University, South Korea)

Abstract

You can provide realistic language education through Virtual Reality. In language education, education that simulates the actual situation has been attempted through various teaching methods. When learning is centered on dialogue, the conversation is mostly hypothesized situations. However, with the development of realistic media, I have created an environment that is almost similar to the actual situation and have reached a situation where language education can be provided. The development of Virtual Reality technology is one of the biggest motives for making such a change in language education. I will first look at what Virtual Reality is. I will examine the history of Virtual Reality technology, compare it with Augmented Reality as similar technology, and examine the differences and similarities. And I will look at how Virtual Reality can be specifically used in language education. As an effective tool for language education, I will analyze and apply concrete examples of classes to see what Virtual Reality can be applied to in actual classes.

Sungjo Kim is a Professor at Yonsei University. He in currently in charge of the VR korean language education program development project at Yonsei University's Institute of Language Research and Education. He is very interested in applying VR technology to language education and has written related papers. As non-face-to-face education is activated, related research is being deepened under the confidence that education using realistic media will be activated.

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Abstracts & Bios

An introduction to VR and AR, basic feature and possible uses

Ethan Zhang and Grazia Scotellaro
(Australian National University, Australia)

Abstract
Virtual Reality and Augmented Reality have opened the door to the possibility of immersing yourself in life like experiences using both simple and sophisticated settings. While VR started mostly for training and gaming in recent years it has gained momentum in the education sector. Both VR and AR can offer learning opportunities in truly immersive and almost natural spaces that can bring a class anywhere or anytime.
In this presentation Grazia and Ethan will introduce the concept of VR for education and explain how VR and AR works as well as simple techniques and apps that anyone can use to create VR and AR instances.
The presentation will demonstrate the variety of assets that can be used to experience VR like Google Daydream and Google cardboard assets. It will then move to present a range of ways that content can be created for VR and AR instances from Google Tour Creator to Google Earth studio to gain an understanding of how free tools can build immersive VR and AR experiences for students. Lastly, we will discuss how VR and AR can be used in an educational setting like CHL with a particular emphasis on language and culture teaching.

Ethan Zhang is a Digital Education Technologist at Australian National University. He works closely with teachers in the design and development of new interactive learning materials for online courses. Ethan is studying Master of Information Technology, and he is always interested in applying new technological solutions in online and blended learning design and environment to enhance student learning.

Grazia Scotellaro is Team Leader and Senior Educator for College of Arts and Social Sciences and has a background in Technology Enhanced Language Learning. Grazia has won several awards including a College of Asia and the Pacific for Award for a Program that Enhances Student Learning in 2011 and a Vice-Chancellor Award in 2012 she was also nominated for the OLT Australian Award for University Teaching in 2012 and 2013. Currently her focus is in the support of small enrolment languages and her enthusiasm for technology and teaching and pioneer use of epubs in education is well known at ANU.
Abstracts & Bios

Torres Strait Virtual Reality: Reflections on Cultural Virtual Reality Game

Rhett Loban
(Macquarie University, Australia)

Abstract
There is a shift in the way that we are learning and teaching with students increasingly becoming digitally fluent and using digital media and games as a primary means for informal and even formal learning. As educators, we should seek to capitalise on the passions and enjoyment of digital media held by our younger generation and find new ways to cater to and link in to these student’s interests and skillsets. This project explored a new way to convey Indigenous Australian knowledge and content in a university course through the use of Virtual Reality (VR). VR research is an area of contemporary academic growth and still needs to be further tested, analysed and assessed. A VR game (Torres Strait Virtual Reality) was developed and used to scaffold students with new knowledge, by presenting the content in a different mode. The VR game was implemented across four different university courses with different approaches using the prototype to intersect with class content.

This is a reflection on the development process and product outcome. VR is a good practical medium for conveying perspectives that can give insight into the implications of broader theoretical, policy or course specific themes. For some of the courses, it was the development process and playing that was of interest, not just the content. VR places the user in an experience, or point of view that cannot be obtained from mere reading of text or even videos, rather the user is immersed in the event as it occurs. Some of difficulties with VR lie in its technical implementation, user-interface and the state of the technology itself. I hope that from my learnings, educators may better appreciate how to develop VR simulations for their university course, and understand the technical, practical and human-interface limitations and uses of VR.

Rhett Loban is a Lecturer at Macquarie University. He is interested in game-based learning and virtual reality. In 2019, he was awarded the CSIRO Indigenous Professional Career Achievement Award for his work on Torres Strait Virtual Reality and vision for new ways of learning.
Abstracts & Bios

Web-based VR for teaching Korean

Carlos Dominguez
(University of New South Wales, Australia)

Abstract

Immersive Technologies at UNSW developed an environment for teaching Korean language via moodle. The environment uses a-frame libraries and is embedded into moodle LMS via the use of LTI tools.

Students access the environment using their mobile phone and as cheap headset. The lesson is guided by the teacher and shows a series of exercises and 360 stills of locations in Korea. The stills were taken via an Theta 360 camera in situ. They are hosted in s3 machines in AWS. Code is hosted in ec2 AWS. The environment has been used in a cohort of 400 students in multiple tutorials.

Carlos Dominguez is Immersive Technologies Lead at UNSW. He created the area 2 years and a half ago. The space has presently 62 projects and multiple ongoing developments. He manages a team of 5 application developers and supervises multiple student’s projects. Before UNSW, Carlos was Online education support officer at Macquarie University. There he led the implementation of Open Universities, Macquarie chapter, online units. He led the migration from webct into moodle LMS and was responsible for the development, maintenance, testing and implementation of more than 400 online units.

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Abstracts & Bios

The Application of 360° Virtual Tour with Foreign Language Learning

Sureenate Jaratjarungkiat and He Xialing
(Nanyang Technological University, Singapore)

Abstract
The 360° virtual tour technology has been widely used by real estate agents in the last few years to provide their clients with immersive experiences of the properties without being physically present at the location. The goal of this project is to develop a 360° virtual tour minigame and investigate its potential in foreign language acquisition. Our team of researchers created a virtual tour by scanning a real convenience store in Thailand and turning it into a scenario-based minigame for Singaporean students who registered for an intermediate Thai language course to learn and practice their Thai.

As language learning best takes place when the learner is immersed in an environment where the language is natively used, we expect this visual-spatial approach constructed using 360° virtual tour technology to bridge the physical gap and import some advantages of studying abroad to foreign language learners at home (AH). (Keywords: Language learning, Visual-Spatial, Virtual Reality, Immersion)

Sureenate Jaratjarungkiat received her BA (Hons), MA and PhD in Thai Language (Linguistics) from Thammasat University and Chulalongkorn University, Thailand. Following work at Google as part of the Google Voice (Thai) team, she has been a lecturer and the Thai programme coordinator at the Centre for Modern Languages, School of Humanities, Nanyang Technological University in Singapore where she was the winner of the Lecturer Excellence Award (LEX) in 2017. Her research interests include language and technology, foreign language education, virtual reality with language, historical linguistics, semantics, and syntax.

Xiaoling He received his PhD from University of Hong Kong. He is a Senior Lecturer and coordinator of Chinese program at Nanyang Technological University in Singapore with over 20 years of experience in teaching Chinese as a second/foreign Language. In her classes, Dr. He adopts a team-based learning and blended learning approach and incorporates numerous technology-enhanced elements in her courses. She has worked on a number of funded research projects, including WeChat-enhanced Chinese learning as well as multimedia learning materials for second language courses. Dr. He has also authored the book entitled ‘Patient-Subject Constructions in Mandarin Chinese’ (John Benjamins, 2019) and published several journal articles in the field of Chinese language teaching.

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