360 VR EDUCATOR

Create, Learn and Guide immersive experiences in VR

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Overview

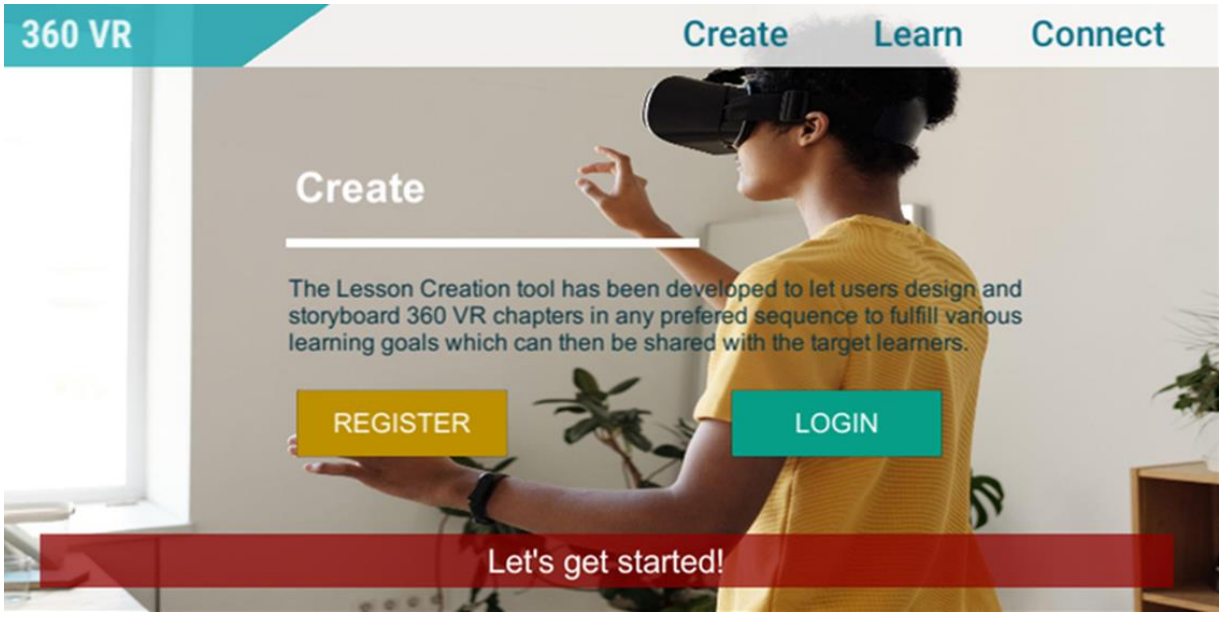
Virtual reality can be used to enhance student learning and engagement. VR education can transform the way educational content is delivered; it works on the premise of creating a virtual world — real or imagined — and allows users not only see it but also interact with it. Being immersed in what you're learning motivates you to fully understand it. It'll require less cognitive load to process the information.

When students read about something, they often want to experience it. With VR, they aren't limited to word descriptions or book illustrations; they can explore the topic and see how things are put together.

About the App

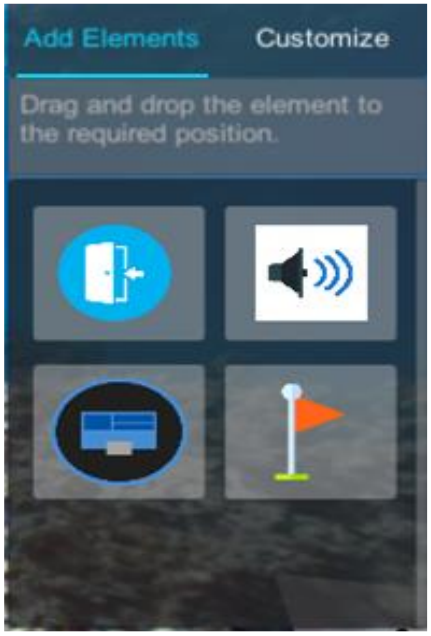
360 VR Educator is learning platform where users can

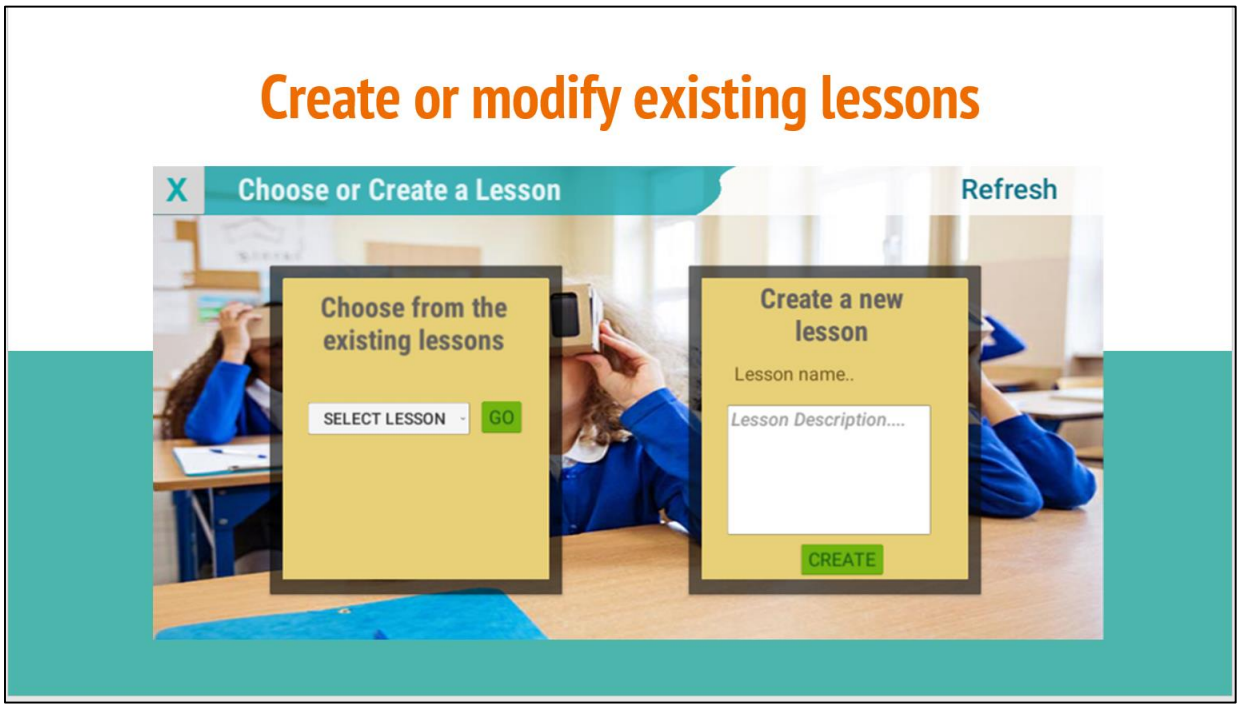
- Create learning experiences for VR environment-(windows app)
  - Create lessons
  - Create chapters inside the lesson and associate it with a 360 image or video
  - Add game elements like panels, portals and audio to the chapters
  - Preview their created lessons
- Experience the created VR content (single-mode)- (android app)
- Connect with other users inside the VR mode and guide the other users-(android app)



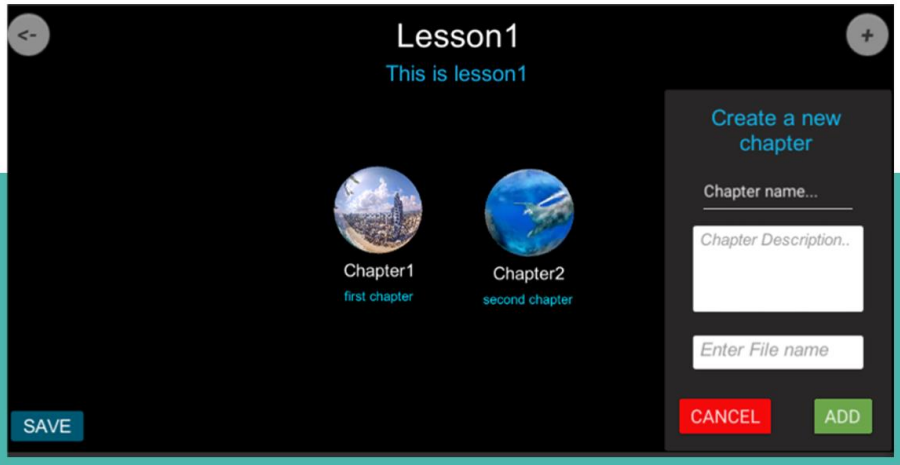
Lesson Creation

- VR lessons can be created and modified using lesson creation tool.
- Lessons consists of chapters.
- Chapters are 360 images/videos consisting of interactive elements called game elements.
- Currently the app has 4 game elements as follows:
  - Audio element
  - Panel element
  - Portal element
  - Checkpoint element





Lesson Creator Tool



Game Elements

Game elements are interactive elements augmented to 360 images or videos to immersify the user experience. Here are the four game elements which can be created within a VR lesson.

Panel Element

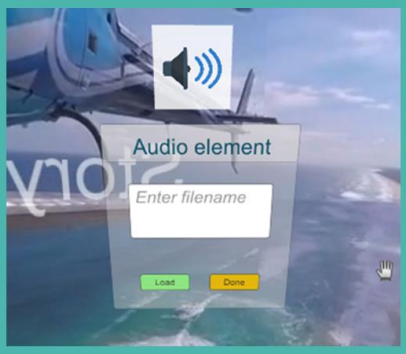
Audio Element

Portal Element

Checkpoint Element

Audio Element

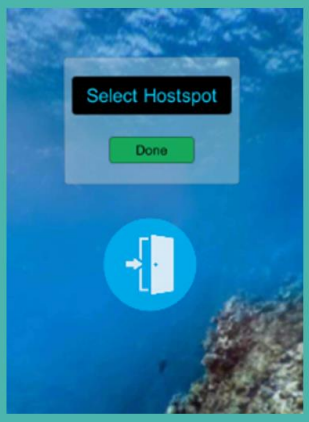
- Narrations can be added to the scene using audio element.
- Users have to provide the link to .mp3 file in the form of a web link (eg: http://xyz.mp3)



Creating an audio element

Portal Element

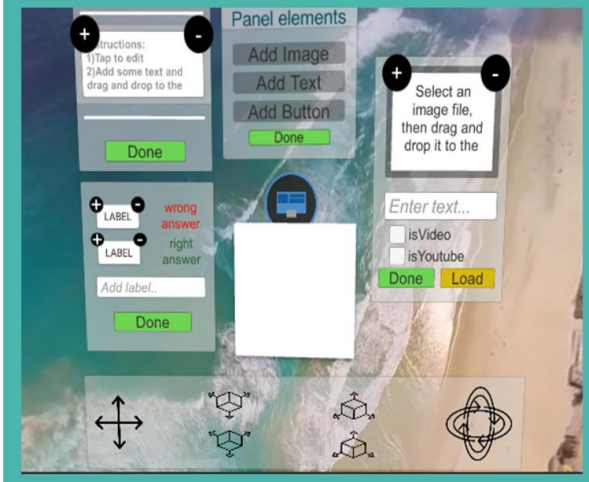
- Portal Elements are used to create links to other chapters in the lesson.
- User can navigate to another chapter by click on the portal button within the chapter.



Creating a portal element

Panel Element

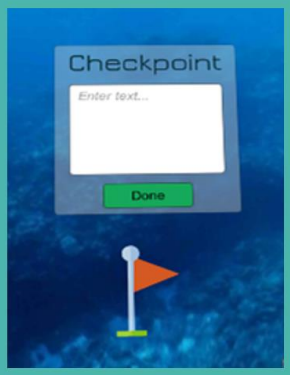
- Panel element is used to add interactive multimedia content to scene like texts, buttons, images, videos, videos from youtube.
- Teachers can annotate the scene or create an interactive quiz using these elements.



Creating panel element

Checkpoint Element

- Checkpoint element can be used to draw attention to important points in in the lesson.
- Teachers can view the list students who have visited the checkpoint element.
- Checkpoint elements can sequentially guide the user through the lesson.
- This game element is used to to connect, interact and guide other users.



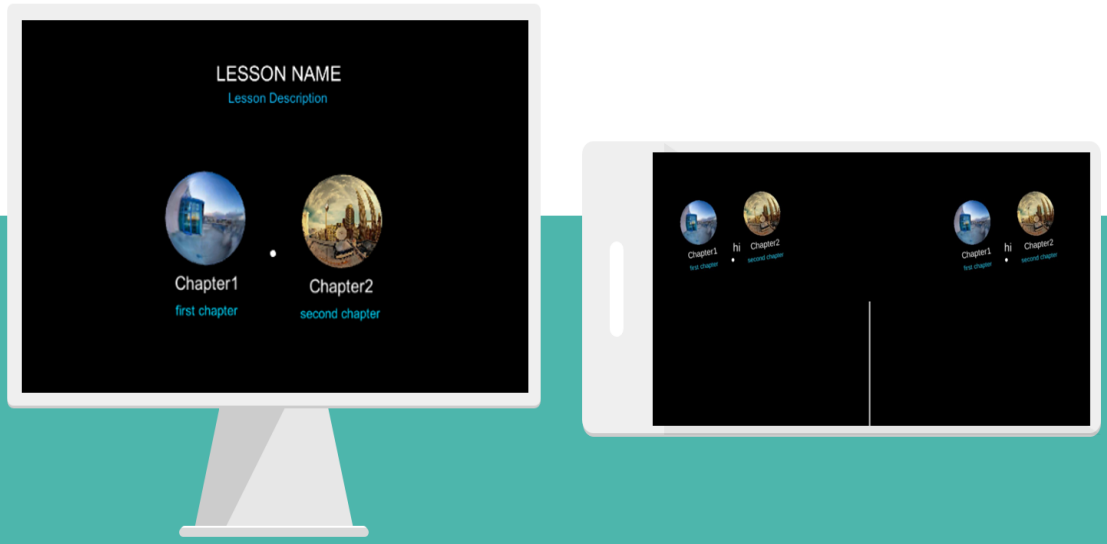
Creation of checkpoint element

Connect, Interact and Guide Students

Teachers can create checkpoint element to be viewed in sequential order. Students have to click on “follow the alert” button to be guided towards the checkpoint.

Once the student clicks on “follow the alert”, he/she will be guided towards the checkpoint by a white color arrow as shown in the above figure.

Experience the content on PC and Android



360 VR Educator Vs Google Expeditions

Features	360 VR Educator	Google Expeditions
360 images and videos	Supports both 360 image as well as videos.	Only supports 360 images.
Audio element/ Narration	Is supported	Is supported
Panel Element	Is supported and has special facility to add videos from YouTube.	Is supported
Portal Element	Is supported	Not supported
Checkpoint element	Is supported	Is supported
Connecting/interacting with other users.	A user can guide another user even though they are located far from each other.	Users should be connected to same wifi networks to avail this facility.
AR Tours (Augmented Reality Tours)	Not Supported	Is supported
Support for multiple devices	Currently this app is supported for windows(non-VR) and android(VR) only. Support for WebGL is currently under progress.	Supports many different platforms like Chrome OS, as well as Android and Apple iOS devices.

This product is demonstrated to Dr Manas Ranjan Panigrahi, Senior Programme Officer, CEMCA on 21st May, 2021 for his feedback. We are planning to conduct a pilot study with thirty teachers for the usability testing of the 360 VR app.