

## AR VR TECHNOLOGY IN EDUCATION

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Scan QR-code  
to watch video



Shri Aakhunji Imtiyaz Ahmad Gulamhusein started his career as a science teacher at the Shri Salpipaliya Taluka Primary School, Paddhari, Rajkot in July 2010. He was deeply interested in technology. The school had its own computer lab, where Aakhunji would spend most of his time honing his skills with the latest technologies. He was worried about the lack of engagement shown by the students in his class and felt that by introducing Augmented Reality and Virtual Reality (AR and VR) in the lessons, he could make the lessons more interesting, contextual and entertaining.

Shri Aakhunji augmented his knowledge using the Internet and taking help from his colleagues. At first, he would screen and download videos that could support his classroom teaching. The CRC coordinator, Shri Mansukhbhai Vadolia was particularly impressed by the videos and he had their CDs made to distribute in other schools in the cluster. Apart from videos, Aakhunji also downloaded images and other reference material from the Internet for use in class. While



School visitor looking in VR BOX

teaching Math and Science, he also introduced quizzes which greatly helped to improve students' level of participation in the lessons.

In the year 2013-14, Aakhunji went on to participate in various ICT related training programs, where he was initiated to the use of AR (Augmented Reality) and VR (Virtual Reality) technology in supporting education. Building on his knowledge, he downloaded an app, "Zookazam" on his mobile phone and used it in class VI to teach students about various animals. He would divide the class into groups and share his mobile with them to see animated versions of the animals. This brought alive the lessons and students participation and subsequently performance greatly increased. His actions motivated other teachers as well who began to use technology to support their lessons for classes I to V.

These are some of the apps that Shri Aakhunji used to support his lessons. AR (augmented reality) technology Apps and uses:

1. Merge cube for: solar system, layers of earth, volcano eruption, rocket etc.
2. Animal 4d: used for showing animals in the chapter adaptation
3. English ABC AR: for alphabet in English
4. Zookazam (paid): for showing animals in class
5. AR solid: showing 3-D shapes of maths
6. AR human body: for showing internal human organ in 3-D
7. Vuforia: for different organs in 3-D

Virtual reality VR Apps and uses:

1. VR sites: for social studies, showing 7 wonders sites in virtual reality mode
2. VR solar: solar system in VR mode
3. VR cell: for showing cell structure in VR mode
4. VR YouTube videos: for entertainment of students



Use of VR technology in the classroom

The VR box helped students visit the sites under study in a virtual environment. This was useful in social studies since the historical places mentioned in the textbook could not be visited.

In 2017, as part of the “Gyankunj” Project, each school was supplied with two laptops. Shri Aakhunji could now use the laptops to teach the lessons and needless to say, they served the purpose better than mobile phones. Students’ engagement with the lessons improved manifold and other schools in the cluster were also inspired to introduce ICT in their classrooms.

Shri Aakhunji’s efforts were duly recognized by the DIET Rajkot. He was asked to be a trainer at the ICT workshops it organized.

As a next step, Shri Aakhunji explored the use of 3D and managed to convince the school

principal to sanction a grant for a hundred 3D glasses. With these glasses, students could view three-dimensional educational videos. Shri Aakhunji also participated in a local Science fair where he organised a 3-D movie show for all the student visitors.

During the Diksha training in 2020, Shri Aakhunji trained teachers in ICT methods and arranged virtual cards and some QR codes for use in their schools.

### Evaluation

With the use of ICT in classroom teaching, Shri Aakhunji achieved the following:

- Students’ engagement with the lessons grew manifold.
- About 80% students said that they found it easy to grasp the concepts.

Shri Aakhunji continues to experiment with technology. As a result of his efforts, his school was moved from C grade to A in Gunotsav. His work has been highlighted in Educational Innovations Fairs held at the District and State level. His work is available on [www.inshodh.org](http://www.inshodh.org) website and his case has been used for training in Samarth 1 and 2 online professional development program for teachers.

Shri Aakhunji has formed a network of teachers interested in technology and connected with them through WhatsApp and Facebook. He is now planning to find donors to provide laptops or tablets to the children he teaches in the school.



#### QUESTIONS FOR TEACHERS

1. How to teach children to use technology in the classroom?
2. After teaching the content to the children in the smart class, how do you evaluate how much the children understand the content?
3. What are the things to keep in mind while creating an application?

#### QUESTIONS FOR TRAINEES

1. What are the things to keep in mind while creating a QR code?
2. What would you do to make every child in the classroom use technology?
3. What are the results of teaching through QR code to children?