

Virtual and Augmented Reality:

THE 4TH DIMENSION OF HIGHER EDUCATION:
MIXED REALITY OF VR, AR, AND HOLOGRAMS

SHALL WE PLAY A GAME?

WITH OVER \$600 MILLION IN MOBILE AR REVENUE IN ITS FIRST THREE MONTHS, POKE'MON GO USHERED IN AN APPROACH TO ENGAGEMENT AND GAMING FOR SOCIAL PURPOSES LIKE WE HAD NOT SEEN BEFORE ...

POKE'MON GO FEST

POST SECONDARY EDUCATION

K-12 EDUCATION SYSTEMS

COMMUNITY

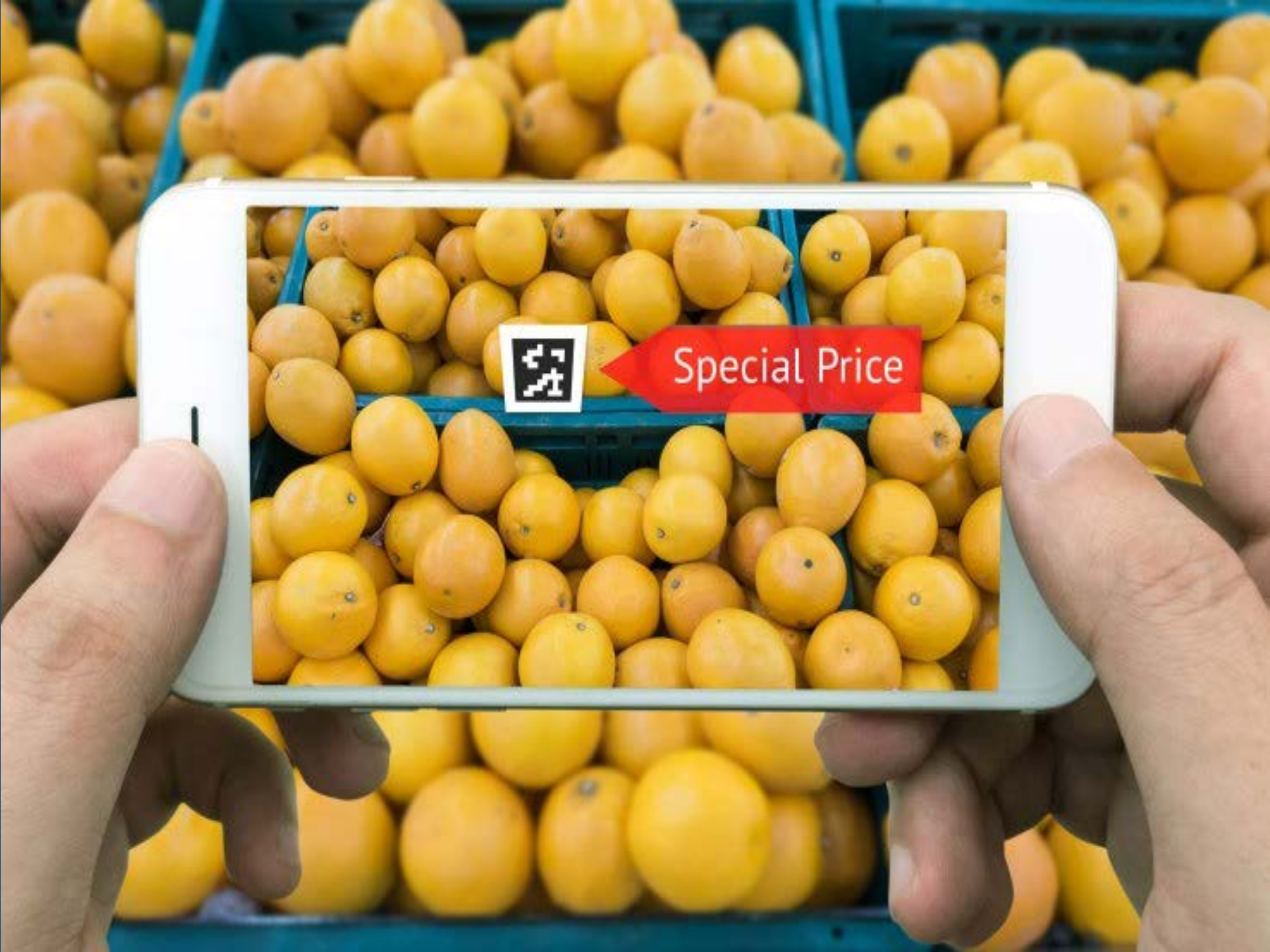
BUSINESS AND INDUSTRY

WHAT'S NEXT?



NUMBER OF VR HEADSETS WORLDWIDE

YEAR	VR HEADSETS IN MILLIONS
2016	18
2017	31
2018	45
2019	62
2020	82
2021	100



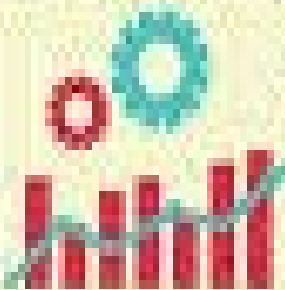
Special Price

VIRTUAL REALITY STATS

FOR 2017

the revenue of virtual reality products is projected to reach

\$4.6 BILLION
U.S. DOLLARS



With revenues from **VIRTUAL REALITY SOFTWARE** alone forecast to reach an over **3000%** increase in

According to a recent Statista survey the **Oculus Rift** is one of the best-known virtual reality headsets in the U.S.

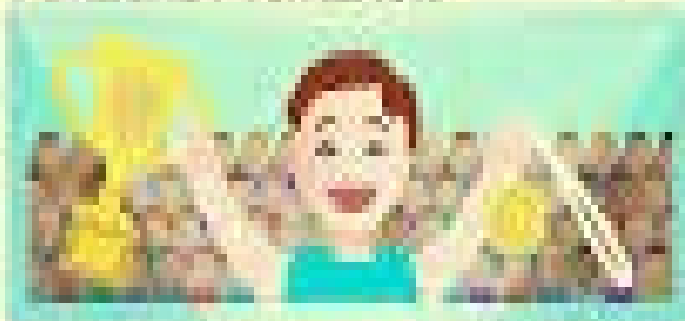


ONLY 4%

of the respondents between the ages of 18 and 29 years said that they were **NOT** interested in virtual reality at all.

THE TOTAL NUMBER OF ACTIVE VIRTUAL REALITY USERS IS FORECAST TO REACH

171 MILLION



of the respondents said that they had **NOT** already tried a virtual headset.

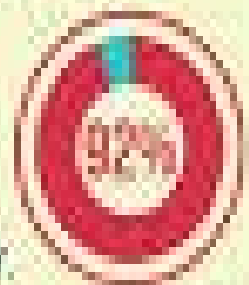
74%



9%

of the respondents said that it was very **unlikely** that users would lose themselves in virtual worlds.

A survey in the US concerned with the **adoption** of 'virtual reality'. 81% of the respondents said that most uses of the term **VIRTUAL REALITY**.



Virtual REALITY IN EDUCATION IN 2017

Virtual Reality IN Education CEREBRUM Inc

97% of students would like to study a VR course



2016 Augmented and Virtual Reality Survey Report



EDUCATION is expected to be the 4th BIGGEST SECTOR for VR investment

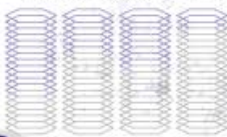
VIRTUAL & AUGMENTED REALITY:

Understanding The Race For The Next Computing Platform Goldman Sachs Report



VR IN EDUCATION

is predicted to be a \$200 million industry by 2020 and a \$700 million industry by 2025.



THE STATE OF TECHNOLOGY IN EDUCATION REPORT 2016

Almost 80% of teachers have access

to virtual reality devices, but these are used regularly by only 6.87% of teachers



SAMSUNG SURVEY OF U.S. K-12

Educators' Opinions and Usage of Virtual Reality



93% of teachers

said that their students would be excited to use virtual reality



7 OUT OF 10 TEACHERS

want to use VR to simulate experiences relevant to the material being covered



49%

of high school teachers

would like to use VR to allow students to visit college campuses to encourage further education



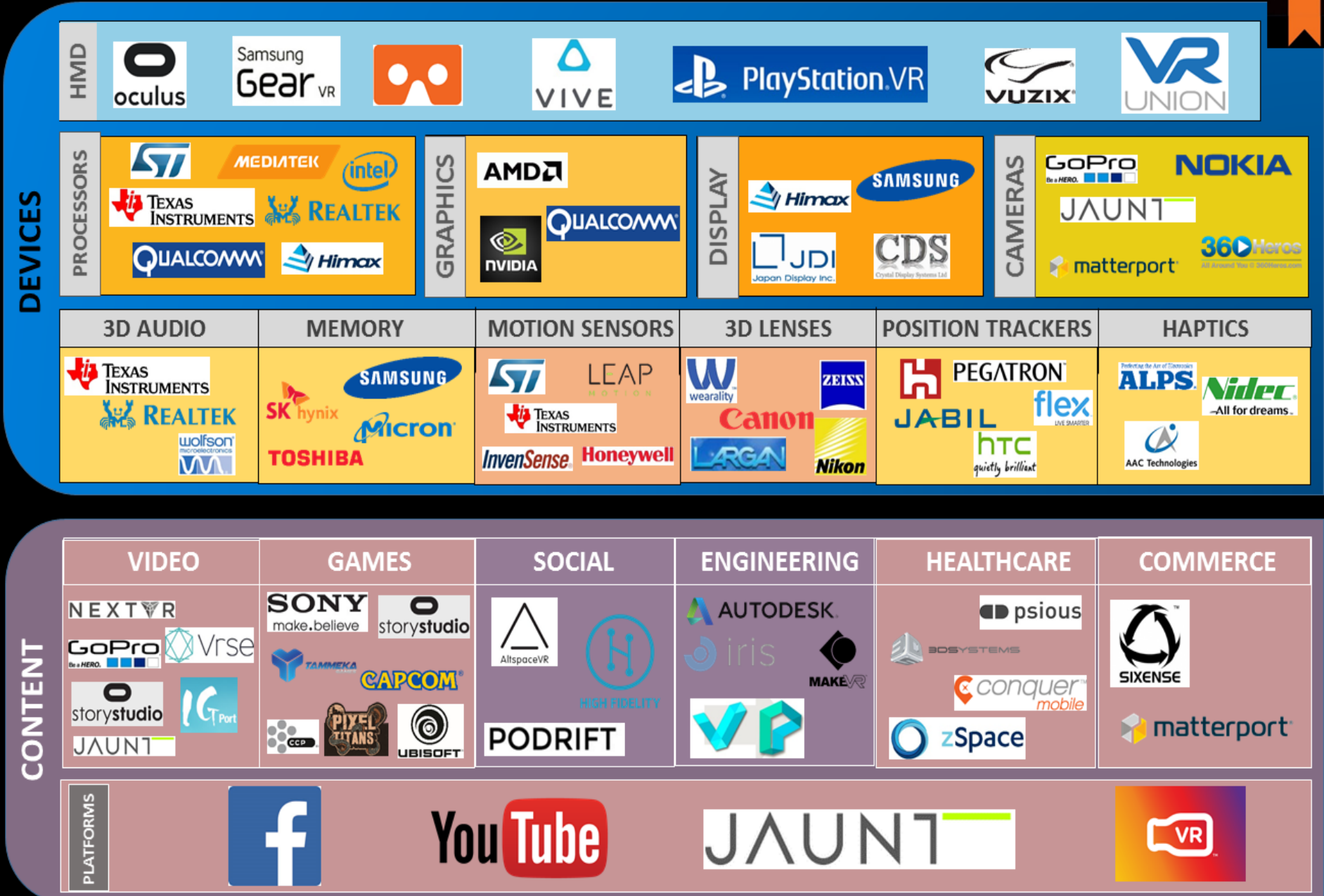
69% of teachers

said that they would use VR to allow students to visit distant locations





VIRTUAL REALITY ECOSYSTEM





SimCoach

THE POWER OF YOUR VOICE



Registration Office
(Level 1000) (Building 1)



Anything you would like about?

Talk to you? How do I do that?

Well, you're doing it right now. Just like in regular English.
Anything needing you?

Close

Focus

Personalized Learning & Big Data

Personalized Learning and Big Data can be the future for corporate training. Many companies have already started leveraging it.



Certification

This trend will continue to rise and drive eLearning industry. Global Certification Market will reach \$7.3 billion by 2020.

Automation

Automation in eLearning content development could rise like never before.



TOP 6 E-LEARNING TRENDS IN 2017

Mobile Learning

Mobile Learning trend is here to stay and grow tremendously. Expected to reach \$70 billion by 2020.



Augmented & Virtual Reality

Augmented Reality and Virtual Reality are set to change the way people learn in 2017 bringing immersive learning experiences.



Microlearning

Microlearning is the latest trend in eLearning. It is a bite-sized learning nugget designed to meet a specific learning outcome.







CLEANING & HYGEINE



Real Time Augmented Customization





Holograms – Blended Spaces



Medical



SmartFoam



Pedagogy and Andragogy

- Duraiswami (2017) states, “[this is immersive education]”
- Varshney (2017) indicates, “This is a new way of communicating and learning that was until now just not possible”
- Carter (2015), “I wanted my students to be able to connect with the period that we are studying”

Theoretical Underpinnings

- Constructivist Approach
- Anchor all learning activities to a larger problem.
- Design an authentic task.
- Design the learning environment to reflect the complexity of the environment in which the learner should be able to function at the end of learning.
- Support the learner in developing ownership for the overall problem.
- Design the learning environment to support and challenge the learner's thinking.
- Encourage testing ideas against alternative views and alternative contexts.
- Provide opportunity for and support reflection on both the content learned and the learning process.
- From Savery and Duffy (1996)

Digital Teddy Bear



AgriBusiness

Today's Use of Technology
For Our Future

Future

- Our yesterday is unlike our now and tomorrow will not resemble today ...
- [Grocery Store 2040 - https://uploadvr.com/groceries-2040s-oculus-quill/](https://uploadvr.com/groceries-2040s-oculus-quill/)

Technology and Business

- Encirca
- John Deere
- AGCO
- Slingshot
- The use of software is everywhere and leads to ...

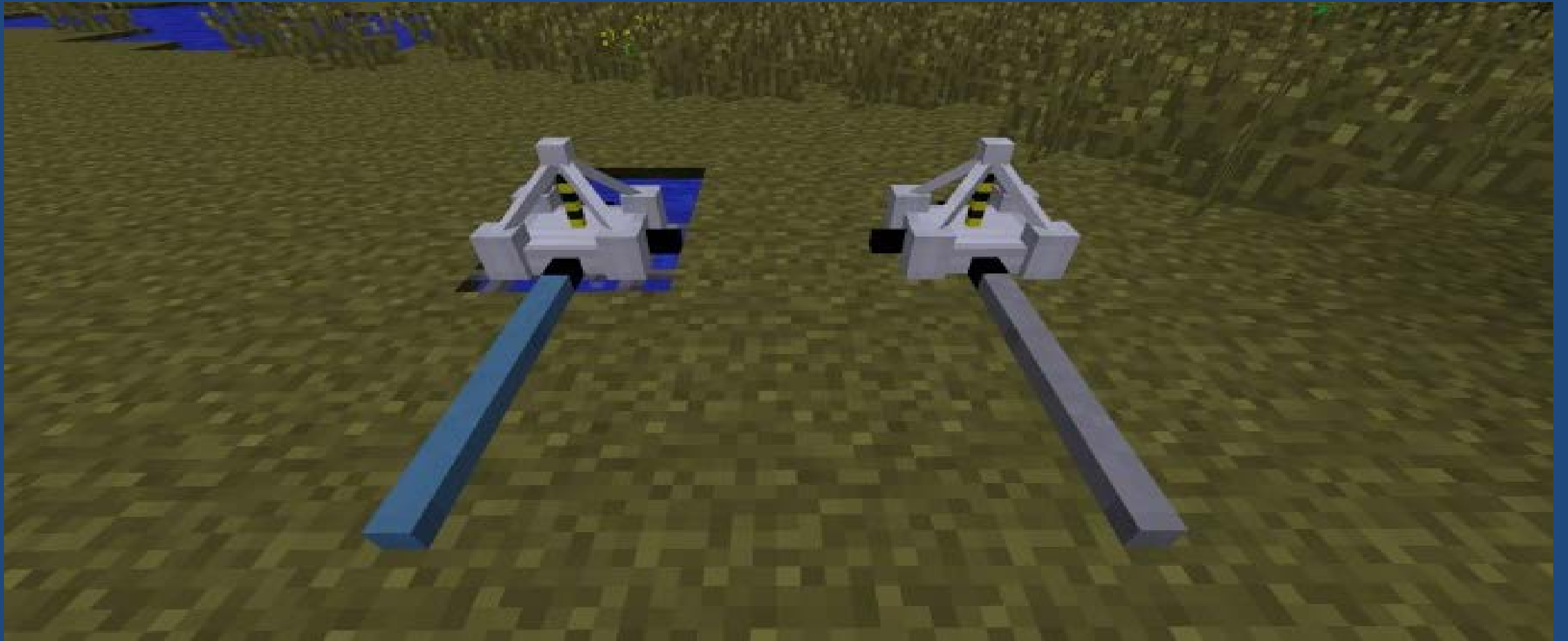
Mixed Reality

- Harvest Simulator VR
- [Agribusiness - https://www.wearvr.com/apps/harvest-simulator-vr?query=Farming](https://www.wearvr.com/apps/harvest-simulator-vr?query=Farming)
- Minecraft
- [Minecraft - https://minecraft.net/en-us/](https://minecraft.net/en-us/)
- Farming Simulator
- [Farming Simulator - https://www.farming-simulator.com/](https://www.farming-simulator.com/)

Bringing VR Farm to Table



Irrigation







Minecraft Farming Mod



What?

- Farming Sim
- [FS - https://youtu.be/OE-sKkdFgaE](https://youtu.be/OE-sKkdFgaE)
- This is exciting ...

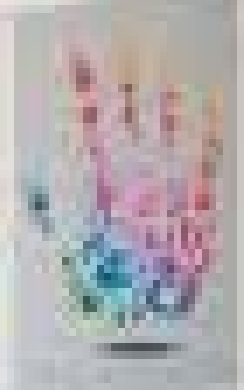
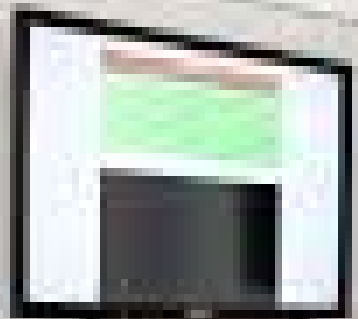
2027 Classroom







art Technology Inspiration



i3

- Intuitive
- Intelligent
- Inspirational

Thank You

Michael Torrence, Ph.D.

Michael.Torrence@volstate.edu

931-644-5462 mobile