EDID 6506 Group Project

Introducing the Innovation of Augmented Reality to Music Education

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Abstract

The need for creativity is becoming essential in the 21st century classroom. Moreover, this need is amplified by the challenges students face in remote learning situations. This is so as the very nature of said environments create barriers to communication and instruction itself. Learners with interests in Music Education, for one, are at a disadvantage as this subject area requires hands-on practice and exposure to music theory. Of note, traditional and non-traditional learning environments do not provide learners equal learning opportunities. To reduce disparities to educational access, Reality Innovators propose the advent of Augmented Reality in Music Education. Accordingly, a virtual classroom focusing on scales, the building blocks of music, was designed. The website demonstration of the innovation introduces the learner to three classrooms. The one-page brief provides a clear and concise description of the instructional audience, the innovators, the innovation, its supporting evidence and the weebly website for accessing the Mockup demonstration of the innovation.

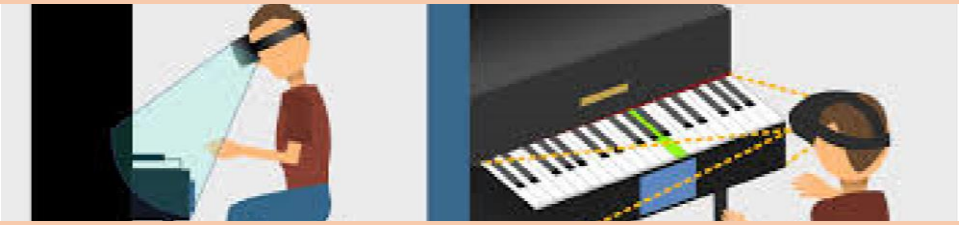
REALITY INNOVATIONS

eBrief

Augmented Reality in Music Education

INTRODUCTION

AR takes learners on an interactive journey of a real world environment with enhanced computer generated perceptual information. Having this cutting edge technology in traditional and non-traditional classrooms will transform learning into a whole new world



SUPPORTING EVIDENCE

AR is a tool that can transform our immediate surroundings into learning, work and entertainment spaces as well as design experiences that are meaningful and enriching. to humanity. There are several things that it does really well:

1. VISUALIZATION

Google Expeditions - an add-on to the Google Classroom Suite supports the integration of AR in the classroom and offers over 100 AR expeditions in a variety of subjects (Google For Education, n.d.). CoSpace (n.d.) provides a suite of intuitive 3D tools that allows students with coding experience to create virtual 3D worlds. Case Western Reserve University (n.d.) is using HoloLens and HoloAnatomy, an award-winning AR app by CWRU and Cleveland Clinic, to learn from their own homes.

2. ANNOTATION

Microsoft's Dynamics 365 (n.d.) Remote Assist on HoloLens and mobile devices enables cross-distance collaboration by sharing a live view with experts for assistance. London's National Theatre is using AR to help make its performances more accessible for people who are deaf and hard of hearing (Papagiannis, 2020). Microsoft's Project Tokyo helps visually impaired people to "see" using AR and AI and the HoloLens (Papagiannis, 2020).

3. SENSORY DEVELOPMENT

EcoMobile Project (Ecosystems Mobile Outdoor Blended Immersive Learning Environment) developed by Harvard Graduate School of Education focused on improving students' understanding of ecosystems through the integration of AR technologies in field trips to local pond environments (Harvard, 2016).

4. STORY TELLING

In February 2020, The Los Angeles Times partnered with Yahoo News, media company RYOT and artist Micah 404 to create an AR experience exploring iconic Oscars dresses from the past five decades (Papagiannis, 2020). Lessons in Herstory uses AR to help rewrite history books in the classroom and inspire the leaders of tomorrow by featuring stories of powerful women (Papagiannis, 2020). The National Gallery of Prague is using haptics (virtual touch feedback) to help people who are blind and visually impaired experience artwork with Touching Masterpieces by Neurodigital.

TARGET AUDIENCE

The Reality Innovators app will target Secondary level students aged 12 to 15. Students will build authentic skills in music scales and be prepared for Initial Trinity Music Exams.

MOCK UP

The following are the respective links that lead to an example of what form the "name of programme" will take. Due to the interactive nature of the innovation, this is better previewed via live websites as opposed to screenshots.

MAIN MENU

Representative of the main page the user sees where they will be able to choose which lesson they would like to participate in. https://assets.adobe.com/id/urn:aaid:sc:US:4e260f22-1ccb-434e-9e07-e1105091f296?view=dimension

Playing Scales: https://6506realityinnovators.weebly.com/playing-a-scale.html

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