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## Current Trends in Instructional Technology

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### Artifact Summary:

The artifact below was created in "EME6055: Current Trends in Instructional Technology" taught by Dr. Sanghoon Park. The purpose of the artifact was to demonstrate my ability to create a lesson plan for an emerging Web 2.0 tool, such as CoSpaces Edu, that I or someone else could use in their own classroom to enrich the learning environment with innovative technologies. The design and development process' were a multi-step process which included identifying affordances, privacy issues, instructor training, applicable motivational and learning theories, and a comparison of utilizing this VR tool as compared to an educational game or tutorial.

The artifact provides evidence of S.1.1 because this task required me to not only familiarize myself with an emerging technology, but also thoroughly analyze the provided lesson's objectives, tasks, and instructional affordances. I then synthesized this information to construct an assessment component for the setting of a 4<sup>th</sup> grade classroom which have not utilized VR capabilities before.

Through the creation of this artifact, I learned how to identify when to support learners that will benefit from the instruction from those who will have difficulty comprehending the lesson and use of the tool; identify relevant resources, constraints, and context of the development and delivery environments; and, describe and provide a rationale for the selection of an instructional approach (Analysis and Technology Inc., 2018, Appendix B).

### Artifact Evidence:

**Pre-existing Content** - There was not much pre-existing content displayed within the lesson. If a teacher had experience with coding and how it could be utilized within the classroom, I think this could be integrated in several creative ways. However, if the teacher had not been exposed to coding and its open interpretation of uses, this would be too broad of a topic.

**Ability to Create New Content** - Within the parameters of the lesson, the example was to create animation of a shark and insert a speak bubble for the shark's dialogue. The lesson guides the users to use Blockly coding to drag and drop commands to the object selected. The users could easily change the object being manipulated, the environment, and animations being coded.

**Safety / Privacy** - All student's in Hillsborough County have an active Office 365 account which would allow them to create their own account and log in, however, to abide by the district guidelines, I would want to submit this application as a district approved resource before allowing my students to use their accounts. In the meantime, perhaps students could use generic information for an account without an identifiable information.

**Instructor Training** - This should easily be a 3-6 hour training of allowing teachers to understand AR/VR and how it can be implemented within various classroom settings, creating and account, navigating the program through the CoSpaces tutorials, then allowing teachers to explore the various applications.

**What learning and motivation theories do you think are used in guiding the design of this VR lesson plan?** The Constructivist Learning Theory is displayed within the constructs of this lesson as students are in full control of the manipulation and learning they acquire using Blockly coding.

**How does learning in VR as shown here differ from other computer-based learning environments such as educational games or tutorials?** Comparing this coding lesson to many others I have experienced within Microsoft's TouchDevelop, Code.org, or Apple's Every Can Code the learning objectives and task management are extremely similar. The largest difference is the view and change in perspective of the object and environment being coded.

**Do you see a possibility of using it with your students or for your own learning?** After some planning, I could easily utilize this within the parameters of our 4th grade math and science curriculum (please see simple lesson below). Student's learning coding in my classroom mostly through self-exploration, however, there are some curriculum that I use (Microsoft's Touch Develop) that have specific teaching points which I find helpful to students when understanding what coding is.

## **Activity 2: Simple Lesson Plan**

**Objective:** Students will use creative thought to construct the scene which must include 4 text images (A, B, C, D), a main character (avatar), and at least 5 additional graphics.

**Materials:** Electronic device with internet capabilities to access the CoSpaces program.

### **Activities:**

1. Students will be given 30 minutes to construct and code their scene which must include 4 text images ( A, B, C, D), a main character, and at least 5 additional graphics.
2. The teacher will display various multiple choice questions based on a standard being taught in class for students to determine their answer choice. For example; the students have been learning about factors and multiples in a 4th grade class. The students will be answering a variety of questions about factors and multiples.
3. The students will use Blockly code to animate their main character to move to the answer option of their choice; either A, B, C, or D.

**Evaluation:** As questions are being asked and students are animating their character to move to the correct answer choice, the teacher can display the students screen (using ActionTec or other screen sharing devices) so that participants can show their scene's and answer choices as the class reviews the answer choices and coding of animations.