Designing Engaging Education Experiences (E3) in Virtual Reality Redux - Lessons Learned

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The Last Time We Spoke - Design of Educational Experiences Course at San José State University (2020)

Outline of the course:
1. What makes for an “engaging” experience, specifically looking at Social VR Platforms (Altspace, VRChat, Mozilla Hubs, etc.)
2. We developed a survey to find out what tools and functionality educators need to develop engaging educational experiences.
3. We identified the top 8 criteria for education in Social VR Platforms
4. We looked at a minimum of 16 platforms for determining if/how they address the criteria.
Top 8 Criteria for Social VR Platforms in Education

1. Ability to communicate via speech in-world
2. Ability to give presentations with slide viewers
3. Ease of use coming in, getting a decent avatar
4. Protocol in place for harassment – e.g. blocking offenders
5. Videos/multimedia functionality
6. Desktop VR access (ability to enter world without headset)
7. Ability to easily transport between areas
8. Ability for people wearing headsets & people at desktops to interact with each other
Outline of the course:

5. We talked about the theoretical basis for learning in Virtual Worlds
6. We covered defining the context of learning for the experience we are developing: Subject domains, learning environments, target learners, world boundaries, and participant roles
7. Then we went on several virtual field trips to discover in more depth which Social VR Platforms met our criteria as well as appropriateness for our context of learning
Designing Engaging Experiences – Take field trips – Sansar, VirBELA, & Somnium Space
Designing Engaging Experiences – Take field trips – AltSpaceVR, Rec Room, Mozilla Hubs, & VR Chat
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Outline of the course:

8. We continued with designing of the curriculum for our experiences, including defining the need or problem, proposing a solution, justification, target audience, learning objectives, assessments, content organization and descriptions, timeline, and personnel & budget development.

9. Finally we talked a little about implementation of our solutions and the big takeaways.
### Problem statement:
People don’t understand how science evolved from religious and political views and who changed the course of science history.

### Proposed Solution:
Create an exhibit in-world focusing on the history of science.

### Justification:
Benefits of situated learning/learner-centered approach.

### Target Audience:
Higher-Ed students, Librarians, Other professionals

### Learning Objectives:
The user should be able to state important discoveries and inventions as well as the major figure involved.

### Assessments:
Pre-assessments and post assessments

### Virtual World Description:
An exhibit focused on the history of science in the 16th and 17th centuries. It should take an hour to go through.

### Content Organization:
Focus on major contributors, their ideas, and discoveries or inventions. Include cultural influences and tie to science today.

### Content Description: opening, quests, rules, rewards, conclusions
Exhibit is walk-through, done at the pace of the learner. Quests/rules/rewards not applicable in this context.

### Storyboards:
Biographies of major contributors, stories of their discoveries and inventions. Recreate an environment in which science was discussed extensively.

### Development timeline, Personnel, & Budget:
One person, 3 months.
Designing Curricula – Example: The Story of Science during the Scientific Revolution
The Big Takeaways

• Start Easy and build up to harder platforms
  • Students gain more confidence that helps them get over the learning curve
• Go on field trips with your students
  • Meet them in-world and show them around – explore *with* them, don’t lecture
  • Helps with confidence and excitement to go back
• Allow them to choose their projects within a flexible framework
  • Creates motivation when they can build what they are excited about
  • Students will actively acquire the needed skills if they are motivated
We are now going on a Field trip to see Student Work

Mozilla Hubs Stops:
https://hubs.mozilla.com/34Hkt7N/sjsu-school-of-information/
https://hubs.mozilla.com/AJGFEZG/sjsu-student-work-museum/
Thank You for your Kind Attention

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