Integrating XR in Curricula: A Practical Worksheet

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For Educause 2024 Session *Working with Faculty to Incorporate XR into the Curriculum: from Consult to Completion*

How to Use:

This document proposes a revised 6-phase framework following Erica Southgate's Curriculum development process for student VR content creation (Southgate, 2022). It's designed to be used as a tool when preparing for, or conducting a faculty consultation. At each phase, we include a set of questions with space for you to write answers to streamline your production of a complete XR integration plan. If you have any questions or comments, please contact Ksenia Ionova (kbi4@cornell.edu).

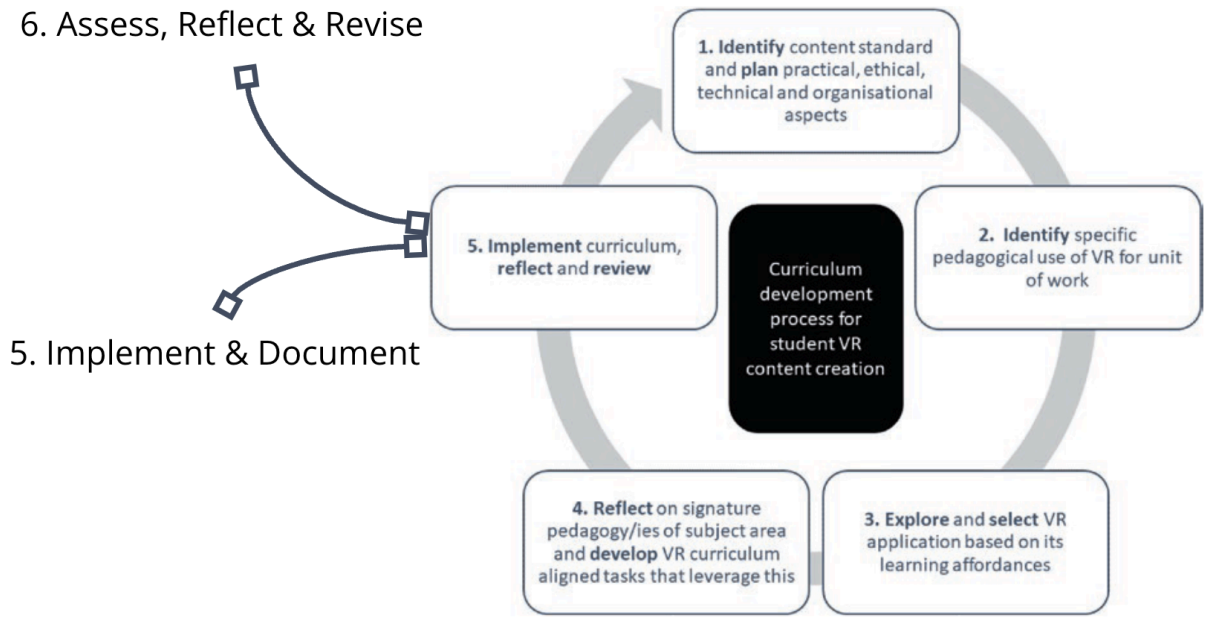

Figure 1.Curriculum development process for student VR content creation (Southgate, 2022), Revised

Phase 1. Identify content standards, plan practical, ethical, technical & organizational aspects

This may be an initial brainstorming session with the Faculty to address the following questions.

Questions to discuss	Answers
What are the course learning outcomes? What do the students need additional help with? What type of learning does the instructor care about?	

What are the affordances of the XR medium that can be leveraged?	
When in the curriculum would it be helpful to implement? How does it maximize the material and the learning objectives of the lesson?	
How would the XR experience build upon the course context? How is it possible to connect it to what comes before and/or after in the course?	
What learning objectives might you set for the XR activity?	
What assessment is appropriate to confirm students reached the outcome?	

Phase 2. Identify specific pedagogical use of XR per unit of work

During this phase, we conduct internal research of XR options related to the course content.

Questions to discuss	Answers
What is the course unit?	
What XR applications are available to leverage the learning goals?	
What software and the hardware are needed? How can they scale?	
Are there ways to provide alternate content options?	

Phase 3. Explore and select VR application based on its learning affordances

We invite the instructor to a playtesting session in our lab.

Questions to discuss	Answers
Which application is resonating with the instructor's vision for the class? Which one fits best considering the parameters?	
Which one of the applications fits best considering parameters from Phase 1?	

What did the instructor learn from observing staff travel around locations?	
What is the signature pedagogy to apply?	

Phase 4. Scope and Plan VR Session

We meet with the instructor to plan the session around the selected signature pedagogy/ies.

Questions to discuss	Answers
How many XR sessions and how long each will be	
Spell out learning outcomes	
How signature pedagogy drives learning objectives	
How can these learning outcomes be measured	
What milestones will keep students on track? Post-VR?	
Build in flexibility. How is it possible to accommodate students who cannot participate, such as provide *accessible alternative formats?*	

Phase 5. Implement Curriculum & Document

We co-facilitate the XR session in our lab or in the classroom.

Questions to discuss	Answers
How to introduce the experience to students to drive the learning outcomes vs. the technology? Will any materials (e.g., handouts) used during the experience?	
What would the onboarding and offboarding process look like? When will you brief on safety?	
What should the facilitation space look like?	
What is the timing of the class? What do you expect the students and the instructor do during each interval?	
What equipment and hardware back-ups should	

be in place? (Chargers, batteries, cleaning supplies, power strips, face masks, casting equipment)	

Phase 6. Assess, Reflect & Review

The instructor collects student interaction artifacts, e.g., reflections, handouts, the work they created in XR, discussion questions, post-XR written assignments, and evaluates them. Then the instructor meets with the instructional support staff to address the following questions.

Questions to address	Answers
What elements of the XR session link to each of the learning outcomes?	
Is it possible to measure them qualitatively or quantitatively?	
Based on the above elements, to which extent did students reach the learning outcomes?	
What other evidence of learning was observed?	
Did anything unexpected come up through this experience? What went especially well?	
Is it worth doing this again in the next iteration of the course? How should the next iteration of the XR implementation improve?	

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