THOMAS College

Peter & Paula Lunder School of Education, Thomas College, Waterville, Maine

GUEST BLOG

Re-envisioning Teacher Education and In-Service Professional Development with ClassVR

The Education faculty of the Peter & Paula Lunder School of Education, Thomas College, Waterville, Maine are dedicated to the work of re-envisioning teacher education and professional development for its future educators. The Education school's Center for Innovation in Education acquired ClassVR headsets and standards-aligned curriculum subscriptions as part of its mission to *engage learners in experiencing the art and science of teaching through creative innovation.*

The Center for Innovation in Education was designed to create a physical space for a wide variety of technology use—moving away from the old model of a computer lab; we constructed an environment that serves as a model classroom and functions as a *creative lab* with various devices including 3D printers, planning boards, educational gaming software, robotics, and virtual reality using ClassVR. The overall physical space of the center is intended to inspire collaboration among pre-service teachers, practicing teachers, college faculty, and external partners.

Our ClassVR Journey

We acquired the ClassVR headsets in August 2019, and they were immediately included in a college wide event that encouraged students, faculty, and staff to try out the newly purchased technology at the center.

This gave our colleagues and students the opportunity to try on a headset, many for the first time, and enjoy a virtual learning experience.

Step 1: Tinker & Play

Soon after, we began to offer Time for Tinkering with ClassVR Sessions. These were open ended blocks of time when someone who was interested could visit the center to tinker, or just be curious and play with the devices by selecting items to view and thus, could begin to develop a confidence with how the system worked.

Step 2: Professional Development Workshops

The next step in integrating the ClassVR system was to hold professional development workshops specifically for our faculty so that they could begin to integrate the use of the headsets and content into their instructional planning. We found that a scavenger hunt styled workshop with questions designed to allow faculty to explore the various features of ClassVR was quite engaging.

The initial questions were more functional-based such as, how many educational resources are included in our ClassVR/AR subscription package; how do you turn on, load, and charge a headset?

Step 3: Teach the Teacher

The scavenger hunt then challenged faculty to investigate the ClassVR lesson plans feature and to design a playlist with more curricular questions in mind. The intended outcome of the workshop was to assist faculty in beginning to integrate the ClassVR content to *teach the teacher*.

This is an important distinction in how we are using ClassVR in our academic teacher education programs, while it contains a broad set of PK-12 content, our application of these headsets is to empower our undergraduate pre-service teachers and our graduate level practicing teachers with the confidence in using virtual and augmented learning experiences in the classroom.

We have targeted ClassVR devices for those courses in our programs of study that focus on curricular and instructional methods classes.

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By Way of a Few Examples

In our *Mathematics for Elementary Teachers* course, students use augmented reality to rotate and observe the characteristics of fractals in a 3D image which extends the perception of this mathematical concept. Students are then asked to identify unique attributes from the various fractals available for viewing.

Oftentimes, discussions ensue on how the augmented dimensionality can allow the learner to grasp the concept of fractals in a way that may invite more curiosity and inquiry. While this is only one way that this class uses the headsets, it does illustrate how the ClassVR headsets are a tool for creative investigations.

In the *Educational Gaming* course, students work in design teams to build a prototype of an educational game, as they construct their game, they capture 360 environmental images that they are proposing for their games. These are then loaded into the ClassVR Community to view directly from a ClassVR headsets to see what a potential educational game environment might look like.

Our *Trends in Curriculum* graduate students choose a concept of curriculum design from a class reading, then create a ClassVR enhanced lesson learning activity using the subscription content area fields. Our students have presented learning activities around the themes of Natural Disasters and Physical Science, World War I, Public Safety Training, and the Human Brain. These activities are aligned to skills and values including collaboration, communication, geographic orientation, and empathy.

The more immediate impacts that ClassVR has had on our programs is the obvious focus on the PK-12 learner. Our students are able to gain experience with a state of the art virtual and augmented headset system. They can imagine, plan, and apply a powerful instructional tool as they begin their careers in the classroom. Our graduate and practicing teachers are able to expand their instructional toolbox with the innovative ClassVR resources. Additionally, as our student teachers go out to classrooms across Maine the nexus of our intent and mission inspires and supports educator-leaders in the delivery of integrated, diverse emergent technologies and ClassVR assists us in this mission.

Although the global pandemic slowed our progress in providing even more opportunities for our students to use the ClassVR system, we envision more interest and applications in our coursework and professional development programming.

In an ever-competitive market, institutions of higher education need to differentiate their curricula and instruction, increase the capacities of their IT network infrastructures, and choose wisely in the investments they make in emerging technologies. We are pleased to say that ClassVR continues to assist us in this endeavor to enhance teacher education.

About the Author:

Dr. Pamela Thompson is the Chair of the Lunder School of Education at Thomas College in Waterville, Maine, where she leads a team of faculty who are committed to innovative practice in teacher education. Her academic research interests include creativity and virtual/augmented and mixed realities as they pertain to curriculum design and instruction.

She is currently on sabbatical during Fall 2021 to study how institutions of higher education are developing, applying, and evaluating virtual and mixed realities.