

## Interdisciplinarity@WMU- Phase One planning Template

1. **Brief Overview:** Provide a brief overview of the proposed interdisciplinary initiative. What types of questions would the initiative ask? What types of complex problems would it seek to solve?

Virtual reality (VR) is the use of computer modeling and simulation that enables a person to interact with an artificial three-dimensional (3-D) visual or other sensory environment. Within a health context, VR has been used to address a variety of conditions, including the improvement of both physical and mental well-being. Evidence also suggests that VR has the potential to be used as an educational and clinical tool. VR is already being used successfully for skill development within the CHHS nursing program.

2. **Impacted units:** What existing units, programs, and colleges would be involved in the proposed initiative? What other possibilities for collaboration across campus or in the broader community might exist now or in the future?

Potential partners for these expanding the use of VR include:

- College of Health and Human Services
- College of Engineering
- College of Fine Arts
- WMUx
- Library-training software
- Sindecuse Health Center,
- Counseling Services,
- Disability Services,
- Counseling and Psychology
- Unified Clinics

3. **Impact on teaching, learning, and curricula:** Describe the anticipated impact of the proposed initiative on teaching, learning, and curricula. How might this initiative help to grow enrollment, including by reaching new audiences of learners through continuing education, dual enrollment, or professional certification? How will the proposed initiative positively impact the training of undergraduate and graduate students? How does it enhance our institutional commitment to diversity, equity, and inclusion?

1. Develop greater sensitivity and empathy for patients with disabilities ie aging, stroke, autism
  - VR can enhance student understanding of various conditions by allowing students to learn in a simulated environment that fosters increased empathy and understanding, leading to a patient centered clinician. These learning opportunities would be expected to translate into improved patient outcomes.

2. Promote use of VR as a clinical teaching tool to improve health and well-being of patients, including skill development
  - Simulates real life in a safe, learning environment while equipping students with hands on. As demonstrated from past research, Students can be taught safe and effective approaches for using VR for patients with wide ranging medical conditions such stroke, anxiety, hypertension. Nursing is already using VR to improve critical skills such as inoculations.
3. Support mental health of students and faculty through the use of VR
  - The mental health of many students is a growing concern, yet student are often reticent to utilize mental health services for a variety of reasons including access, cost, and stigma. VR is a self-directed activity which has the potential to decrease anxiety. As a self-directed activity with availability of VR on campus, the reasons of access, cost and stigma are decreased. Providing access at CHHS would be even more valuable.

4. **Impact on research and creative activity:** Describe the anticipated impact of the proposed initiative on research and creative activity. How will this initiative promote discovery and creative scholarship? How might it result in increased external funding?

Create research opportunities with the use of VR for improving health. We propose working with the Office of Research and Innovation to identify faculty scholars across campus who have an interest in applications with this specific technology.

- Evaluate the feasibility and efficacy as a student support tool
- Evaluate the feasibility and efficacy as a clinical teaching tool
- Develop innovative interventions for patient populations.

5. **Efficiencies and/or cost savings:** How might the proposed initiative contribute to increased efficiencies and/or cost savings, for example by reducing administrative positions (e.g. chairs/directors), sharing staff support services and/or by sharing facilities?

Possibilities across colleges, especially for more cost-effective simulations.

6. **Impact on course offerings and workload:** At present, proposed initiatives will only be feasible and sustainable if they can be supported by existing resources, including instructional capacity, faculty and staff time, and facilities. Will the proposed initiative streamline existing course or program offerings? Could the initiative help create more equitable and sustainable workload for faculty, for example, by reducing the need to offer under enrolled courses, reducing the frequency of course offerings or eliminating the need to teach some courses?

We envision numerous approaches for using this exciting technology in educational, clinical and research contexts. The need in this early stage is to develop partnerships with departments and colleges who have a vested interest in using VR. This would result in innovative teaching and learning opportunities in addition to possibilities for external funding.

7. **Additional Information:** What additional information would you like to provide in support of this proposal?

8. **Contact**

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