Short Title	Video library of clinical skills demonstrations for Health Science Programs
1. **Name**	Virginia Chambers
2. **Email**	virginia.chambers@clackamas.edu
3. **Department**	Health Sciences
4. **Please briefly describe your idea**	Video library of clinical skills demonstrations for Health Science Programs. Health Sciences would like to record clinical skills demonstrations and create a video library for the following programs: Medical Assisting, Clinical Lab Assistant, Dental Assistant, and Nursing Assistant programs. Each program requires students to perform and pass a number of clinical skills competencies (e.g., phlebotomy, injections, electrocardiograms). Clinical lab is delivered face to face and students practice and perform "hands-on" skills. Each skill is introduced by faculty at the beginning of the clinical lab (~30-50 minutes of the 3 hours lab time) and students are given a check off list to follow. Each skill has multiple complicated steps and often students don't remember or retain all of the steps introduced. It has become more common for students to try using their cell phones to record clinical demonstrations and share links/recordings with peers. The plan is to identify the most complicated and challenging clinical competency and record faculty performing the demonstration. Recorded demonstrations will use close captions with step by step visual aids to improve learning and providing students with quality instructional support. Students may have access to embed video recording within their Moodle shell with unrestricted viewing. Faculty can create additional instructional material (e.g., assignments, discussions, case studies) using the recorded demonstration. Possible opportunity to collaborate across disciplines and share content. Note: Recorded video skills demonstration does not "replace" the need for face to face clinical skills lab courses. Providing access to video recorded demonstrations of clinical procedure for students, supports and facilitates skill development remotely. Students can work towards learning clinical competency in a low-stakes environment (remotely). Allowing utilization of asynchronous video provides students flexibility and supports students with barriers to campus access (e.g., COVID, natural disaster, illness). Recorded clinical demonstrations may also accommodate future pandemics that interrupt learning. Use of recorded clinical skills demonstrations may provide students with more time in lab practicing skills as it reduces time required by faculty to introduce the procedure.
5. **Indicate the strategic priority that this project supports. (check all that apply)**	Excellence in Teaching and Learning Community Connections Diversity Equity & Inclusion
6. **How does your idea support the College's strategic priorities?**	Excellence in Teaching and Learning; Utilizing pre-recorded video demonstrations of clinical skills provides students with accessible meaningful, relevant and applicable information required for performing clinical competencies. Faculty can use the videos to interact and engage with student learning by developing associated assignments, discussions, or reflections. The video demonstrations allow faculty and students more hands-on time in lab by removing the comprehensive clinical demonstration. Community Connections; As we strengthen our core curriculum and develop new ways of providing quality remote and online training opportunities, we are laying the foundation to meet customized training needs. By providing quality online delivery we are meeting the demands of employers and incumbent workers.
7. **What contribution would this project make to the Diversity, Equity and Inclusion Strategic Plan? How does it contribute?**	Currently, faculty utilize face to face lab time to demonstrate clinical skills (e.g., Electrocardiograms, phlebotomy, pulmonary function tests) one time and often students are trying to record it with their phone for later viewing. Faculty expect students to retain, process, and perform skills (practice) immediate after demonstration. Limited amount of practice time is assigned before student must

| | | complete (perform) their clinical skills competency. In order to pass the lab, they must pass the competency.

Providing students access to high quality pre-recorded video demonstrations of clinical skills (e.g., Electrocardiograms, phlebotomy, pulmonary function tests) helps to address time, learning, access, and other potential barriers.

For example, students will have unrestricted access to video demonstrations which allows students flexibility to watch/learn at their convenience (e.g., after work, during a lunch break, on the bus). Less pressure to retain and process all information provided during a live face to face skill demonstration. Utilizing video demonstrations with accurate closed captions benefits students with English as a second language. Captioning improves comprehension, especially if the instructor is talking too fast, using slang, abbreviations, or medical jargon as recordings can be paused, replayed, etc., allowing time to read, watch, and process information. |
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| 8. | **What problem, need or gap in service will be addressed? What evidence is readily available to illustrate the need or support the goal(s) of the project? Please include links to data sources if known.** | Limited face to face time for students to observe, practice, and perform clinical skills competencies. Due to natural disasters and pandemics we are left with an uncertain future. We are seeking creative solutions for limited campus access and innovative ways to deliver clinical skills instruction. Resource links: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3613297/ https://link.springer.com/article/10.1007/s40670-019-00714-4 https://www.researchgate.net/publication/260994898_Use_of_online_clinical_videos_for_clinical_skills_training_for_medical_students_Benefits_and_challenges https://journals.sagepub.com/doi/full/10.4137/JMECD.S18933 https://www.youtube.com/watch?v=es7vmyQl208 |
| 9. | **What is the benefit of this project (e.g. revenue potential, impact on student enrollment, retention, completion, etc.)?** | Ownership of video content, video utilization with CCC Customized Training – opens up opportunity for developing more incumbent training, increase in remote/online opportunities for student learning, increase in meaningful lab usage, strengthens program ability to pivot. |
| 10. | **What activities will be proposed in the project?** | 1. Identify and establish faculty for project
2. Identify the most challenging and time-consuming clinical skills demonstrations to record. Each of the four programs will select 3-5 procedures.
3. Collaborate with Video Production at CCC (student volunteer/faculty mentor).
4. Faculty to write out script for each of the skills demos.
5. Create video ready slides and story board.
6. Identify faculty who will be recording demonstrations. Work with Video Production to record demonstrations/timelines.
7. Finalized video product will be shared during Health Sciences Program Directors meetings and video library will be accessible for all faculty/programs/college. |
| 11. | **Identify stakeholders who will likely be involved in the project planning or delivery.** | Program Directors; Sarah Parker, Marilyn Braught, Kari Hiatt, and interim Nursing Assistant Program Director along with additional Part-time faculty interested in instructional design work. Video Production Program (student/faculty) Online learning (Moodle shell) Center for Teaching and Learning |
| 12. | **How do you think success could be measured for this project?** | Student engagement surveys (strategic indicators), Faculty satisfaction survey, Video usage within Moodle shells, Work completed on time and under budget |
| 13. | **Describe the investment (time, funds, etc.) that would probably be needed to get this project off the ground.** | Time: Spring 2022 through Winter 2023 Funds: 24 competencies = ~$20,000.00 |

14. Have you identified a grant or other funding source to help cover related expenses?	No
15. If yes to 14, please provide more information about the grant or other funding source.	
16. Beyond the start-up costs, is additional or ongoing funding required to maintain this project in the future? If so, please describe the costs (amounts, frequency, etc.) as well as if you have identified sources for ongoing funding.	Once the clinical skills demonstrations are recorded and an online library is created for Health Sciences, there will be little to no cost associated with on-going funding.
17. What level of urgency best fits your idea?	Short-term, needs to be explored within next 4-12 months
18. If you answered "other" in question 17, please describe.	This idea responds to a timely, significant need felt by students/community.
19. Please include additional information you would like to share:	"Sample: https://www.youtube.com/watch?v=UuuOjxBexBU "This online exposure to core content and knowledge outside of the classroom prepares the learner for faculty-facilitated interactive classroom discussions focused on the application and mastery of the video-delivered content" (Ellman & Schwartz, 2016) "Multimodal pedagogies that blend online audio and video learning tools with in-class didactic activities can be particularly effective in enhancing the learners' engagement and enrich opportunities for both the acquisition and application of knowledge and skills in both basic and clinical science learning" (Ellman & Schwartz, 2016) .. "the acquisition of knowledge and skills to time outside the classroom and to utilize in-class time for training in the application of these skills and knowledge" (Ellman & Schwartz, 2016) "In the clinical sciences, a blended learning approach can facilitate the learning of clinical skills and provide students with greater confidence and knowledge to prepare them for when they are required to apply these skills on real or simulated patients" (Ellman & Schwartz, 2016) "Using this approach, students can observe the appropriate application of physical examination skills in videos and review them as often as needed to prepare them for their own application of these skills with real or simulated patients. Video depictions of physical examination maneuvers combined with an instructional voice overlay can be used to expose students to modeled performance and the ability to rewind for closer inspection and repeat viewing" (Ellman & Schwartz, 2016) Best Practices provided to Yale faculty producing curricular videos (Ellman & Schwartz, 2016) •Restrict video length to 8–15 minutes • Focus on only a few concepts • Provide learning objectives at the start of the video • Add action using callouts, live drawing, animations, etc.to grab attention • Use simple, slides/scenes with limited text • Rehearse narration and annotations to limit post production editing • Create explicit linkage between online and in-class activities for students"
20. Please share any questions you have for the Innovation Team:	

Survey for this Innovation Fund request: https://forms.gle/r773ZN5SRZVm5Eyp7