

UGFN1000 In Dialogue with Nature and UGFH1000 In Dialogue with Humanity are the two foundation courses for all undergraduates in CUHK. Students are required to read the core texts before attending interactive tutorials to discuss some enduring questions about nature and humanity. In our experience, students are interested in reflecting on these questions. However, many of them find it difficult to have an in-depth discussion. This is mainly because they lack the prerequisite knowledge beyond the texts; they misunderstand the concepts; or they have an inadequate comprehension of abstract ideas and are unable to connect different texts.

In view of this, we have developed three micro-modules in this project to provide eLearning supplements for better learning and teaching. The micro-module “Greek Philosophy” consists of the animation “What is Platonic Form?”, and was developed for UGFN and UGFH. The micro-module “History behind Bible” consisting the animation “Jesus and Paul in History” was developed for UGFH. The micro-module “Newtonian Worldview” was developed for UGFN. It consists of the animations “How did Newton do a deductive demonstration?” and “How did Newton discover the law of universal gravitation?” These animations have been tailor-made to explain essential knowledge and to clarify misconceptions that might arise. Instead of conventional video recordings of short lectures, whiteboard animations have been created to enrich the students’ learning experience. These consist of step-by-step illustrations with voiceover narrations to explain complicated and abstract ideas in an attractive and enjoyable way. The micro-modules are available online for students’ self-paced learning. In this project, we have also developed a whiteboard animation production manual to provide instructions for making whiteboard animations.

The micro-modules were used in the five UGFN and UGFH classes of the project members, which have 500 students, in the first term of the 2018-19 academic year. The effectiveness of the micro-modules was assessed by quiz and questionnaire surveys. According to the questionnaire survey, over 88% students agreed that whiteboard animations are more appealing than lecture recording and whiteboard animations raised students’ interest in the tutorial discussion. The quiz survey suggested that the animations are effective to equip students with the prerequisite knowledge before tutorial classes. This aligned with the questionnaire survey that over 94% students agreed the animations are helpful for their understanding of the texts, clarifying concepts and gaining knowledge before tutorials. In general, about 94% students were satisfied with these animations. The results are encouraging.

The micro-modules will be full-launched for use in all UGFN and UGFH classes starting from the second term of the 2018-19 academic year. Approximately 3800 students per term will be benefited from the micro-modules. In order to further enhance the teaching and learning of UGFN and UGFH, more micro-modules with whiteboard animations will be developed in the future. At last, we would like to thank the IT Governance Committee for the generous financial support. We would also like to thank Office of University General Education for its support.