Collaboration in the Cloud and Online Education Environments

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EXTENDED ABSTRACT

See presentation http://dsc.soic.indiana.edu/presentations/CTS-May22-2013.pptx

Cloud computing is attractive [1-3] from several points of view for next generation online education. There are many jobs [4, 5]. It supports shared information repositories as well as sharing the real time and asynchronous interaction between teachers and learners. The promise of virtual universities in the cloud has been highlighted by the growing interest in MOOC's (massive open online courses) which are naturally hosted on clouds. The basic delivery model of MOOC's is reasonably traditional with the scaling of clouds added. However MOOC's emphasize new collaboration models for the interaction between mentors (graders, teachers) and students. Further "laboratories" are typically used in many classes and we discuss the use of clouds to support computing labs attached to computer science and related classes. We suggest that MOOC technology can be used in different ways. Rather than single classes aimed at many students, we suggest that an alternative is multiple classes customized for different communities. Here we have a MOOC lesson repository (in the cloud) and technology like Google Course Builder to construct different "play lists" corresponding to the different classes. This has been implicitly used in past with "PowerPoint" presentations placed on the web and then re-used in different ways However often PowerPoint is hard to re-use and it seems more promising to re-use the MOOC lesson with presentation and recorded lecture.

Keywords: clouds, MOOC, distance education

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BIOGRAPHY

GEOFFREY CHARLES FOX (gcf@indiana.edu, http://www.infomall.org) received a Ph.D. in Theoretical Physics from Cambridge University **a**nd is now distinguished professor of Informatics and Computing, and Physics at Indiana University where he is director of the Community Grids Laboratory and Associate Dean for Research and Graduate Studies at the School of Informatics and Computing. He previously held positions at Caltech, Syracuse University and Florida State University. He has supervised the PhD of 65 students and published around 1000 papers in physics and computer science with an hindex of 67 and over 23000 citations. He currently works in applying computer science to Bioinformatics, Sensor Clouds, Earthquake and Ice-sheet Science, and Particle Physics. He is principal investigator of FutureGrid – a facility to enable development of new approaches to computing. He is involved in several projects to enhance the capabilities of Minority Serving Institutions including the eHumanity portal. He has experience in online education and its use in MOOC's for areas like Data and Computational Science. He is a Fellow of APS and ACM.

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