Mohd Ayub A. F. et al. (Eds.) (2011). Workshop Proceedings of the 19th International Conference on Computers in Education. ChiangMai, Thailand: Asia-Pacific Society for Computers in Education.

Using Second Life® for teaching genetics laboratory sessions to undergraduates

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Abstract: There is a growing need for new approaches to effective laboratory-based learning. Issues of space, time and resources, lead to pedagogical limitations in the use of practical classes involving student engagement in pre-designed experiments. There remains a need for approaches that help students develop skills such as experimental design and teamwork, whilst effectively combining theoretical and practical aspects of the subject. We describe the processes involved in setting up three genetics-based practical classes in Second Life, a virtual world where students access the information as avatars. First year biological science students and first year medical students have each taken part in different virtual laboratory activities, designed to complement current real laboratory practical sessions. We have evaluated whether or not Second Life is an effective education tool. Initial findings show that many students felt that the virtual laboratories were very beneficial to them, helping them link the practical work with the underlying theory. There was also some improvement in the knowledge gained and retained by the students.

Keywords: Genetics, Second Life, virtual worlds, laboratory, evaluation