Effects of wiki on health science students’ collaborative learning, approaches to learning and performance in a traditional biostatistics course

Shirley S.M. Fong†, Samuel K.W. Chu‡, Wilfred W.F. Lau§, I. Doherty¶** & K.F. Hew‡

†School of Public Health, Li Ka Shing Faculty of Medicine, The University of Hong Kong, Hong Kong
‡Institute of Human Performance, The University of Hong Kong, Hong Kong
§Division of Information and Technology Studies, Faculty of Education, The University of Hong Kong, Hong Kong
¶Department of Curriculum and Instruction, Faculty of Education, The Chinese University of Hong Kong, Hong Kong
**Learning and Teaching Innovation, Navitas Professional and English Programmes, Navitas, Sydney, Australia

Background:
• This study aimed to investigate the effectiveness of incorporating wiki technology into a traditional biostatistics course on improving health science students’ collaborative learning, approaches to learning and course performance.

Summary of work:
• Twenty-one and twenty-four undergraduate exercise and health students were assigned to the wiki and control groups, respectively.
• The students in the wiki group attended face-to-face lectures and used a wiki (PBworks) weekly for online group discussion for 13 weeks, and the students in the control group had no access to the wiki platform during the study period.
• The students’ collaborative learning, approaches to learning and course performance were assessed using the Group Process Questionnaire (GPQ), Revised Study Process Questionnaire (R-SPQ-2F) and course results, respectively, at the end of the intervention period.

Summary of results:
• Multivariate analysis of variance results revealed that the R-SPQ-2F surface approach, surface motive score and surface strategy score were lower in the wiki group than in the control group (p < 0.05).
• The GPQ individual accountability and equal opportunity scores were higher in the wiki group than in the control group (p < 0.001).

Conclusions:
• Using wiki technology in conjunction with the traditional face-to-face teaching method in a biostatistics course could enhance undergraduate students’ collaborative learning (individual accountability and equal participation opportunity) and approaches to learning (from surface to deep learning levels).
• However, it could not improve students’ overall course performance.

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Contact person:
Shirley Fong (smfong@hku.hk)