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

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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.

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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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