

Table 1. Characteristics of experimental and quasi-experimental studies

Author (Year)	Study design	Intervention (Type of CWA studied)	Population (Speciality and context)	Measured outcomes	Results	Conceptual Framework
Mirk (2010)	Quasi-experimental (before and after trial)	Wiki (Wetpaint.com)	Third year pharmacy students involved in an elective course on landmark trials	Pre/post evaluation of students' attitudes, level of perceived usefulness, degree of involvement with wiki collaboration, and level of satisfaction with wiki collaboration (5-point Likert scale)	Based on responses from the pre-survey, 50% (14/28) of the students had previously accessed a wiki; none reported previously collaborating in a wiki. On the post-survey, the overall satisfaction with collaborating on the course wiki was neutral. A majority of students (63%) highly recommended or recommended using a wiki in future landmark trial classes. No difference between student level of involvement and student-reported final grade ($p=0.5$) or level of satisfaction ($p=0.2$) were noted. Course facilitators favored using a wiki because it accommodated an increase in class size and provided another way to engage students.	None
Moeller (2010)	Experimental (RCT)	A Wiki facilitated problem-based learning (PBL) course compared to traditional PBL course	Different level medical students involved in a problem-based learning (PBL) course	Self-administered questionnaires: learning effect, communication; collaboration; student satisfaction; diagnostic approach; Completion of 7 steps of PBL learning (Maastricht approach);	Self-administered questionnaires revealed the following results: 1- Learning effect: wikis significantly reduced the perception of PBL case difficulty compared to chat and interactive diagnostic context. (No difference of wikis on other aspects: acceptance of the case's difficulty; feeling to have covered everything; preparedness for the exam; right diagnosis; number of right answers in the self-test; 2- Knowledge acquisition: perceived increased from pre to post significantly for all wiki groups. 3- Communication: wikis improved the perceived time to communicate, organization of work flow via communication, the density of communication, and the longevity of information communicated. 4- Collaboration: No significant perceived differences between wikis and other PBL groups; however, Chat improved perceived collaboration significantly 5- Satisfaction: significantly increased with the bPBL with wiki support 6- Wiki groups show significantly lower diagnostic selectivity; lower knowledge about diagnostic costs and lower knowledge about adequate diagnostic steps 7- Wikis support 3 of the 7 steps in PBL: hypothesis formation; documentation of results; and working on tasks	None Inspired by the structure of the PBL course: Seven step approach of Maastricht (Schmidt 1983)
Morley (2011)	Quasi-experimental (Before and After trial)	Wiki, Restricted editing content	First-year nursing students involved in a sociology of health course	Structured questionnaires at week 4 and 8 (middle and end of the course): participation and facilitators to wiki access, collaboration, socialization, motivation, students' global opinion.	45% (31/69) of students valued wikis as a communication tool (accessibility and portability at different times) and 33% (23/69) believed it promoted or allowed the sharing of group views. It also has the potential for collaborative learning and group networking. For the adult nursing group with a wide geographical area the rates of participation and the importance of anywhere communication was notably higher than the other groups. However, some participants also expressed the feeling of working in isolation. Wikis have the potential to structure academic learning and promote social networking in the crucial first few months of a course.	Salmon's five stage model of implementation of a e-learning tool (2002)
Phadtare (2009)	Experimental (RCT)	Google Docs compared to traditional classroom teaching	Medical, nursing and physiotherapy students involved in a scientific writing course	Manuscript quality (Six-Subgroup Quality Scale); satisfaction; post hoc number of communication events (emails or phone calls) between participants and mentors	Google Docs group had better overall manuscript quality (mean Six-Subgroup Quality Scale (SSQS) score (SD) = 75.3 (14.21) vs. control group (mean SSQS (SD) = 47.27 (14.64) ($p = 0.0017$) Participant satisfaction (SD) was higher in the Google Docs group (4.3 (0.73) vs. control group (3.09 (1.11)) ($p = 0.001$) (5-point Likert scale) Control group had fewer communication events (SD) with their mentors vs. Google Docs group (0.91 (0.81) vs. 2.05 (1.23) ($p=0.0219$)	N/A