Cooperative Wikis used to Promote Constructivism and Collaboration in a Skills Laboratory Course

Tori A. Rude, PharmD, Jeanne E. Frenzel, PharmD, PhD
North Dakota State University School of Pharmacy

Introduction

• Collaborative learning can benefit students’ critical thinking and increase their understanding of course material.1-4
• A wiki allows multiple people to create and edit information, which makes it beneficial tool for collaborative learning.5,6
• Literature supports the use of wikis in higher education; however, few studies analyze use in pharmacy education.9-13

Objectives

• To promote students’ engagement with course material through reading and collective knowledge building using a wiki

Methods

• Two faculty members and one post graduate year one resident facilitated an institutional-focused pharmacy practice laboratory course
• Due to the 2019 coronavirus pandemic (COVID-19), lab sections were divided into smaller groups than previous semesters to allow for social distancing (See Image 1)
• Students were required to complete 4 wiki-based assignments over the course of a semester as a part of a 4- to 5-person student group.
• Assignments included activities that encouraged students to get to know each other, work as a team, and prepare materials that would be useful in studying for the course
• Assignments were graded based on a faculty developed rubric
• Students voluntarily completed an anonymous survey using a 7-point Likert scale (1 = very strongly disagree, 7 = very strongly agree) to evaluate their digital experiences and measured the perceived learning, communication and reflection, satisfaction, and frustration students had with the assignment
• Data analysis was completed using SPSS v24 (IBM Corp., Armonk, NY)

Results

• Twenty out of 69 (29%) students participated in the study
• Overall average score for the wiki was 24.8 out of 26 (95.4%)
• Mean scores for the four constructs evaluating students’ attitudes toward the use of wikis were: perceived learning (M=4.0, SD=1.3), communication and reflection (M=3.9, SD=1.2); satisfaction (M=3.7, SD=1.4); and frustration (M=4.2, SD=1.6) (Table 1)
• Thematic analysis found that students’ felt the wiki helped them collaborate with team members and keep organized while providing a valuable study tool; however, the wikis were not user friendly and teamwork was limited

Conclusions

• Students used a wiki to complete team-based assignments
• Students felt the wiki encouraged collaboration and was a useful way to organize and study course information
• Students’ attitudes towards use of the wiki indicated that the wiki assignments did not contribute to their team learning or team communication and students reported low satisfaction with wiki assignments

References

9. King AE, Egan AM. A Required online course with a public health focus for third professional year pharmacy students. APhE. 2015;78(5):46. doi:10.5664/ajp7956

Table 1: Student Ratings of Survey Subscales

<table>
<thead>
<tr>
<th>Subscale</th>
<th>Mean (n=29)</th>
<th>SD</th>
<th>Cronbach’s Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perceived Learning</td>
<td>4.0</td>
<td>1.3</td>
<td>.85</td>
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<td>Communication and Reflection</td>
<td>3.9</td>
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Abbreviations: SD = Standard Deviation
Table 2: Student Ratings of Survey Subscales

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1=very strongly disagree; 2=strongly disagree; 3=disagree 4=neither agree nor disagree; 5=agree; 6=strongly agree; 7=very strongly agree