Expanding the Role of Peer Tutors Through the Use of Online Quizzes

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**Publication Information**

Lull, Melinda E. and Mathews, Jennifer, "Expanding the Role of Peer Tutors Through the Use of Online Quizzes" (2015). *Pharmacy Faculty/Staff Publications*. Paper 42.  
[https://fisherpub.sjfc.edu/pharmacy_facpub/42](https://fisherpub.sjfc.edu/pharmacy_facpub/42)

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Abstract
Peer tutors are commonly used in higher education as a way to provide additional resources for student learning. Self-testing, a type of formative assessment tool, provides students with a study tool that can help identify areas of weakness that require focus. Despite their usefulness, this type of additional learning resource can often be time consuming for faculty members, limiting its successful use across multiple courses. The use of peer tutors has been investigated and shown to provide advantages to both students utilizing tutoring services and tutors alike. Educating peer tutors to be involved in the academic process by preparing study materials for students, such as selftesting quizzes, increases their

Keywords
fsc2015

Disciplines
Pharmacy and Pharmaceutical Sciences

Comments
Presented at the Teaching Professor Conference on May 29, 2015, in Atlanta, Georgia.

This poster presentation is available at Fisher Digital Publications: https://fisherpub.sjfc.edu/pharmacy_facpub/42
Expanding the Role of Peer Tutors Through the Use of Online Quizzes

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Background
Peer tutors are commonly used in higher education as a way to provide additional resources for student learning. Self-testing, a type of formative assessment tool, provides students with a study tool that can help identify areas of weakness that require focus. Despite their usefulness, this type of additional learning resource can often be time consuming for faculty members, limiting its successful use across multiple courses. The use of peer tutors has been investigated and shown to provide advantages to both students utilizing tutoring services and tutors alike. Educating peer tutors to be involved in the academic process by preparing study materials for students, such as self-testing quizzes, increases their involvement in the learning and teaching experience.

Objectives
• Address the advantages and challenges of using online quizzes prepared by peer tutors
• Provide supporting data related to student benefit from the use of online quizzes
• Provide useful guidance for the implementation of online quizzes in other programs

Methods
Prior to the implementation of online quizzes, peer tutors offered 3 office hours a week and group review sessions prior to exams. At the beginning of the semester, tutors altered their services to include 1.5 office hours, review sessions before every exam, and 1 hour of quiz preparation. Each week, a ten question quiz was prepared on the previous week’s material. Quizzes were made available through ExamSoft®, the software used for all exams. Use of ExamSoft® also allowed students to experience questions in the same format as exams and track their progress. Students could take each quiz multiple times and were allowed to review each question. Data collected from the quizzes included: number of students taking each quiz, average quiz scores and performance on each question. At the end of the semester, both a survey was completed by both tutors and students.

Advantages
• Students are interested and invested in using the online quizzes as a study resource.
• Students grades are positively effected by the use of quizzes.
• Student perceptions of the resource are extremely positive.
  • Increased confidence
  • Influence study habits
  • Quizzes accurately represented exam material
• Peer tutors perceive a benefit to students.
• Peer tutors reflect that the experience of making online quizzes was a valuable experience.

Challenges
• Peer tutors must be adequately trained and provided with teaching and exam writing resources.
• Faculty time is required to review questions, assemble quizzes, and release quizzes to students.

Student Perceptions of Tutoring Quizzes (n=37)

<table>
<thead>
<tr>
<th>Question</th>
<th>Average Score*</th>
<th>% SA/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>I feel that the tutoring quizzes are a valuable resource.</td>
<td>4.65</td>
<td>95%</td>
</tr>
<tr>
<td>The tutoring quizzes influenced the way that I studied for the exams.</td>
<td>3.95</td>
<td>73%</td>
</tr>
<tr>
<td>I feel that taking the tutoring quizzes increased my confidence going into the exam.</td>
<td>4.43</td>
<td>92%</td>
</tr>
<tr>
<td>I feel that taking the tutoring quizzes increased my performance on the exam.</td>
<td>4.27</td>
<td>81%</td>
</tr>
<tr>
<td>I feel that the tutoring quizzes accurately reflected the material that was on the exams.</td>
<td>4.24</td>
<td>92%</td>
</tr>
<tr>
<td>I recommend continuing to offer tutoring quizzes in the future.</td>
<td>4.76</td>
<td>98%</td>
</tr>
<tr>
<td>Using the tutoring quizzes will increase my likelihood of using other tutoring services in the future.</td>
<td>4.11</td>
<td>69%</td>
</tr>
</tbody>
</table>

* Based on a Likert Scale of 1-5 (1= Strongly Disagree; 5= Strongly Agree); SA= Strongly Agree; A= Agree

Peer Tutor Perceptions of Tutoring Quizzes (n=8)

<table>
<thead>
<tr>
<th>Question</th>
<th>Average Score*</th>
<th>% SA/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Online tutoring quizzes were a valuable resource for the students I was instructing.</td>
<td>4.63</td>
<td>100%</td>
</tr>
<tr>
<td>Writing online tutoring quiz questions increased my knowledge of the course topics covered.</td>
<td>4.38</td>
<td>88%</td>
</tr>
<tr>
<td>Learning to write quiz questions was a valuable learning experience.</td>
<td>4.63</td>
<td>100%</td>
</tr>
<tr>
<td>Overall, I would rate my experience as: 1-very poor, 2-poor, 3-satisfactory, 4-good, 5-excellent</td>
<td>4.63</td>
<td>88%</td>
</tr>
</tbody>
</table>

Quiz and Exam Summary

<table>
<thead>
<tr>
<th></th>
<th>Online Quizzes</th>
<th>Exams</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number</td>
<td>12</td>
<td>5</td>
</tr>
<tr>
<td>Average Percentage Score ± SD</td>
<td>79.95 ± 8.02</td>
<td>86.90 ± 5.52</td>
</tr>
<tr>
<td>Average Number of Questions Per Assessment</td>
<td>10</td>
<td>34</td>
</tr>
<tr>
<td>Average Number of Students Taking Each Assessment ± SD (% of class ± SD)</td>
<td>55 ± 9.8 (70.5 ± 18%)</td>
<td>78 ± 0 (100 ± 0%)</td>
</tr>
<tr>
<td>Time to Complete</td>
<td>Unlimited</td>
<td>50 minutes</td>
</tr>
</tbody>
</table>

Quiz Performance versus Exam Performance

I feel that the tutoring quizzes are a valuable resource.
The tutoring quizzes influenced the way that I studied for the exams.
I feel that taking the tutoring quizzes increased my confidence going into the exam.
I feel that taking the tutoring quizzes increased my performance on the exam.
I feel that the tutoring quizzes accurately reflected the material that was on the exams.
I recommend continuing to offer tutoring quizzes in the future.
Using the tutoring quizzes will increase my likelihood of using other tutoring services in the future.