The Use of Guided Reading Questions as a Scaffolding Technique in a Flipped Graduate Metabolism Class

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Abstract

Objective: Evaluate the use of guided reading questions (GRQ) as a scaffolding technique in a flipped classroom among graduate dietetic interns.

Method: The Staged Self-Directed Learning Model conceptualizes how students move towards self-directed learning in 5 stages. As students become more responsible for their own learning, they need different guidance or support from the teacher. In a previous study, students were resistant to flipped learning initially. It was hypothesized that if the instructor provided scaffolding techniques, such as GRQ, to help students learn on their own, the resistance to flipped learning may be minimized.

Findings

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<tr>
<th>Theme</th>
<th>Description of Theme</th>
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<tr>
<td>Responsibility for Learning</td>
<td>At the beginning of the semester, students were confident to learn on their own, but wanted some instructor guidance. Did not need to read textbook to be successful in previous courses. Although learning independently was challenging, they had a desire to continue learning.</td>
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<tr>
<td>Metacognition</td>
<td>Flipped learning is time consuming, but acknowledged this was part of the learning process. Understand how they learn best, with a focus on repetition. Discussion, asking questions, and hearing multiple points of view improve learning.</td>
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<td>Team-Based Learning</td>
<td>Learning teams provide social support, provide feedback on each other’s understanding, and allowed them to ask each other questions. Still personally responsible for their own success; must prepare to help team succeed.</td>
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<td>Transfer of Skills</td>
<td>Understood how class format applied to future career (i.e. finding answers on their own). Improved other life skills (i.e. time management).</td>
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Background

In a flipped learning, students prepare for class by reading, completing assignments, or watching videos. During the face-to-face class sessions, students then spend time applying foundational knowledge.1 While flipped learning appears to be beneficial,2 in two previous iterations of this graduate metabolism course, students did not buy into the flipped learning process for several weeks.3 To help students adjust, scaffolding may be necessary to help students learn on their own.4 Guided reading questions can help students identify what the instructor wants them to understand from the assigned readings.

Objective

Evaluate the use of guided reading questions as a scaffolding technique in a flipped classroom among graduate dietetic interns.

Methods

The study was approved by the Bradley University Committee on the Use of Human Subjects in Research.

Setting:
- Graduate level metabolism course in a Dietetic Internship-Master of Science Program (n=10)
- Flipped course with team-based learning
- Students were given the option of completing guided reading questions to help them with the textbook readings that were phased out during the semester.

Data Collection
- Each student completed 8 structured learning reflections as part of the normal class using the Learning Management System Blog Tool

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<tr>
<th>Data Analysis</th>
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<tr>
<td>Content analysis by time-point applied to reflections by 2 independent investigators</td>
<td>Responsibility for Learning</td>
</tr>
<tr>
<td>Reflections were compared to previous cohorts of this class without guided reading questions.5</td>
<td>Metacognition</td>
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Discussion & Conclusions

Even though flipped learning is beneficial1, students may need time to adjust and buy into the process.1 By utilizing scaffolding techniques, instructors may be able to provide the guidance students initially need from the instructor,4 and in the present study, guided reading questions seemed to be a useful scaffolding technique. Compared to previous cohorts of this class that did not have guided reading questions, students maintained initial confidence, did not express frustration, trusted the flipped process from the beginning of the semester, did not have anxiety about team members coming to class prepared, and acknowledged their own limitations and areas for improvement. These scaffolding techniques may be especially important if students have not had a flipped class before as they may struggle with reading comprehension, note-taking skills, and independent learning.6

References