Traditional vs. Flipped Library Instruction for the Life Sciences

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Traditional vs. Flipped Library Instruction for the Life Sciences

Michael C. Goates, Megan Frost, and Gregory M. Nelson, Brigham Young University

Abstract

We compared search statement development between traditional lecture and flipped instruction sessions using two separate flipped models. Students in lecture sessions scored significantly higher on developing search statements than those in the flipped model 1 sessions. However, student scores were not significantly different between the lecture and the flipped model 2 sessions. Reasons for lower flipped-session scores may include a lack of student accountability, strong preference for a live demonstration, and disconnections between online tutorial content and in-class collaborative activities. Students in all sessions expressed a strong preference for pedagogies that incorporate elements from both traditional and flipped models.

Analysis

- Divided participants into 3 groups
  - Lecture treatment (lecture)
  - Flipped/tutorial (flipped/yes)
  - Flipped/no tutorial (flipped/no)
- Compared scores: one-way ANOVA
- Coded student comments

Student Search Statements

- Topic: The impact of soft drink consumption on childhood obesity.
- Construct an effective search strategy within the Web of Science database to find relevant journal articles on this topic.
- Use the OR, AND, and NOT operators and any necessary limiters (date range, title search, truncation, document type, etc.) to refine your results.
- Once you have modified and refined your search and narrowed your results to a set of relevant articles, list your final search statement, any limiters or modifiers you applied, and the total number of articles found in this final search.

Student Search Assignment

- Traditional lecture equal to or better than flipped models
- lecture 4.07616 0.76287
- Flipped/Yes
- Flipped/No

Conclusions

- Modified flipped classroom model can be as effective as a traditional lecture for teaching search strategy development
- Student-led search demonstration improved performance for all students in a flipped session (regardless of tutorial completion)
- Successful flipped classroom considerations:
  - Facilitate student engagement
  - More one-on-one/smaller class size
  - More instrucqional resources
  - More student-led demonstrations
  - More student-led assignments
  - More student-led small class size
  - More student-led class size

Study Takeaways:

- Modified flipped classroom model can be as effective as a traditional lecture for teaching search strategy development
- Student-led search demonstration improved performance for all students in a flipped session (regardless of tutorial completion)
- Successful flipped classroom considerations:
  - Facilitate student engagement
  - More one-on-one/smaller class size
  - More instructional resources
  - More student-led demonstrations
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Study Feedback by Theme

- Lecture Positive Responses
  - Learning search strategies
  - Brush up on library research
  - More one-on-one/small class size
  - More instructor "chatter"

- Lecture Negative Responses
  - Time consuming/limited

- Flipped Positive Responses
  - More student-led/responsibility
  - More one-on-one/small class size

- Flipped Negative Responses
  - More instructor "chatter"

Student Feedback by Theme

- Why a Flipped Classroom?
  - Flipped classroom – traditional lecture material assigned as pre-class homework, hands-on application and collaborative activities during class time
  - Used extensively in academic settings, including library instruction
  - The flipped model could revitalize traditional ‘one-shot’ library session
  - Most flipped library instruction assessments are anecdotal/non-empirical

Methods

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