The Use of Current Events as Assessment Tools

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INTRODUCTION

An important student learning outcome for students in biology courses is the ability to apply the information attained to “real life” situations. Newspaper articles covering course-related material provide an avenue for students to see how the material discussed in the course relates to life outside of the course. Assessment of students’ understanding of the articles provides an opportunity to measure how well students are able to apply information to situations outside of traditional coursework.

Newspapers have been described in the literature as tools to facilitate active learning in the science classroom. An article by Bondos and Phillips (2) describes using newspaper articles as the basis for a non-majors biology course. An article by Mysliwiec, Shibley, and Dunbar (4) describes incorporating newspaper articles in the science course to encourage active learning and to help students understand the role of science in their lives. As a result of their study, students reported that the assignments helped illustrate that “biology actually has something to do with our lives” and “it was interesting to read articles that we had just learned about in class.”

Current events can be used in a variety of ways to assess students’ application abilities. I use current events as assessment tools in several of my courses, including an allied health microbiology course and a non-majors genetics course. These tools can be adapted to fit any level of student or biology discipline.

PROCEDURE

Current events can be used as in-class active learning activities. I often give students short articles either at the start of class to help reinforce previous material or at the end of class to reinforce the current topics. The students read the article independently, but I give them the opportunity to work with a partner and discuss the questions. Articles in local papers are nice to use because the students typically feel comfortable and not intimidated by the content. It is also valuable to use articles with mistakes. Having the students identify the mistakes not only shows me that the students are learning important concepts, but it also alerts the students to the importance of critically evaluating what they read.

Another use of current events is as an independent assignment. Independent current events assignments serve as an excellent tool for encouraging students to pay attention to science in the news. An assignment that I use in both my microbiology and non-majors genetics classes requires students to find their own current event article that relates to some aspect of the course. The students must summarize the article, discuss how it relates to the course, and analyze the article for accuracy and relevance. This assignment gives students the opportunity to use what they have learned in the classroom, and gives me the opportunity to assess how well they are applying their knowledge. It also provides me with a great source of articles for use in future classes.

Current events can also be used as a means to measure improvement in students’ ability to understand current events. I always tell my students that I hope that after taking one of my courses, they can better understand the news. In an effort to see if that improvement was actually happening, I conducted a classroom research project during the winter and spring quarters of 2009 (3). The purpose of the project was to evaluate whether students improved in their ability to understand a subject-related newspaper article by the end of the course compared to their ability at the beginning. Additionally, I used a survey to collect data on the students’ perceptions of the use of current events in the classroom. This study involved approximately 57 students enrolled in an allied health microbiology class. The study included administering a pre- (first week of class) and post- (last week of class) current event news article assessment. In both cases, the students were given the same news article to read during class and then given a worksheet including both factual and application style questions related to the information in the article. The students were allowed to keep the article, but I did not return the pre-assessment questions. This prevented students from being able to “study” the answers before the post-assessment. The assessment article chosen related to
many important course concepts including pathogens, virulence, and antibiotic use/misuse (1). Comparison of the pre- and post-assessment scores on both the factual and application style questions provided valuable insight into how well students increased their knowledge of the subject, as well as how they improved in their ability to apply that knowledge.

CONCLUSION

Analysis of the classroom data showed that the average correct responses on the factual questions improved from 41% on the pre-assessment to 77% on the post-assessment (see Fig. 1). Average correct responses on the application questions improved from 14% to 63%. The improvement in scores from pre- to post-assessment was significant ($p < 0.001$). There was a significant interaction effect in that student performance on application questions improved more than performance on factual questions ($p = 0.002$). These data show that students are not only acquiring more microbiology knowledge, but they are also improving on their ability to apply that knowledge to a variety of contexts. Analysis of student responses to survey questions and open-ended comments showed that students valued current event assignments. Some of the student comments included: “I like tying course material to events outside of class …” and “I enjoyed the news articles, they helped me understand the information we learned in class a lot more. I liked applying what I learned to real life situations.” The results of the survey questions also showed that the students found the current events valuable. The average of students’ responses was 4.7 out of 5 with 5 being “strongly agree” when students were asked whether or not they felt that the current events helped them apply course material to “real world” situations.

The results of my study are consistent with what has been reported in the literature. Current events can be used in numerous ways to help students connect classroom topics to real life situations. They are readily available and can be adapted to any class or student level. In addition, students see them as valuable.

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REFERENCES