

RECAP – A Reinforcement Strategy for Student Learning

Professors are expected to prepare graduates to possess the ability to problem-solve and use higher order thinking skills (Lewis & Smith, 1993). Learner-centered pedagogies such as classroom discussion take more class time compared to a teacher-centered method like lecture. However, with learner-centered teaching methods, students are more likely to comprehend and remember ideas since they are active in creating understanding (Halpern, 1993).

Students need to be engaged in the classroom for meaningful learning to occur (King, 1993). RECAP is a student-centered strategy designed to reinforce student learning (Radhakrishna, 2008). The acronym RECAP stands for: R-Read/Recall class materials; EC-Engage in discussions, and group activities in class; A-Apply what was learned in class via exams, assignments, projects; P-Progress/Performance as determined by course grade.

The procedure for using RECAP involves a series of sequential steps. First, the instructor describes this learning strategy to students the first day of class and through the course syllabus. Second, the instructor develops a set of questions for each class session to be taught during the semester. Following each class session, students are given the RECAP sheet containing the questions for that class session, which is to be used as a review at the beginning of the next class session. In other words, this is a summary presentation of what was taught in the previous class session. Third, at the beginning of the next class session, a student is selected at random to present this summary. The rationale for selecting a student at random is to ensure that every student prepares for presenting the summary. During this presentation, which is approximately 15 to 20 minutes in length, other students and the instructor discuss or respond to the presentation. The instructor evaluates each student's presentation and select RECAP sheets throughout the semester for grading.

The RECAP strategy has been implemented for over three years in two different graduate-level classes. Students' comments indicate that this is a very helpful strategy for keeping track of content discussed in class. Overall, students agreed that this strategy was helpful in identifying where they need further help or reinforcement on key concepts discussed in class. Student comments like the following support the use of RECAP.

"RECAP sheets helped me to prepare for exams. The assignments were helpful in understanding concepts."

"During the whole of my academic life, the RECAP sheet proved to be the most effective way I came across in motivating me to revise weekly and more thoroughly. After each RECAP I felt prepared for on the spot questions and tests. In addition, by revising the RECAP sheets, I spent less time preparing for the mid semester and final tests. I am such a big fan of the RECAP sheet, I even explained it and recommended it during an 'effective lectures' presentation I had to give for a Teaching and Learning course."

From the instructor perspective, the RECAP strategy has both challenges and opportunities. The challenge is to prepare effective questions that allow for critical thought and reflection of class content each week. On the other hand, this strategy provides opportunities for students to review course content on a weekly basis and come prepared for each class session. The strategy also helps students to learn presentation skills and respond to questions from their peers.

RECAP has proven to be beneficial to both the students and the instructor. The students have a better grasp of concepts taught in class, as well as a systematic way of preparing for exams. Further, the instructor is able to assess not only student learning, but also track student progress in the course. The RECAP strategy works best for small to medium sized classes. Although, it will be a time consuming effort in large classes, it is worth trying.

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John C. Ewing
Naveen Chikthimmah
Rama B. Radhakrishna
Tracy S. Hoover
The Pennsylvania State University
University Park, PA 16802

Engaging Net Generation Learners by Incorporating Their “Hot Topics” into the Classroom

Thanks to the continuing emergence of information-sharing technology, our students have so much knowledge available at their finger tips that it is sometimes hard to feel like we can teach them anything new. Milliron (2008) determined that as of 2008, Net Generation Learners (Oblinger and Oblinger, 2005), or “Net Gen’ers” (students who were born in the 1980’s or later; the generation that encompasses the majority of our students today) are online an average of 12.2 hours a week, and those 12.2 hours often occur simultaneously with hours watching television, instant messaging, emailing, blogging, etc. Net Gen’ers are known as the “we” generation, as opposed to the “me” Generation X’ers, or the family oriented Baby Boomers (Milliron, 2008). The “we” mentality is present everywhere they go, including in their learning environments. Net Gen’ers appreciate when their learning is experiential (Oblinger and Oblinger, 2005) or at the very least, engaging. They want to feel like they are helping to drive the direction of the course and they need to have their thoughts and opinions heard.

In an effort to help engage the Net Gen’ers in my Introduction to Food Science and Human Nutrition Course (FSHN 101), “hot topic” cards were used at the start of the Fall 2008 semester. Variations of “hot topic” cards are used throughout academia, and their purposes vary almost as much as their appearance. The “hot topic” card that was used for FSHN 101 is shown in Figure 1. It is a very simple card that asked the students to describe a hot topic related to the food industry that they would like to learn more about during the semester. FSHN 101 is an introductory course that is composed of four main sections: health and nutrition, food chemistry and composition, food microbiology and processing, and food laws, quality, and the consumer. Students were asked to complete their “hot topic” cards on the first day of class and they were encouraged to pull their topics from any of the course’s four sections.

<p>FSHN 101 HOT TOPIC FALL 2008 SEMESTER</p> <p>Name (please print clearly): _____</p> <p>Email address: _____@illinois.edu</p> <p>Please describe a hot topic related to the food industry that you would like to learn more about. Your signature: _____</p>
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Figure 1: Hot Topic Card

Twenty-eight “hot topic” cards were turned in, which accounted for two-thirds of the 42 students in the course. Since this was not a graded assignment, nor did the students receive any extra credit for turning in a card, this impressive response rate indicated that the majority of the class felt that this was a way for their thoughts to be heard, or in other words, a way for them to be engaged in their learning. The students’ willingness to participate in the “hot topic” experiment encouraged the author to try very hard to incorporate the hottest of hot topics (topics mentioned by multiple students) into the course, and additional topics, too, time permitting.

After obtaining and organizing the cards, the general breakdown of the topics requested was shared with the class, and the “hot topics” were highlighted whenever they surfaced throughout the course. The number one requested “hot topic” centered on learning about a “diet that worked.” The nutritional needs of an individual are specific to that individual, and a “diet that works” isn’t something that should be advertised in an introductory food science and human nutrition course. The course did cover the topic of diet and smart choices, though, so the idea of a “developing a diet that is right for you” was incorporated into the “nutritional adequacy and the body; macronutrients; micronutrients; the Dietary Guidelines for Americans; and the Food Guide Pyramid” lectures.

Another popular “hot topic” was the genetically modified organism versus organic foods debate. A lecture on “genetically modified organisms” was already slated for the course during the food microbiology and processing section, but since this was a topic of interest for a number of the students in the course, the author decided that a simple lecture about the history of GMO’s probably would not suffice. Instead, Dr. Bruce Chassy, Executive Associate Director of the Biotechnology Center at the University of Illinois, was invited to provide an interactive lecture on the genetically modified organism-organic foods debate. Students gained insightful knowledge about both GMO’s and organic foods, and they learned how to better evaluate the information provided in the popular press about both topics.

Other “hot topics” that were covered during the semester were: how to read and understand the nutritional facts label, acid reflux, soft drinks and obesity, ethanol production, food borne illness outbreaks, the impact of food processing on food quality, and nutrition bars. Truthfully, all of the topics on this list, except for nutrition bars, were topics originally slated for the course. For the lectures that focused on these topics, the number of interactive activities planned were increased in hopes to better engage the students who identified these “hot topics.” The decision to cover nutrition bars, too, presented itself for two reasons: 1) the nutrition bar industry is interestingly popular to a diverse con-

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sumer group and 2) the author had a peer that used to work in a nutrition bar group for a major food company. The industry representative was invited to FSHN 101, and she was specifically introduced to the student who suggested the topic. The presentation on nutrition bars engaged all of the students in a thorough discussion about the nutrition bar industry, particularly how individual bars meet the needs of individual consumers. The industry representative also brought some popular nutrition bar products for the students to sample, and as we all know, free food always helps engage students in the learning process. At the end of the presentation, the student who initiated the "hot topic" expressed his gratitude the industry representative for the information. The student also displayed his gratitude by becoming a more engaged student, earning consistently higher grades on quizzes and exams and earning a top grade in the course.

The FSHN 101 "hot topic" cards were used for an introductory level course, but "hot topic" cards could be easily incorporated into courses at any level, including the higher level, "traditional" food science courses, such as food chemistry and food microbiology. Evaluating case studies is an excellent instructional tool used in the higher level courses. Identifying case study topics that interest the students through the use of "hot topic" cards is just one way to use the cards in the traditional courses. The cards can also be used to identify subject matter

interests within a course. Student research groups can be formed and course research projects can be assigned based on similar interests, which should engage and motivate learners at any level.

Using "hot topic" cards provided FSHN 101 students with a way for them to help drive the direction of the course, and in return, they allowed the students to be engaged in the learning process. As Oblinger and Oblinger (2005) identified, Net Gen'ers require their learning to be experiential and engaging, and utilizing "hot topic" cards is an easy way to fulfill that need.

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Dawn M. Bohn
University of Illinois at Urbana, Champaign
539 Bevier Hall
905 South Goodwin Ave
Urbana, IL 61820
217-333-0881 (work)
dbrehart@uiuc.edu

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