Teaching Tips/Notes



Using Jeopardy Game in a Forages Course

Introduction

There are several teaching venues used in the classroom such as: traditional teaching on the board, PowerPoint presentations, interactive games, or online learning. Another active learning tool that could be incorporated into the classroom is using games to ask questions, such as in Jeopardy, to help students remember and review what was covered in previous lectures. Games have been proven useful in improving learning in classes (Schwartzman, 1997; Khan and Elzouki, 2011). Schwartzman (1997) reported that conceptualizing education as a game restores enjoyment, healthy competition, cooperation, and discipline to teaching and learning. The game of Jeopardy can also be used as a tool to review the materials that were learned in previous classes or as a pre-exam review (Grabowski et al., 2003).

Using the Jeopardy game in classroom settings is not new in academia, but there are no publications testifying of the use of Jeopardy in agricultural science courses, particularly forages classes. Thus, the objective of this note, is to introduce the Jeopardy game and explain how it was used in a forages course at Kansas State University Department of Agronomy in Manhattan, KS.

Methods

Using the Jeopardy game in class is not as hard as it sounds. The first game takes a couple of hours to put together, but after that, the first game can be used as a template for other games by simply changing the questions. First, the number of questions per game must be decided on so that the length of the presentation can be determined. Once the length is determined, the presentation can be made using Microsoft PowerPoint. Each game will need the following: a title slide, game board slide, three slides for final jeopardy, and two slides for each question and answer pair. Double jeopardy is optional and requires only one additional slide to signal which question is the double jeopardy question of the day. The title slide should have the word "Jeopardy" typed in large font with the subject of the jeopardy in smaller font as seen in Figure 1.

| Jeopardy Silage Making Edizion | Moisture/ DM Losses | Planting and Harvesting | Additives | Toxins |
|-----------------------------------|------------------------|----------------------------|--------------|--------------|
| | <u>\$100</u> | <u>\$100</u> | <u>\$100</u> | <u>\$100</u> |
| | <u>\$200</u> | <u>\$200</u> | <u>\$200</u> | <u>\$200</u> |
| | <u>\$300</u> | <u>\$300</u> | <u>\$300</u> | <u>\$300</u> |
| | <u>\$400</u> | <u>\$400</u> | <u>\$400</u> | <u>\$400</u> |
| | <u>\$500</u> | <u>\$500</u> | <u>\$500</u> | <u>\$500</u> |

Figure 1: Title slide (left) and game board slide (right) taken from the Silage Making jeopardy game

Pictures on this page are optional. Game boards can be made by inserting a chart onto the slide. To do this, click the charts and tables button in the middle of the slide and select the number of rows and columns desired. The top box in each column should contain a quiz topic as seen in Figure 1.

These quiz topics are chosen by dividing the lecture content into main points that the students should understand and study. The questions in each row under the quiz topic column should come from the related portion of the lecture material. Dollar amounts or point amounts should be added under the quiz topic from smallest to largest. Easy questions should be placed under smaller amounts and harder questions under larger amounts.

Once the game board is made, hyperlinks are created to facilitate movement between the game board to the question slide. To do this, highlight an amount, right click, select "Hyperlink," and then choose the correlating slide number. "Final Jeopardy" should be placed after the game board so it is easy to access.

The first slide may contain a picture of final jeopardy or just a fun cartoon as seen in Figure 2. The purpose of this slide is to signal that it is time for the final question and to allow teams to wager their points before seeing the question. The next two slides should contain the question on the first slide and the answer on the second. Next, the normal questions and answers should be filled in. The answer slide for each question should be place directly behind its question slide. Hyperlinks need to be added to every answer slide so the presenter can move back to the game board. The hyperlink from the answer slide back to the game board should be placed over a small picture i.e. home button, return button, cartoon, etc. in a corner of the slide that can be easily clicked when the presenter is ready.



Figure 2: Beginning slide for Final Jeopardy taken from the Silage Making jeopardy game. This slide gives students a chance to wager their points before seeing the question

In the end, it should be easy to navigate back in forth between the game board and question slides. Click the space bar to move from the question to the answer, and then use the home button to return back to the game board. Questions and answers should be added into their respective slides to finish making the game (Figure 3).



Figure 3: An example of a question (left) and an answer (right) taken from the Silage Making jeopardy game.

Jeopardy Game Uses in Forages Course

Jeopardy games can be used as a form of classroom review, to increase student interaction, and to track comprehension. The objectives of using the Jeopardy game quizzes in the forages class were: 1) to remind the students what they learned and what they need to know, 2) to make sure they understand the content taught in the class, and 3) to have students build team work skills via the Jeopardy game in the forages class. Reviews using Jeopardy games can be held either directly after the lecture or at the beginning of the next class period. Rewards for winning, such as extra credit, encourages students to pay more attention in class.

Before starting the review, the class should be divided into manageable groups. As they play through the game, the professor or teaching assistant should keep track of the points accumulated by each team. All questions, other than the final jeopardy question, should be answered by the individual who received it, with no discussion within the teams.

During the game, the instructor has the option of explaining or adding details after the answers has been given. The game also encourages students to communicate, particularly for their Final Jeopardy question which can sometimes determine who wins the game.

At the end, before the final jeopardy question is asked, teams should discuss how many points they wish to wager on the final question. They may wager any amount up to the amount they have earned so far. Once the wagers have been relayed to the score keeper, the final question should be displayed. The teams should be given a short amount of time to discuss the answer within their groups and submit their answer on paper to the score keeper. If the team answers correctly, the amount of points they wagered is added to their total score. If they answer incorrectly, the same amount is subtracted from their score. The team with the most points at the end of the game wins. Rewards can either be given at the end of each game or as an accumulation of points over the semester.

The majority of students participated in a Jeopardy-game formatted quiz for the first time at K-State in forages class. Five categories were given with five sub-questions under each category plus one Final Jeopardy question. Each team earned points (i.e., 1st place: 5, 2nd place: 4, 3rd place: 3, and 4th place: 2) and these extra points were added to their total points. In each Jeopardy game, points were accumulated to give extra credit points to the students. I divided the class into four groups (A, B, C, and D). Each group consisted of nine students with one student from each group being selected as the group captain.

Jeopardy games can also be used outside of the classroom. Once the review has been done in the classroom, it can be posted to the class webpage as a study resource for the students. With the games posted online, students can access them at any time to help them study and review for exams. The main purpose of using the Jeopardy game in the Forages class was to encourage students to engage in class, learn together, and have fun in the classroom.

References

Grabowski, J. and M. Price. 2003. Simple HTML templates for creating science-oriented jeopardy games for active learning. Journal of Chemical Education 80(8): p.967.

Hill, J., R. Clark, J. Blair and C. Carver, Jr. 2003. Puzzles and games: Addressing different learning styles in teaching operating systems concepts. Technical Symposium on Computer Science Education (SIGCSE 2003), West Point, NY. 182-186.

Khan, M. and A. Elzouki. 2011. Comparison of jeopardy game format versus traditional lecture format as a teaching methodology in medical education. Saudi Medical Journal 32(11): 1172-1176.

Schwartzman, R. 1997. Gaming serves as a model for improving learning. Education. 118(1): 9-18.

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