Once Upon a Time in America: Interactive Nutrition Evaluation

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Participants of nutrition education classes sponsored by the State Cooperative Extension System are typically evaluated with a pencil-and-paper design. At the initial meeting, participants answer questions before any intervention. Such “testing” can generate apprehension among participants and foster an uninviting environment.

The purpose of this research was to create an enjoyable first-time experience for individuals participating in Cooperative Extension education series programs. This environment helps foster a positive relationship between participants and the educator. Once Upon a Time in America (OUTIA) was developed to create an engaging, age-appropriate, easy-to-use evaluation tool for fourth and fifth grade students in a nutrition education program.

The OUTIA evaluation tool is composed of 2 components used simultaneously by students. A nutrition evaluation questionnaire assesses personal nutrition knowledge and behaviors, whereas a Jeopardy-like game quizzes students’ knowledge of food history and other social science concepts. The OUTIA evaluation tool served as pre- and postassessments to determine changes in students’ nutrition knowledge and behavior that resulted from participation in a 6-week nutrition education program.

The methods for OUTIA used cooperative learning tenets. Students were accountable for their own nutrition knowledge and behavior as they individually completed the questionnaire. Concomitantly, collaboration and positive interdependence were used as students answered game questions in teams.

The colorful OUTIA questionnaire (Figure 1) includes 15 nutrition knowledge and 26 eating behavior questions. The questions assessed concerns (1) calcium consumption, (2) fruit and vegetable consumption, (3) Food Guide Pyramid knowledge, (4) breakfast consumption, (5) after-school activities, (6) soft drink consumption, (7) nutrients in foods knowledge, and (8) functions of nutrients knowledge. The questions are yes/no, matching, and multiple choice.

The Jeopardy-like game features a colorful map of the United States (Figure 2). Both pre- and postassessment games contain 16 game cards with point values of 25, 50, 75, and 100 and 1 bonus card. Preassessment game cards are divided into 4 categories: Foods, People, Places, and Animals. Postassessment categories are States, Symbols, Trivia, and the USA. A game question is printed on the back of 14 of the 16 game cards. Game questions are intended to reinforce fourth and fifth grade State Board of Education standards for social science concepts. A unique aspect of the game is its use of 2 game cards, called “Go To” cards. These cards instruct students to stop playing the game as a team and to complete a section of the questionnaire as an individual. Because the fronts of the “Go To” cards and the game cards are identical, students were unaware when a “Go To” card would be selected. When selected, the nutrition educator ensured that all teamwork ceased and that individuals answered questionnaire questions alone.

Students answered game questions in teams to earn points. The highest scoring team was declared the winner. Approximately 45 minutes were required to complete the evaluation tool.

OUTIA was created with a low-level readability. The Flesch-Kincaid Readability score for the questionnaire (1.8) was below a second grade level. For the game, the score (5.6) was higher owing to the nature of game questions. Words such as “pancakes,” “griddlecakes,” and “flapjacks” are lengthy but recognized by students. The content validity of OUTIA was determined in pilot tests involving university nutritionists, 20 nutrition educators, and 20 schoolteachers and their classes of fourth and fifth grade students.

OUTIA was implemented statewide as pre- and postassessments among 773 students in fourth and fifth grades. Following this implementation, nutrition educators completed a process.
evaluation of their OUTIA experiences. They confirmed that the tool reinforced classroom instruction in an enjoyable environment. The educators agreed that the grammar, readability, and content of the OUTIA evaluation tool were exceptional. Most important, program impact data were obtained in an appealing environment.

In summary, OUTIA is an engaging, age-appropriate, and easy-to-use evaluation tool. Nutrition educators using OUTIA obtain program impact data. Elementary teachers value the reinforcement of social science concepts within OUTIA. As well, students gain social interaction skills.

NOTE
Game materials for OUTIA are available through the State Cooperative Extension System by contacting the author for correspondence.

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REFERENCES