Portable Computer Used for Prompt Evaluation of Students' Performance

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Abstract

A laptop computer is being used as an evaluation tool for the Oral Expression course at The Ohio State University. The Department of Agricultural Education is field testing a computer program that is able to record the evaluator's observations. The program utilizes a bank of pre-programmed instructor comments. The comments give students prescriptive advice in order to improve their presentations. The comments are divided by subject headings such as: stage presence, visual aids, gestures, organization, power of expression, and conclusion. Each comment has a three digit identification code for retrieval purposes.

Introduction

The computer age has brought with it a new tool that is used in classrooms around the world. Computers have been used for teaching purposes, for data analysis and are now in the classroom for purposes of evaluation. Evaluation, in a sense a form of data analysis, is an essential ingredient as a teaching component.

Related Literature

Assessment of student learning and performance is not a new idea. However, recent accountability movements have prompted a more careful examination of alternative assessment techniques. Chittenden (1991) examined assessment activities in New Jersey and New York and concluded that they could be characterized as (a) capitalizing on the actual work of the classroom, (b) enhancing teacher and student involvement in evaluations, and (c) meeting some of the accountability concerns. Perrone (1991) stated, "...we must move assessment activities closer to the actual work of teachers and (students)..." (p. 164).

Worthen and Sanders (1987) classified the various approaches to evaluation into six categories: (1) objectives-oriented, (2) management-oriented, (3) consumer-oriented, (4) expertise-oriented, (5) adversary-oriented, and (6) naturalistic and participant-oriented. They indicated that the objectives- oriented approach has dominated the thinking and development of evaluation. This straightforward process of indicating objectives (criteria) and judging success upon them has led to its high degree of use.

Background Information

The college instructor's new student evaluation tool is a portable computer. At least the students are enrolled in the Oral Expression course at The Ohio State University, offered through the College of Agriculture in the Department of Agricultural Education are familiar with this method of evaluation. Each student is required to present four speeches to the class. The speeches are evaluated by the instructor or teaching assistant with the aid of the laptop computer. This computer is special. The Zenith computer,

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1. Then are not all nations developing nations?
2. If a developing nation can be defined as one that is in the state of being developed, does this mean that the supposedly industrialized nations, who in recent years have been referred to as the "Group of Seven (USA, Canada, Japan, France, England, Germany, and Italy)," are they developing nations as well?

Ralph Waldo Emerson once wrote, "People do not seem to realize that their opinion of the world is also a confession of character." When the citizens of one nation make reference to another nation by using allegedly derogatory or judgmental adjectives, is it then true that the societal opinion of that nation is a confession of its character? Remember our portrayal of character counts as we work in International Agriculture.

References

Ali, Sheikh R., (1989), *Third World at the Crossroads*, Westport, Connecticut: Praeger Publishers, pp. 1-12.

De Souza, Anthony, Phillip W. Porter, (1974), *The Underdevelopment and Modernization of the Third World*, Washington, D.C.: Commission of College Geography, pp. 1-8.

Gamer, Robert E., (1976), *The Developing Nations: A comparative Perspective*, Boston Massachusetts: Allyn and Bacon, Inc., pp. 3-5.

Griffin, Keith, (1969), *Underdevelopment in Spanish America*, London, England: George Allen Unwin, preface.

Morris, van Cleve, (1961), *Philosophy and The American School*, Cambridge, Massachusetts: The Riverside Press, pp. 111-138.

Seers, Dudley, (1972), "Who are We Trying to Measure?" *The Journal of Development Studies*, Volume 8, pp. 21-36.

Szentes, Tamas, (1971), *The Political Economy of Underdevelopment*, Budapest, Hungary: Akademial Kiado.

-- (1990), *Webster's Ninth New Collegiate Dictionary*, Springfield, Massachusetts: Merriam-Webster Inc., Publishers.

model ZA-180-65, houses a customized program to enable the instructor and teaching assistant to render an extensive appraisal of the students' performance.

The program is in its developmental stage. It has been field tested for two quarters. The program utilizes an extensive bank of 150 instructor comments and includes space for virtually an unlimited supply of additional comments. The program also is adapted for 125 characters of space in order to type in open-ended comments. It provides an evaluation screen for each of the four student speeches to use while observing students' presentations. The program can be expanded for additional speeches.

The comments are meant to give prescriptive advice to students so they can improve their speech presentation and writing skills. The comments are organized by subject headings for ease in retrieval. The headings include: introduction, stage presence, voice, visual aids, gestures, organization, power of expression, knowledge of subject, questions and conclusion. The comments under each heading have an identification code consisting of a letter of the alphabet and a two digit number. The letter of the alphabet is representative of the heading where it is located. When the evaluator wishes to retrieve a comment, the evaluator simply types in the code that corresponds to the full comment.

For example, if the evaluator wishes to comment that the visual aids used in the speech were too small to read, "A12" would be selected on the keyboard. The code letter "A" contains various comments related to visual aids. "A12" signals the computer to choose the 12th visual code within that heading to appear on the computer screen. There are spaces available to enter up to 30 codes on each student's screen that correspond to the evaluator's comments. When the students' evaluation record is printed, the full comment appears. Each record is displayed on the computer screen while the speech is in progress.

How the Computer Program Operates

The evaluator sits at the keyboard while observing students delivering their speeches. A master list of headings with the comments and codes is printed out for the evaluator as a reference. These comments came from a collection of hand written, open-ended comments given to students before the computer was utilized in the classroom. These comments include both positive reinforcement items and constructive criticism. Examples of positive reinforcement comments include: "good organization of subject matter", "appeared very sincere", and "good timing of gestures". Examples of constructive criticism include: "slightly monotone, try more variety and inflection", "hold eye contact longer", and "summary was not definite and was ineffective".

Each member of the class has an identification number that is entered into the program at the start of the quarter. The identification number identifies the student by name and social security number. The class roster serves as a source for the class list. Each quarter, the program is prepared to record separate data for that class. Students are also identified by the lab period in which they are taking the class, as there are multiple sections taught.

As the first student speaker is introduced, that student's record is produced on the screen. As the speaker begins talking, the time is recorded by striking one key that activates an automatic time clock built into the computer. Another single key stroke will bring the current date on the screen. The evaluation phase continues as additional codes are selected that correspond with the evaluator's comments regarding the student's performance. At the conclusion of the speech, the computer's time clock is stopped and the computer determines the exact time length of the speech. There is also a place on the screen for the evaluator to indicate if a grade penalty will be imposed for a speech that was over or under the time limit. Based on the performance the evaluator has seen, a subjective numerical grade is determined. The student's grade is automatically logged on the student's record. The next speaker's identification number is keyed in and a separate evaluation screen appears. The process continues for the next speaker. When all speeches have been presented for the day, the grades are posted to the students' files. The laptop computer is connected to a printer in order to get a printed copy of the evaluator's comments, speech time and grade. Grades can be changed prior to printing out the speech. The evaluator can take time to review the written speech manuscript and additional written documents such as the audience analysis sheet, full-sentence outlines, manuscripts, speech references and students' note cards. Students' individual records can be accessed in order to change the numerical grade that was previously entered.

The printed record can be given to the students during the next class meeting. This quarter, students are asked to evaluate the videotape of their speeches and give themselves a grade. Their self-evaluations must be turned in to the instructor or teaching assistant before receiving the computer printout.

Many students find that this form of evaluation is more objective than a handwritten evaluation. Since the evaluation is typed and was produced from a computer program, many feel that it is more valid.

The instructor has the ability to modify the program to statistically analyze the data collected. Frequencies for each code description can be calculated. This will allow the instructor to have information concerning those codes that are most frequently used when students' speeches are evaluated. An automatic grade book also can be added to the program that will record grades for all speeches and compute a total score.

Benefits of the Program

To be most effective, evaluation must be objective. If students are made aware of the criteria for evaluation, they will be more likely to perform according to those criteria. This computerized program allows an opportunity to "look into the window" or the mind of the evaluator and understand what components of the presentation will be evaluated. By seeing the total list of printed evaluation comments prior to delivering their first speech, students can focus on

fine tuning the skills listed. The comments are distributed to the class early in the quarter.

The computer printout system is a more efficient method for providing students feedback on their presentations than handwritten evaluations. Student evaluation, logistically, is easier for the instructor to perform. Less time is taken to record the comments and to determine a final grade. The evaluator can spend more time actually watching the student speaking, instead of writing open-ended comments.

A greater amount of feedback can be given simply by striking a few keys on the keyboard. Full sentences are generated on the students' printouts in seconds. This computer-managed evaluation system provides a much more professional looking report and is a more efficient method compared with handwritten analysis. Also, typewritten analyses are easier to read than handwritten analyses.

Likewise, there is more consistency between raters with this system. This is especially handy when there is a teaching assistant involved in the evaluation process. Each rater is viewing the students' performance and evaluating the presentation according to a set list of codes and criteria. There is more focus placed on the evaluation and certain headings are less likely to get overlooked. The codes, which are part of the system serve to focus the evaluator's comments. However, there is flexibility to offer an individual open-ended comment for those times when the programmed comments just aren't enough. After all, students do get creative in their presentations, thereby requiring a creative response! As the course develops, additional comments and codes can be added at any time to accommodate new ideas. Existing codes can be rearranged or deleted.

Other Applications for the Program

This is an appropriate program to use when evaluating all types of student presentations. It is not limited to a university setting, as it also can be adapted for use in post-secondary, secondary and elementary grades. It is most useful for individual or group presentations. It also can be used in non-formal educational settings.

There are many occasions when students' oral communication skills are evaluated including: preparation for public speaking contests, student organization presentations, reports of research, honor student projects, parliamentary procedure contests, student teaching, microteaching, speeches, oral reasons for general livestock judging and dairy judging, land judging, interviewing, theatrical performances and singing performances.

Because the computer is portable and contains a battery pack, it can be taken into the classroom or out in a field setting. Specific components of evaluation could be added in order to target the observation. For example, if the instructor was interested in a student teacher's ability to lead student discussion, a specific section dealing with teaching methods would be added.

Microcomputer Plus Videotape Feedback

All presentations in this course are videotaped. This offers another benefit in that students must self-evaluate their presentations. The printout serves as a reminder of the performance elements that the evaluator noticed. However, another procedure could be put in place that allows students to utilize the program. The laptop could be made available to students to evaluate their own performance prior to receiving the instructor's evaluation printout. Peer evaluations could be conducted using the computer if a second computer were made available during the presentations. Students also could trade videotapes in order to conduct peer reviews after the actual presentations were made.

National, state, district and local level competitions could adapt this program for speaking contests. Organizations such as the Agricultural Communicators of Tomorrow, the National FFA Organization, 4-H and the National Junior Horticulture Association all have speaking contests that would adapt well to the program. Judging for these events would be more focused and standardized.

Conclusion

Students have responded positively so far to the feedback they are receiving from the printouts. They are able to review the printouts as they view their videotapes the second time. The only concern to date is the noise created with each keystroke on the keyboard. The sound of a person typing makes some students nervous. It is recommended that a silent keyboard be purchased with the computer, or students be told to try to block out this distraction during their presentations. It should be viewed as a very minor disturbance. The evaluators can also position themselves in the back of the room so the noise is less obvious. Slower key stroking also diminishes the noise factor somewhat. If the speech is being videotaped, the camera should be situated away from the keyboard so the typing noise isn't recorded.

Currently the program is being expanded to include additional comments. Other speech and education instructors at The Ohio State University will be contacted soon to evaluate the program. The software used for this program is copyrighted by OSU. Details about its availability may be obtained from the author.

References

Expanding Student Assessment. edited by Vito Perrone. Alexandria, VA: Association for Supervision and Curriculum Development, 1991.

Chittenden, Edward. "Authentic Assessment, Evaluation and Documentation of Student Performance" in *Expanding Student Assessment.* Edited by Vito Perrone.

Blaine R. Worthen and James R. Sanders. *Educational Evaluation: Alternative Approaches and Practical Guidelines.* New York: Longman 1987.