Technological Approaches for Improving Grading Efficiency and Compatibility in Multi-Section/ Multi-Instructor Communication Courses

CHRIS R. SAWYER
RALPH R. BEHNKE

SUPERVISORS of multi-section communication courses utilizing a number of instructors are faced with the problem of achieving an acceptable level of similarity in the content and grading methods of these courses. Should accusations of incompatibility arise, department chairs and academic deans may also become involved. Ideally, such problems are addressed in the design and development stages of such courses although they may be modified later and redesigned to assure appropriate levels of compatibility among sections. This report focuses on improving grading efficiency and compatibility by using computer aided evaluation that is especially useful for grading performance assignments in basic courses.

Trends in student demographics and educational policy portend substantial enrollment increases in college speech communication courses for the next several years. On a state-by-state basis, college enrollment gained an average of 22% from 1982 through 1993 (Gwaltney, 1994, p. 12). Between 1974 and 1991, the number of students pursuing a post-secondary education immediately after high school also increased substantially (*Projections of Education Statistics*, December, 1992, p. 135). Moreover, high school graduation rates are expected to rise by the close of the century (*Building a Nation of Learners*, 1993, p. x). The National Center for Educational Statistics has predicted that the number of bachelor degrees awarded per year will rise from 1,166,000 in 1995 to 1,303,000 in the year 2003 (April, 1992, p. 59). A recent survey published in the *Chronicle of Higher Education Almanac* (September 1, 1994, p. 15) revealed that college and university administrators expect that enrollments will continue to rise well into the next century. Consequently, speech enrollments will grow, in part, as a function of overall increases in the student population.

Changes in educational policy will also contribute to this growth trend. National efforts at educational reform often advocate that adults enhance their oral communication competencies throughout their careers (*Building a Nation of Learners*, 1993, p. xi; *The Nation Responds*, May, 1984). Mandates from regional accrediting organizations (e.g., *Criteria for Accreditation*, 1992. p. 18) that college graduates must possess competence in oral communication have led many higher education institutions to require speech courses as part of their core curricula (*Association of American Colleges*, 1985). Business and community leaders, who have long stressed the need for a highly skilled work force, deem the speaking, listening, and critical thinking abilities students gain from college speech communication courses highly desirable. Likewise, studies in speech communication have increased in popularity with the perception that oral communication competence enhances career development (Ford and Wolvin, 1993). Thus, a greater proportion of college students now take basic speech courses to satisfy program and degree requirements than in the past. Coupled with those increases commensurate with a growing student population, the demand for speech communication will continue to rise.

Responding to calls for educational reform (e.g., *A Nation At Risk, 1983*), speech communication scholars began to explore communication competence as a serious line of research (Bostrom, 1984; Spitzberg & Cupach, 1984). Consequently, the primary focus of some speech communication courses shifted from imparting theoretical knowledge to enabling students to apply communication principles, strategies, and techniques in practical speaking situations. For example, O'Hair, Friedrich, Wiemann, and Wiemann (1995) stress "two related pairs of concepts: *knowledge acquisition* and *skill building* to achieve *effective* and *appropriate* communication" (p. v). Indeed, many prominent speech communication scholars have advanced communication competence as the primary goal of basic courses.

While it could be argued that current college graduates possess greater communication competence than did graduates a decade ago, by the end of the century, incoming college students will likely have far less social skill than any generation in recent history. Alberg, Petry, and Eller (1994) reported that between 1970 and 1988 the number of children under the age of six whose mothers worked outside the home rose from 29% to 61%. These scholars also reported that as of 1994, most children have only one conversation of ten or more minutes with a parent each month (Alberg, Petry, and Eller, 1994). Pointing to the importance of parent-child communication in the development of a child's communication competence, Alberg, Petry, and Eller (1994) argue that social and communicative skills of elementary and secondary school students are in rapid decline. Marked increases in the social anxiety among children and adolescents have also been observed (Alberg, Petry, and Eller, 1994), contributing to diminished chances for academic achievement (Witherspoon, Long, and Nickell, 1991). Socially anxious and less socially skilled college students perform poorly in school as well (Watson, 1990; Chesboro, McCroskey, & Atwater, et al, 1992). Taken together, these trends point to an American workforce deficient in speaking and listening skills at a time when teamwork and participative management will be most needed for success in a competitive global economy (*Workplace Literacy*, 1992). Thus, *enabling students to achieve proficiency in oral communication skill will surely become more burdensome in light of increasing enrollments of less skilled and more anxious students.*

In a recent article elaborating the transformations taking place in modern education, a variety of implications for curricular change were addressed (Sawyer, Miller, & Behnke, 1994). Rapid growth of communication programs around the country has underscored the need for curricular and methodological changes in communication courses. Public relations programs, for example, despite their burgeoning enrollments, have seldom received adequate faculty additions to maintain the ratios found in other communication programs such as journalism (Fedler & Smith, 1992). Moreover, increasing the number of in-class performances, a natural consequence of emphasizing communication competence, places

limits on enrollments per section. Accommodating greater student demand has meant expanding the number of basic course sections or reorganizing course activities around a lecture-performance laboratory format. Both strategies add to the size of the instructional staff. Because many departmental budgets have not expanded as rapidly as enrollment demand might suggest, much of the increase in personnel has been accomplished by hiring more adjunct part-time faculty or assigning more graduate students as instructors in performance laboratories. As a direct result, either an instructor is required to make a larger number of grading comparisons on an assignment, or, a larger number of instructors or laboratory assistants will be employed. Both of these outcomes place added pressures on graders that serve to undermine the relative uniformity or comparability of grading.

In speech communication programs where multiple sections of a course are used, or where a wide variety of lab instructors grade the speeches, the team of instructors, the director of the basic course, the department chair, and the academic dean all have a vested interest in attempting to assure that regardless of which section of the course a given student is assigned, the basic nature of the course and the performance requirements are essentially the same. Historically, procedures for addressing this problem require regular meetings of the teaching staff and the supervisor, a common syllabus, and common performance evaluation forms. Despite such efforts, complaints may arise regarding differences in task demands among the sections of the course, especially the evaluation of performances. While such concerns may never be completely eliminated, efforts to minimize them should be of significant interest to all members of the department whether or not they are currently part of that teaching staff. Finally, it is important to emphasize here that, as the problem of grading comparability resulting from elevated teaching loads is aggravated, any efforts to improve the efficiency of grading methods is highly desirable. Computer-aided grading methods should be of significant interest to those teachers and administrators faced with the problems outlined above. The following discussion outlines the rationale, methods, and techniques for using computer-aided grading in communication courses.

COMPUTER-AIDED FEEDBACK IN STUDENT EVALUATION

The modern electronic computer's ability to store and process large amounts of information according to rules has led to its implementation in evaluating a variety of communication skills. In this process the instructors' evaluative decisions are quickly processed and transformed into typewritten commentary. The purpose of the commentary is two-fold: it provides (1) evaluative feedback and (2) reinforcing feedback in appropriate quantities and in a timely fashion.

In their applications to the evaluation of writing, King and Behnke (1986) developed large, well phrased student comment files regarding matters of style. Frequently occurring criticisms, as well as uncommon ones, can be quickly accessed and assembled in the documentary critique. Duplicate copies of all critiques are easily provided and maintained in the instructors' files in case of disputes or in order to make time-based comparisons in order to document improvement. Workloads of faculty appear to be reduced (Behnke & King, 1986). Finally, changes in teaching strategy or curriculum content could be based, in part, on documented trends in student achievement. Computerized feedback enhances the quality and quantity of criticism, provides and stores models of outstanding work for students to emulate, and facilitates record-keeping despite the fact that *more* instructional feedback is provided to students.

Interestingly enough, technological applications in communication training are becoming increasingly popular. In speech and language pathology programs wherein pathologists and audiologists are trained and evaluated, the computer-feedback methods have been equally effective (Helmick & Behnke, 1984). In this model, the relationship between the student-

clinician and the clinical-supervisor is enhanced by the same computer feedback strategies as were outlined above. The authors underline the importance of reducing the time delay between student performance and reception of the supervisor's evaluative comments, since the time proximity between the two is an important factor in effective learning (Guthrie, 1952). Computerized instructional feedback has been used to teach interviewing skills as well (King & Behnke, 1985). Empirical data supporting the effectiveness of computerized criticism shows that high percentages of student compliance are achieved using such methods (Beatty & Behnke, 1979).

Computerized criticism of speeches has been shown to have a powerful effect on instruction (Behnke & King, 1984). This technology is particularly important because of the *speech instructor's dilemma*: at any given moment in time, should one be attempting to listen to the presentation or write comments? Apparently, the two cannot, neurologically, occur at the same time. At any rate, a relatively large instructor commentary can be provided to speakers immediately upon completion of a performance. For a thorough description of a wide range of system applications of high technology to communication instruction see Behnke and O'Hair (1984). Finally, a teaching/learning laboratory, utilizing instantaneous feedback technology, is outlined in Derry and Behnke (1983).

PERFORMANCE FEEDBACK AND DOCUMENT MODELING

Evaluating Student Presentations

Recent advances in computer software combined with increased processing speed and memory capacity of laptop and notebook computers, greatly facilitate grading efficiency in multi-section/multi-instructor communication courses in which speaking performance is featured as a major component (Vockell & Schwartz, 1992). Previous attempts at employing microcomputers to assist speech teachers with performance evaluation required adapting general word processing, relational database or hypertext authoring software to this highly specialized use. Although features of some existing software packages could perform some facets of computer-assisted evaluation, none can perform *all* aspects efficiently. For example, hypertext authoring software and database software permit rapid access of prewritten textual passages that can be assembled into a commentary about the student's performance. However, the extent to which an instructor is able to easily modify and personalize a student's evaluation is severely limited. Word processing programs allow storage, retrieval and adaptation of text but are very limited with respect to numerical scoring and assignment methods.

Unlike their predecessors, such applications are known as *document modeling programs*. A prime example is Intelligent Questionnaire (Performance Guild Associates, 1993), which allows communication instructors to prepare and organize an elaborate array of performance-related comments, guide the evaluator in the selection of the most appropriate or applicable descriptions for any given performance, assemble the selected commentary into a well written critique of the student's performance, provide an estimate of the student's score for the assignment and produce an attractive document that may be used as immediate instructional feedback (Dempsey & Wager, 1988). These advantages stem from the specialized use of three distinct pieces of software; an interactive questionnaire, word processing stationery, and the document modeling program itself.

Equipped with a laptop computer and the document modeling software, the instructor observes student performances and answers an interactive questionnaire. Several descriptions of the student's performance for a given performance criterion are provided on screen and are selected with mouse clicks. Each brief on-screen description represents a much longer set of comments, including suggestions for remediating deficiencies in performance. Each questionnaire item is linked to other screens of questions which can be used to further

refine or elaborate on the comment. These additional screens, which provide more precise descriptions of a student's communicative behavior, remain hidden unless triggered by selecting certain key answers to earlier questionnaire items. Moreover, specific information about the student, such as first name, academic major, gender, level of communication apprehension, speech assignment title, and type of assignment, are also stored in the questionnaire. After the student finishes the performance, the instructor completes the questionnaire and begins the process of converting observations into a performance evaluation.

Using a *merge* command, all information about the student's performance is transferred from the interactive questionnaire to the *stationery* or final document. In appearance, the *stationery* is a standard speech rating instrument such as the *Competent Speaker Evaluation Form* (Morreale & Taylor, 1991, November) except for the addition of personalized comments unique to each individual speaker's performance. Document modeling programs perform such tasks as calculating student's performance grades in either an analytical or holistic speech scoring scheme (Goulden, 1994). Finally, both merged stationery documents and individual questionnaires can be saved as separate documents for future reference by the instructor. When compared to traditional paper-pencil methods of grading performances, these features serve the especially useful function in the event of student grading complaints.

At Tarrant County Junior College's Northwest Campus, a large, metropolitan, two-year institution located in the southwest, computer-assisted evaluation via document modeling has been employed successfully for several years. Computer Assisted Speech Evaluation (CASE), a software application using *Intelligent Questionnaire with the WriteOne*, is used to compile the instructor's observations into a comprehensive narrative explaining the particular strengths and areas of weakness in each student's performance. CASE is relatively easy to use and does not disrupt the active listening of the evaluator. Assessments of message organization, support material, language, vocal variety, and fluency are made efficiently, allowing for several minutes for scrutinizing physical delivery behaviors. Point values for each major aspect of the assignment are embedded in the observations and are not viewed directly by the instructor. Mathematical formulae for various grading options calculate the student's numerical performance score. This overall grade or score appears on the last line of the evaluation document. Hard copy of the evaluation is printed on a laser-printer located in the classroom and does not disrupt student presentations. Students receive three to four pages of single-spaced, type-written commentary immediately following their performances. Students frequently comment that they are impressed by the swiftness with which the performance feedback is delivered. More than when using evaluations on simple checksheets or standard rating sheets, students concentrate on reading the extensive commentary about their performances. Moreover, students are less likely to complain or challenge low grades on performances because the evaluation provides such extensive verbal descriptions of their speaking behavior, not merely checkmarks on a rating sheet or very brief written comments.

Tracking and Analyzing Performance Evaluation Data

In addition to the efficiency computerized performance evaluation brings to the speech classroom, document modeling programs permit communication program administrators to monitor and analyze performance evaluation data. Specifically, this strategy might involve exporting data from the interactive questionnaire to a database program. Instructors in multi-section courses, and laboratory assistants, can generate computer-aided evaluations saved in database format. Subsequently, cross-tabulations, or other analyses of these data, can yield valuable insights into the grading compatibility in the course as a whole. Course supervisors can diagnose the extent to which members of the instructional staff are prone to grading leniency or harshness when compared to their colleagues. Such trait er-

rors, might be produced by a novice rater's fixation on some particular element at the expense of others. By reviewing such evaluation patterns with instructors and lab assistants, the overall grading compatibility of the course instructional staff can be demonstrably improved.

CONCLUSION

The purpose of this report and summary is to highlight recent advances in computer-aided performance evaluation. Applications of this technology greatly improve the grading efficiency and compatibility in multi-section/multi-instructor communication courses, especially those that require the evaluation of student performances. Finally, because of the record-keeping capabilities of such systems, administrators of basic courses can monitor grading tendencies, compare grading practices among sections, and, in case of grade disputes, utilize all available existing data in their adjudication.

REFERENCES AND NOTES

Chris R. Sawyer (Ph.D., University of North Texas, 1992) is Associate Professor of Speech Communication at Tarrant County Junior College, Fort Worth, Texas.
Ralph R. Behnke (Ph.D., University of Kansas, 1966) is Professor of Speech Communication, Texas Christian University, Fort Worth, Texas.

Alberg, J., Petry, C., & Eller, S. (1994). *The social skills planning guide*. Research Triangle Park, NC: Center for Research in Education.

Association of American Colleges. (1985). *Integrity in the college curriculum*. Washington, DC: Association of American Colleges.

Behnke, R. R., & Beatty, M. J. (1979). Modifying nonverbal behaviors of student teachers through immediate video feedback. *Journal of Applied Communication Research, 7,* 110-115.

Behnke, R. R., & King, P. E. (1984). Computerized speech criticism. *Communication Education, 33,* 173-177.

Behnke, R. R., & King, P. E. (1986). Computer eases teacher workload in writing course. *Journalism Educator, 40,* 26-28.

Behnke, R. R., & O'Hair, H. D. (1984). Applications of high technology to communication instruction. *Central States Speech Journal, 35,* 171-177.

Bostrom, R. N. (Ed.). (1984). *Competence in communication: A multidisciplinary approach.* Beverly Hills, CA: Sage.

Chesboro, J. W., McCroskey, J. C., Atwater, D. F., Bahrenfuss, R. M., Cawelti, G., Gaudino, J. L., & Hodges, H. (1992). Communication apprehension and self-perceived communication competence of at risk students. *Communication Education, 41,* 345-360.

Dempsey, J.V., & Wager, S. U. (1988, October). A taxonomy for the timing of feedback in computer-based instruction. *Educational Technology, 25* (10), 20-25.

Derry, J. O., & Behnke, R. R. (1983). Instantaneous feedback in the teaching/learning laboratory. *Educational Technology, 23,* 28-30.

Fedler, F., & Smith, R. F. (1992). Faculty members in AD/PR perceive discrimination in academia. *Public Relations Review, 18,* 79-89.

Ford, W. S. Z., & Wolvin, A. D. (1993). The differential impact of a basic communication course on perceived communication competencies in class, work, and social contexts. *Communication Education, 42,* 215-223.

Goulden, N. R. (1994). Relationship of analytic and holistic methods to raters' scores for speeches. *The Journal of Research and Development in Education*, 27, 73-82.

Gwaltney, C. (Ed). (1994, September). The Chronicle of Higher Education almanac issue. *Chronicle of Higher Education, 40* (Suppl. 3), 1-120.

Helmick, J. W., & Behnke, R. R. (1984). Application of computer-aided immediate feedback to the clinical teaching process. *Tejas, 10,* 4-6.

King, P. E., & Behnke, R. R. (1985). Teaching interviewing skills by electronically mediated simulations. *Journal of Research and Development in Education, 19,* 45-48.

Morreale, S. P., & Taylor, K. P. (1991, November). *The Competent Speaker Assessment Instrument: Uses and logistics for administration.* Paper presented at the meeting of the Speech Communication Association, Atlanta, GA.

National Center for Education Statistics. (1992, April). *Projections of educational statistics.* Washington, DC: National Center for Education Statistics.

National Commission on Excellence in Education. (1983, April). *A nation at risk: The imperative for educational reform.* A report to the nation and the Secretary of Education, United States Department of Education. Washington, DC: National Commission on Excellence in Education.

National Education Goals Panel. (1993). *The national education goals report. Building a nation of learners. Volume One: The National Report.* Washington, DC: National Education Goals Panel.

O'Hair, H. D., Friedrich, G., Wiemann, G.W., & Wiemann, M.O. (1995). *Competent communication.* New York: St. Martin's.

Performance Guild Associates (1993). *Intelligent Questionnaire with the WriteOne.* Grandbury, TX: Performance Guild Associates.

Sawyer, C. R., Miller., P., & Behnke, R. R. (1994). Communication education transformations: Implications for curricular change. *Journal of the Association for Communication Administration, 2,* 104-109.

Southern Association of Colleges and Schools. (1992). *Criteria for accreditation.* Atlanta, GA: Southern Association of Colleges and Schools.

Spitzberg, B. H., & Cupach, W. R. (1984). *Interpersonal communication competence.* Beverly Hills, CA: Sage.

United States Department of Education. (1984, May). *The nation responds: Recent efforts to improve education.* Washington, DC: United States Department of Education.

United States Department of Education (1992). *Workplace Literacy: Reshaping the American Workforce.* Washington, DC: United States Department of Education.

Vockell, E. L., & Schwartz, E. M. (1992). *The computer in the classroom.* New York: McGraw-Hill.

Watson, A. K. (1990). Helping developmental students overcome communication apprehension. *Journal of Developmental Education, 14,* 10-12.