DACUM, an acronym for Developing A Curriculum, is a standardized curriculum development process used primarily in community colleges across the United States. DACUM results provide a valid national database that can: (1) further justify the study of speech communication in most academic curricula; and (2) help define the nature of the basic speech communication course. This paper examines DACUM results across, rather than within, curricula. Seventy-five DACUM charts constructed by one state's DACUM Resource Center between 1985 and 1989 were analyzed; 90% included speech communication competencies. Further analysis of DACUM data can demonstrate the necessity of communication study and can identify essential communication competencies. Contains 14 references and 2 tables of data. (Author/RS)
DACUM: A National Database

Justifying the Study of Speech Communication

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ABSTRACT

DACUM, an acronym for Developing A Curriculum, is a standardized curriculum development process used primarily in community colleges across the country. DACUM results provide a valid national database that can (1) further justify the study of speech communication in most academic curricula and (2) help define the nature of the basic speech communication course. This article examines DACUM results across, rather than within, curricula. Seventy-five DACUM charts constructed by one state's DACUM Resource Center between 1985 and 1989 were analyzed; 90 percent included speech communication competencies. Further analysis of DACUM data can demonstrate the necessity of communication study and can identify essential communication competencies.
INTRODUCTION

When the future of a speech communication requirement or department is in jeopardy, the Speech Communication Association (SCA) is frequently asked to provide documentation that supports speech communication as a course of study. As a result, the national office of SCA has prepared for distribution a series of documents including a Rationale kit: Statements supporting speech communication (SCA, 1989). More recently, in 1991, the SCA's Educational Policies Board (EPB) established a Committee on Oral Communication in the Undergraduate General Education Curriculum and charged it with preparing a report that documents the need for oral communication in the general education curriculum and offers guidelines for a required oral communication course supplemented by oral communication-intensive courses. As of this writing, the EPB committee report is under review by SCA.

Despite such efforts by SCA, there are still administrators and academics in other disciplines who regard the study of speech communication as superfluous and even expendable. These criticisms are frequently countered with essays and career surveys. Skeptics and critics, however, dismiss essays and opinion pieces penned by speech communication professionals as biased. Surveys of specific career areas are also seen as self-serving or flawed. Critics point out that surveyed populations
frequently are limited to respondents one step removed from the employees in question; the opinion of a personnel manager may not be the same as an employee's perception of the need for communication skills. Furthermore, most of the justification studies use instruments on which subjects are asked to select from a predetermined list of communication skills critical to their profession. This method presumes that speech communication researchers have accurately identified the skills that are utilized in the workplace. Moreover, such studies focus on a singular field of employment at a particular time. What is missing from most studies is a universal perspective and a standardized methodology that identifies communication competencies that can be taught across the college curriculum.

This article does not offer new summaries of existing reports; nor does it present additional survey results documenting the need for communication training in a specific career area. Instead, it introduces an untapped national database that can be used to identify communication as a skill that can and should be taught to all students, regardless of major or occupational goal. This article proposes that DACUM, a standardized curriculum development process, be tapped to justify the study of speech communication in higher education. Specifically, DACUM can (1) justify the study of communication in most academic curricula, (2) guide speech communication curriculum planning, and (3) provide a national database for further analysis of communication competencies derived from the
needs and judgements of successful workers. Not only does DACUM provide a means of achieving the above goals, it boasts several advantages as a methodology and database that can be used to support more traditional and discipline-generated speech communication research.

THE DACUM PROCESS

DACUM, an acronym for Developing A Curriculum, is a process designed to help colleges develop, update, or evaluate a curriculum or training program. According to Faber (n.d.), DACUM was created by the Canada Department of Manpower and Immigration and the General Learning Corporation of New York. It was first used in the Women's Job Corp program in Clinton, Iowa, in the mid-1960s. It was adapted by Holland College, Prince Edward Island, Canada, as the basis for its instructional program in 1969. In the late 1970s and early 1980s, the National Center for Research in Vocational Education (formerly at Ohio State University) became involved in fine-tuning and promoting the use of the DACUM process. Since that time, a number of curriculum centers, community colleges, and businesses have used the process in a variety of applications.

DACUM is a standardized method for determining curricular needs. Its purpose is to identify the duties, tasks, and skills performed in a particular occupation, career area, or profession. DACUM assumes that successful workers are best equipped to identify the competencies needed in their specific occupation.
As a means of tapping into this information, a panel of carefully selected expert employees, who perform the job being studied, meet for two days under the guidance of a trained DACUM facilitator. Panel members respond to a series of open-ended questions such as "What do you do on this job?" or "What essential skills are needed by a competent employee in your position?" Based on the answers, a complex DACUM chart is developed, discussed, revised, and recorded. A DACUM chart normally identifies 8-12 duties (general areas of competence) and 50-200 tasks (specific, observable job skills) that describe a competent worker. Supplementary lists of knowledge and skills, traits and attitudes, and tools and equipment accompany the DACUM chart.

For example, a DACUM chart for a "Child Care Provider" designates "Communicate with Others" as an occupational duty and then identifies specific communication tasks under that duty (e.g. conduct parent interviews). A "Media Specialist" chart, however, includes communication skills within the broader duty of "Function in a Media Work Environment." In addition, separate lists of traits and attitudes, and knowledge and skills for the above occupations usually include abilities such as human relations skills, interviewing skills, and leadership. The following excerpts from DACUM charts illustrate the ways in which communication tasks are derived from occupational duties.
One of DACUM's unique attributes is that the only competencies listed on a DACUM chart are those suggested by the expert panel. The facilitator does not supply categories of tasks or suggest duties. Faculty members and educational administrators do not sit on the panel. If the panel does not identify a skill as essential to employees, the skill does not appear on the DACUM chart.

After the creation of a DACUM chart, a panel of faculty members, program directors, industry trainers, and/or employees reorganize DACUM chart information into a series of curriculum recommendations. A basic assumption in this phase of the DACUM process is that most of the tasks identified in the DACUM chart can and should be taught. Although the DACUM process was designed to develop or revise curricula for very specific career areas, the process has been used to establish general education
requirements, determine assessment criteria, develop job
descriptions for employees, identify the professional development
needs of a faculty, and outline the mission and objectives of an
educational institution. DACUM has been validated as an
effective tool for determining essential employee duties, tasks,
skills, and attributes. The reliability of DACUM data has been
tested by sending DACUM charts, which identify the specific tasks
for an occupation, to expert workers who were not members of the
original panel charged with chart development. Respondents rate
each task on the chart according to the item’s importance in
successfully completing the requirements of their job. In all
cases the charts were found to have accurately identified the
workers’ tasks (Asselin, 1985; Hamilton & Harrington, 1979; Hesse
& Nijhof, 1988; Kosidlak, 1987; Norton, 1977; Nunes & Halloran,
1987; Rusnell & Phillips, 1984; National Alliance of Business,
Inc., 1987). By finding common duties and tasks for a specific
occupational field in multiple DACUM charts, the DACUM process
has been validated as a reliable instrument for developing
curricula.

JUSTIFYING THE STUDY OF SPEECH COMMUNICATION

Validation studies have examined the DACUM process
vertically, i.e., within each curriculum. Although DACUM was
devised to identify the critical duties and tasks of a specific
occupation within a specific curriculum, its data has not been
analyzed horizontally, i.e., across curricula. By identifying
common DACUM duties, tasks, knowledge and skills, and traits and attitudes in multiple DACUM charts from varied curricula, the DACUM process can be used to rediscover that speech communication is part of the "core that holds" all curricula together.

Although there are no published analyses of DACUM across curricula, there are observations suggesting the results of such analysis. Nolan (1985, p. 40), a veteran DACUM facilitator, has identified communication skills as an area of competence that appears on all DACUM charts:

> From the many charts facilitated by the author, three general areas of competence, with their respective bands of skills, always appear. Each group may designate a different name but the basic skills are the same. These three predominant areas are: (a) communications, (b) professional qualities, and (c) problem-solving skills.

Although Nolan is not more specific, it is arguable that all three of the predominant areas involve communication competencies.

To demonstrate the utility of the DACUM process and its database as a means of documenting the centrality of speech communication to any academic curriculum, a series of DACUM charts were reviewed to determine the extent to which oral communication skills were represented in different occupations and curricula. With the cooperation of one state's DACUM Resource Center, all of the DACUM charts submitted to the center in a five year period, between 1985 and 1989, were requested for analysis. Seventy-five DACUM charts involving 60 different occupational areas were provided by the DACUM Resource Center.
Of the 75 charts, 59 were developed at community colleges, six by two different public school systems, nine by a State Department of Education's Division of Vocational-Technical Education, and one by a university. The 59 DACUM charts from community colleges represented 15 colleges in six different states.

Communication competencies on each DACUM chart were identified and classified based on their listing as a Duty, Task, Knowledge and Skill, or Attitude and Trait. DACUM definitions of the above four categories and examples of communication skills from the collected DACUM charts follow:

**Duty:** a grouping of related tasks
- Child Care Provider: Communicate with others
- Computer Programmer/Analyst: Consult with customers
- Construction Superintendent: Manage personnel
- Secretary: Practice interpersonal skills

**Task:** a specific observable unit of work
- Executive Secretary: Conduct interviews
- Early Childhood Educator: Participate in meetings
- Draftsperson/CAD Operator: Provide explanation of drawing
- Paraprofessional Accountant: Answer questions concisely and clearly

**Knowledge and Skills:** specific areas of knowledge and skills that workers need in order to perform the tasks fully
- Small Business Owner: Public speaking
- Salesperson: Communication skills
- Registered Nurse: Leadership skills
- Biotechnician: Ability to communicate with others

**Attitudes and Traits:** characteristics that competent workers in the field possess
- Computer Video Artist: Good listener
- Stage Technician: Cooperative nature
- Printing Press Operator: Team player
- Community Organizer: Articulate

Only communication competencies in the above four categories that were specific to speech communication were included. In
attempting to identify communication competencies relevant to speech communication, a conservative criterion was used. Any term which might not qualify as an oral communication competency was excluded. For example, whereas "offer resources to parents" and "make lesson plans available to parents" were identified as tasks of a Child Care Provider, they were not included as speech communication competencies because such tasks could be performed in writing. Child Care Provider tasks such as "conduct parent interviews" and "employ active listening skills" were included because speech communication is inherent (i.e., cannot be excluded) in the performance of these tasks.

Of the 75 DACUM charts analyzed, 73 (97 percent) included speech communication competencies. The most frequent terms used to describe communication duties were "Communicate with Others" and "Function in a Work Environment." Although these labels could be construed as "English" skills or personality traits, the listing of tasks under these duties always revealed oral communication skills. Only two occupations' DACUM charts lacked communication competencies: Environmental Laboratory Technician and Industrial Electrical/Electronic Technician. In the case of the Environmental Laboratory Technician tasks such as "report safety violations and unsafe conditions" merely imply oral communication. The DACUM chart for Industrial Electrical/Electronic Technician lacked any reference to communication, oral or written. There were, however, three other DACUM charts for Electronic Technicians in the collection
analyzed, all of which included communication competencies such as "human relations skills," "interacts with others," and "ability to work in teams." Analysis of 75 DACUM charts confirmed Nolan's observation that communication-related competencies are the single set of skills that appear on almost all DACUM charts. The results of this review indicate that communication skills are essential to job performance in almost every occupation examined by the DACUM process.

As a validated method of identifying the essential components of a curriculum, the DACUM process can provide a rich database demonstrating the importance and centrality of communication studies. An analysis of DACUM chart data establishes the necessity of communication studies in all curricula. Furthermore, lists of DACUM duties, tasks, knowledge and skills, and traits and attitudes identify specific communication competencies unique to specific careers and professions. DACUM charts constructed to identify general education requirements can be compiled to demonstrate why communication studies should be included in a core curriculum.

DEFINING THE BASIC COURSE

While DACUM can be used to justify the study of speech communication in the general education curriculum, its database can also answer several of the most fundamental questions asked about the nature of the basic course: Should the basic course be a hybrid (interpersonal, groups, public speaking) or focus on one
area of speech communication? What percentage of the basic course should be theory-based and what percentage competency-based? Should students choose from a menu of basic courses or be required to take a single common course? If speech communication is a required course, what units should be included?

Preliminary review of over 75 DACUM charts revealed information that can be used to reassess or redesign the basic course in speech communication. For example, public speaking often is a major component of basic communication courses; however, an analysis of DACUM charts does not support such an emphasis. When successful employees are asked "What do you do on this job?" and "What essential skills are needed by a competent employee in your position?" the answers that focus on communication are more likely to be concentrated in the areas of interpersonal and group communication. Interviewing, listening, planning and conducting meetings, and resolving conflicts are cited more frequently than public speaking. Yet, in many basic speech communication courses, as much as half of a hybrid course may be devoted to public speaking. In some cases, public speaking is the only required speech communication course.

It is important to note that DACUM data was never intended to go beyond the level of identifying basic competencies. Therefore, it cannot and should not be used to answer questions about the inclusion of communication theory or research in a basic course. DACUM does not attempt to generate communication education goals such as understanding and interpreting human
communication in all its forms or gaining insight into the relationships among communication goals, choices, and outcomes. The DACUM process, however, does offer the advantage of better identifying the most appropriate course components for students in different curricula. For example, business majors may be better served by a hybrid course whereas nursing students may need the theory and skills included in an interpersonal communication course.

The ongoing nature of the DACUM process is such that it is possible to collect dozens of recent DACUM charts related to a specific curriculum (e.g., business management, allied health, general education) and identify the most important communication competencies for those areas. Such review and analysis could make the basic speech course more responsive to the needs of students and their future employers while answering key questions about the nature and function of the basic communication course.

NATIONAL DATABASE FOR FURTHER RESEARCH

The DACUM process has produced a well-established, validated, national database of occupational competencies. Unlike Rationale Kits, EPB reports, and discipline-based essays, DACUM is neutral. Only those competencies identified by expert workers are listed. As Faber concludes in his DACUM process summary, "...it provides a clear, reality-based picture of the tasks required in a particular occupation" by relying exclusively on DACUM panel members for competency profile data.
DACUM also overcomes many of the limitations inherent in the most common methods used to study communication skills in the workplace. In 1987, DiSalvo and Larsen identified four significant liabilities among studies attempting to identify and establish the importance of communication skills in occupations. First, methods of operationalization vary across studies in that some studies identify skill importance, others focus on deficiencies, while still others ask only about past problem areas. The DACUM process identifies the necessity of skills regardless of relative importance or current deficiencies. A second problem with studies of communication in specific occupations is that there is disagreement over the definitions of communication skills. DACUM does not use a researcher-generated list of communication skills or definitions. Skills are identified by the expert workers who do the job. The third liability is the variation in the assignment of communication skill importance as a result of the positions held by the subjects within their organizations. DiSalvo points out that it is likely that the importance of particular skills is going to be different for entry level workers compared to CEOs. The DACUM process focuses only on those workers within a very specific job description, thus minimizing differences in occupational position. Finally, some studies have overlooked differences in skill importance resulting from differing directions of communication, e.g., upward, downward, horizontal, or external. The DACUM process has the ability to identify these differences.
After reviewing the literature that identifies communication skills in the workplace, DiSalvo (1980) suggested a number of directions for future research. First, there should be continuing efforts at identifying current communication skills in the workplace. DACUM is a continuing and expanding process designed to identify any skills necessary for a particular job, including communication skills. Second, instruments that standardize the identification of skills need to be utilized to avoid inconsistent identification of skills across studies. Rather than using a standardized instrument, DACUM uses a standardized and validated method of generating job skills. Because the DACUM process is conducted by a trained DACUM facilitator, differences in approach and effectiveness could account for differences in results. Yet, most DACUM charts include communication competencies, regardless of DACUM facilitator ability. Consistent results reinforce the utility of the DACUM process as a means of identifying communication as a central competency in all curricula. Third, a more standardized research method that examines a variety of occupations across the United States needs to be developed. This would involve developing more consistent sampling techniques, sample sizes, and samples of workers in specific occupations. The standardized DACUM process already has been used to examine hundreds of occupations across the United States and Canada using common standards for the selection of panel members. Fourth, future
research, while continuing to examine traditional workplace contexts, must also examine governmental, hospital, public service, and religious occupations. The DACUM process can and has been used for such "nontraditional" occupations. Furthermore, the process is such that there are no inherent limitations on the type of job area that may be examined. Finally, current curricula should be reviewed to determine that the necessary communication skills are being taught as they are represented in the workplace. DACUM is, as its acronym implies, a method specifically designed to develop and update curricula. Its link to curriculum development ensures that the communication skills being taught are those represented on a DACUM chart.

In addition to functioning as a source of data, DACUM also can be used as a means of validating other instruments used in communication research. DACUM data on communication competencies can be compared to data from studies assessing the need for communication training in a specific career area. For example, the communication competencies listed in a DACUM chart can be compared to the Communication Activity Questionnaire (CAQ) activities described by DiSalvo, Larsen, and Backus (1986) in which seventeen discrete communication skills used by employees were identified. Thus, the frequent inclusion of nonverbal communication competencies in DACUM charts (e.g., Cardiovascular Technologist—"recognize body language" and Community Organizer—"use and interpret non-verbal communication techniques") suggests another CAQ category. DACUM data also can be compared to the
criteria listed on assessment instruments published or endorsed by SCA.

EXPANDING THE SCOPE OF DACUM

Because DACUM was designed to develop curricula for vocational education programs, its applicability may appear limited to occupational training. In many states, the DACUM process has been used, primarily, by community colleges and businesses to develop training programs for skill-based occupations. Thus, most of the database reflects occupational curricula. Yet, the same process that can identify the key duties and tasks of a hospital orderly also can be used to identify the key duties and tasks of a physician. The process used to construct a chart for a teacher’s aid can be used to develop a chart for a university professor. As the DACUM database grows, the range of curricula expands.

At first DACUM may appear to have little utility in curricular areas that are not skill-based such as philosophy or literature. However, the DACUM process has been used by colleges to develop general education and arts and sciences requirements. Rather than asking for occupational skills, the DACUM process asks for basic educational requirements. A separate study of general education requirements produced through the DACUM process could provide a rich source of evidence supporting the centrality of communication studies to general education.

For example, one of the DACUM charts reviewed in this study
developed core competencies for an arts and sciences degree. Communication was identified as the most important general competency. Specific communication competencies included the following skills areas: listen actively, express concepts orally, communicate in a team atmosphere, and communicate non-verbally. In a narrative discussion of the DACUM chart, the panel added that communication "means that the development of effective interpersonal relations would also be taught." A wider search of DACUM charts could further document the centrality of speech communication in a core curriculum.

Finally, and as previously indicated, DACUM does not address discipline-based goals for a speech communication course. DACUM data is not derived or directed to help students understand and interpret human communication in its various forms. DACUM makes no claims about the role and function of communication theory and research in a basic speech communication course. And, DACUM does not consider an institution's mission, departmental philosophy, individual student needs, and the level of academic/faculty support in an institution offering speech communication. However, DACUM does provide a national and credible database that can help speech communication departments justify and develop a responsive basic course.

CONCLUSION

The systematic analysis of DACUM data can benefit and justify speech communication as a discipline of study. DACUM
data can justify the inclusion of speech communication instruction across the curriculum. DACUM data also can help identify the specific communication skills needed and used in specific occupations.

DACUM has proved to be a valuable tool for curriculum development. Although the discovery of DACUM's rich database as a source of supporting evidence for communication study was serendipitous, tapping that database can become a fruitful undertaking for communication researchers. By identifying communication competencies critical to every occupation, the study of communication becomes essential for every curriculum. As a universal competency communication study becomes justified as the "core that holds."
Footnotes

1The SCA Rationale kit: Statements supporting speech communication is a compilation of excerpts from articles, essays, studies, and reports to be used in support of claims establishing the importance of communication studies. The contents of the kit range from materials from the National Commission on Higher Education to surveys of employers. Although the Rationale kit can provide supporting materials for an argument advocating the study of communication, the net effect of the evidence is not a complete argument. The empirical studies in the kit look only at conclusions regarding the importance of communication on the job; they do not presume that communication is a skill that can or should be taught. Furthermore, the kit only looks at communication in the largest sense of the word. The Rationale kit is not and was not meant to be a comprehensive or validated study of the need for communication study.

2Several states have created DACUM resource centers for the purpose of coordinating DACUM projects, training DACUM facilitators, and collecting DACUM data. The DACUM resource center used in this study was created in 1982 by the Maryland Department of Vocational-Technical Education through the U.S. Department of Education. The center provides direct DACUM services to secondary schools, colleges, universities, businesses, industries, labor unions, and government agencies.
References


Faber, D. M. (no date). DACUM: A practical response to corporate training needs. Unpublished manuscript, Dundalk Community College, Maryland DACUM Resource Center, Dundalk, MD.


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