Higher education is traditionally organized along disciplinary lines, with departments and programs generally corresponding to individual disciplines. Like most entities, disciplines have their own life cycles, marked by periods of growth, changes in societal attention, and the waxing and waning of student interest. This paper describes the changes in one discipline, communication sciences and disorders, during the past century and the delineation of some of the lessons those changes offer to other disciplines.

Communication sciences and disorders (CSD) has several attributes that make it a good entity for study. First, it is one of the oldest disciplines, with roots going back to the ancient Greeks. Demosthenes, who filled his mouth with pebbles and taught himself to speak clearly over the sounds of the sea, reflects the value that we have placed on clear and effective communication from the earliest of times. Second, the field bridges both basic and applied research. In CSD, experimentation in neuromotor control systems, inner ear hair cell regeneration, and early language development, support applied research in a range of diagnostic and treatment strategies for those with communication disorders. Third, the field is well represented in the academy, with more than 250 graduate programs across the U.S.

The 20th Century

Early in the last century, those working in the field began to formally organize themselves as a discipline to increase their effectiveness and their professional visibility. These individuals came from the field’s roots in elocution and were joined by psychologists interested in the phenomenon of stuttering, physicians studying brain damage and aphasia, and educators working with schoolchildren who had difficulty speaking, and others. From initial gatherings of interested individuals, the discipline was formalized in 1925, when the predecessor of the American Speech-Language-Hearing Association (ASHA) was founded.
The minutes of the first meeting of that association make it clear that the focus of the organization was to be scientific:

“…this organization shall have as its purpose the promotion of scientific, organized work in the field of speech correction” (Malone, 1999).

The Association’s constitution, adopted one year later in 1926, amplified this focus by stating that the association was to:

- “stimulate…more intelligent interest in the problems of speech correction”;
- raise the standards and the visibility of the profession;
- and create leadership for the profession through respect of good works “i.e., by our scholarly research work, publicity work, and administrative skill.”

This focus on science and research reflected both the interests and the aspirations of the discipline’s early leaders, for they believed that only through scientific exploration would they be able to assist those with communication needs.

In the decades following its founding, the discipline focus remained on research, and universities became the locus of that activity. But following World War II, there were increasing pressures to respond to the clinical needs of society. Veterans returning from the war put significant demands on the medical and rehabilitation resources of the nation; in fact, the creation of the profession of audiology was largely a response to those needs. Later in the century, the field expanded beyond speech and hearing to formally recognize the mediating role of language in the communication process. This recognition, in turn, led to professional responsibility for a host of new communication problems in individuals of all ages. At the same time, the federal government recognized the rights of all children to receive all needed supportive services. The Individuals with Disabilities Education Act (IDEA) and the Americans with Disabilities Act (ADA) put into law our national commitment to the rights of all citizens; with that legislation, the demand for speech and hearing professionals grew.

The discipline responded to these increased demands for service in laudable ways. In 1965, for example, the Association adopted national certification standards for speech-language pathologists and audiologists. These standards required completion of at least a master’s degree prior to certification and specified the academic and clinical experiences necessary for entry into the professions. The Association also took responsibility for creating and implementing accreditation standards for educational institutions. Given the designation of the master’s degree as the entry-level credential, these accreditation standards understandably focused on Master’s curricula; and in fact, undergraduate and doctoral curricula were generally viewed as outside the
purview of the accrediting body. It is important to note that these steps marked ASHA as extremely progressive. Many other fields have only recently begun moving to advanced training as a prerequisite to clinical certification. Communication sciences and disorders, however, decided early on to set a high standard for training in order to assure the best possible clinical services for the public. At the same time, however, it set in motion a trajectory that put the entire discipline at risk.

The clinical certification standards set by the discipline were challenging but attainable. During the past 50 years, ASHA membership has soared to over 100,000 members (Table 1.) In 1951, the majority of the Association’s 1,859 members were academicians interested in the study of communication processes and its disorders. In 2003, the vast majority of the membership is comprised of clinical professionals, holding what is for all intents and purposes terminal Master’s degrees. As a result, the field now has a much stronger identification with the professions of speech-language pathology and audiology than with the discipline of communication sciences and disorders. This is true in society, at large, where the impact of 100,000 practitioners can’t be ignored, and within the academy, where many departments focus on clinical instruction.

Table 1. Membership in the American Speech Language-Hearing Association, 1951 - 2003

<table>
<thead>
<tr>
<th>Year</th>
<th>Members</th>
</tr>
</thead>
<tbody>
<tr>
<td>1951</td>
<td>1,859</td>
</tr>
<tr>
<td>1961</td>
<td>7,587</td>
</tr>
<tr>
<td>1971</td>
<td>13,741</td>
</tr>
<tr>
<td>1981</td>
<td>34,772</td>
</tr>
<tr>
<td>1991</td>
<td>61,168</td>
</tr>
<tr>
<td>2003</td>
<td>103,000</td>
</tr>
</tbody>
</table>

One of the effects of the early move toward Master’s-level certification and accreditation is that the undergraduate and doctoral curricula in the field began to be defined relative to the master’s curriculum. Unlike other fields where undergraduate, Master’s, doctoral, and postdoctoral work form a progression of study moving a student further into the details of a particular aspect of the field, the undergraduate and Master’s curricula in communication sciences and disorders (CSD) serve primarily to prepare individuals as service providers. Those students pursuing a research career follow these initial six years of training with the challenge of starting over in their education to acquire the specific knowledge and scientific skills necessary for a doctoral education. Formulating a curriculum around the master’s degree also had an effect on the type of students who were attracted to the field, with an ever-increasing number of students who had little or no interest in the science of the discipline. Students
were drawn to the field by a respected professional credential, guaranteed employment, and a good salary (entry-level Master’s salaries remain competitive with those of doctoral faculty at many universities). Ironically, the very steps taken to assure a science-based profession (Master’s requirement, national certification standards, academic accreditation programs), led to an academic environment in many departments that reflected a diminishing scientific focus.

Today, there are over 250 graduate programs in communication sciences and disorders in the U.S. with 61 of those offering the Ph.D. (Shinn, et al., 2001). At the same time, there are nearly 10 times as many students enrolled in Master’s programs as Ph.D. programs (Table 2.) As a result, most doctoral programs have exceedingly small enrollments. Of the 61 doctoral programs in the country, 40 have fewer than 15 students and only four have at least 25 students. This relative dearth of doctoral students does not bode well for the future of the discipline and its likelihood for replenishing and expanding future faculty (Oller, Scott, & Goldstein, 2002). Moreover, the size of the individual student bodies combined with the number of sub-disciplines within the field means that few CSD doctoral students are working in a cohort of like-minded junior scholars, something that is recognized as a valuable part of the doctoral experience.

Table 2. U.S. enrollment in communication sciences and disorders in 2001

<table>
<thead>
<tr>
<th>Level</th>
<th>Enrollment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Undergraduate</td>
<td>16,397</td>
</tr>
<tr>
<td>Master’s</td>
<td>7,389</td>
</tr>
<tr>
<td>Ph.D.</td>
<td>795</td>
</tr>
</tbody>
</table>

Response to the Crisis

In response to the impending crisis in the discipline, the American Speech-Language-Hearing Association and the Council of Academic Programs in Communication Sciences and Disorders (CAPCSD) appointed a joint committee to develop a plan to:

- increase the number of doctoral students in communication sciences and disorders;
- retain current doctoral faculty;
- develop strategies for educating students in communication sciences and disorders in the current climate of doctoral shortages.

Appointing a committee is not altogether surprising; in academe, when you’re faced with a problem—form a committee! A couple of aspects are noteworthy, however. First, its formation marked a serious discipline-wide effort to address a
serious problem. ASHA had evolved into a largely professional organization with the delivery of professional services as its primary role. The Council of Academic Programs had a membership comprised solely of academic programs and was created in the mid-70’s, in part, to give voice to non-clinical concerns. Thus, the formation of a joint committee reflected a coming together of the two halves of the field. Second, the group was not charged with addressing the problem, but rather with creating a plan for addressing the problem. This charge reflected a history of well-intended efforts that had been limited in their effectiveness, and the awareness that a coordinated effort was the only strategy that could succeed. Third, the recommendations that resulted from the committee’s work did not focus on external remedies, but instead focused inward and especially on the culture of the academic departments within the discipline. Unlike the product of many academic committees, few of this group’s 30 recommendations called for increased spending as a means of addressing the problem. Instead, many of the recommendations called for a change in how academic departments operate. (ASHA-CAPCSD, 2002)

**Prognosis for Success**

On balance, the prognosis for success for the discipline is guarded. The importance of re-invigorating the science of the discipline has finally gained a wide appreciation and has motivated an unprecedented level of cooperation among individuals and groups within communication sciences and disorders. At the same time, the field is facing a monumental task. First, it is attempting to reverse a decades long trend toward the professionalization of the field and continuing societal pressures in that direction. Second, it is fighting significant inertia within the academy. Hundreds of departments across the country have configured themselves around a set of assumptions that need to be re-examined and modified. These assumptions range from the nature and interests of the students, to the underlying tenets of the curriculum, to a department’s role in its university. Academic departments typically change slowly and even then they do so in their own way. To move all, or even most of these departments in a similar direction in a reasonable period of time will be a challenge. Third, the nearly 300 CSD departments nationwide reflect a diversity nearly as large as higher education itself. CSD departments are found in colleges of liberal arts, allied health, medicine, education, communication, and others. Thus, each faces its own set of particular challenges and must meet differing institutional expectations for performance. Implementing the several recommendations of the Joint Ad Hoc Committee will be much more difficult for some departments than others, given differing institutional expectations and resources. Fourth, while there is consensus on the need to redefine ourselves, there is not unanimity. Some individuals are less convinced than others that the field should take any step(s) that would de-emphasize its professional image. This feeling is more widely held outside of the academy than inside, but the feeling exists to some extent in all circles.
Lessons Learned

There are several potentially valuable lessons to be learned from the experiences of CSD over the past century. Many of these concern the need for maintaining a balance between the discipline and the profession(s) of a field. A discipline is a *branch of knowledge or teaching* (Morris, 1970) and the founders of the field of communication sciences and disorders were interested in defining just such a branch of knowledge (from minutes of the organizational meeting in 1925: “…this organization shall have as its purpose the promotion of scientific, organized work in the field of speech correction”). A profession, by contrast, is an *occupation or vocation requiring training in the liberal arts or the sciences and advanced study in a specialized field*. The establishment of a master's degree as the entry-level credential for clinical professionals, was wholly consistent with this definition. As the demand for trained professionals grew, however, the field was unable to provide sufficient resources to meet that demand while at the same time maintaining the branch of knowledge that was the discipline. Simply put, immediate societal pressures overwhelmed longer-term scientific needs. This imbalance between the professions and the discipline had several effects, including a concomitant imbalance of applied versus basic research and of responsiveness to external versus internal constituencies. As the field moved further from its disciplinary focus, it also moved further away from an academic focus. This exacerbated the disconnect between the field and its liberal arts traditions and led to its marginalization in some universities. As part of the same reinforcing spiral, the leadership of the field became increasingly influenced by, and drawn from, the professions. Thus, at the highest levels, it was difficult to exert the influence necessary to maintain balance in the field. Maintaining such a balance will always be difficult in a field like CSD, because the number of scientists will likely never again approach the number of clinicians. At the same time, the field has a huge stake in those relatively few scientists and this must be respected if the field is to survive.

There are two other lessons that can be learned from CSD. First, disciplines should stay alert to periods of rapid change. Clearly the 1960’s and 1970’s were marked by a whirlwind of changes in communication sciences and disorders. A more than 400% increase in membership, the establishment of professional credentials, and claiming the authority to set academic standards are but a few of the markers of the changes that were underway. The challenge for any field going through such change is to recognize its magnitude and to remain objective about the motivations and the effects of the change. In the case of CSD, the external motivations for service to society and the positive feedback generated by providing this service, blinded the field to the other, less desirable, impacts. Second, disciplines are human enterprises that are defined and maintained by individuals working independently and in organized groups. Thus, the importance of individual leadership is crucial to maintaining the disciplinary balance described above. Through the latter part of the 1900’s there were voices
calling for a re-commitment to the science base of the discipline (Bernthal & Mendel, 2000; Hochberg, 1996; Minifie, 1997; Ringel, 1982; Schiefelbusch, 1981, 1991; Wilcox, 1998), but these calls went largely unheeded. The discipline failed to provide these ideas with the attention that they deserved. By contrast, the creation of the Joint Ad Hoc Committee in 2001 was the result of the right combination of leaders emerging at the same time in both the American Speech-Language-Hearing Association and the Council of Academic Programs in Communication Sciences and Disorders. These leaders had an appreciation for the issues, and the willingness to lead an effort to address them. The simple lesson for professional associations is that they must stay attentive to the long-term well being of the discipline and balance future needs with short-term agendas.

As we enter the 21st Century and the era of the “knowledge economy,” there is a growing demand for advanced technical training in a range of fields. Just like communication sciences and disorders in the middle of the last century, other disciplines (e.g. biology, chemistry, engineering) are presently experiencing an increased demand for persons with master’s degrees who can help to address the technical needs of society. Indeed, in a 1995 article in the Chronicle of Higher Education, Anne Petersen, deputy director of the National Science Foundation suggested that “The Ph.D. should be construed in our society more like the law degree. A lot of people go to law school with no plans to practice law.” Many university departments are rushing to fill the growing demand for science practitioners by creating new curricula, changing admissions philosophies, and redefining faculty roles; and in most cases these departments are being rewarded for their responsiveness by their institutional leaders and by the private sector. While it may sound extreme to envision the field of biology becoming dominated by practitioners, the same feeling was likely held by many of the 1,859 members of ASHA in 1951. It is difficult to predict what the next 50 years might bring. All science-based disciplines, and especially those with increasing demands to serve society may be well advised to heed the lessons of communication sciences and disorders.

References


MN: Council of Graduate Programs in Communicative Sciences and Disorders.


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