

THE NEW CERTIFICATION STANDARDS: AN OPPORTUNITY FOR INNOVATION AND CHANGE IN CURRICULUM AND PRACTICUM

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Spencer Jones, M. D. (1998), co-author of *The One Minute Manager*, wrote a recent best seller titled *Who Moved My Cheese?* It's amusing, it's inspiring, it's food for thought. There are four characters in this story. Sniff and Scurry, two little mice and two "little people," Hem and Haw.

In the story, cheese that has been available at one location for a long time is suddenly gone. Sniff checks out every nearby location, sniffing everywhere, trying to find something to eat, to accommodate change early. Scurry runs as fast as he can to find the cheese. Like the cheese for the mice, the certification standards have been in place for us for quite a while. Mice seem to know about cheese and they have this sniff and scurry strategy.

Then there are these two "littlepeople," Hem and Haw. Hem denies that the cheese is gone. He resists change, thinking that it must be close by somewhere. He blames others for what's happened to him, that there is no cheese left, and that he doesn't have anything to eat. Haw starts out like Hem with the "blame game" and resists taking any action, thinking that whatever they might do to find more cheese would only make things worse!

Eventually, he overcomes some of his fear and begins through a maze to search for a new location where cheese is to be found. He occasionally encounters some recurring fear and doubt about finding more cheese, but eventually he gets through the maze. As he goes through the maze, he writes some things on the wall of the maze, recognizing that he has left Hem behind and hoping that eventually Hem will come along and find the cheese that they all

are looking for. They are getting hungry, so Hem and Haw are quite motivated, which is a good thing for Haw.

In this story, cheese is what you want in life, in your job, in your relationships, money, health, and possessions. For us, cheese is the success of our students as providers of clinical services to the communicatively impaired and our own success as mentors. The maze is where you look for what you want, the academic program you work in, the clinical laboratory, and the community you live and practice in.

So here we are, faced with change in our certification standards and we have to discover how to deal with it in our academic programs. Read the handwriting from Hem and Haw on the wall of their maze (Johnson, 1998, p. 74).

The Handwriting on the Wall

Change Happens

They Keep Moving The Cheese

Anticipate Change

Get Ready For The Cheese To Move

Monitor Change

Smell The Cheese Often So You Know When It Is Getting Old

Adapt to Change Quickly

The Quicker You Let Go Of Old Cheese, The Sooner You

Can Enjoy New Cheese

Change

Move With The Cheese

Enjoy Change!

Savor The Adventure And Enjoy The Taste Of New Cheese!
Be Ready To Change Quickly and Enjoy It Again And Again.
They Keep Moving The Cheese

Change is Our Challenge!

The nature of changes required by the new Certificate of Clinical Competence (CCC) standards suggests another metaphor. The changes we seek are like progressing from playing notes to making music. To play the notes, one must learn to vibrate the reed, finger the keys, and bow the strings. To make music, the player must solve the problem of making the composer's score more understandable to others. The musician, for example, must, in addition to playing the notes, learn to read and interpret the complexities of the score, discern the intent and meaning of the composer, phrase the playing in many ways, vary the intonation and dynamics, complement and contrast with other players, and meet the needs of the listener.

Over past years, we have used the CCC standards as a template for curriculum in academic programs: 6 hours in language, 6 hours in speech, 36 hours at the graduate level, 12 hours in communication sciences, basic sciences courses before pathology courses, pathology courses before clinical practice, clinical practice before externships, and so on. A problem with these minimums is that minimums tend to become maximums. Students think when minimums are met, they are through learning in that area. Listen to the students: "I don't want to take aphasia; I want to work with children." "I've already met my clock hours; I'm not going to my externship site anymore." When we set a minimum standard, we have a tendency to minimize the program, and, thereby, minimize the students' perceptions of our expectations for and of them. Requirements for

a degree greater than those required for certification are interpreted as excessive and guided by interests other than those of the students.

Another observation about the structure of Communication Sciences and Disorders (CSD) curriculums relative to the old standards has to do with chunking. When standards specify instruction or background in certain areas, faculties tend to set up courses to match the language (e.g., articulation, language, voice, fluency, hearing measurement, hearing rehabilitation) and the semester hours. The same matching has occurred with clinical clock hours. Some programs have constructed grids or charts to check off the magic words, categories, and hours. Even though courses and cases cannot be described accurately as exclusively speech or language and not all cases will require the same number of clock hours of service, they are frequently “chunked” to fit the categories in the CCC standards. Moreover, if course material in language, for example, is chunked into five chunks, students who meet the minimum requirement will take two chunks, others may take two different chunks, and none will get the knowledge and skills included in the three chunks they didn’t choose. What was intended, as a common standard for students, is not a common standard because of chunking.

The Nature of the Changes.

The language of the new CCC standards reveals a focus on integration and outcomes, much like making music. They require that students who would be certified as clinically competent must acquire an extensive, integrated knowledge base; readily apply the integrated knowledge base to analysis and care of patients’ problems; be effective and efficient in skills for problem solving or clinical reasoning, clinical procedures, self-directed learning, and team participation.

In addition, the new standards address several other issues:

- *The increasing complexity of the role of the SLP in addressing communication problems.* At the same time, we have become increasingly specialized, our responsibilities have broadened in many directions, including, for example, reading, writing, and more general communication principles of social interaction. Another example: The role of environment in communication is becoming increasingly important to us. It's not just that we should do therapy in situ, but we recognize that environment must be conducive to communication partnerships. As in music, environment is an important variable to the players. Environment doesn't just envelop the players and their playing; environments impact the players. Sometimes environment enhances; sometimes it impedes, impairs, or destroys. So, both increased specialization and broader considerations in communication characterize our changing roles.
- *The standards specify oral and written communication skills.* Clinical supervisors are united in their concerns about their students' writing! Oral skills are needed not in the context of patient care, but in terms of advocacy for the profession, interpreting to the media, persuading schools that case loads are too large, and many other professional circumstances that call for informative and persuasive speaking.
- *The new standards highlight knowledge of professional issues, ethics, and research.* The emphases on professional issues and research are not new. As a professional concern, ethics is not new either. However, providing mechanisms for honing our students' ethical decision-making and judgment is an important part of their professional education. The first ethic for us clinically is to keep our patients and their welfare paramount. As faculty, an ethical transposition would hold that our academic programs must keep the needs, interests, and welfare of our students paramount. Student-centered academic programs will result in professionals who are engaged in the professions and prepared for continuing growth and success.

Making music requires integration of superb skills of the players and dynamic interaction between performers, directors, musical scores, and listeners. These new standards for the CCC call for the integration of exceptional skills and dynamic interactions between students, teachers, funds of knowledge, and cases or problems. For both musician and clinician, the evidence of progress and achievement is in the quality of the performance.

Players have Changed Too

Any changes faculty may make in academic programs to meet the new certification standards must also take into account changes in our students over the past 20+ years. Here are some observations of CSD graduate students in one accredited program in North Carolina.

- Our students are not all 21 year olds, just completing a Bachelor's degree. Some are back-to-schoolers, completing interrupted education. Others are career-changers, for various reasons.
- Most are multi-tasking—going to school, caring for family (children and/or elders), working part-time, and contributing to the community. Some are good at time management; others are not.
- More than 90% are female. Women do have, culturally, some different responsibilities and in different proportion than do men. Gender makes a difference, particularly when it comes to family-care issues.
- Racial, ethnic, economic, and social diversity contribute to the heterogeneity of students in the classrooms and programs.
- Today's students are technologically savvy. Five years ago, only about 20% had computing skills; now, more than 80% own their own computers and have, at least, word processing, e-mail, and internet skills.
- Most students are service-oriented, having had more experience with children than with the elderly. Many have had volunteer experiences in high school, working with special populations, which have prompted their interests in CSD. Many think of certification standards as a series of hurdles over which they

must jump before they can “get out in the real world.” They want to “do clinic” earlier; they are eager to “get to work” with “hands on” experiences.

- Many students require unambiguous expectations. They want things they are to do written in black and white. How many pages should the paper be? How many references must I cite? Can I use this reference or that reference? What will happen if I turn the paper in late? Do we have to read articles on the bibliography? Will this chapter be covered on the test? Even older students are acculturated historically by fast food, drive-by services, and instant everything. Some influence on their attitudes may be attributed to their technology experience. For example, in many favorite computer games, what the player has to do is clearly explained. The consequences of play are straightforward and unemotional; players have no competition but themselves. This might suggest that innovation, creativity, and extemporaneous instruction are unappreciated. Unlikely, but awareness of students’ needs, experiences, preferences and our communication of expectations must be factored in what we define as favorable outcomes.

Our students’ questions and concerns help us to understand whom we are teaching and how they might best learn. Some questions reflect the perception that students have that their learning program is a set of barriers instead of a set of opportunities, a guideline or map, for their learning. If we are really serious about integrated, life-long, student-centered learning, we must rid our discourse of messages that suggest barriers to learning. Moreover, notice in students’ questions that they are asking the faculty to make the choices for them about what they shall learn. A shift in responsibility here would empower students to make their own choices, recognizing their need to know and discovering strategies to find knowledge and develop skills. Academic programs should give them abilities and confidence in their abilities to recognize their own needs and the value parameters in considering options to meet those needs.

Different Players Making Music Equals Opportunities

Consideration of the characteristics of current students (different from characteristics of the faculty were when they were students!) suggests some opportunities in the development of academic programs. Some examples:

- Schedule and program flexibility and accessibility is more important now than in prior years. Technology for asynchronous participation can be used in on campus as well as distance education.
- Programs must be efficient, not only to meet cultural expectations but also to be cost-effective for universities and students.
- Programs must include enough practice to be effective in developing clinician competencies for the “real world”. Employer feedback inquiries often reveal that graduates are attractive, polite, gracious, eager, energetic, and so forth, but they don’t know the real things they need to know to do the job. Favorable outcome measures rather than number of practice hours will build self-efficacy, a valuable professional advantage.
- Early student engagement in meaningful, satisfying, rewarding work-related activities prepares students for professional work and retention in the workforce. The satisfaction of having solved problems, removed obstacles, made a difference is the life-blood of motivation in service-based professions.

Principles of Orchestration for CSD Academic Programs

Consideration of ways to meet the new CCC standards, in letter and spirit, prompts the following principles for changing or developing graduate academic programs in communication sciences and disorders. The list is not exhaustive, so consider it a start. These principles guide the proposed matrix paradigm, which follows:

1. Reduce the linearity in academic programs. Academic programs, like orchestral scores, are both linear and matrix in design. Each part or player has a line of music they play in linear fashion. But the score of the whole work is a matrix of parts played together. Some sequential learning is appropriate and suggested by the CCC standards. For example, the list of areas of knowledge—basic science, communication science, communication disorders, and management of communication disorders—is sequential. Linearity makes sense in that each area is a foundation for the next. A matrix organization, however, is more effective in conveying complex relationships. Matrix organization has its origins in mathematical theory and is widely used in business organizations. A major principle of matrix organization is that parts, or players, are integrated and contributors to the whole, moving outcomes from minimal to maximal with greatest efficiency and effectiveness.

2. Develop knowledge and skills through practice. To the degree that the education program is linear, students are postponed in beginning their clinical practice. That is, they have to wait to learn. While waiting to learn impedes the integration of knowledge and practice, matrix organization will facilitate learning on a clinical need-to-know basis.

3. Plan an intra- and inter-disciplinary curriculum. Our professions have a history of heavy borrowing from many other disciplines. Psychology, linguistics, biology, sociology, and cognition—we've borrowed from everybody. New areas are developing (e.g., genetics, gerontology, biotechnology). We have to borrow more from new fields that have or have potential for enormous impact on communication disorders and the way we deal with them. Negotiating the contributions of expert players in other disciplines to CSD programs is qualitatively and economically superior to CSD faculty becoming novice players of many disciplines.

4. Facilitate cohesion and integration of learning environments and strategies. CSD academic programs have exposed students to a variety of practice settings according to guidelines in previous CCC standards. Varied practice settings and communication venues integrated with other learning can help students to know about and experience the impacts (positive and negative) of environments on communication outcomes.

5. Develop support groups within and between departments, schools and/or communities. Considering the degree to which our professions are dependent on information from other disciplines, practice in non-university settings, interface with other professions, academic programs are well served by cultivating support groups. Groups might include faculty from related departments and schools, consumers, community leaders, school and health care administrators, and professionals in speech-language pathology and audiology as well as in related disciplines, such as insurance, law, medicine, and dentistry. The academic programs that are visible members of the university community and the larger civic community will be enriched in many ways by the networks available through them.

6. Guide continuing quality improvement with formal and informal outcome research. Every element of the academic program must contribute to positive outcomes for students and patients that will, in turn, constitute positive outcomes for faculty and the university. Non-contributing components should be discarded; they waste time and money and sap motivation. Natural feedback loops from formative and summative assessments of students and patients provide ready information for program assessment and improvement.

Refer to Slide 11 in Power Point Presentation here

Cases or Problems are the Centerpiece of the Matrix

Unfortunately, most of our present faculties have had little, if any, training as teachers. Instead, our study and experience was aimed at mastering the content of our discipline and profession, the theoretical, conceptual, and factual information. Little attention was given to the pedagogy of teaching and learning; most faculty teach as they were taught, without much regard to best practices for efficiency and effectiveness in meeting the learning needs of future professionals.

The most common center of CSD academic programs is courses, including as content the theories, methods, materials, and skills related to the focus of a course. Lecturing has been the primary method of information transfer in the classroom. The professor is center stage, doing most of the talking. Students listen, or nod off, or scribe every word. One writer even called the students “desk-potatoes.”

The paradigm (Slide 11) presented in this proposal for your consideration focuses the educational program on problems or cases, the real-life stuff of our learning, research, and clinical endeavors. All cases represent problems that need to be addressed, but not all problems are cases. For example, a possible problem that is not a case would be the effective SLP supervision of communication assistants in clinical practice. With cases or problems at the center, learning will be ordered on a “need-to-know” basis. Logically, learning when the need arises and then applying that knowledge immediately to resolve problems is mutually reinforcing. Clients come for professional services when they have a need to know about communication disorders and can apply that knowledge immediately. Cases or problems are the center of the academic program matrix. Large and deep funds of knowledge inform the case studies and a substantial support system provides infrastructure for faculty, staff, and students.

Teams

The essential elements of the team are at the top in blue circles. Notice that families are beside the clients; families are an important part of the matrix. Several faculty and/or students may be on a team, as needed or desired. Externship supervisors would be included if the case is in an off-campus environment. In addition, there are potential related contributors, people with expertise in related disciplines that could contribute (with appropriate client consent). They would be included on the team for a particular case where their expertise was applicable. In some cases, another client (with appropriate consent) might be on a team for their insight from a client's point of view.

Oral and Written Communication

Oral and written communication is an important part of the new standards. Communication is the “glue” that allows teams to work together. The team discussions will require all team members to consider options, to reason logically, to communicate their viewpoints to others. In addition, team interaction gives faculty and students opportunities to identify and address difficulties in individual and/or team communication. The team is a relatively safe, nurturing, natural professional environment for team members to discover their own skill and knowledge needs.

Funds of Knowledge

On the left vertical axis is a stack of funds of knowledge. These refer to what we know. Knowing the score is not the music until we play the music. The teams will access the score, funds of knowledge, in all of the processes involved in considering a case or problem. Knowledge may be stored in team members' memory and experience, research literature, internet sites, and informal observations. Treatment efficacy data (e.g., results of the NOMS studies) that inform teams in making evidence-based decisions and recommendations for best

practices, should be included. The funds are areas, not intended to suggest courses, but to suggest bodies of knowledge.

The funds of knowledge have considerable flexibility. As knowledge changes—news accounts indicate that the information is doubling every seven years—programs can include new or revised information and exclude old information. Moreover, using the knowledge and skills validation study now underway will aid selection of the content to be included, at least to start.

Support Systems

Continuing with reference to Slide 11, four areas making up a support system from the bottom up are suggested on the horizontal axis. The work of the teams in addressing the cases will require support systems to conserve and maximize their efforts and outcomes. More and more, universities have employed expert personnel (not faculty) to provide support in these areas. CSD academic programs must engage them in support of our academic programs much like in past years we have sought the help of professional librarians and trained janitors! A few examples in each area will illustrate.

Learning Environments

Our academic programs have typically utilized a variety of physical locations as learning environments: classrooms, clinics, laboratories, faculty offices, libraries, schools, and health care facilities. Even within those locations, a number of environmental options are available. Distance educators create learning environments for students who aren't in the same location. Those same environmental strategies can be used with on-campus students, using various strategies to maintain confidentiality. Internet-based synchronous and asynchronous communication strategies (e.g., discussion forums, chat rooms, distribution lists, and e-mail) work well. They provide a mechanism for formative

assessment, as well. The instructor can monitor participation, the quality of contributions, and provide immediate feedback on the forum, if appropriate, or by e-mail, if privacy is needed.

Electronic or telephone “help desks” are also useful learning environments which provide opportunities for formative assessment. Graduate teaching assistants could assist in monitoring, responding to student questions, offering guidance and direction.

Information Systems and Access

Librarians are no longer just “book shelvees.” Librarians are experts at information retrieval in a variety of locations. Librarians are like copy machines; they charge you for getting information to you, but they are worth every cent for the time saved. Many librarians are good teachers about search strategies, locating information that seems hidden or in unexpected places; being able to browse is useful. Professional associations have good information systems and access, too. Just as with print literature, electronic media need to be evaluated critically. Some information systems and access experts can support us in the development of videos and CD ROMS and other kinds of instructional media that are transportable. The availability of digital technology makes video clips and video streams much more realistic. We no longer have to rely only on a written account of a patient’s behavior. We can show the patient in situ, listen and see the patient’s communication skills, and observe the patient’s behaviors.

Many professional programs in other disciplines now use simulations. The business schools teaching with case-based learning (e.g., Harvard Business School) use simulations, hypothetical cases. Simulations would give students more practice in special skills, analyses and interpretations than would otherwise be possible.

Information systems professionals could provide invaluable assistance to an effort to develop national and international case databases. Faculty, clinicians, scientists could develop some cases of different types: routine, instructive, enlightening, and exceptional. Case development would be a good scholarship/publication opportunity for all faculty members. The development of the cases for instructional purposes also includes formulating questions to guide students' learning on a need-to-know basis. For example, what is the main issue in this case? What kinds of analyses need to be done? How do you interpret the data? What does the data tell you? What is the best way to help this person? Cases would then be indexed by key words (e.g., primary disorder areas, secondary areas, related problems, severity/complexity, learning objectives, beginning/advanced skills required). Then, the cases would be published in a national database so that they can be shared with other academic programs. Such a database would share the workload, broaden the experiences available to students and teams, make unusual cases available in non-referral areas, expose students to a variety of points of view, and expand our funds of knowledge.

Technology

The technology explosion is impacting every facet of our lives, personal and professional. To advantage our academic programs through the use of technology requires that we have support from those with technology expertise. Miniaturization, portability, and power are increasing at lightening speed and can be valuable tools for instruction and assessment. For example, hand-held Palm computers are being used in junior high and high school classrooms now to guide and assess students' learning in the classroom and in field-based learning environments. The instructor is an interactor in an intense, integrated learning process. The teacher is coaching, prompting, questioning, suggesting, and conducting on-going evaluation of the students' thinking, learning, and understanding.

Similar strategies could be applied in clinical practice instruction. Imagine a clinical supervisor with a student clinician. Students have hand-held computers on which they enter data from their clinical work. Supervisors access the data and interact with the students to coach, prompt, guide, and question and evaluate during the formation of clinical skills.

Technology experts can support our instructional programs in other ways. Video engineers and videographers can record patient, clinician, and team interactions. Technology works for the team, rather than the team working at technology. Web site designers put together web tools and strategies that meet the needs of faculty and students. In order to make music, we must not be distracted or consumed by stringing and unstringing our instruments.

Research and Development

Formative and summative assessments are emphasized in the new certification standards. Think about how these might fit into this paradigm of case-based learning. Inquiries of clients and employers who have had interactions with our students during and after their training are already a part of our assessment battery. In addition, assessment of career pathways would be useful to academic program planning to meet changing needs.

Concerns, in considering such changes as I have described, have been raised about administrative data required in colleges and universities. FTEs, workload assessments, and budgets are still required. Often these “production” data drive budgets, new faculty and staff hiring, equipment procurement, and space allocation. In matrix program designs, productivity would be considered in terms of how many and what types of cases are taught. Hence, in order to determine full-time teaching loads, for example, number and complexity of cases prepared and taught would be transposed to number of courses used by other schools and departments within universities. Data transformation is a common

principle for statistical analysis. Moreover, data transformation already occurs in academia in considering, for example, how many lab instruction hours are equal to a lecture hour.

Cases might be grouped by common characteristics or concerns (see discussion of case databases above) so that thirty cases or problems related to language development, for example, might be transformed as one course. Or, cases could be grouped with common or progressive learning objectives into modules and then modules transformed into courses or credit hours for administrative data purposes.

Guiding Change in Your Program

Change is our challenge. Times have changed. The CCC standards have changed. The matrix organization of CSD academic programs would be a major change in the way we educate our future professionals. It represents integration, increased practice, flexibility, accessibility, student empowerment, and community involvement. It incorporates technology, multiple learning environments, oral and written communication opportunities and research, including outcomes of students and faculty to guide continuous quality improvement.

How to get started? Consider the need for change as the problem; the matrix organization is an option that considers many, if not all, of the objectives of the new standards. Gather the team of faculty, students, administrators, support personnel, etc. Ask lots of questions. For examples: What is our situation now? What barriers would we need to overcome? What ideas are there for overcoming the barriers? What do we need to know to identify various options? What are the pros/cons of each option? What kinds of quantitative/qualitative analyses can be applied to the situation? If not this option, what would you

propose? What criteria do you apply in making this assessment? Do you see any difference between short- and long-term impacts of the option you have chosen? What is the best outcome you can foresee from the option you propose? What is the worst? Is there any possibility that the option you propose might make the problem worse?

Now keep going...working this problem just like you would work a case, informed by the funds of knowledge and served by the support system.

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