Where Will We Be Tomorrow? We Need a 2020 Vision

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"The only limit to our realization of tomorrow will be our doubts of today. Let us move forward with strong and active faith."
— Franklin Delano Roosevelt

INTRODUCTION

In July 2001, I challenged the Council of Faculties that "we can be better tomorrow than we are today." To achieve this, we need to have a vision of what "tomorrow" will likely entail for pharmacy faculty. Although AACP members have highlighted these issues and these are largely a part of our organization's strategic plan, I believe we need a clearer picture of what faculty and pharmacy schools will look like in 2020.

What will be expected of pharmacy faculty tomorrow and how do we get there from where we are today? Perhaps we can gain some wisdom about answering these questions by recalling Alice's experiences in the fairy tales, Alice in Wonderland and Through the Looking Glass(1). For example, when Alice questioned Chesire Cat about which path to take, he indicated "That depends a good deal on where you want to get to." The lesson here is that a clear vision or a goal describing what you want to achieve is essential. As Alice navigated her way through the Looking Glass House, she encountered challenges, unusual creatures, and unexpected paths. But, through this experience, she grew from a girl to a woman. A lesson for us is that even if we have 2020 vision about pharmacy education, we will encounter unexpected situations and challenges along the way. Therefore, we need to "move forward with strong and active faith" in order to successfully forge the path to 2020.

Since July 2001, I have had opportunities to step "through the looking glass" by reading about the future of academia and talking with Council of Faculties members, the AACP Board of Directors, my mentor, and other colleagues about the future roles and responsibilities of pharmacy faculty. The following description summarizes what I have learned about the Looking Glass Room of higher and professional education.

FORCES DRIVING CHANGE

In order to envision what faculty roles and responsibilities will likely be in 2020 we need to first better understand the forces driving change in higher and professional education and the pharmacy profession. The primary forces that will impact future pharmacy faculty roles and responsibilities are the expectation of efficiency, efficacy, and excellence by our stakeholders. The continuing evolution of technology which promotes self-directed learning and assessment is a common thread across all of three of these primary forces and its momentum will significantly facilitate success of all three factors.

Efficiency. The need for a more efficient delivery of education is being driven by several motives. First, the demand for higher education is already increasing and nontraditional students who are seeking new careers and lifelong learning will continue to increase in numbers(4,5). In spite of this increased demand, financial support at the public level for higher education will continue to decrease. Privatization and for-profit institutions of higher education will radically drive everyone to be more efficient. Since faculty and staff salaries comprise a vast portion of a pharmacy school's budget, we will be required to find more efficient approaches in the delivery of instruction(6). Technology will continue to evolve and become easier to access and use. Therefore, we will turn to it as a means for handling larger numbers of students in a more efficient manner.

Efficacy. The second force that will drive change in the future is the need for more effective teaching and learning strategies. Robert Chalmers, our beloved past pharmacy leader put us on the right path over 10 years ago by advocating abilities-based pharmacy education(7,8). The public is making it clear that institutions of higher education must do more than just transmit knowledge to students and the attributes they are demanding are abilities-based. Specifically, in order to remain a strong nation, we need graduates who can "do some-
thing” with information, work collaboratively with others in their workplace and community, and assume leadership roles in these settings(5,9). Higher education is being called upon to inculcate values such as diversity, honesty, personal responsibility, and compassion due to the rapid changes our society is undergoing and will continue to face(10). Finally, health professionals will be called upon more than ever to adapt to change and assist in managing change. Health profession educators therefore, are being called to teach students how to adapt to and manage change(11). Facilitating the development of complex abilities rather than just transmission of knowledge will continue to require faculty members to use a “learning” rather than a “teaching” paradigm and this will drive significant cultural changes within our faculties(12,13).

For learning to be more effective, faculty will continue to find the need to use a greater variety of effective learning and assessment methods in order to reach our increasingly diverse population of students (14). Tomorrow's students will continue to be diverse with respect to age, gender, socioeconomic status, race and ethnicity, and learning/physical abilities; therefore, faculty will continue to encounter groups of students who have varied levels of preparation and learning styles. We are quickly realizing that student learning is shaped not only by their classroom experiences but also out-of-classroom experiences such as employment and family responsibilities. Gardner's work on multiple intelligences further emphasizes the need for varied learning and assessment strategies(15). As I advocated in the last issue of the Journal, our learning and assessment strategies must become more "evidence-based" so we are confident they are the most effective approaches possible(16). As recently demonstrated by Shomaker in medical education, many of these "more effective" learning and assessment strategies will likely be technology-based(17). In summary, society needs citizens who can demonstrate complex abilities and not just exhibit a body of knowledge. Achievement of these outcomes by a diverse population of students will require future faculty to adopt new approaches to learning and assessment for which there is evidence-based efficacy.

**Excellence.** The third primary force is "excellence" and at both the higher and professional education levels of accreditation we have already encountered expectations of increased accountability. If we are "evidence-based" in selecting our learning and assessment strategies for pharmacy students, we will be using the most efficient and effective instructional methods and therefore be more likely to demonstrate "excellence." Why is the focus on excellence important? As resources continue to shrink, there will be the risk of decreased quality of instruction. For example, in face of declining resources an institution may turn to using the Internet to disseminate knowledge but not incorporate other teaching strategies that enable achievement of higher levels of learning and inculcation of the values previously described. Outcomes assessment provides a means for continuously monitoring whether a learning institution delivers the product it claims. In the future, some quality indicators will likely be used in decisions about program continuation and funding. The process of outcomes assessment must become more efficient and embedded into daily teaching activities so that faculty members are not burdened. Although there are currently only a few examples of software that are attempting to achieve this, future technology will allow much more advanced outcomes assessment software to be embedded within student learning and assessment activities.

The forces of efficiency, efficacy, and excellence are also evident in pharmacy practice. The pharmacy profession will continue to encounter the need to adapt to changes in health care and need graduates who can lead full implementation and provision of pharmaceutical care. Pharmacy educators will need to work closely with the professional organizations in pharmacy to assure that our curricula are preparing graduates to accomplish what is needed and to proactively refine our curricula as the profession matures and meets the health care needs of our rapidly changing society.

The provision of health care in outpatient rather than the inpatient settings has already had a dramatic impact on where and how health professional students receive their clinical training. We are likely to see a continuing evolution where students are better prepared for patient care experiences by means of simulation laboratories because technological developments will enable more cost efficient approaches. Settings such as the workplace, apartments and even community clubs are likely to become major learning environments for patient care.

**PHARMACY FACULTY TOMORROW: ONE VIEWPOINT FOR THOUGHT**

As noted in the quote by Roosevelt at the beginning of this Section, we need to put doubts behind us and "move forward with strong and active faith." We therefore, as a Council of Faculties need to envision future faculty roles and responsibilities in order to implement policies that will put us on the right path and offer the most effective programs and activities related to faculty development and leadership training. Based on the above description about the forces that will most likely propel us forward, I offer the following musings as an example of the likely roles and responsibilities of pharmacy faculty in 2020. We need to have a vigorous debate about this and I encourage all of us to share our thoughts and reactions so that we can "enable knowledge creation" and develop a strong 2020 vision for the Council of Faculties(18).

**PHARMACY FACULTY IN 2020**

As I peer through the looking glass, I envision that due to faculty shortages and the need for more cost-efficient instruction, we will have already carefully dissected faculty responsibilities and those which can be accomplished by someone without an advanced degree or specialization (e.g., course management, program coordination) will have been assumed by "faculty extenders." Faculty extenders are individuals who have a college degree and/or advanced training that enable them to assume faculty responsibilities that do not require an advanced pharmacy degree or specialization. Pharmacy faculty therefore, will focus their instructional efforts on either content development or facilitating aspects of the learning processes which require expertise. By more efficiently accomplishing their instructional responsibilities, faculty can focus on research, clinical practice, and other ventures that will stimulate discovery of new knowledge and generate revenue for their institution. Newman notes that "unbundling" of university budgets may be able to reduce the cost of higher education by as much as 75-90 percent and that e-learning encourages the unbundling of instruction(19).

The content of our curricula will be developed by a cadre of nationally-recognized experts (e.g., faculty members, practitioners, curriculum specialists, media designers) by means of partnerships or consortia and faculty members at individual institutions will largely be responsible for facilitation of the learning process, assessment, and supervision of patient care(20). Pharmacy faculty members therefore, may be employed or contracted by several institutions or other business entities.

Content can be more efficiently delivered and taught by computer technology and development by experts will enable it to be effective and promote teaching excellence. However, this technology will not be able to inculcate and assess achievement of communication skills and the professional, ethical, and moral values that are essential to the future of our profession. Moral and ethical issues will become even more predominate as pharmacogenomics evolves and therefore, we will need to have greater emphasis on these topics by having faculty members facilitate discussions and learning of these topics. Technology also can not totally replace the role of the clinical expert in supervising students’ provision of patient care. Therefore, we will need expert clinicians who can provide expertise about patient care. Finally, although technology will enable use of more effective assessment methods we will need faculty members who conduct assessments that are not possible by computer and need faculty mem-

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bers to monitor overall program quality. Therefore, I concur with Benor's vision that future faculty members will assume one of three roles within their primary institution: (i) learning process facilitators that ensure development of communication skills and professional, ethical and moral values; (ii) clinical experts that supervise development of patient care abilities and are a resource to students and facilitators; and (iii) assessment experts that evaluate student performance when it can not be accomplished by computer technology and also monitor overall achievement of student competence.

Technology will enable pharmacy schools to efficiently and effectively disseminate knowledge to students. However, pharmacy schools must identify new learning strategies that allow students to achieve higher levels of learning(6). Classroom and experiential learning are likely to become much more integrated and this will facilitate the need for new approaches to teaching and learning. For example, Bourner and Flowers predict all of these levels of learning can be accomplished by a "high-tech/high-touch" combination of: (i) open learning that is delivered by the Internet; (ii) large group workshops; and (iii) action learning sets. An action learning set involves a group or "set" of learners who come together for consultation and exploration of their ideas. Compared to seminars or tutorials, action learning sets are student-centered and more likely to empower creativity(21). During an action learning set, although the individual is responsible for his/her own problem, the group contributes to resolution of the problem. These authors note that experience at the Open University has shown that distance learning by internet effectively allows dissemination of knowledge and allows students to test their ideas and evidence(6). Large group workshops allow students to use their ideas and generate new ideas and evidence. Bourne and Flowers state that action learning sets enable students to develop personally and also plan and manage their own learning. Bourner and Flowers advocate the combination of methods as a means for achieving efficiency and efficacy.

Mirecka notes we will always need "planners" who will coordinate and oversee all activities occurring in the learning environment but, foresees this being accomplished at the global or regional scale(22). I believe we will find most of these responsibilities can be more cost-efficiently assumed at the local level by "faculty extenders."

WHAT ARE THE IMPLICATIONS?

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WHAT ARE THE IMPLICATIONS?

Although the Association has given much attention to e-learning and provided programming in this area at national meetings, we need to address some important issues in order to provide the additional faculty development that is needed to prepare for 2020. For example, what should be the faculty member's role in developing courseware? Should they be purely content experts or do they need to have some understanding about designing the web or software interfaces in order to be an effective member of a partnership or consortia that develops course content? To answer this, perhaps we need to learn from others who are further along this path than the typical pharmacy school. If we agree on the future need for facilitators, clinical experts, and assessment experts, we need to begin developing certificate, diploma, and/or advanced degree course offerings that can help a faculty member develop the expertise needed to fulfill one of these responsibilities.

We also need to give thought about what faculty members need in order to help lead the inevitable change we face as we transcend through the looking glass house of pharmacy education. In the coming year, the Association will focus on the theme of leadership. Faculty development about leadership is not just needed for those who want to be Deans; we need all faculty members to have minimum competency in leadership so that they can effectively implement changes related to instruction and help students become leaders of change. Although you will likely learn about many leadership approaches and strategies in the coming year as you participate in Association activities, please remember it takes more than "knowledge" to be a leader. To move pharmacy education forward we need faculty members who have the "guts" to implement change. I offer the following for all of us to reflect upon in the upcoming year.

Leaders are visionaries with a poorly developed sense of fear and concept of odds against them. They make the impossible happen.

Dr. Robert Jarvik

References

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