

Developing Cultural Competence and Social Responsibility in Preclinical Dental Students

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Abstract: Dental student development of cultural competence and social responsibility is recognized by educators as an important element in the overall shaping of minds and attitudes of modern dental practitioners. Yet training modalities to achieve these competencies are not clearly defined, and outcome measurements are elusive. This article shows an effective method to meet these desired outcomes. Sixty-one freshmen (class of 2005) participated in forty hours of nondental community service, and reflective journals were completed by the end of second year. Competency outcomes were measured by selecting key words and phrases found in the individual journals. Key phrases were related to compassion, righteousness, propriety, and wisdom. Also, phrases had to be accompanied by written indications of direct program causation. The combination of active-learning (based upon service learning models) in public health settings outside of the dental realm, accompanied by reflective journaling, enhanced cultural understanding and community spirit in the majority of students.

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Throughout the latter part of the twentieth century, medical and dental schools have set standards to provide new practitioners the tools necessary to assess information critically, stay abreast of changing knowledge, adapt to continuous change, and reflect on the larger role and responsibilities of the profession in society.¹ In 1996, for example, the Association of American Medical Colleges launched the Medical Schools Objectives Project to ensure that high standards of professionalism, including altruism and dutifulness, remained at the core of medical education.² As the twenty-first century unfolds, these standards have become increasingly relevant in our professional education process. Rapidly changing demographics and globalization have further made important the professional's ability to understand and incorporate the needs and perspectives of culturally diverse communities. There is a need to recognize multiple determinants of health such as social relationships, living conditions, neighborhoods, and communities. The Committee on Educating Public Health Professionals for the 21st Century further envisions a future where a significant portion of all medical school graduates are fully trained in an "ecological" approach to public health and believe that public health and medicine are more connected than ever before. This connection will help to facilitate the kind of interactions required to tackle the complex health problems that are influenced by many

factors—social, behavioral, environmental, and cultural, as well as biological causes.³ It may therefore be concluded that all health care providers have a responsibility to acquire and demonstrate the skills and commitment to provide sensitive, equitable, competent, high-quality care to all patients irrespective of cultural determinants.⁴

In my opinion, most dental school curriculums have previously not engaged students adequately in the development of these skills. The 1995 Institute of Medicine study, *Dental Education at the Crossroads*, concluded that dental students have too little time to consolidate concepts or to develop critical thinking skills, that comprehensive care is considered an ideal rather than reality in the education process, and that instruction still focuses too heavily on procedures rather than on patient care.⁵ As Boyd points out, dental students generally spend their first two years engaged in acquiring primarily factual knowledge by listening to lectures and reading textbooks.⁶

Two teaching methods, however, have helped to overcome this reliance on passive, rote learning methods: service learning and reflective journal writing. There is evidence that service learning helps develop cultural literacy, improve citizenship, enhance personal growth, and foster a concern for social problems, which leads to a sense of social responsibility and commitment to public/human

service.^{7,8} Similarly, reflection is described as the key to obtaining meaning from the service experience. It is a process by which the service learners think critically about their service experience and thereby mix action, thought, and observation.^{6,9} Journaling gives students time to reflect on the experiences they have encountered and assess how these service experiences may have impressed, depressed, troubled, or excited them. It is this action of critical thinking and reflection by the students that hopefully evolves into the development of cultural competence skills.

By utilizing these two learning methods and, importantly, by developing experiences in public health services that are unrelated to dental services, students at the University of Pittsburgh, School of Dental Medicine, through the S.C.O.P.E. (Student Community Outreach Program and Education) project, gained new insights and attitudes that reflected personal growth and helped them in attaining the following school-specified competencies (as listed on Competency Document 12-17-02):

1. Apply ethical principles to professional practice.
2. Establish rapport and provide compassionate care for all patients.
15. Recognize health in all patients to include: children, adolescents, adults, geriatric, and individuals with special needs.
29. Participate as community advocate for the promotion of oral and systemic health.
30. Educate patients about the importance of oral health as a component of total health and quality of life.
31. Provide patient care that emphasizes prevention of oral diseases and supports maintenance of systemic and oral health.

Also, students were aided in developing some of the fifteen “core skills” that are considered necessary by the Community-Campus Partnerships for Health¹⁰ to help foster and develop the health professional’s role of effectively meeting the needs of the public. Included in these core skills are the following:

1. Participating in racially and culturally diverse society
2. Understanding the role of the physical environment
3. Involving patients and families in the decision-making process
4. Caring for the community’s health
5. Improving the health care system
6. Continuing to learn

Although the concept of becoming more socially responsible appears straightforward to most people, the model of gaining cultural competence is not as clearly and universally understood. There is, however, an extensive body of literature regarding improvement in cultural competence among health care professionals. One theoretical description of improving competence is that, based on progressing along a continuum, ranging from an individual’s view of cultural “destructiveness” to “proficiency.”¹¹ Cultural competence is also described as a process whereby students gradually build cultural awareness, knowledge, and skills that result in a changing of their attitudes. Included among criteria needed in order to move toward proficiency, professionals must learn to 1) value diversity, 2) understand their cultural biases, 3) be conscious of these dynamics when they interact, and 4) internalize cultural knowledge.¹²

According to HRSA,¹³ there are nine “domains” that are important in measuring cultural competence in health care settings. Among these interacting domains are:

- *Values and attitudes.* These are directly influenced by cross-cultural interactions and refer to improved understanding, knowledge, and respect for various cultures.
- *Cultural sensitivity.* This refers to heightened knowledge of the needs of the community members and how to best deliver health services to individuals.
- *Family and community participation.* This increases awareness of the role of the family and community in the provision of health care.

It is my hope that dental students’ movement toward “proficiency” along the competence continuum, as well as enabling their social responsibility, will be demonstrated by the examination of their journal reflections.

Evaluating Students’ Attainment of Competencies by Active Learning

As part of this newly established and currently ongoing dental school curriculum, freshman students from the graduating class of 2005 (n=61) completed forty hours of nondental community service over a two-year period and then presented a three-to-five page reflective journal on their experiences. Students

had the opportunity to select any project related to public health activity, except dental-related activities, and were encouraged to reflect openly on these experiences. Prior to any activity, students were informed that they should express their unabridged thoughts, whether positive or negative, and it was emphasized that this is a pass/fail exercise that is independent of their personal opinions expressed. Students were provided no guidance about the content of these journals other than these three general guidelines: 1) Write about your experiences. This could include any one or all project(s) or any interactions with people or individuals; 2) Include any changes in attitudes, how this might affect their future professional career, and other impressions; and 3) Present honest, thoughtful reflection and program evaluation. Specific content was not graded, and the final Pass/Fail grade was independent of personal opinions and views.

Nondental service was stressed for the following reasons. First, this program for preclinical students was modeled after programs in other health care professional schools and was designed to link public health, medicine, and dental care. There was a perceived need to develop multiple attributes including cultural competence, empathy, multiculturalism, etc., and therefore a broad spectrum of community service was an important element. Second, dental school provides abundant dental-related experiences but often fails to give students a nondental perspective on health issues. Third, working outside of dentistry provided a broad scope of patient, family, and community desires and demands. A high degree of student reflection and insight was therefore required in these unique settings.

Since public health encompasses a broad variety of topics, students were generally free to choose appropriate projects. The SCOPE director, however, still ultimately determined final approval of projects for students. The following are examples of programs selected by students for participation:

- Big Sister program
- Pittsburgh AIDS task force
- Youth Outreach Program
- Hand-In-Hand Festival (for mentally and physically challenged children)
- Family Center “Health-A-Rama”
- Community church activities (fundraisers, community service)
- Walk for Juvenile Diabetes

After completion of the projects, students were asked to submit reflective journal articles based on these experiences.

According to HRSA, one type of measurement of cultural competence is by assessing the values, principles, perspectives, and attitudes espoused by providers. This is referred to as “organizational viewpoint” measures.¹³ Although this measurement generally refers to competence changes at an organizational level, its measurements/indicators refer to checklists for individuals that reference behaviors such as “I recognize and accept that folk and religious beliefs may influence a family’s reaction” and “I understand that traditional approaches . . . are influenced by culture.” Included as indicators are vision statements committed to delivery of culturally competent services, a demonstration of attitudes that indicate respect for diverse cultures, and a demonstration of the willingness to work with culturally diverse populations. I felt that this model could be extrapolated for use in assessing individual students. Therefore, a variation of the above model was used in this study to demonstrate shifts in attitudes, beliefs, and activities toward student competence proficiencies. I recognize that the degree of this behavioral shift was not measured as described by HRSA (behaviors measured from “frequent” to “never do”).¹³

The measurement/indicators were placed into categories based upon the Confucian four constant virtues: Compassion (humanity, kindness), Righteousness (selfless, doing for own sake), Propriety (respect, correctness in dealing with others), and Wisdom (knowledge).^{14,15} I found this to be a convenient system of categorization that seemed to encompass the desired growth expectations of students and could apply universally to a variety of competency goals (see Table 1). For example, the following ADEA competencies¹⁶ are listed, and their related classification samples, based on the four virtues, are highlighted:

#2 Provide empathetic care for all patients including members of diverse and vulnerable populations. (Provides sympathetic care to diverse populations; dealing with others: Propriety)

#18 Assess patient goals, values, and concerns to establish rapport and guide patient care. (Understands needs and perspectives

of culture; responsiveness to consumers; communication: Propriety and Knowledge)

#19 Communicate orally and in writing, with peers, other professionals, staff, patients and guardians, and the public at large (Communication skills: Knowledge)

#22 Establish rapport and identify patient's general needs and expectations. (Understands needs and perspective of cultures; responsiveness to consumers; communication: Propriety and Knowledge)

[not numbered] Treatment planning. Develop and implement a sequenced treatment plan that incorporates patient goals, values, and concerns. (Understands needs and perspectives of patients; responsiveness to consumers: Propriety)

#54 Manage patient care for disabilities and special care patients. (Understands multiple determinants of health; understands needs and perspective of culture: Propriety and Knowledge)

Other virtues, such as Compassion and Righteousness, are exhibited in individual student journal observations and insights, but are not necessarily reflected in the stated competencies.

Each student paper was reviewed, and key words and phrases, as listed in Table 1, that articulated positive shifts in cultural competency and recognition of social responsibility were identified. Prior to the evaluation of the entire class, ten journals were selected at random for an evaluation of rater reliability. Three raters (two college students with academic backgrounds in English and myself) scored these journals independently. A foundation in the English language was deemed important for the analysis of key phrases; however, no other particular student credentials seemed necessary. When reasonable reliability was shown to exist, I proceeded to examine all of the remaining papers.

Although I did not establish student baseline attitudes and beliefs and since only student understanding and growth directly attributable to this project were desired, key phrases were counted only when measurement/indicators similar to those noted above (I accept, recognize, understand) were prefaced or accompanied by pre-qualifying phrases such as "the SCOPE project helped me to . . .," "due to this project, I . . .," "this experience has . . .," etc. Those not accompanied by direct reference to project influences were not recorded as outcomes.

As an example of how journal phrases were transferred into categorical measures, here is a quote from a journal of a second-year student: "This was a very worthwhile event because I got a chance to see what mattered to the people in the community. Hope-

Table 1. The four virtues: categories for student outcome measurements

	Compassion <i>(humanity, kindness)</i>	Righteousness <i>(selfless, doing for its own sake)</i>	Propriety <i>(respect, dealing with others, correctness)</i>	Wisdom <i>(knowledge)</i>
Classifications for key words/phrases	Altruism	Dutifulness	Responsiveness to consumers	Common sense
	Improving human condition	Placing interests of patients and public first	Patient advocate	Identify personal needs and expectations
	Caring		Integrity	Assess personal values
			Sympathetic care to diverse populations	Adjust to continuous change
			Understand needs and perspective of culture	Understand multiple determinants of health
				Critical thinking
				Communication skills

fully, I will be able to use this experience to become a better communicator with my future patients.” In this quote, two virtues were identified, accompanied by separate prequalifying phrases and measurement/indicators:

Prequalifying phrase #1: “I got a chance”
 Measurement/indicator #1: “to see what mattered to people in the community”
 Virtue Category #1: exhibits dealing with others and understanding needs and perspective of cultures. Therefore the virtue of propriety was selected.

Prequalifying phrase #2: “I will be able to use this experience”
 Measurement/indicator #2: to become “a better communicator with my future patients”
 Virtue Category #2: This phrase fits the wisdom/knowledge virtue.

Results

The results of the reliability of the instrument are provided in Table 2. A reasonable reliability (70-100 percent) was shown in the ability to categorize student comments into the four virtues. Table 3 shows the ability to develop a reasonable profile of individual students in at least three out of the four categories (grader agreement in nine out of ten cases) based on their observations, new perceptions, and thoughts. Tables 4 and 5 show a categorization of the observations, perceptions, and thoughts expressed by the students in their journals. As shown in Table 5, their experiences were rarely limited to less than three of the four virtue categories mentioned, showing the broad nature of the learning experience. Possible further studies of behavioral changes, based upon “Organizational Viewpoint” measures, are noted in the discussion section.

Sample excerpts from student journals about various programs are as follows:

Big Sister Program: “It really got me thinking about how our society has such a tremendous impact not only on adults but also on the lives of innocent children.” “She has so much patience and courage. . . . She has taught me to cherish life and try to be the best person that I can be.”

Youth Outreach Program: “This community service, I have to confess, has given me the opportunity to search my heart and motivation again. I am glad that I spent those hours, thinking and working with different people. . . . Children were so lovable and I enjoyed them so much. It gave me a lot of thoughts about being a children’s dentist.”

Walk for Juvenile Diabetes: “Every one of them seemed determined to overcome their setbacks. I learned so much from them as we talked and worked together.”

Church Community Outreach: “This was a very worthwhile event because I got a chance to see what mattered to the people in this community. Hopefully, I will be able to use this experience to become a better communicator with my future patients.”

Idaho Soil Conservation Visitors Tour: “I have always been interested in politics and this experience made me think more about my involvement in the community when I graduate from school.”

Hand-In-Hand Festival (mentally and physically challenged children; one-on-one helper): “Overall, my day at Hand-In-Hand festival was a very challenging but ex-

Table 2. Inter-rater reliability: rater agreement of identification of student observation and insights (cumulative)

	Compassion	Righteousness	Propriety	Wisdom
All three graders in agreement (10 cases)	10/10	7/10	7/10	7/10
% agreement	100%	70%	70%	70%

tremely fulfilling one. I learned a great deal about how it is to take care of a moderate to severely disabled child. I also learned how amazing each child is through my interactions with the other children at the festival as well as with [my assigned child]. My experience at the festival was a great one and will be an experience that I will hang on to and cherish the rest of my life.”

Here are five examples of students’ statements, representing ten students who participated in AIDS-related activities:

Student 1. “It is really amazing how much one can learn and grow through just one experience. I truly feel like I gained so much by volunteering at the AIDS walk. I know that AIDS is a terrible disease and I also know that it has destroyed many families and loved ones. I am embarrassed that I am one of the many who feared the disease, and in some way I feel like I was very prejudiced towards those with AIDS. Until today, I can honestly say that I had many of the same views that society had toward those with AIDS. Today, I am proud to say that I am no longer one with those views. When I met the people who have been affected by the disease, I was heartbroken. I met fathers and mothers walking for their daughters or sons, nieces walking for uncles and aunts, siblings walking for other siblings, husbands walking for wives and wives walking for husbands. . . . I appreciate the opportunity I was given to help at this walk. I feel more comfortable with the disease. I think it will make me a better dentist to those I encounter in my future practice.”

Student 2: “When I was told what my task would be, I really thought of it more as a job that needed to be done to get community service hours. I never expected to get anything out of this experience. I was very wrong! I was educated that day in numerous ways. . . . To me the words death and AIDS were synonymous. I learned otherwise that day of the AIDS walk. I learned that people with AIDS are full of life, love and compassion. . . . The amount of love that the AIDS community showed each other

was amazing. . . . I am so thankful for having had the opportunity to participate in such a wonderful act of love.”

Student 3: “I had learned all about the disease over and over throughout my formal schooling but had never known anybody with the deadly disease or even anybody whose life had been affected by it. I knew all of the facts but in the back of my mind I was still a little uncomfortable with the thought of volunteering at this event [AIDS walk]. . . . It was a great chance for me to meet and chat with the people from the community. . . . I have already participated in the AIDS walk again . . . and hope that more students have as positive experience as I have had.”

Table 3. Inter-examiner reliability: rater agreement across all four virtues per student (individual student profiles)

Complete agreement of individual student profiles in all four virtue categories by all graders (10 cases)	5/10
Partial agreement of individual student profiles in three out of four virtue categories by all graders (10 cases)	4/10
Limited agreement of individual student profiles in one out of four virtue categories by all graders (10 cases)	1/10

Table 4. Cumulative identified student observations and insights per virtue category (n=61)

Students’ Reflection and Insights	Total percentage of students
Compassion	88
Righteousness	60
Propriety	86
Wisdom	91

Table 5. Individual student profiles based on the four virtues (n=61)

Observed student reflection and insight in:	Total percentage of students
All four virtue categories	47
Three categories only	32
Two categories only	21

Student 4: “Talking to people who attended the event gave me a different perspective on AIDS. It was something that I was not familiar with outside of textbooks and the classroom.”

Student 5: “I have a different view and profound respect for all with the disease and an understanding that there are no stereotypes, but rather real people with real stories.”

Discussion

This article demonstrates a preclinical method to help bring about changes in student attitudes, personal beliefs, and insights while completing nondental, active-learning community services. This technique uses service learning and journaling techniques and importantly adds the dimension of performing nondental public health services, thereby enriching the student’s experiences in compassion, righteousness, propriety, and wisdom. It is recognized in the ADEA bylaws that dentists are expected to enhance and promote the total health of patients and that professional development should begin on the first day of dental school. This model, too, begins at the beginning of dental school education and encompasses needed student growth for overall improved patient care and recognition of social responsibility.

Although the observations and thoughts of the students reflect positive shifts along the cultural competency continuum, the study does not demonstrate behavioral changes among students. Also, it is important to note that an individual may become culturally aware without changing behaviors. To this end, a future study could include a scaled, self-evaluation measure based upon students’ perception of any personal behavioral modifications. This would more closely mirror outcome measures based upon the “Organizational Viewpoint” model. Similarly, a long-term prospective study should be able to show an increase in the amount of community service hours and volunteer services given by dentists who have experienced this program.

Ludmerer points out that the power of medical education is limited, particularly regarding its ability to produce doctors who are caring, socially responsible, and capable of behaving as patient advocates in all practice environments.¹⁷ Further, many argue that characteristics such as compassion, integ-

riety, and common sense are largely individual and apart from those of formal education and training. Others, however, insist that the art of medicine is to be learned like everything else: by practice and imitating good role models.

The results of this experience can be compared with that of Wiltshire et al.’s *Empathetic Communication Between Dental Professionals and Persons Living with HIV and AIDS*.¹⁸ They found that dental practitioners made a distinction between knowing about the disease and understanding the person with the disease. Practitioners have mixed feelings about the disease and the people affected. They describe resentment of persons with HIV and AIDS, fear of contagion, and preferences for referring these patients if they could. Wiltshire et al. reported that the majority of dental practitioners expressed a level of empathetic care that was moderate rather than high and that empathetic care was lower with stigmatized populations. That article concluded that training of dental students should include empathetic communication skills and understanding. However, it is hopeful that written results from SCOPE students who worked with patients and families of people who have AIDS/HIV indicate the development of a greater understanding and willingness to deal with this population.

Active learning strategies, such as those utilized in this project, are considered paramount to learning by the Institute of Medicine.⁵ Reflective student journal notations, for example, although underutilized as a teaching strategy in the past, are likely to lead to deeper learning and development of critical thinking and to improve interactions such as trust, communication, and rapport. As Boyd observes,⁶ reflection on experience is the way learners make meaning out of information they acquire, and this develops critical thinking skills. The addition of incorporating public health service projects ensures a rich educational matrix for developing noted competencies regarding cultural competence and professional responsibilities that, in contemporary dental education, are highly valued but rarely addressed in the curriculum. Professional development should begin the first day the student enters dental school and should be a continuous process of improvement.¹²

This project has demonstrated a strategy to engage preclinical dental students in broad-based community health service that helps develop important competencies necessary for the development of culturally competent, community-minded, and reflective dental health professionals. At the end, we can

hope that all dental students will agree with these two second-year students who reflected in their journals: “This community service, I have to confess, has given me the opportunity to search my heart and motivation again. I am glad I spent those hours thinking and working with different people”; and “The volunteer experiences . . . have helped me to develop compassion, understanding and humility—three qualities that are essential to the development of a great dentist.”

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