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Service-Learning and Dental Hygiene: A Literature Review

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Dental hygienists should be aware of the concept of service-learning and how it can enhance dental hygiene education. A look at national documents and other relevant historical literature will be reviewed, in addition to more recent books and articles to define service-learning. Although perceived as a new teaching strategy, service-learning has its roots in experiential education. Several definitions of service-learning have emerged, which take into consideration the reciprocal needs of the student and community, bridging academic theory with community service, and instilling civic responsibility through a reflective component. Considering the advantages and disadvantages, service-learning seems to be a good methodology for dental hygiene education. Recommendations include the expansion of the ADA Accreditation Standards to include service-learning, and incorporation of an operational definition of community-based oral health programs, as well as the term service-learning in its Definition of Terms.

Keywords: service-learning, dental hygiene education, educational methodology, experiential education

Introduction

Service to the public on the national level is outlined in the *Competencies for Entry into the Dental Hygiene Profession* developed by the American Dental Education Association (ADEA). One of the domains of these competencies states, "dental hygienists must appreciate their role as health professionals at the local, state, and national levels. This role requires the graduate dental hygienist to assess, plan, and implement programs and activities that benefit the general population. In this role, the dental hygienist must be prepared to influence others to facilitate access to care and services."¹ According to the competency regarding Community Involvement (CM), item CM.3 states: "provide community oral health services in a variety of settings."¹

The *Report of the ADEA President's Commission: Recommendations for Improving the Oral Health Status of All Americans: Roles and Responsibilities of Academic Dental Institutions* highlighted 2 important concepts that are related to serving the public. Recommendation 3: To prepare students to provide oral health services to diverse populations, item 3.3 states: "provide in the curriculum and in other forums opportunities to teach students about their professional obligation to serve the public good and encourage students to explore how they and the profession can ensure oral health care for all Americans."²

In addition, Recommendation 5: To improve the effectiveness of allied health professionals in reaching the underserved, item 5.1 states: "develop the knowledge and skills necessary to serve a diverse population, provide experiences of oral

health care delivery in community-based and nontraditional settings, and encourage externships in underserved areas."² Providing care in settings outside of the traditional academic clinic should foster an environment where students can exercise critical thinking and decision-making skills.

Standards set by the Commission on Dental Accreditation (CODA) of the American Dental Association (ADA) mandates, in Standard 2-18 of the Patient Care Competencies, that dental hygiene graduates must be competent in providing dental hygiene care to various population groups including children.³ Not only should dental hygienists be competent in providing dental hygiene care, they should ensure that there is access to oral health care. The Code of Ethics of the American Dental Hygienists' Association (ADHA) mandates justice and fairness in access to dental hygiene services through basic beliefs, core values, and professional responsibility to the community.⁴ This supports strategies outlined in the *Oral Health in America: A Report of the Surgeon General*. In the description of "the nature of community health programs," the primary focus is on a group in need, in this case to decrease disparities in health care particularly among low-income and minority families.

Typically, government agencies, charities, schools, or religious groups "spearhead" programs that incorporate the values of the specific organization, tapping into the expertise, enthusiasm, and knowledge of the community. Members of the community organizations often can be used as staff, volunteers, or consultants.⁵⁻⁶ The government documents discussed above provide support for communities to partner with academia through service-learning activities.

While the authors recognize the integration of service-learning within other disciplines (ie, nursing, dietetics), the focus will be on the dental profession, specifically dental hygiene. The purpose of this article is to acquaint grassroots dental hygienists with service-learning and to facilitate the role of dental hygiene education in these activities. Although a suggestion is offered later in this article to establish a more universally clear definition of service-learning for the dental hygiene profession, the definition that suits health care professions is displayed in Table 1.

Table 1. Definition of Service-Learning

- Service-learning strives to achieve a balance between service and learning objectives - in service-learning; partners must negotiate the differences in their needs and expectations.
- Service-learning places an emphasis on addressing community concerns and broad determinants of health
- In service-learning, there is the integral involvement of community partners - service-learning involves a principle-centered partnership between communities and health professions schools.
- Service-learning emphasizes reciprocal learning - In service-learning, traditional definitions of "faculty," "teacher" and "learner" are intentionally blurred. We all learn from each other.
- Service-learning emphasizes reflective practice - In service-learning, reflection facilitates the connection between practice and theory and fosters critical thinking.
- Service-learning places an emphasis on developing citizenship skills and achieving social change - many factors influence health and quality of life. The provision of health services is not often the most important factor. In service-learning, students place their roles as health professionals and citizens in a larger societal context

Citation: Seifer SD. (1998). Service-learning: Community-campus partnerships for health professions education. *Academic Medicine*, 73(3):273-277. Source: <http://www.ccpn.info/>

Review of the Literature

It is often said, "experience is the best teacher." As in the other health and helping professions, on-the-job training has been a big component of the education experience. As one assesses community needs, it is also necessary to investigate how students can help solve problems.⁷ Many youth programs such as 4-H Clubs and Boys/Girls Scouts model the tenets of community service and responsible citizenship. School-based programs have been integrated into the school system through clubs or co-curricular activities, volunteer clearinghouses, community service credit, labs for existing courses,

community service classes, and finally to school-wide focus or themes.⁸ Thus the concept of *service-learning* is being applied in the educational system where service is combined with *learning*.

According to Seifer, as cited on the website for Community-Campus Partnerships for Health (CCPH), service-learning is now integrated into higher education as students combine service with required coursework. Seifer contends that there are differences from traditional clinical education within the health care professions, as displayed in Table 1.⁹ Sigmon defined service-learning as experiential, reciprocal education that occurs only when both the providers and the recipients of the service benefit from the activities.¹⁰

Service-learning is often confused with other activities such as volunteerism, internships, field education, clinical rotation, and community service (See Table 2), Although these activities may offer both service and learning, the primary focus of these activities is either service or learning. That is, the elements of service and learning are not balanced and either service or learning may be a by-product of the original intent of the activity.

Table 2. Comparison of Service-Learning with other Activities

Activity	Primary focus is meeting student learning needs	Primary focus is meeting agency/community needs
Volunteerism		X
Community Service		X
Field Education	X	
Practicum	X	
Clinical Rotation	X	
Internships	X	
Service-Learning	X	X

Adapted from: Sigmon, Furco; Seifer; Eylar & Giles; Hemphill in Geruink.¹⁰⁻¹³

For example, with volunteerism and community service, the objective is to serve, any learning is unintentional, and the student may or may not make the academic link (if there is a link). The main purpose of internships, practicum, clinical rotations, and field education is to increase technical skills, knowledge, or understanding of the field of study or vocational development. These activities can be considered "on-the-job training" to benefit the academic learning of the student and not to provide service to the agency. Furthermore, these activities do not: 1) meet the encompassing definition of service-learning as an activity that balances service and learning objectives; 2) link the needs of the student and the community; 3) develop citizenship skills; and 4) contain a reflective component.^{10,11,12,13}

Service-learning "is a teaching strategy that combines service to the community with classroom curriculum in K-12 schools."¹⁴ Mission statements of educational institutions that address social problems, commitment of students to community, or contribution to society support service-learning methodology. Many institutions have joined organizations such as Campus Compact, AmeriCorps, and the National Society for Experiential Education. According to the website for the National Service-Learning Clearinghouse (NSLC), there were 712 000 students who participated in some form of service among the 349 campuses that responded to a survey of institutions offering courses in which service-learning was a component of instruction.¹⁵

Additionally, there are publications that create a body of literature on service-learning activities. The *Michigan Journal of Community Service Learning* is a peer-reviewed publication devoted to service-learning. *Synergist*, a journal started around 1971, has articles that link service to learning. Other educational literature such as *Action in Teacher Education* prints articles that links service to learning.

Although it may seem like a new approach in education, the philosophy of service-learning is rooted in the ideas of Dewey and Kolb. Dewey believed that the student needed to be an active participant in learning and to address social issues. Dewey's continuum of learning demonstrated the relationship of education, work, and experience. Regarding the nature of experience, Dewey wrote: "when we experience something we act upon it, we do something with it; then we suffer or undergo the consequences."¹⁶ It is perhaps from the consequences that the learner is then forced to reflect upon his/her experiences and learn from them, thereby producing a change. According to Taylor "[f]or Dewey, experience and education were inextricably linked to social and political development, making community service an integral aspect of citizen

participation in a democratic society."¹⁷ Later, Kolb theorized a learning cycle comprised of different ways people learn in school, in the community, in a career, and in other facets of life. Kolb's work on learning styles or preferences demonstrated how service-learning activities can have an impact on careers and lives.¹⁸

Various initiatives of the US government have demonstrated a commitment to service in the form of creating jobs, while meeting needs or providing service. One of the earliest government developments in service-learning was the creation of the Civilian Conservation Corps (CCC) in the 1930s. Further opportunities were developed in the 1960s from the Peace Corps on an international level to the "War on Poverty" for improving local neighborhoods with organizations such as Volunteers in Service to America (VISTA) and the Job Corps. In addition, the Higher Education Act of 1965 defined a community service program as educational, assisting to solve a community problem, and part of an academic degree or college level course that utilizes an institution's resources and faculty.¹⁹ More recently, the National and Community Service Act of 1990 provided support for service in the areas of service-learning programs including higher education service programs. The National Community Service Act of 1993 created AmeriCorps and the Corporation for National Service.²⁰

For true service-learning to occur there must be: 1) academic course content within a discipline or field of study; 2) an activity that meets a social need and civic responsibilities; and 3) a reflective component such as personal journals, portfolios, in-class or online discussions, case studies, or essays.²¹ Eyler and Giles integrates the critical thinking and reflective components in their definition of service-learning, and makes the distinction between *service learning* with or without the hyphen. The authors stated: "In our own practice, we have embraced the position that service-learning should include a balance between service to the community and academic learning and that the hyphen in the phrase symbolizes the central role of reflection in the process of learning through community experience."¹²

Activities are designed in which the student encounters moral dilemmas not found in the classroom, meets individuals with different personal values, and is challenged with moral decision making. Thus, service-learning is not just experiential learning, but a bridge for theory with practice that demands reflective thinking. Assessment of the students' learning may be accomplished through the following: written work by the student (ie, essays, journals, diaries, etc.), group discussions, individual conferences with students, evaluation by supervisor, and self-assessment by the students themselves.⁸ According to Howard, the concept of service-learning contains 3 components: 1) relevant and meaningful service with the community; 2) enhanced academic learning; and 3) purposeful civic learning. This is depicted in the diagram from the journal²² (See Figure 1).

(Adapted from Howard, J., Editor, Summer 2001 Michigan Journal of Community Service Learning)

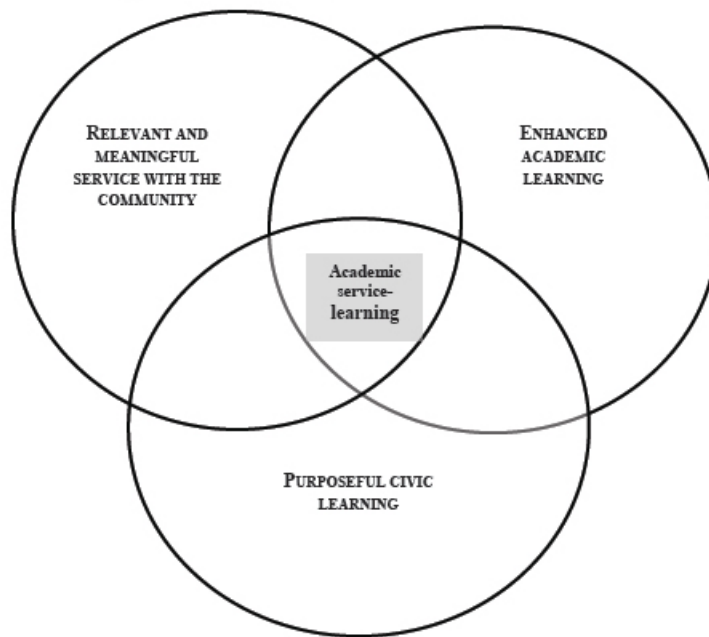


Figure 1. Venn Diagram of the Components of Service-Learning.

More specific to dentistry, service-learning activities have been reported "not only to enhance the students' knowledge and clinical skills, but also to facilitate their personal and professional development, ethical and critical reasoning, and values and attitudes."²³ Hemphill used the principles developed by the Center for Healthy Communities (CHC) as the impetus for her discussion on service-learning in dental hygiene education while Yoder developed her own framework for service-learning in dental education.^{13,24} Both models take into consideration collaboration during the planning stage, the academic needs of the student, the oral health of the community, and the reflective element in the evaluation of the activity (See Table 3).

Table 3. Components of Service-Learning

A. Center for Healthy Communities (as cited by Hemphill)	B. Yoder's Framework for Service-Learning in Dental Education
<ul style="list-style-type: none"> ❖ Community Partner Collaboration ❖ Mutual Objective Formation ❖ Orientation ❖ Preparation ❖ Service-Learning Experience ❖ Reflection ❖ Evaluation 	<ul style="list-style-type: none"> ❖ Academic Link ❖ Sustained Community Partnership ❖ Service-Learning Objectives ❖ Broad Preparation ❖ Sustained Service ❖ Reciprocal Learning ❖ Guided Reflection ❖ Community Engagement ❖ Ongoing Evaluation and Improvement ❖ Opportunities for Community-Engaged Scholarship

Sources: (A) Hemphill S. Service-learning in Geurink, KV. *Community Oral Health Practice for the Dental Hygienist, 2nd ed. 2005*, Elsevier Saunders, St. Louis, MO. (B) Yoder K. A framework for service-learning in dental education. *J Dent Ed* 2006; 70(2): 115-123.

In a report published by *Campus Compact*, responding institutions indicated that 65% of their service-learning programs and projects addressed health issues.²⁵ These institutions also ranked *health* fourth out of the top 10 disciplines that utilized

service-learning in their curriculum. Elementary students (89%) and low-income (83%) populations were the highest groups among those served through service-learning activities.²⁵

Dental Hygiene Service-Learning in Action

A school-based dental sealant program provides a good example for incorporating service-learning into the dental hygiene curriculum.²⁶⁻²⁹ At a midwestern university within a rural community, senior baccalaureate dental hygiene students are scheduled in several rotations as part of a multicultural course. A sealant program is a good opportunity for students to work with a population they (typically) will not frequently see in the dental hygiene clinic. An activity such as this blends academia with the community in order to meet some of the preventive oral health needs of underserved children. This program was made possible through funds from the state health department. Yoder stated that service-learning projects are often linked to external funding sources.²⁴

In addition to the school-based sealant program, senior dental hygiene students gain competencies in a variety of dental settings via a nursing home/skilled care facility, a Veteran's Administration hospital, a rural dental health clinic, a campus-based community dental center, and a rural dental health clinic, which includes migrant farmworkers as a portion of the population served. At the end of each rotation, students write a reflective essay on their experiences. In turn, not only does this allow the supervising faculty to improve upon the course content, but gives students an awareness of how they can become better equipped to face particular needs of individuals within their own communities.

Furthermore, Lam wrote about dental hygiene students' participation in a community dental sealant program with its base in the dental hygiene clinic, as well as other services provided by students within a community dental health course at a community college located in a large urban area. In addition to the dental sealant program, other service-learning activities are integrated into the dental hygiene curriculum.³⁰

Advantages and Impact of Service-Learning

Oral Health in America: A Report of the Surgeon General has provided further rationale for the dental hygienist's role in reducing the disparities in oral health and oral health care among population groups.⁵ *A National Call to Action to Promote Oral Health* has as one of its goals for improving access to oral health care, "to ensure an adequate number and distribution of culturally competent providers to meet the needs of individuals and groups, particularly in health care shortage areas."³¹

Service-learning can create a mechanism by which dental hygiene students can acquire skills that enable them to become culturally competent by providing opportunities to work with ethnically diverse populations and individuals with special needs. Thus, students are able to meet objectives outlined in accreditation standards, as well as addressing the core competencies for entry in to the dental hygiene profession.^{1,3,32-33}

There are positive outcomes from the incorporation of service-learning into higher education curricula. Zlotkowski spoke of several successful service-learning programs, including one in which he served as its first director. The Bentley Service-Learning Project began as the Bentley Homelessness Project, and through its success based upon student involvement, became the impetus for a college-wide, faculty-led service-learning program.³⁴

At Brevard Community College, a conscientious effort was made to support faculty in numerous service-learning endeavors to include: research, mini-grants for course development in underrepresented disciplines (eg, math, art, technology and English), K-14 collaboration to establish service-learning in the public school system, international service-learning pilot projects, faculty travel and professional development, and support for faculty who served as recruiters or consultants for other campuses.³⁴

The 2 examples above, along with the service-learning efforts mentioned previously, that are associated with dental hygiene programs, are just a few of the many programs and institutions that have had successful service-learning projects. Thus,

service-learning appears to be a viable teaching methodology in the education of dental hygienists. This would entail meeting all 3 criteria of service-learning: relevant and meaningful service with the community, enhanced academic learning, and purposeful civic learning with academic service-learning as the core.

Disadvantages of Service-Learning

Coordination of service-learning activities may not be incorporated into the faculty teaching assignments. Consequently, faculty members volunteer to facilitate certain activities. By placing them into a course, this would raise the level of importance of any service-learning activity as an integral part of the dental hygiene curriculum. It would also give recognition for faculty willing to be committed to the philosophy of service-learning and the role it plays in the educational process.

The authors have taken note that this lack of recognition in the faculty reward structure has been suggested in the literature as a deterrent for those who do not use this as a teaching strategy.³⁵ According to Chapdelaine, Ruiz, Warchal, and Wells, "service-learning is a labor-intensive activity that should not be a risky undertaking for faculty. [...] Campus barriers to service-learning include resource limitations, poor community relations, and lack of student involvement in the educational process."³⁶ With respect to faculty support, Zlotkowski stated:

"One only need consider how little experience most faculty members have had working outside the classroom, let alone working with community partners. In other words, most faculty need to develop a new skills set—skills of designing, coaching, and helping students process fieldwork—to complement their traditional skills of lecturing, and guiding text-based discussion. They also need an opportunity to develop new, more appropriate assessment techniques."³⁴

As cited in *Campus Compact*, the major obstacles to institutionalization or advancement of service-learning were time and pressure on faculty teaching loads.²⁵ Although service-learning programs can be easily incorporated into the tenure, promotion, and merit review process, this is not the case.³⁴ While community outreach or service is expected of faculty, research and teaching obligations often outweigh the focus on developing students' sense of civic engagement.³⁷

Service-learning can easily be recognized as a viable pedagogical experience. For example, the term "service-learning" could be included in the ADA *Accreditation Standards for Dental Hygiene Education Programs* as part of educational methodology in the enriching clinical and community dentistry experiences.³

Conclusions and Recommendations

If dental hygiene educators are to take the lead with integrating service-learning into the curriculum, the communities of interest (ie, the leaders in the profession, the faculty and administrators of dental hygiene education programs, and the academic institutions) will have to embrace the philosophy of service-learning. Opportunities for networking currently exist at various professional association meetings. Time constraints, however, may prohibit the interaction among practicing dental hygienists and junior and senior faculty members to have an active discussion on the issues concerning the integration of service-learning into the curriculum, and community collaboration.

In order to facilitate the probability of incorporating service-learning into the existing dental hygiene curriculum, faculty and the profession need to understand:

How to plan and develop service-learning activities.

The needs of the community that is to be served.

How to evaluate the activity and the students' participation in the activity.

The importance of collaborating with grassroots dental hygienists to bridge the gap between academia and the community at large. In other words, **ask** them to take part in the assessing, planning, implementing, and evaluating the activity.

Initiatives need to be expanded that increase the role of dental hygienists in providing access to oral health care. Opportunities need to be developed for dental hygienists to work outside of private practice and to reach those individuals who do not seek regular preventive dental care due to barriers such as cost, transportation problems, and limited providers. Positive experiences need to be given to dental hygiene students so that they may not only apply for employment in alternative practice settings, but also help develop these opportunities in non-formal clinical settings.

With respect to the *ADA Accreditation Standards for Dental Hygiene Education Programs*, which are currently undergoing revisions, and utilizing elements from Yoder's *Framework for Service-Learning in Dental Education*,²⁴ the authors further recommend that either a new standard be developed or the (current) standard 2-22 (proposed revision would make this standard 2-20, if adopted; see Table 4) be expanded to incorporate examples of evidence to demonstrate compliance from service-learning activities.

Table 4. Proposed Revision to ADA Accreditation Standards for Dental Hygiene Education

<p>2-20 2-22</p>	<p>Graduates must be competent in assessing, planning, implementing and evaluating community-based oral health programs including, health promotion and disease prevention activities.</p> <p>Intent: <i>Dental hygienists should experience a series of broad-based activities dealing with diverse populations to ensure competence in oral health education and preventive counseling for individuals and groups. Population based activities will allow students to apply community dental health principles to prevent disease and promote health.</i></p> <p>Examples of evidence to demonstrate compliance include:</p> <ul style="list-style-type: none">• student projects demonstrating assessing, planning, implementing and evaluating community-based oral health programs • examples of community-based oral health programs implemented by students during the previous academic year• evaluation mechanisms designed to monitor knowledge and performance
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Source: http://www.ada.org/prof/ed/accred/announcements/appen_03.pdf Accessed December 22, 2006.

For example:

- a. Reflective mechanisms designed to monitor changes in students' attitudes and behavior, (ie, journals, essays, discussions).
- b. Documentation of hours devoted to the service-learning activity(ies).
- c. Surveys from dental hygiene graduates indicating participation in volunteerism, advocacy, political initiatives, etc.

Furthermore, the terms "community-based" and "service-learning" should be added to the section within the standards document entitled: *Definition of Terms Used in Dental Hygiene Accreditation Standards*. Additionally, the ADHA policy number 11-97 regarding curriculum under Education/Continuing Education as printed in the September 2006 *Policy Manual* should be revisited to incorporate service-learning and perhaps include a definition of community-based and service-learning in its Glossary, also contained within the *Policy Manual*. The current policy reads: "The ADHA supports externships and internships within accredited dental hygiene programs in order for students to gain practical experience in public health and alternative practice settings."³⁸

The authors feel that clarification of these terms would facilitate the interpretation and implementation of the standard pertaining to competency in the area of community-based oral health programs; and that an official, universally recognized definition of service-learning be adopted for use among dental hygiene educators. Also, this could foster a better understanding of the roles of the dental hygiene student, the grassroots dental hygienists, and academe in meeting the oral health needs of their respective communities.

Acknowledgements

Notes

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