

Short Report

Strategies for Service-Learning Assessment in Dental Hygiene Education

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Introduction

Service-Learning

Service-learning pedagogy has its roots in the Cooperative Education Movement of the early 1900s.¹ Service-learning is a teaching and learning strategy that is also known as experiential learning.² Service-learning is a structured instructional activity that incorporates purposeful community service, definitive preparation and guided reflection. Due to the community focus, the term service-learning is often used interchangeably with the term “community engaged teaching and learning.”³ Regardless of whether it is referred to as experiential learning, community engaged learning or service-learning, this instructional approach seeks to enhance scholarship experiences through hands-on participation while edifying civic responsibility and fortifying communities.² An important component of service-learning is its reciprocal nature; it is the intent of experiential learning programs that both student and community benefit. Table I shows the definition of service-learning promoted by the Community-Campus Partnerships for Health (CCPH) whose goal is to promote health equity and social justice through partnerships between communities and academic institutions.⁴ Unique to service-learning in health professions is the concept of influencing health disparities and the quality of life of communities.⁵ CCPH has an enormous amount of resources for the health professional educator. Dental hygiene educators can access suggestions regarding service-learning projects, partnerships, research and assessment strategies via CCPH’s easy to navigate website. Service-learning in health professions education occurs largely within higher education institutions.

Service-Learning in Higher Education

The history of service-learning in higher education is well documented. In 1969, educational leaders

Abstract

Purpose: A large body of literature exists on the instructional pedagogy known as service-learning. Service-learning is a teaching and learning approach characterized by the dental hygiene student’s practical application of academic studies and occurs within a community setting, to the benefit of both the student and community. Dental hygiene educators use service-learning to enhance student knowledge and application of oral health curriculum. This manuscript reports on the importance of service-learning assessment to the National Dental Hygiene Research Agenda as well as the future of the profession of dental hygiene and the successful strategies in service-learning evaluation available for utilization by dental hygiene educators.

Keywords: service-learning, dental hygiene education, assessment strategies

This study supports the NDHRA priority area, **Professional Education and Development:** Investigate curriculum models for training and certification of competencies in specialty areas.

gathered in Atlanta to discuss service-learning and the importance of employing the instructional strategy throughout American colleges and universities. They produced 3 recommendations for institutions of higher education in regards to service-learning:⁶

1. Colleges and universities should encourage students to participate in community service, help to make sure that academic learning is part of this service and to give academic recognition for that learning
2. Colleges and universities, private organizations, and federal, regional and state governments should provide the opportunities and funds for students wanting to participate in service-learning
3. Students, public and private agency officials, and college and university faculty should all participate in the planning and running of service-learning programs

Since these initial recommendations, scholars and educational policymakers alike have met regularly to discuss and determine best practice ideas for service-learning instruction. Currently, service-learning is part of a larger movement within higher education described as community engagement.

Community engagement is a systematic, structured, integrative continuum of teaching, research and service in institutions of higher learning.⁵

There is a broad spectrum of service-learning programming in health professions education. While scholarship suggests that the projects, institutionalization, goals and impact of service-learning in health professions education vary, there are common characteristics that represent authentic service-learning experiences which can be identified. Service-learning in health professions education is often noted within the literature as positive, meaningful, cooperative, addressing complex health issues, engaging in contextual problem-solving, promoting critical thinking skills, deep learning, and supportive of emotional, social and cognitive learning and development in students.²

Service-Learning in Dental Hygiene Education

In 2006, Dr. Karen Yoder developed a framework for service-learning in dental and dental hygiene education (Figure 1). Yoder outlined 10 components that characterize true service-learning and described how educators can develop more effective service-learning curriculum, including the use of appropriate assessment strategies.⁷ Yoder noted that "Integrating service-learning into the dental curriculum will create a deeper understanding of the dynamics, the assets, and the challenges of the community and its relationship to oral and general health."⁷ Based on the foundational concepts within service-learning theory, dental hygiene education programs have developed service-learning projects similar to others within health professions education.^{8,9} Yoder's components of scholarship, partnerships, professional growth and sustainable programs can be identified within the articles dedicated to recounting service-learning experiences within dental hygiene education. Dental hygiene students have engaged in service-learning experiences in rural communities, urban areas within the U.S. and even internationally.¹⁰ Research supports Yoder's findings that students gain a greater understanding of access to care issues while working with underserved communities.¹¹ Research also notes that dental hygiene students who engage in service-learning experiences acquire enhanced clinical and interpersonal skills working with diverse populations and a deeper appreciation of the complexity of oral health disparities.¹² Assessment of service-learning experiences within the dental hygiene curriculum is an important component to understanding student outcomes as it relates to service-learning pedagogy. Goals for service-learning experiences can be as broad and varying as the projects themselves. Desired student

Table I: 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

outcomes may include cultural competency, richer understanding of access to care issues, civic learning, greater clinical competence and interpersonal growth.¹³

Appropriate Assessment Strategies Move Dental Hygiene Education Forward

The National Dental Hygiene Research Agenda (NDHRA) encourages research that supports educational methods that "prepare dental hygienists to meet the increasingly complex oral health needs of the public" and emphasizes the importance of validating reliable methods to "evaluate student critical thinking and decision-making skills."¹⁴ For dental hygiene educators, the NDHRA outlines the essential contribution of high-quality evidenced-based curriculum, the use of well established assessment strategies and appropriate research methods aimed at growing the dental hygiene profession toward greater autonomy. While the NDHRA guides dental hygiene educators, the recently released American Dental Hygienists' Association (ADHA) Environmental Scan Dental Hygiene at the Crossroads of Change pushes them to see beyond the current status of dental hygiene education.¹⁵ Emerging opportunities for dental hygienists in a variety of practice settings as well as the development of an expanded scope of practice summarized by the ADHA Envi-

ronmental Scan, challenges dental hygiene educators to extend more opportunities for students to go beyond the walls of the classroom and develop superior critical thinking skills. There is a clear need for dental hygiene programs to implement proven educational strategies that allow students to experience greater independence and diversity in patient populations and work environment all the while preparing them as the next generation of dental hygiene leaders. Service-learning provides this opportunity to dental hygiene students and continues to meet the guidelines for educational programs in the current instruction and curriculum accreditation standards set by the Commission on Dental Accreditation (CODA).¹⁶

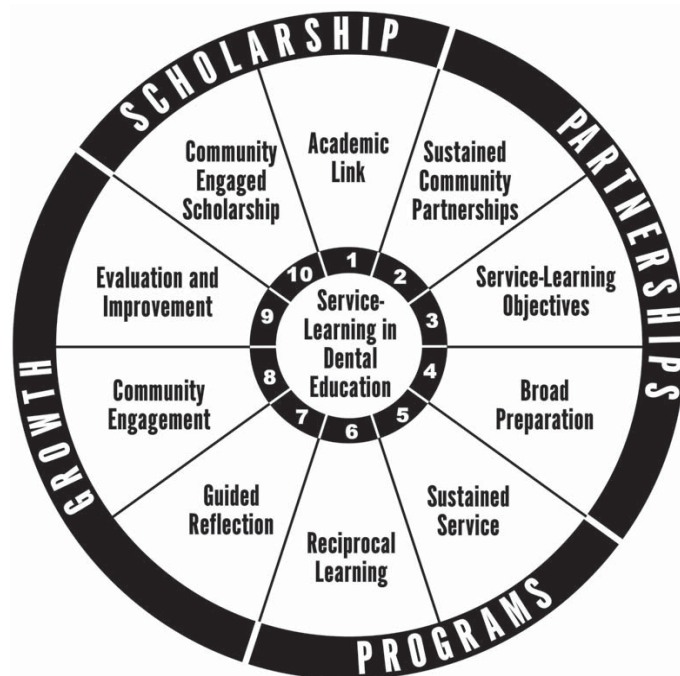
Strategies for Service-Learning Assessment

A broad variety of assessment strategies for service-learning instruction exist. There are a number of resources dental hygiene educators can access to assist in the development of appropriate assessment tools for their individual service-learning instruction. These resources include online guidebooks. For example, the CPH offers a workbook entitled "Methods and Strategies for Assessing Service-Learning in Health Professions."¹⁷ The National Service-Learning Clearinghouse has a toolkit dedicated to service-learning in higher education.¹⁸ Merely accessing service-learning related research articles from professional journals and magazines can spark new and innovative ideas for dental hygiene faculty.

Reflection Exercises

Traditional service-learning assessment is based on simple reflection exercises. Service-learning integrates numerous exigent reflection activities that are continuous, initiate deep thinking and engender scrutiny from students about themselves and concerning the experience.¹⁹ Research indicates that structured reflection activities help students apply learning to real-life situations. This in turn allows them to develop stronger problem-solving skills. Finally, research verifies participating in reflection activities is associated with improved openness to new ideas, the capacity to see issues in a new way and the aptitude to examine situations methodically.²⁰ Guided reflection activities include critical thinking questions addressed by students during the service-learning experience, end of the course questionnaires and continuous journaling assignments. Journaling throughout a service-learning experience can assist students to view their experience holistically so that at its end they can see the progress they made and evaluate the success of the project in terms of meeting the needs of the com-

Figure 1: Framework for Service-Learning in Dental and Dental Hygiene Education



munity.²¹ Technology and the use of social media have impacted reflective exercises, allowing for almost immediate assessment of the service-learning experience. The ease and familiarity of mobile computing via laptops and smart phones allow dental hygiene students to tweet, blog, share videos and utilize internet discussion boards to review their service-learning activity and connect with faculty and fellow students. Dental hygiene educators have found success in utilizing online directed journaling as a reflection and sharing strategy.²² It is important to note that with journaling, and especially online blogging or other social media outlets, a high level of care needs to be practiced to protect confidentiality, safety and privacy of all individuals involved in the service-learning activity.

Advocacy Assignments

Less traditional, yet remarkably valuable assessment strategies of activities service-learning include advocacy assignments. Related to increasing understanding of civic responsibilities and the public health role of the dental hygienist, students participate in social justice activities as well as legal and political issues within marginalized communities during service-learning instruction. Course requirements could include engaged critical analysis items, such as formal communication assignments related to advocacy. For example, students may participate in setting agendas for advocacy meetings, attending and critiquing legislative sessions, developing scripts for making phone calls or sending emails, or

even write formal, professional letters to newspapers, government organizations, legislators or lobbyists.²³

Interdisciplinary Approaches

With the boundaries of health careers ever evolving, the development of a dental hygiene student's ability to collaborate, communicate effectively and work well with other health care practitioners is essential to the future of the dental hygiene profession.²⁴ One assessment strategy aimed toward evaluating these characteristics in students during interdisciplinary service-learning instruction is small group problem solving.²⁵ Students from various disciplines are grouped, participate in the service-learning activity, identify and develop a plan to address one problem for the community they served. This activity may include addressing a specific access to care dilemma for a particular population within a community. This might also be an opportunity to focus on cultural competency. This interprofessional group process is monitored by faculty and a formal presentation of group solutions is made to the entire assembly of interdisciplinary students and faculty. Evaluation of both the team process and the solution presentation allows faculty to determine the student's professionalism, collaboration, leadership and communication skills.

Focus Groups

Similarly, the use of focus groups to assess service-learning activities in dental hygiene curriculum can have a two-fold purpose. First, the dental hygiene student focus groups can appraise student perceptions of the service-learning experience. Student perceptions are often difficult to measure; surveys are frequently skewed, whereas observations during focus groups can give healthy insight into student non-verbal behaviors, in depth discussion of thought processes and more truthful opinions.²⁶ Second, the dental hygiene student focus group can assist in service-learning instruction evaluation and development, thus contributing to important qualitative research within the field of service-learning pedagogy. Certainly focus group assessment might assist the student in identifying the benefits, both clinical and academic, of their service-learning experiences.

Self-Assessment Measures

Finally, self-assessment measures are the most common strategy utilized in the evaluation of service-learning instruction. Self-assessment measures can include surveys, questionnaires, guided critical thinking exercises, and written assignments geared toward developing a student's ability to critique their own beliefs, attitudes and behavior, communicate opinions, and express them professionally.²⁷ Self-assessment measures are helpful strategies in dental hygiene education, allowing them to meet CODA standards for an educational programs capacity for teaching ethics and professionalism.¹⁶ And according to the ADHA Environmental Scan, to be a registered dental hygienist in the future, students will need leadership skills including self-awareness, flexibility and a greater capability to communicate professionally with other practitioners. Self-assessments as a strategy for evaluating service-learning instruction helps develop these skills for the dental hygiene student.

Conclusion

Service-Learning pedagogy is being successfully utilized in higher education and health professions education in a variety of ways. Service-learning in dental hygiene education has incorporated many of the 10 components outlined by Yoder.⁷ A comprehensive approach to service-learning program development, curriculum design and assessment is imperative to the success of service-learning instruction within the field of dental hygiene education.¹⁵ There is an opportunity to strengthen dental hygiene curriculum via the use of suitable assessment strategies for service-learning activities. Dental hygiene educators have a broad selection of service-learning assessment strategies to choose from including reflection exercises, advocacy assignments, interdisciplinary approaches, focus groups and self-assessment measures. Influenced by current accreditation standards and the predicted massive shifts in the professional environment, appropriate assessment strategies for dental hygiene service-learning instruction can contribute to the successful development of the next generation of highly skilled, collaborative and competent dental hygiene practitioners.

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