Assessing the Demand and Preferred Format of a Student Leadership Development Program at Pacific


Abstract: Dental students are future leaders of health care and the dental profession. The purpose of this study was to assess the interest in leadership development programs at the University of the Pacific Arthur A. Dugoni School of Dentistry and compare the results with similar studies. In April 2010, two surveys were administered. Of the 462 students enrolled, 58 percent completed the survey. Of the eighty-one faculty members and administrators who attended the Spring Faculty Development Day, 85 percent completed the survey. This study confirmed claims that students find it most effective to learn leadership from mentors. Over 80 percent of the student respondents indicated that faculty mentorship would be the most beneficial aspect of a leadership development program. Sixty-two percent of the faculty respondents said they would serve as mentors. Following mentorship, small-group discussion (74 percent), public speaking (56 percent), dental society member mentorship (40 percent), panel discussions (39 percent), community outreach (39 percent), and capstone project (13 percent) followed in popularity. This study established a foundation to develop a pilot for the Dugoni Practical Leadership Initiative at Pacific based on the preferences of the participants in this survey. With more data and longitudinal studies, we will assess how these programs translate to leadership in dental school and after graduation.

Keywords: dental students, leadership development, mentorship

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Today’s dental students are not only tomorrow’s practitioners; they are tomorrow’s city council members, public health directors, educators, and community leaders with an astounding influence on the health of the American people. Through leadership training programs in dental schools, dental students can develop needed leadership skills in preparation for their future. The process of becoming a dentist is much akin to that of a leader—an arduous journey of continuous learning and self-development. A dental student’s journey to becoming a practitioner is not mutually exclusive from his or her development into a leader. Any dental student can be a leader and should view this as an essential aspect of his or her own personal and professional development.

In 2000, a study by Taichman et al. found nearly 70 percent of responding dental school deans reported that leadership training was the most crucial factor in preparing to become a dean. In fact, this area of study and experience was perceived by respondents in that study to be more important than the ability to teach dentistry, knowledge of budget and finance, and conducting research. Although dental educators have acknowledged the significant benefits of student leadership training, only three articles have been published describing the development of formalized leadership programs—those at Case Western Reserve University, the University of Michigan, and the University of Southern California (USC). This subject requires further study because the dental school years may represent an important opportunity to inspire, encourage, and enhance the development of the dental leaders of the future.

Pioneering research in the area of dental student leadership development was conducted at Case Western Reserve University. Nearly all student respondents in that study believed that leadership can be learned, with over two-thirds stating they would be interested in participating in a leadership devel-
opment program. In addition to taking a leadership position within their future practice, over 70 percent of the students had a desire to participate in non-dentistry-related leadership roles in their community.

Dr. Arthur A. Dugoni once reflected, “The needs of the practicing profession have outgrown the capacity of our educational programs.” The need for leadership education in dental schools is a recognized need for modern dental students as they report being interested in improving their confidence, assertiveness, public speaking, organizational skills, and ability to work with others. It is now the challenge of dental schools’ leadership and students to decide how to incorporate this learning opportunity into an already packed curriculum.

There is no single correct way to create a dental leadership development program. Different student populations require different pedagogies and differ in affinities for particular topics. However, recent studies support the need for a humanistic environment to foster collegial, professional interactions and promote learning as a positive growth experience in dental schools. Students need to be treated with respect as professional colleagues from the time they enter dental school and understand the associated obligations of ethical conduct and professional responsibility. The humanistic model creates an environment of personal accountability and an inclination to reciprocate the kindness and respect bestowed upon one. In addition, the humanistic model empowers students to take leadership roles within the school and dental community by fostering a safe environment for taking calculated risks in order to create innovation.

In June 2007, the University of the Pacific Arthur A. Dugoni School of Dentistry’s new strategic plan “Advancing Greatness” was adopted to guide the school for the next five years. In this document, the writing committee—which consisted of representatives from the various stakeholder groups—pointed out: “Our school has many unique attributes, but among its most distinguishing core values are the following: leadership, innovation, and the humanistic model of education.” The school’s first strategic goal is to lead educational innovation. As this goal is described in the document:

The School of Dentistry must continue its leadership as an innovator by developing and implementing opportunities for learners to become outstanding oral health care practitioners who are critical thinkers invested in lifelong learning. The school must not only educate oral health care providers in the delivery of dental services, but also in understanding the importance of oral health to overall health. It is our responsibility to develop professionals committed to improving the health of the public by nurturing future leaders, implementing innovative curricula including service-learning, collaborating in private and public partnerships, and enhancing clinical care through cultural understanding and international collaborations.

The development of a leadership development program at Pacific would thus support this strategic goal of the school.

The humanistic model of dental education is the foundation for the way administrators, faculty members, staff, and students conduct themselves at the school. Humanism is the first value listed in the school’s core values, stressing dignity, integrity, and responsibility. The traditional, unidirectional model of dental education from teacher to student is replaced by a vision of learning communities in this humanistic model. The school’s continued advocacy for innovation (the second core value) and leadership (the third core value) suggests that Pacific would be an ideal institution to implement a leadership development program.

The call for student leadership development is not merely a result of the supportive environment at Pacific but reflects the fact that dentistry is in the midst of great change. We are members of a changing health care system, and in order to adapt to these changes, we must better equip students with the necessary skills to be stewards of patient care throughout their entire careers. Of these skills, the abilities to manage a team, communicate, and participate in one’s surrounding community are of great importance. All of these are leadership skills.

By increasing the number of leadership development programs in dental schools, these institutions could produce students who desire collaboration through more effective communication, create innovation through self-reflection, and energize others to be leaders to solve the challenges faced by dentistry and their communities. This study assessed the demand for such programs and the preferred format for leadership development at one dental school.
Methods

In April 2010, two surveys were developed, and Institutional Review Board exemption for the study was obtained. The surveys were developed based on evidence from previous research on this topic. Asking questions similar to those used in previous surveys would also allow us to draw comparisons between our survey of Pacific community members and other work on the subject.

The first survey was a six-question instrument administered to sixty-nine faculty members and administrators. It was given in paper form to those attending the spring faculty orientations in the second week of the semester. Surveys were distributed to all those who attended the two-hour lunch meetings, with each attending only one per week. Participants were informed that their participation was voluntary and that all information would remain anonymous.

The survey was developed and validated through reviews by several peers and faculty members to ensure clear directions and readability. It consisted of five closed-ended questions and one open-ended question. The first two questions asked closed-ended questions with an ordinal rating scale (ranging from 1—not important at all to 5—very important). These questions asked how important leadership is to the success of a practicing dentist and a dental student. The parallel between the two questions could reveal the need for a leadership development program within the dental school experience. The third question asked if a leadership development program should be placed within the curriculum or be co-curricular, defined as occurring outside scheduled classes. To determine preferred formats, participants were asked which pedagogies should be included. Respondents were able to indicate all they thought appropriate from a list of pedagogies and could also choose “other” and write in a pedagogy not listed. One suggested program component was a faculty mentorship program. To assess its feasibility, faculty and administrators were asked if they would participate as a mentor. The last question was open-ended, asking for any specific topics/themes that should be incorporated into the program.

The second survey was a seven-question, self-administered, paper survey completed by 124 first-year students, 104 second-year students, and thirty-eight third-year students in May 2010. First-year international students were included in the report as second-year students, and second-year international students were included as third-year students because of the close approximation of their educational experiences. The survey was developed and reviewed by several peers and faculty members to ensure clear directions and readability.

The survey consisted of six closed-ended questions and one open-ended question. The first four questions were identical to the first four on the administrators and faculty survey. This design allowed for direct comparison between faculty and student opinions. The faculty question regarding willingness to be a mentor was not included in the student survey. However, the desire to be a mentee in the program could be highlighted when a student selected faculty mentor program as a suggested pedagogy. Like the faculty survey, if a particular pedagogy was not on the list, the student could write it in. The fifth and sixth questions asked if the student believed a leadership development program would be beneficial and if they would participate if a program were available. The last question was open-ended and asked for topic suggestions that should be incorporated into the curriculum of the program.

The student survey was completed at varying times between classes. The first-year students received it during a mandatory lecture by the Restorative Department. The second-year students received it during a mandatory oral pathology lecture. The third-year students received it prior to an afternoon clinic session, and it was collected at the end of the session. The students were informed that their participation was voluntary and that all information would remain confidential. The only demographic information collected was the student’s year in school.

Results

Of the 462 students enrolled in the three-year D.D.S. program and two-year International Studies Program, 461 were eligible to take the student survey. (The first author of this article was excluded from the pool.) Two hundred and sixty-six students completed the survey, yielding a response rate of 58 percent (266/462). Response rates by year are as follows: first-year students, 88 percent (124/141); second-year students, 65 percent (104/161); and third-year students, 24 percent (38/160). Of the eighty-one faculty members and administrators who attended Faculty Development Week, sixty-nine completed the survey, yielding a response rate of 85 percent (69/81).
For both surveys no other demographic information was recorded.

To better assess the perceived need of a leadership development program in dental school, we asked both groups to evaluate the importance of leadership for the success of dental students and practicing dentists (defined as current practitioners). Responses were on a scale of 1 to 5, in which 1 meant not important at all and 5 meant very important. Figure 1 shows respondents’ average values by group and in total for both categories. With regard to the importance of leadership for dental students, the average score was 3.35 for faculty; 3.38 for first-year students; 3.26 for second-year students; and 3.41 for third-year students—resulting in an overall average of 3.35. When asked about the importance of leadership for a practicing dentist, the average was 3.93 for faculty; 4.59 for first-year students; 4.39 for second-year students; and 4.41 for third-year students—resulting in an overall average of 4.33.

The second and third questions were asked to assess the perceived benefit and projected participation of students in a leadership development program at Pacific. Figure 2 shows the responses of students when asked if they felt a program of this type would be beneficial. Ninety-three percent (115/124) of first-year class respondents, 72 percent (75/104) of second-year respondents, and 84 percent (32/38) of third-year respondents thought it would be beneficial at Pacific—resulting in 84 percent (222/266) of all student respondents.

Figure 3 shows students’ projected participation by class and an overall average of the classes. The majority of all three classes said they would or maybe would participate in the program if it were offered. The breakdown by class is as follows: 96 percent (119/124: 62/124 would participate, 57/124 maybe would) of first-year student respondents; 96 percent (98/104: 37/104 would participate, 61/104 maybe would) of second-year student respondents; 92 percent (35/38: 21/38 would participate, 14/38 maybe would) of third-year student respondents. Overall, 95 percent (252/266) of all student respondents answered they would or maybe would participate in the program if it were offered. Only 5 percent (14/266) said they would not.

To implement an effective leadership program, the pedagogies used should reflect the preferences
Figure 2. Student responses concerned perceived benefit of a leadership development program at Pacific

Figure 3. Projected participation of students in a leadership development program at Pacific
of its participants. Therefore, we asked students and faculty what types of workshops or modules should be included in a pilot program. For faculty, the most desired components were small-group discussion and faculty mentorship. For students, the most desired component of a leadership program was found to be faculty mentorship (81 percent, 215/266; Table 1). After that, small-group discussion (74 percent, 198/266), public speaking workshops (56 percent, 148/266), San Francisco Dental Society Member Mentorship Program (40 percent, 108/266), panel discussions (39 percent, 105/266), community outreach (39 percent, 103/266), and senior capstone project (13 percent, 34/266) followed in popularity. Figure 4 shows the distribution within each class and for the faculty. When participating faculty members were asked if they would serve as a mentor in a program, 62 percent (43/69) responded yes, and 38 percent (26/69) responded no.

Finally, both surveys asked if a student leadership program should be organized within the school’s curriculum or be co-curricular, and the great majority

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**Table 1. Preferred components of a leadership development program at Pacific, by number and percentage of total respondents**

<table>
<thead>
<tr>
<th></th>
<th>Faculty (N=69)</th>
<th>First-Year Students (N=124)</th>
<th>Second-Year Students (N=104)</th>
<th>Third-Year Students (N=38)</th>
<th>Percentage of Total Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small-Group Discussion</td>
<td>46</td>
<td>72</td>
<td>60</td>
<td>20</td>
<td>74%</td>
</tr>
<tr>
<td>Senior Capstone Project</td>
<td>6</td>
<td>17</td>
<td>6</td>
<td>5</td>
<td>13%</td>
</tr>
<tr>
<td>Panel Discussions</td>
<td>30</td>
<td>30</td>
<td>33</td>
<td>12</td>
<td>39%</td>
</tr>
<tr>
<td>Faculty Mentor</td>
<td>46</td>
<td>76</td>
<td>65</td>
<td>28</td>
<td>81%</td>
</tr>
<tr>
<td>SFDS Mentor</td>
<td>17</td>
<td>35</td>
<td>39</td>
<td>17</td>
<td>40%</td>
</tr>
<tr>
<td>Community Outreach</td>
<td>22</td>
<td>57</td>
<td>49</td>
<td>20</td>
<td>39%</td>
</tr>
<tr>
<td>Public Speaking Workshop</td>
<td>30</td>
<td>50</td>
<td>48</td>
<td>20</td>
<td>56%</td>
</tr>
</tbody>
</table>

*Note: Respondents were allowed to check more than one method.*

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Figure 4. Preferred components of leadership development program
(69 percent, 232/335) responded they would like the program to be co-curricular. This finding was true in each class and with the faculty (Figure 5). Specifically, 70 percent (48/69) of faculty respondents, 62 percent (76/124) of first-year students, 73 percent (75/104) of second-year students, and 82 percent (31/38) of third-year students answered that the program should be co-curricular.

Discussion

This study clearly demonstrates that both faculty/administrators and students at Pacific see the value of and need for student leadership development. Respondents in our study strongly recognized the importance of leadership skills for success as a student and practicing dentist. In a study at Case Western Reserve University, dental students were asked if they thought it important for dentists to have leadership skills, and 99 percent agreed. Similarly, 84 percent of Pacific’s students and faculty members believed that a leadership development program would be beneficial to students. This percentage is close to that found in a 2008 study in which 83 percent of surveyed students from across the United States agreed that leadership development programs in dental school would be beneficial.1,12

Students do not just see these programs as beneficial, but have demonstrated that if a program of this type were offered at their school, they would participate. In our study, 94 percent of students said they would or maybe would participate if a program were offered. Similarly, 80 percent of Case students and 97 percent of students surveyed nationally would or maybe would participate in a similar program.1,12

All evidence suggests that dental students are interested in leadership programs, but how would these programs be developed and what should be included? Similar to previous results, our study found that students believe it most effective to learn leadership skills from talking with dental leaders and mentors.1 Over 80 percent of the responding Pacific students believed that a faculty mentorship program would be the most beneficial aspect of a new leadership development program. Demonstrating that launching such a program would be feasible, over 60 percent of the faculty members stated they would be mentors if a program existed. This willingness to serve reflects the humanistic model that governs the culture at Pacific.

The data also support the idea that a program at Pacific should be co-curricular. With the demanding

![Figure 5. Preferred placement of leadership program in curriculum](image-url)
three-year program, students and faculty members apparently saw little to no room for a program like this in the required curriculum. However, the school is now transitioning to the Pacific Dental Helix Curriculum: a curriculum that is fully integrated, drawing connections among the basic sciences, clinical sciences, preclinical techniques, and principles of clinical dental practice. The fifth strand of the helix curriculum is the Personal Instructional Plan, which will serve to develop individual student interests in particular areas through faculty mentorship and collaboration. The establishment of this leadership development program may be later incorporated into the personalized portion of the helix curriculum.

There are limitations to this study. First, the survey was administered at only one school. The curriculum at Pacific is very different from that at many schools, so it may be difficult to generalize our results. Second, there was a very low response from the third-year class (this included D.D.S. third-year students and second-year international students). When calculating average values, the third years represented a very small portion of that average, so the results do not equally reflect all three classes. Third, the only demographic information requested in the survey was the students’ year in school. No information was collected as to how much leadership experience the student may have had before school that would influence a response. Finally, the faculty members attending the weeklong orientation represent a large subset of but not the entire faculty, so their responses may not reflect all faculty members.

In contrast to these limitations, there were two main advantages of this study. First, this was the first research on this topic in which faculty were included in the research pool. To effectively assess the desire for and feasibility of a leadership development program in dental schools, all potential participants must be studied, including administrators and faculty members. Second, the data were analyzed by class. One of the largest challenges in developing a program like this is participant recruitment. Information on each class’s attitudes helped to shape a recruitment strategy and class-specific curricula for the pilot program to maximize participation.

Using the information from this study, we developed the Dugoni Practical Leadership Initiative (DPLI) at Pacific for the 2010–11 school year and hope to report outcomes following its completion. The outcomes of this pilot program will be measured through mentor and participant surveys. The DPLI is a six-month program focusing on leadership development through three themes: yourself as a leader, yourself as a team leader, and yourself as a community leader. The three themes represent the three hats worn by all practicing dentists at all times. The goal of the DPLI is not to teach students leadership theory, but to help them develop practical leadership skills they can apply immediately and, through practice, apply in their future endeavors.

There are four ways to participate in the program. First are six monthly core group meetings, with two meetings per theme ranging from writing a personal strategic plan to learning how to motivate a dental team. Second are three presentations as part of the DPLI Speakers Series. These meet every other month and highlight one of the core themes. Third, students are encouraged to participate in the Experience Leadership Mentorship Program, which pairs students with faculty mentors in specified areas of interest ranging from public health dentistry to dental research. The mentorship experience culminates with a session in May to reflect on the experience and create a personal action plan to continue the student’s exposure to the specified area of dentistry. The fourth aspect of the program is the Leadership in Action Practicum. In this section, students are to use the skills learned in the program to lead a research group to assess student perspectives in a feasibility study for Pacific’s new dental school building. Students will complete the research and finish the project with a presentation to the Dean’s Cabinet. These four components of the DPLI will enable as many students as possible to participate in the program. The first year of the DPLI was very successful. We had over 100 students participate in the pilot program, with forty-four students completing the core curriculum requirements for a certificate of completion. Thirty-seven faculty members and administrators served as mentors, including our university president and over half of the school’s department chairs.

Although the need and desire for leadership development programs have been studied, only a small number of active programs exists. As more research is published on this topic, we hope that other schools are encouraged to develop similar programs. This would lead to more data on the subject, which allows for studies to be generalized. In addition, by better understanding the respondents’ previous leadership experience, we could see how it translates into leadership in dental school and after graduation.
Acknowledgments

We would like to thank the entire Pacific Dugoni Family for their continued support on this project. The humanistic model of education and the dedication of the administrators, faculty, and staff has been the foundation of this work. In particular, we would like to thank Dean Patrick J. Ferrillo Jr. for his unending support of student innovation and Dr. N. Karl Haden for his guidance throughout the project. In addition, we would like to thank Jonathan Gluck and Alan Chee for furthering the vision of this project and ensuring its growth in the future. Last, we would like to thank all the participants thus far in the DPLI. This project focuses on leadership development of all dental students, and we look forward to working with more students in the future.

REFERENCES

12. Mellion A. Leadership development programs and opportunities in U.S. dental schools. Poster presentation at the 2010 American Dental Education Association Annual Session & Exhibition, Washington, DC.