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ORIGINAL RESEARCH

Evaluation of the Stanford Anesthesiology Faculty Teaching Scholars Program Using the Context, Input, Process, and Product Framework

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INTRODUCTION

The purpose of faculty development is “to improve health care for individuals and their communities, by the process of developing physicians as teachers, educators, researchers and leaders.”¹ Faculty development is essential to the educational mission of academic medical centers, which focus on patient care, teaching, and research.^{1,2} The Accreditation Council for Graduate Medical Education (ACGME) also highlights the importance of faculty development by specifying it as one of its core program requirements. Faculty development can improve career advancement, knowledge/skill development, and retention.³

Many academic medical centers and even individual departments have initiated their own faculty development programs where faculty can develop their educational knowledge and skills while continuing to maintain their clinical, teaching, and research responsibilities by, for example, leading an independent project, taking formal university courses, attending seminars, and/or attending an education conference.^{4,5} Studies have assessed program development and implementation, with less work published on program evaluation.⁶ Alexandraki et al found that program evaluation remains an area of improvement in faculty development, as “most studies focus on the description of FD (faculty development) programs, their implementation, and self-reported outcomes.”⁶ The effectiveness, quality, and

outcomes of these programs defined by a participants’ change in knowledge, skills, attitudes, and behaviors and impact on learners, departments, and institutions should be evaluated regularly to ensure that the needs of the individual faculty and department are being met.^{4,6,7} An important component of the evaluation process is using an appropriate framework.^{7,8}

Given the complexity of faculty development programs, the evaluation framework should allow for assessment of all phases of a program and give insight into the dynamic processes that facilitate or inhibit the program outcomes.⁶ The context, input, process, and product (CIPP) framework can be useful to evaluate both educational and noneducational programs and focuses on program improvement. *Context* refers to the background, environment, and needs and opportunities for the program, *input* refers to program content and available resources, *process* refers to how the program was implemented and what barriers arose, and *product* refers to impact and sustainability of the outcomes of the program and product. This CIPP framework is meant to be cyclical to continually strive to develop the best product or educational outcome and can be used both formatively and summatively.^{9,10}

In 2007, the Stanford University Department of Anesthesiology created the Faculty Teaching Scholars Program, housed within the department, to train and empower faculty to develop their own pedagogy and to improve residency education.¹¹ Faculty

apply to the year-long program and are accepted based on their education project proposal and career goals statement. The program includes protected nonclinical time to complete their project and funding for an offsite education-related conference. Initially, the program offered quarterly seminars on core medical education topics given by faculty within the Anesthesiology Department, but this evolved to now also include a monthly multidisciplinary medical education scholar’s lecture program offered through the School of Medicine (Table 1). The program design and implementation for 3 faculty cohorts was initially described and published, but no further evaluation of the program has been done despite more than 10 years of program implementation.¹¹

The aim of this study was to use the CIPP framework to evaluate the Faculty Teaching Scholars Program by surveying and interviewing program graduates. This evaluation study would identify areas of improvement that could help achieve the outcomes of the program and ensure that the program is addressing faculty development needs, which would improve future iterations of the program.

METHODS

The Stanford Institutional Review Board determined that this study was not considered human subjects research as defined by federal guidelines and thus was exempt from review.

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Faculty Survey

The survey was designed to measure the experience, attitudes, satisfaction, and outcomes of faculty who had previously participated in the Teaching Scholars Program (Appendix A). The survey included both dichotomous questions and Likert response scale questions with the option to include free text comments. The initial survey instrument questions were uniquely developed from a literature review and the CIPP framework. Questions addressed the context (what are the needs and opportunities for the program), input (what is the content and resources for the program), process (how was the program implemented and what barriers arose), and product (what were the outcomes in terms of impact and sustainability) of the program. The survey was then pilot tested by 1 chief resident, 1 research assistant, and 2 anesthesia faculty from a different institution. Their suggestions were used to reword questions and Likert scales. For example, initial Likert scales included 7 choices, but all survey testers recommended changing the scales to include only 5 varied choices. The final anonymous survey was distributed electronically (Qualtrics XM, Provo, Utah) via an email with a survey link to previous faculty ($n = 54$) who completed the Teaching Scholars Program from 2007 to 2018.

Structured Interviews

Once all survey responses were received, structured interviews were held with program graduates to further elicit detailed information about their experiences and evaluation of the program. Interview questions were developed in conjunction with the survey questions to address the context, input, process, and product of the program with the goal to allow for more depth and explanation in the interview (Appendix B) than could be achieved via the survey instrument. All interviews were performed by the study author (M.C.C.) in person or electronically via a web-based interface (Zoom Video Communications, San Jose, California). Permission to record the interviews was obtained by each participant. After the interview, the recording was transcribed (Otter.ai, Mountain View, California), and accuracy

in the transcription was verified by the study author (M.C.C.).

Fifteen program alumni volunteered to participate in the structured interview after an email requesting interview participants was sent electronically to alumni of the program from 2007 to 2018. The transcribed interviews were analyzed by two study authors (M.C.C. and P.T.), and themes were identified deductively using the CIPP framework to develop a codebook. Given theme saturation found in the initial set of 15 interviews, a second request for interview volunteers was not sent, and no further interviews were conducted. The structured interviews were then coded independently by the 2 study authors using qualitative data analysis software (NVivo, Qualitative Data Analysis Software). The study authors reconciled any differences in coding until there was agreement.

RESULTS

Twenty-six of the 54 (48% response rate) participants in the program from 2007 to 2018 completed the survey. There was at least 1 survey responder from every graduate class year, and of the 26 respondents, 24 participated in the program within 10 years of completion of their residency and/or fellowship training. Twenty-five of the 26 survey responders continue to work in an academic medical center with 18 remaining at Stanford University, 23 completed their project, and 17 projects are still part of the training program. Fifty percent of the faculty responders indicated that they worked with a resident on their project. Seven of the 26 participants presented their project at an offsite conference, and 3 of the 26 projects were ultimately published (Table 2).

Because the multidisciplinary monthly medical education lecture program did not begin until 2014, 12 of the 15 who had access to the lecture program indicated that they had attended at least 7 of 9 lectures, and 13 of the 15 were satisfied with the topics and speakers. Six of the 15 were able to receive an Honors Certificate from the lecture program, which required attendance at 7 of the 9 lectures and presentation of their project at the Stanford Innovations in Medical Education conference.

Seventeen of the 26 program graduate survey responders reported having gone on to pursue other leadership roles, including

rotation director, clerkship director, associate residency or fellowship director, or program director. Two of the 17 leadership roles were at other academic institutions, including residency program director, with the remaining 15 leadership roles remaining within the Stanford Anesthesiology Department. Fifty percent pursued additional medical education projects after the program, including curriculum development, simulation work, and faculty development projects. Ninety-six percent of survey responders agreed that they were better medical educators after the Teaching Scholars Program and would recommend this program to their colleagues.

Fifteen structured interviews were conducted with 12 faculty who continue to work at Stanford University and 3 faculty who work at other academic medical centers. Based on recurrent themes that were deductively identified in the structured interviews using the CIPP framework, the code system was developed with illustrative quotes for each of the identified codes (Table 3).

Context (Background, Environment, and Needs and Opportunities)

Identified themes included reason for participation, previous experience in medical education, and resident education impact. Most faculty participated in the Teaching Scholars Program because the program was a specific opportunity to get involved with the educational mission of the department and to understand the system of how projects get launched and completed. Career advancement in an academic medical center, self-motivation to improve teaching skills, and understanding of medical education research were also identified as reasons for participating in the program. Almost all program participants interviewed had little to no previous experience in medical education before starting the faculty development program. Resident education impact addressed whether the project had a direct effect on resident education, such as a new curriculum or addressing a particular need within the residency program. Many of the program participants stated that projects were developed in direct response to either a new ACGME requirement or a particular clinical rotation curriculum that needed updating, such as new objectives or content.

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Input (Content and Available Resources)

Themes included benefits of lecture series, negatives of lecture series, availability of resources, and adequacy of nonclinical time. Faculty enjoyed the multidisciplinary discussion and collaboration during the Clinical Teaching Seminar lecture series and the topics of the lecture series, including building on a framework in medical education research. The two most common negatives were being able to find time to attend the lecture series, which was usually scheduled at the end of a clinical workday, and having lecture topics not applicable to their project or interests.

Faculty reported a lack of personnel to help when a particular issue arose with their project, such as technology support or research coordination. Although faculty were aware the department and/or university had personnel support available, most faculty were unsure how to access the support. Funding provided to attend an educational meeting was useful to faculty that wanted additional knowledge to help with their project or teaching skills. The monthly protected nonclinical time was appreciated, but faculty stated that their projects were constrained by time, as they reported the time given was insufficient to develop a substantial project.

Process (Implementation and Barriers)

Most faculty interviewees did not have a resident work with them, as residents were often too busy with residency responsibilities to make meaningful contributions to the project. Faculty believed that their projects would have been more successful with more mentorship to help when questions arose, to navigate resources, and to keep them accountable. Some stated a formal mentor was a particular necessity to make a scholarly project successful. For barriers, a few participants mentioned properly understanding the educational needs of the residents when developing and implementing a new curriculum. Knowing about and accessing available resources and overcoming resistance to “culture change” with respect to innovative curricula and/or approaches to feedback were deemed as barriers.

Product (Outcomes)

Themes included project completion, education sustainability, positive/negative outcomes, and suggestions for improvement. Most interviewees were able to complete their project during the year-long program. Education sustainability addressed whether the project continued to play a role in the residency. Almost 80% of the curriculum-based projects (eg, simulation and global health) remained in the residency program at the time of interview, especially if the faculty continued to work in the department. Some of the curricula though had evolved as resident educational needs evolved over time, but the project was important in initiating the curriculum.

A positive program outcome commented on by multiple faculty was that the program helped with career development and advancement as well as skill building. Continued independent learning, self-motivation, and teaching skills were positive traits that faculty developed. Common suggestions for improvements included more resident input, formal mentorship, specific timeline and accountability for project completion, and availability of a warehouse that identified resources in the department and university.

DISCUSSION

This mixed methods study used surveys and interviews to successfully evaluate a faculty development program from 2007 to 2018 using the CIPP framework. Unlike the more commonly used outcomes-focused Kirkpatrick model, the CIPP framework examines the context in which a program is launched, the inputs and processes involved in implementing a program, and the products or outcomes of the program.¹⁰ Faculty who participated in the program had little to no previous experience in medical education and wanted to improve their skill as well as have a direct contribution to the educational mission of the department. Nonclinical time and other resources, such as a multidisciplinary lecture series, were offered, but faculty sometimes found the resources hard to navigate and use. Designating a formal mentor was identified as an area for improvement. There was sustainable impact, with almost 80% of projects still part of the educational program. Overall, faculty reported self-growth,

improved skills, and career development and advancement. Although many studies have reported outcomes of a faculty development program after initial implementation, few have evaluated a program after more than a decade of faculty participation, which is especially important as faculty development needs are dynamic and evolving.⁶

Context

Context evaluation is useful for an established program needing to adjust to a changing environment. Regarding the background, environment, and needs, many faculty join an academic department and are expected to teach despite not having prior formal opportunities to learn about medical education and pedagogical methods. As a result, faculty development programs have expanded substantially.^{1,12} Teaching is an integral part of a physician’s professional identity, and faculty development programs can “awaken, strengthen, and/or support a teacher’s identity.”¹³

Most faculty who participated in the Stanford Anesthesiology Teaching Scholars Program had no previous education teaching or experiences, as most were within 10 years of residency or fellowship training and were self-motivated to learn and develop those skills.¹¹ The program provided an avenue for career advancement and to understand the process of developing and implementing projects within a large academic anesthesiology department. The motivation to participate in the program was similar to the findings of Steinert et al, who reported the most likely reason for regular participation in a faculty development program included “personal and professional growth” and “learning and self-improvement.”¹⁴

The Teaching Scholars Program also served as a mechanism for new educational needs of trainees to be addressed. For example, as the ACGME and the American Board of Anesthesiology changed requirements, these needs were often targeted by faculty.¹⁵ This direct impact on residency education through choosing projects that also aligned with their clinical practice helped faculty engage more fully in the program.

Input

Content and resources discussion pinpointed that institutional and departmental support

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are necessary for a successful faculty development program. Enthusiasm and support for these programs also leads to promotion of organizational change where faculty development is prioritized.^{2,4,16} The protected funded time given to program participants (0.5 day/month) showed them that faculty development and growth was valued by their department. However, most participants underestimated the amount of time needed to complete projects and thus modified their projects to fit within the funded time given, which could have hindered the breadth and impact that a project might have had on the department's educational mission. Although some faculty were able to complete their project with the nonclinical time given, one suggestion was to customize the amount of professional time awarded to the proposed project size and scope akin to a grant application.

Although graduates indicated that the university and department were "flush with resources," many faculty had difficulty locating and using the necessary resources for their projects, including technology support and personnel, such as research coordinators. An improved infrastructure (and central warehouse of resources) to easily access these resources would improve the program and the development and implementation of the education projects. Most program participants reported that they benefited from the multidisciplinary lecture series on fundamental concepts, such as curriculum development, bedside teaching, and medical education research. Some found that not all lecture topics were particularly applicable to their project and/or learning needs, as has been found in other evaluations of faculty development workshops and lectures.^{1,17} As has been reported in other studies, participants often indicated that competing clinical responsibilities interfered with regular attendance in the lecture series.^{1,14,17}

This multidisciplinary lecture series was added to the program curriculum based on feedback from the first few graduates and was easy to incorporate, as it was a lecture series organized through the School of Medicine. Faculty development opportunities can help create communities of practice, and those communities can in

turn help develop faculty.¹⁶ Participation in the multidisciplinary medical educator lecture series led to networking with faculty from different specialties within the School of Medicine, collective learning, and a community of practice. For future program participants, the multidisciplinary lecture series and community building would continue to be encouraged, but faculty could attend only interest-specific lectures.

Process

Process evaluation provides formative information on program implementation and what barriers arose for guiding adjustments while the program is running. Faculty making the program a top priority given the limited professional time available is a common barrier, in particular balancing clinical work, professional growth, and personal needs.^{1,14,17,18} Another barrier identified in our evaluation of the Teaching Scholars Program was faculty understanding of the educational needs of the residents. The program encourages faculty to work with residents to receive resident input on the educational impact of their projects and also provides an opportunity for residents to fulfill their scholarly activity ACGME requirement.¹⁵ Cocreation in the development of educational programs between learner and teacher has been shown to improve learner and teacher engagement and overall program design.¹⁹ Only 13 of the 26 faculty graduates indicated that residents were able to actively participate in projects. The emphasis on resident participation should focus on resident input on their educational needs through cocreation as part of the assessment faculty can do to choose their project and not on sharing the workload of the project with the resident. The project is meant to bring to bear the educational framework taught in the lecture series with the local education unmet needs. Further resident involvement in the projects could potentially be beneficial to both faculty and resident but should not be required.

One important finding from our evaluation was the missed opportunity by not formalizing a mentor to the faculty as part of the program. Strong mentorship benefits all pursuits within academic medicine.^{1,4,12} Although there was informal mentoring through the Teaching Scholars Program directors, a formally designated mentor would likely have helped program

participants identify and use resources and keep them accountable to implementing and completing their project. Scholarly output may have also improved with mentorship. Mentorship should be an integral part of any faculty development program and provides benefits to both mentee and mentor.^{20,21}

Product

Product evaluation is meant to produce valuable information to judge program outcomes. Overall, 25 of the 26 Teaching Scholars Program alumni would recommend the Teaching Scholars Program to a colleague, and 25 also agreed that they attained the skills to independently pursue a medical education project. More than 70% of faculty survey participants stated that they became much better medical educators. Knowledge and skill development as well as self-perceived medical educator status were self-reported. Perhaps more objective measures such as evaluation of teaching skills by trainees would give better insight to assess outcomes in future evaluations of the program.

The program also helped with career development and advancement, with almost all participants continuing to remain in academic medicine and many going on to pursue leadership roles within medical education. Although not an intended outcome of the program when the program was created, all 5 residency associate program directors and 3 of 6 ACGME fellowship directors in the department had previously participated in the Teaching Scholars Program. Within the department, participation in this program may suggest to department leaders that one is interested and invested in furthering the educational mission of the department by pursuing more skills and faculty development opportunities. However, the skills and experiences developed through the program and perceived interest in medical education can also lead to further career opportunities, as evidenced by the faculty who were given educational leadership opportunities at other institutions.

This study has several limitations, beginning with that it examined a single institution and one clinical specialty department, which may limit generalizability if the results are used by other academic departments

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interested in developing their own program. One key example is the large number of future leadership positions for participants in the program, as this outcome has limited generalizability because the number of opportunities and competition for roles will vary by academic department. Another limitation of the study was the accuracy of the survey instrument used for data collection, as validity of the instrument was not fully explored, and the majority of survey responders and faculty who volunteered to participate in the structured interviews continue to work at the same institution. Also, the structure of the program evolved over the years, such as, for example, to include a monthly seminar series so the program curriculum and experiences changed over time. As is expected with any survey study, risk for self-selection bias exists in which those either dissatisfied or satisfied with the program would be more likely to respond as is also true for those who volunteered to participate in the structured interviews. Retrospective structured interviews are also vulnerable to recall bias.

In conclusion, the CIPP evaluative framework confirmed that faculty who participated in the Teaching Scholars Program from 2007 to 2018 had reported self-growth and improved educator skills with opportunity for career development and direct residency program impact. The evaluative process identified improvements (i.e., dedicated mentorship), which will be

implemented for future iterations of the program. As faculty development evolves, evaluations of a faculty development program should continue to occur with perhaps more focus on objective outcomes and metrics as it relates to the learner, faculty, and institution.

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Abstract

Background: Faculty development programs are essential to the educational mission of academic medical centers as they promote skill development and career advancement and should be regularly evaluated to determine opportunities for improvement. The context, input, process, and product (CIPP) framework evaluates all phases of a program and focuses on improvement and outcomes. The aim of this study was to use the CIPP framework to evaluate the Stanford Anesthesiology Faculty Teaching Scholars Program.

Methods: Using the CIPP framework, a survey was developed for alumni (2007 to

2018) of the program, followed by structured interviews, and each interview was deductively coded to identify themes.

Results: Twenty-six of the 54 (48% response rate) participants in the program completed the survey, with 23 completing their projects and 17 of those projects still part of the anesthesiology training program. Seventeen survey responders went on to educational leadership roles. Twenty-five of the 26 survey responders would recommend this program to their colleagues. Fifteen structured interviews were conducted. Using the CIPP framework, themes were identified for context (reason for participation, previous experience in medical education, and resident education impact), input (benefits/negatives of the lecture series, availability of resources, and adequacy of nonclinical time), process (resident participation, mentorship, and barriers to implementation), and product (project completion, education sustainability, positive/negative outcomes of the program, and suggestions for improvement).

Conclusions: The CIPP framework was successfully used to evaluate the Teaching Scholars Program. Areas of improvement were identified, including changing the program for input (add education lectures customized to faculty interests) and process (formally designate an experienced mentor to faculty).

Keywords: CIPP evaluation framework, faculty development, Teaching Scholars Program, qualitative thematic analysis

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Tables

Table 1. *Lecture Topics for the Clinical Teaching Seminar Series*

Lecture title
Curriculum development using the Kern method
Understanding survey methods
Qualitative survey data analysis
Quantitative methods for medical education research
Teaching methods to promote transfer
Best practices in assessment
Feedback in medical education
Effective bedside teaching
Dissemination strategies in medical education research

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Table 2. Survey Results

Survey Question	Response
Were you able to complete your project?	Yes = 23
	No = 3
Is your project still part of the anesthesia residency or fellowship program?	Yes = 17
	No = 9
Did you work with a resident on your project?	Yes = 13
	No = 13
Did you attend an educational conference during your Teaching Scholars Program year?	Yes = 12
	No = 14
Did you present your project at a conference?	Yes = 7
	No = 19
Were you able to submit your project for publication?	Yes = 3
	No = 23
Was the Clinical Teaching Seminar Series offered during your Teaching Scholars Program year?	Yes = 15
	No = 11
Did you attend the Clinical Teaching Seminar Series?	Yes = 12
	No = 3
How satisfied were you with the Clinical Teaching Seminar Series topics?	Extremely satisfied = 5
	Very satisfied = 3
	Moderately satisfied = 5
	Slightly satisfied = 0
	Not at all satisfied = 2
How satisfied were you with the Clinical Teaching Seminar Series speakers?	Extremely satisfied = 3
	Very satisfied = 6
	Moderately satisfied = 4
	Slightly satisfied = 1
	Not at all satisfied = 1
Did you complete the Honors Certificate?	Yes = 6
	No = 9
After the Teaching Scholars Program, did you pursue other roles in medical education?	Yes = 17
	No = 9
After the Teaching Scholars Program, have you pursued other medical education projects?	Yes = 13
	No = 13
After the Teaching Scholars Program, do you think you attained the skills to independently pursue a medical education project?	Extremely confident = 2
	Confident = 13
	Slightly confident = 10
	Not confident = 1
After the Teaching Scholars Program, I think I am a better medical educator.	Strongly agree = 4
	Moderately agree = 15
	Slightly agree = 6
	Moderately disagree = 0
	Strongly disagree = 1
How likely are you to recommend the Teaching Scholars Program to your colleague?	Extremely likely = 12
	Somewhat likely = 13
	Neither likely nor unlikely = 1
	Somewhat unlikely = 0
	Extremely unlikely = 0

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Table 3. Illustrative Quotes From the Structured Interviews for Each Code

Codes	Illustrative Quotes
Context codes	
Reason for participation	“One of the reasons was I was hoping to just improve my skills to learn more about curriculum development. Because I think part of the expectation of our faculty is to have some of those skills.”
Previous experience in medical education	“Formal training in medical education? I don’t think so.”
Resident education impact	“Vascular cases are an ACGME requirement but we didn’t have a rotation for it yet. I thought the residents would benefit from a structure rotation and curriculum.”
Input codes	
Benefits of lecture series	“I like that it allowed me to meet up with other people, and see how they develop their projects, and kind of learn from them.”
Negatives of lecture series	“I didn’t necessarily think those lectures would help me personally and the topics didn’t interest me.”
Availability of resources	“In my mind, there’s no good directory of resources for faculty that are doing projects. Whether it’s developing a website or writing a grant, especially if you’re a clinician educator.”
Adequacy of nonclinical time	“So I felt if I had been given more time, perhaps I would have tried to make my project a bit more elaborate. I would say more time would be more and more helpful.”
Process codes	
Resident participation	“I didn’t have one to start. I did recruit a resident later on. Her role was probably less active than I would have liked. But I think mostly because our residents are very busy.”
Mentorship	“I think it’s okay on very small projects to learn by doing and make your mistakes. But if you’re going to do a formal project over months, I think some consultation at the beginning to address methods, scope, and assessment would improve the experience.”
Barriers to implementation	“I think changing our culture is always the hardest thing to do. And we all know that because status quo is always the easiest path of least resistance. That was the challenge.”
Product codes	
Project completion	“I guess it was near the end of that Teaching Scholars Program year that we implemented the first version and integrated it into the system.”
Positive outcomes of the program	“And so for me the Teaching Scholars Project was a mini crash course in adult learning and graduate medical education that I think directly led to my leadership roles. So it was very foundational.”
Negative outcomes of the program	“Well I can tell you that there was no programming in those days. We didn’t have a formal curriculum or regular activities.”
Education sustainability	“I was already working on developing the global health curriculum for the residents and this program helped jumpstart the implementation.”
Suggestions for improvement	“I mean you have to start somewhere, but some more structured faculty development, as part of it, or as a precourse, I think would be helpful.”

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Appendices

Appendix A. Survey for Program Graduates

1. What year did you participate in the Teaching Scholars Program? (*Free text*)
2. Were you able to complete your project? (*Yes/No*)
3. Is your project still a part of the Anesthesiology residency curriculum/program? (*Yes/No*)
4. Did you work with a resident on the project? (*Yes/No*)
5. Did you attend an educational conference during your Teaching Scholars Program year? (*Yes/No*)
6. Did you present your project at a conference? (*Yes/No*)
7. Were you able to submit your project for publication? (*Yes/No*)
8. Was the Clinical Teaching Seminar Series offered during your Teaching Scholars Program? (*Yes/No*)
9. If yes, did you attend the Clinical Teaching Seminar Series? (*Yes/No*)
10. How many sessions did you attend? (*Free text*)
11. How satisfied were you with the Clinical Teaching Seminar Series lecture topics?
(*Not at all satisfied/Slightly satisfied/Moderately satisfied/Very satisfied/Extremely satisfied*)
12. How satisfied were you with the Clinical Teaching Seminar Series speakers?
(*Not at all satisfied/Slightly satisfied/Moderately satisfied/Very satisfied/Extremely satisfied*)
13. Did you complete the Honors Certificate? (*Yes/No*)
14. Do you still work in an academic medicine institution? (*Yes/No*)
15. After the Teaching Scholars Program experience, did you pursue other roles in medical education (committees, rotation directors, leadership)? If yes, please comment. (*Yes/No and free text*)
16. After the Teaching Scholars Program experience, have you pursued other medical education projects? (*Yes/No*)
17. After the Teaching Scholars Program experience, do you think you attained the skills to independently pursue a medical education project?
(*Not confident/Slightly confident/Confident/Extremely confident*)
18. After the Teaching Scholars Program experience, I think I'm a better medical educator.
(*Strongly disagree/Moderately disagree/Slightly agree/Moderately agree/Strongly agree*)
19. How likely are you to recommend the Teaching Scholars Program to a colleague?
(*Extremely unlikely/Somewhat unlikely/Neither likely nor unlikely/Somewhat likely/Extremely likely*)
20. How likely are you to participate in another Teaching Scholars Program?
(*Extremely unlikely/Unlikely/Neutral/Likely/Extremely likely*)

continued from previous page

Appendices continued

Appendix B. Structured Interview Questions

1. What were the reasons that made you choose to participate in the Teaching Scholars Program?
2. What prompted you to develop your particular teaching scholars project?
3. Did you have a resident actively participate in your project? If so, what was their role in the project?
4. Did you have any structured learning on medical education topics to help you develop your project? If so, please explain.
5. If you attended the Clinical Teaching Seminar Series, what did you like about the program? What did you not like about the program?
6. What were some of the barriers you faced during your project? Development? Implementation? Completion?
7. Did you have a mentor for your project?
8. Did you think the nonclinical time given to you was sufficient?
9. What was the most important thing you learned during your Teaching Scholars Program experience?
10. Is there anything else you would like to add about the program?