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Original Research

Development and Implementation of a Clinician-Educator Track for Residents in Anesthesiology

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Introduction

Historically, education as a path to faculty promotion in academic medical centers has been far less common than clinical or laboratory research pathways.[1] Promotion usually relies on scholarly productivity, such as publications and grants. These traditional standards of measuring productivity may not apply to clinician-educators. Accordingly, different faculty tracks and criteria for promotion have been developed for clinician-educators at many centers to include teaching characteristics, education administration, mentoring, and education scholarship.[1] Faculty development programs are therefore necessary to build a sufficient cadre of adequately equipped clinician-educators to meet increasing learner needs and to help faculty achieve their promotion milestones.[2]

Clinician-educators in academic settings are expected to engage with residents and medical students in teaching, assessment, and providing feedback.[3] According to a survey consensus definition, a clinician-educator is active in clinical practice, applies educational theory to teaching, participates in educational scholarly activities, and acts as a consultant to others about educational questions and issues.[4] Furthermore, the responsibilities of clinician-educators include developing curricula, designing trainee and program assessments, program administration, conducting education research, developing leadership skills, and anticipating the challenges of medical education transformation.[5] Faculty development programs have accordingly been focused on helping faculty acquire the skills and knowledge needed to be effective teachers, scholars, and leaders.[2] However, a growing trend is to offer professional development activities throughout all stages of medical education, starting in medical school and continuing into residency training.[3,6] Programs that improve physician teaching skills during residency training can enhance the quality of medical student education and help prepare residents for a career in academic medicine.[6] Unfortunately, many trainees who wish to become educators may lack formal training in medical education.[7] In 2020, we implemented a Clinician-Educator Track (CET) in the Department of Anesthesiology at Columbia University Irving Medical Center geared toward residents and fellows with the initial goal of improving teaching skills. We created a comprehensive education track with a curriculum that covers the following topics: (1) adult learning theories and their application in medical education, (2) evidence-based best practices in adult learning and medical education, and (3) experiential opportunities to develop and practice the skills of successful educators. In evaluating the first 2 years of the program, we aimed to explore the feasibility and effectiveness of the CET in promoting the knowledge, skills, and attitudes of medical educators and allow participants to provide feedback to help improve the program in the future. We hypothesized that the implementation of our CET will improve teaching skills among participating residents.

Methods

Participants and Program Implementation

Starting in the summer of 2020, an annual email has been sent inviting all senior residents and fellows to voluntarily participate in the CET if interested. In the first year of the program (2020-2021 academic year), the CET was also offered to faculty members who wanted to improve their formal knowledge and teaching skills and who could also then serve as mentors and facilitators to expand the community of practice of educators in the department. Based on feedback after the first year about comfort in the learning environment, the program was only offered to residents and fellows for the 2021-2022 academic year and did not include faculty as participants. We assumed that most interested faculty had already participated during the first year of the program.

Participant data were collected throughout each year of the program. We collated information on number of participants, year of training, number of sessions attended, and career trajectory. Participants who finished residency and/or fellowship were noted to continue training in a subspecialty fellowship, start working at an academic medical center, or secure employment in private practice. We also observed whether faculty participants

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remained at an academic medical center or moved to private practice.

Curriculum Design

The curriculum of the program was developed by the director of the CET (J.B.S.) with assistance from the Vice Chair of Education in the Department of Anesthesiology (M.J.H.). The goal of the program was to enhance participant knowledge of concepts in adult learning theory, evidence-based best practices for effective teaching in different educational settings, how to give feedback, and how to perform trainee assessments. The longitudinal format served two purposes: to develop concepts across sessions while allowing time for experience and reflection and to build a community of practice among members of the department related to medical education. The content of the initial curriculum is described in Appendix A. For both academic years, the curriculum started in September and continued through June. Monthly sessions consisted of 1-hour, interactive, small-group discussions that incorporated short presentations of the material, application of medical education principles, and practice with teaching and feedback skills. Prereading assignments were distributed approximately 2 weeks before each session. Due to varied clinical and call responsibilities, 2 or 3 dates were given as options for each session to allow maximal ability for all interested participants to attend. To cover the proposed curriculum, 21 sessions were held in 2020-2021, and 23 sessions were held in 2021-2022. Each session was designed as hybrid and was offered both in-person and over Zoom (an online video conferencing platform). The sessions were not recorded because they were all interactive, requiring participants' active engagement. If more than 1 participant missed a session, a makeup session was scheduled. The director of the CET (J.B.S.) facilitated 34 of the 44 total sessions, and 3 other faculty members (A.J.L., T.P., and M.J.H.) helped facilitate the other 10 discussion sessions.

Observed Teaching Session

The CET curriculum culminated in a voluntary observed teaching session designed to allow participants to practice and enhance their medical education skills. These sessions used objective assessment rubrics to structure the evaluation and feedback; the rubrics were provided to participants in advance and specifically appraised the learning environment, learner engagement, session management, and teaching methods. While the rubrics have not been assessed for validity or reliability, they offered a general starting point for feedback in various teaching environments (Appendix B).[8,9] Those who chose to participate in an observed teaching session were observed by 2 faculty members, 1 of whom was the director of the CET (J.B.S.), and the other was either a faculty participant in the CET or another faculty member in the education division. Each participant chose the practice setting of the teaching session (one-on-one, lecture, or small-group teaching session). One-on-one teaching sessions usually involved teaching a medical student or a more junior anesthesiology resident in the operating room. Faculty observers discussed feedback with the participant immediately after the observed session, and a written summary of the assessment was emailed to them within 1 week of the observation. We adapted this approach from a previously described intervention piloted to improve medical student education skills. In that report, each participant was observed by 2 clinician-educator faculty coaches who then held personalized feedback sessions with the participant based on a validated scoring rubric.[9]

Program Evaluation and Data Collection and Analysis

We administered 2 anonymous online surveys to CET participants through Columbia University's Qualtrics platform at 2 time points in academic year 2020-2021: after session 3 and after the last session. For 2021-2022, only 1 anonymous survey was administered at the conclusion of the program (Appendix C). The goal of the surveys was to gauge participant satisfaction, perceived learning from the program, and perceived behavior changes in educational practices. The survey results also helped modify and improve the program for the subsequent academic year. Qualitative content analysis of the survey comments was performed using inductive coding to generate relevant categories. A second pass coding further allowed the identification of the main themes. The Institutional Review Board approved this study with a waiver of informed consent.

Results

Participation and Career Trajectories

The initial recruitment email at the beginning of the 2020-2021 academic year was sent to 25 clinical anesthesia year 2 (CA2) residents, 26 clinical anesthesia year 3 (CA3) residents, 34 clinical anesthesia fellows, and 104 clinical faculty, for a total of 189 possible participants. Nineteen (10%) of invited people chose to participate in the CET: 4 CA2 residents, 6 CA3 residents, 4 fellows, and 5 faculty. In 2021-2022, the email was sent to 26 CA2 residents and 29 fellows, with 16 participants (29% of possible participants), of which 11 were CA2 residents and 5 were fellows (Table 1).

For the 8 discussion sessions in 2020-2021, the facilitators met with participants 21 times, as each session had 2 or 3 dates to allow for maximal attendance. In 2021-2022, there were 9 discussion sessions with 23 meeting times. Fifteen of 19 participants (78.9%) attended at least 7 of the 8 total sessions in 2020-2021, while 14 of 16 participants (87.5%) attended at least 7 of the 9 total sessions in 2021-2022. The structured observed teaching session was voluntary, with 9 of 19 participants (47.4%) opting to be observed the first year of the program and 12 of 16 (75%) opting in the second year. Out of the 21 participants who were observed teaching over the first 2 years of the CET, 16 taught concepts or procedures one on one to medical students or junior residents, 2 gave lectures to a diverse group of learners, and 3 taught a small group of residents in the intensive care unit.

Of the 10 residents who participated in the CET the first year of the program, 9 underwent further clinical anesthesiology fellowship training. Three of those residents have finished fellowship training and are now working at academic medical centers; 1 resident did not complete a fellowship and went into private practice. The 4 fellows and 5 faculty members in the first year of the program have all remained at academic medical centers. For participants in the second year of the program, all 5 fellows

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now work in academic medical centers, and all 11 residents have secured clinical anesthesiology fellowship positions (Table 1).

Anonymous Survey Data

Two anonymous surveys were sent to the 19 participants in 2020-2021 at different time points. The first survey received 7 responses (36.8% response rate), and the second survey received 12 responses (63.2% response rate). Only 1 anonymous survey was sent to the 16 participants after the last session in 2021-2022, generating 8 responses (50% response rate). The qualitative analysis of the comments through descriptive coding revealed 3 main categories: design and scheduling, content and facilitation, and perceived outcomes. The categories are detailed below with sample comments provided as an illustration.

Design and Scheduling

In both years of the program, participants described their appreciation for the flexibility of being provided 2 to 3 possible dates for each session. In particular, comments indicated that the "systematic" scheduling design effectively addressed the anticipated challenges of busy and unpredictable clinical schedules. However, clinical demands "limited [the] time to review material before the session." Moreover, when participants joined a session after a "difficult day in the OR," they reported feeling less engaged and "distanced" from the conversation.

Comments indicated the "multimodal" design of the course as a strength, with the combination of lectures, discussions, and workshops. Some respondents recommended using class time for more "hands on" and "practicing teaching." Virtual attendance was described as a challenge for some attendees by being less conducive to engagement. However, use of interactive techniques with in-person or virtual participants raised the level of engagement.

Content and Facilitation

Providing "real-world examples" and sharing anecdotes were described as most appealing to the participants. These anecdotes included lived "experiences and challenges" from the perspective of a learner or educator. They validated participants' own experiences and helped to identify "perspectives on how [to] approach teaching differently." One respondent suggested adding in "a session on 'lessons learned' as a junior attending."

The observed teaching sessions allowed the participants to "put into practice" what had been discussed throughout the course. In addition, the feedback and specific comments participants received were "appreciated," "specific and fair," and described as "helpful […] going forward." One participant remarked that "having two evaluators is key in hearing different inputs on the session." Several respondents suggested that a greater number of observed teaching sessions would be worthwhile as well as having more advance notice before an observed teaching session to prepare their teaching topics.

Participants' impressions regarding educational theory content were varied. For some participants, the sessions focused on theory were more enjoyable than expected, while for others, they were the offerings of least interest. Notwithstanding, these concepts were of benefit by "introducing evidence-based methods of teaching," and "a few specific points and teaching methods in particular stood out."

Perceived Outcomes

Perceived outcomes were grouped according to Kirkpatrick's evaluation model: satisfaction, learning, and practice change.[10] All participants indicated overall satisfaction with the CET. Further comments indicated perceived effectiveness of the course in providing learning benefit and prompting practice change, especially associated with the observed teaching sessions. The learning was described as a broadened understanding of the topic, which resulted from reading the literature and hearing others' perspectives, experiences, and challenges. In addition, learning arose from facilitated self-reflection on one's approach to teaching.

Participants described multiple changes in their teaching practice as a result of the course. For example, they reported becoming "more facile" at self-evaluation of their teaching approach, "spent more time and effort in pre-teaching prep," "tr[ied] to streamline… presentations," had "increased comfort with teaching," and "[found] opportunities to give feedback." This resulted in "more thoughtful" interactions with "learners in the OR," such as identifying the learner's needs and favoring open-ended questions that engaged learners and "[gave] more room for their thoughts." Several respondents highlighted a new focus on the learner because of the course: "I will be more mindful of gauging where [the] learner is;" "more active concerted effort to listen to what the learner needs;" and "addressing learner needs."

Discussion

We are the first to describe the design and implementation of a CET curriculum for anesthesiology trainees and faculty, which was found to be both feasible and effective. The feasibility of developing such a program depends on several key factors. A motivated director with experience in curriculum development, education theory, and evidence-based best teaching practices must lead the initial effort to establish a CET. The goals and objectives should be established in advance, tools for assessing the achievement of goals need to be selected, and then learning experiences must be chosen.[11] Someone with administrative skills is required to contact participants, keep track of session dates, set up online video conferencing links, reserve conference room space, note attendance at sessions, and distribute readings and surveys. Each residency program must determine its own optimal timing of in-person sessions; we found that offering multiple dates and a hybrid option for each session enhanced the ability to participate. Another key to our success may be our straightforward admissions process and lack of a required final project. Finally, experienced clinician-educators are necessary to help facilitate sessions, observe teaching, and evaluate the program. The major programmatic cost is nonclinical time required to develop and then manage the logistics of a CET program.

Feedback regarding course effectiveness was solicited with respect to satisfaction, learning, and practice change. All

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participants expressed satisfaction with the course overall; they felt that they acquired valuable and relevant knowledge about medical education, and they reported that participation in the course prompted a positive change in their practice of and approach to medical education. Participants appreciated the interactive style of facilitation as well as the opportunity to practice the educational concepts discussed.

A recent systematic review of clinician-educator curricula in graduate medical education included 39 articles, none of which were specific to anesthesiology.[5] Similar to our program, most of the curricula in their review targeted residents and fellows, while some included faculty. The articles generally described the curricula as "tracks," "concentrations," "distinctions," or "pathways," and all were voluntary. Most curricula involved synchronous instruction, didactic meetings, and small-group learning, and half provided feedback on observed teaching. None of these articles described objective evidence of improved knowledge or skills as a result of the clinician-educator curriculum; they only provided self-reported changes in attitude, skills, and knowledge.[5]

Our course differs from previously reported programs in several ways. First, most programs are designed as a 2-year continuum, typically culminating in a final project related to medical education or medical education research.[6,12] To be as inclusive as possible and to limit the time burden of completing the preclass assignments, we chose to conduct a 1-year curriculum that did not mandate an admissions process or final project. Instead, our culminating activity consisted of an observed teaching session that allowed direct and actionable feedback to the participant. Second, the most common outcomes previously reported were participant satisfaction and tracking of graduates' careers.[12] Participants in similar tracks have consistently reported satisfaction with the programs, increased confidence in their education skills, and a favorable effect on professional development and career advancement.[6,13] Our evaluation of the program was more robust by performing qualitative analysis of participants' perceptions, which allowed an assessment of design, content, and perceived effect of the course.

Several insights were gleaned from the comments. First, the role of the facilitator was generally perceived as less important than the value gained from the peer-coaching element and interactive nature of the sessions. Second, hearing real-life anecdotes was reported as most useful for the participants to gain insight into and validate their own experiences. By contrast, adult learning theory was largely perceived as unnecessary for practical development of teaching skills and will be deemphasized in future iterations of our curriculum. Third, direct, actionable feedback following observed teaching was the most useful element in building educational skills. This activity will be expanded for future participants in this track to allow more hands-on, practical application of concepts learned throughout the course.

We acknowledge several limitations for our project. First, these results represent the experience in a single large academic center with the benefit of significant institutional support for the educational mission. Staffing and time constraints may challenge the ability to adopt a similar program in smaller centers. If resources allow, for other programs considering creating a similar track, it might be beneficial to split up trainees and faculty to minimize trainee discomfort with power differentials that might occur in the learning environment. Second, we report the results of only 2 years of experience. Because interest in the CET remains robust, we will continue to offer this course annually and aim for longitudinal data collection, including effect on faculty teaching evaluations and subsequent career trajectories. Third, the focus of this curriculum was direct instructional methods. For the academic year 2022-2023, we are offering the Advanced Clinician-Educator Track for participants who completed the Basic CET in 2021-2022. The topics focus less on improving teaching skills and more on education scholarship,[4] with multiple opportunities to practice teaching in various educational settings. The Advanced Clinician-Educator Track curriculum includes sessions on medical education research, curriculum development, technology in teaching, and education leadership.

In summary, we describe the successful implementation of a novel, anesthesiology-specific CET that focuses on teaching pragmatic, evidence-based best practices in medical education. Our endeavor has been effective based on the self-reporting of participants who noted improved teaching skills and overall satisfaction with the program. The enduring success and popularity of this program most likely will depend on maintaining the flexibility of scheduling sessions, interactive facilitation, and practical application of teaching concepts with useful feedback. Continued data collection will allow us to ascertain the long-term benefits for participants who complete the program and whether participation in the program is associated with continuing a career as a clinician-educator and possible leader in academic medicine.

References

1. Fleming VM, Schindler N, Martin GJ, DaRosa DA. Separate and equitable promotion tracks for clinician-educators. *JAMA*. 2005;294(9):1101-4.
2. Alexandraki I, Rosasco RE, Mooradian AD. An evaluation of faculty development programs for clinician-educators: a scoping review. *Acad Med*. 2021;96(4):599-606.
3. Steinert Y, Mann K, Anderson B, et al. A systematic review of faculty development initiatives designed to enhance teaching effectiveness: A 10-year update: BEME Guide No. 40. *Med Teach*. 2016;38(8):769-86.
4. Sherbino J, Frank JR, Snell L. Defining the key roles and competencies of the clinician-educator of the 21st century: a national mixed-methods study. *Acad Med*. 2014;89(5):783-9.
5. Yang Y, Gielissen K, Brown B, et al. Structure and impact of longitudinal Graduate Medical Education curricula designed to prepare future clinician-educators: a systematic scoping review: BEME Guide No. 74. *Med Teach*. 2022;44(9):947-61.
6. Smith CC, McCormick I, Huang GC. The clinician-educator track: training internal medicine residents as clinician-educators. *Acad Med*. 2014;89(6):888-91.
7. Marshall AL, Thompson CA, Cullen MW, et al. Medical education interest, exposure, and career planning in subspecialty trainees. *Med Sci Educ*. 2020;30(3):1011-4.
8. Newman LR, Roberts DH, Schwartzstein RM. Peer observation of teaching handbook. *MedEdPORTAL*. 2012;8:9150.
9. Tchekmedyian V, Shields HM, Pelletier SR,

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Pazo VC. The effect of rubric-guided, focused, personalized coaching sessions and video-recorded presentations on teaching skills among fourth-year medical students: a pilot study. *Acad Med*. 2017;92(11):1583-9.

10. Boet S, Sharma S, Goldman J, Reeves S. Review article: medical education research: an overview of methods. *Can J Anaesth*. 2012;59(2):159-70.
11. Wiggins G, McTighe J. *Understanding by Design*, 2nd ed. Alexandria, VA: Association for Supervision and Curriculum Development; 2005.
12. Friedman K, Lester J, Young JQ. Clinician-educator tracks for trainees in graduate medical education: a scoping review. *Acad Med*. 2019;94(10):1599-1609.
13. Ahn J, Martin SK, Farnan JM, Fromme HB. The graduate medical education scholars track: developing residents as clinician-educators during clinical training via a longitudinal, multimodal, and multidisciplinary track. *Acad Med*. 2018;93(2):214-9.
14. Brookfield S. The Classroom Critical Incident Questionnaire. www.stephenbrookfield.com/critical-incident-questionnaire. Accessed July 26, 2022.

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Abstract

Background: Clinician-educators in academic settings have often had no formal training in teaching or in giving feedback to trainees. We implemented a Clinician-Educator Track within the Department of Anesthesiology with the initial goal of improving teaching skills through a didactic curriculum and experiential opportunities for a broad audience of faculty, fellows, and residents. We then assessed our program for feasibility and effectiveness.

Methods: We developed a 1-year curriculum focusing on adult learning theory, evidence-based best teaching practices in different educational settings, and giving feedback. We recorded the number of participants and their attendance at monthly sessions. The year culminated in a voluntary observed teaching session using an objective assessment rubric to structure feedback. Participants in the Clinician-Educator Track then evaluated the program through anonymous online surveys. Qualitative content analysis of the survey comments was performed using inductive coding to generate relevant categories and identify the main themes.

Results: There were 19 participants in the first year of the program and 16 in the second year. Attendance at most sessions remained high. Participants appreciated the flexibility and design of scheduled sessions. They very much enjoyed the voluntary observed teaching sessions to practice what they had learned throughout the year. All participants were satisfied with the Clinician-Educator Track, and many participants described changes and improvements in their teaching practices due to the course.

Conclusions: The implementation of a novel, anesthesiology-specific Clinician-Educator Track has been feasible and successful, with participants reporting improved teaching skills and overall satisfaction with the program.

Keywords: interprofessional education, curriculum, medical education, anesthesiology, teacher training

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Table

Table 1. *Demographic Distribution of Participants in the Clinician-Educator Track for the First Two Years of the Program and Their Career Trajectories*[a]

	Year 1: 2020-2021		Year 2: 2021-2022	
	Participants	**Fellowship and/or Academic Medical Center**	**Participants**	**Fellowship and/or Academic Medical Center**
CA2	4	4	11	11
CA3	6	5	0	0
Fellow	4	4	5	5
Faculty	5	5	0	0
Total	19	18	16	16

Abbreviations: CA2, clinical anesthesia year 2; CA3, clinical anesthesia year 3.

[a] Participants who have finished residency and/or fellowship were counted in the "Fellowship and/or Academic Medical Center" column if they continued training in a subspecialty fellowship or took a job at an academic medical center. Faculty were counted in this column if they remained at an academic medical center.

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Appendices

Appendix A. Curricula for the First 2 Years of the Clinician-Educator Track Program

The format for the 2020-2021 academic year consisted of the following curriculum:

Session 1: Self-appraisal as a learner and a teacher
Session 2: How adults learn and what motivates them
Session 3: Effective teaching in lecture settings
Session 4: Effective teaching one on one
Session 5: Effective teaching of procedural skills
Session 6: Simulation education
Session 7: Feedback
Session 8: The struggling trainee
Observed teaching sessions

The format for the 2021-2022 academic year included the following:

Session 1: What makes a good educator
Session 2: How adults learn and what motivates them
Session 3: Effective teaching in lecture settings
Session 4: Effective teaching one on one
Session 5: Effective teaching of procedural skills
Session 6: Feedback
Session 7: Simulation education
Session 8: The struggling trainee
Observed teaching sessions
Session 9: Wrap up and summary

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Appendices *continued*

Appendix B. One Rubric Used to Assess Medical Education Teaching in a Variety of Settings

Global[a] Peer Observation of Teaching Form	
Observer or Faculty Member	Observations, Notes, Quotes
Learning Environment	
Gets to know the learners	
Identifies the learners' needs	
Demonstrates enthusiasm for teaching	
Builds on learners' knowledge and skill-base	
Models and encourages "thinking out loud"	
Encourages learners to voice uncertainty	
Teaches to the range of learner levels	
Learner Engagement	
Fosters active learning by asking open-ended, analytic, or evaluative questions	
Encourages learners to share information and experiences	
Elicits learners' thought processes	
Encourages learners to ask questions and discuss issues	
Encourages learners to pursue and critically appraise the literature	
Session Management	
Communicates clear goals and agenda for session	
Modifies session plans in response to learners' needs	
Organizes the session appropriately	
Keeps track of time	
Uses chalkboard or AV effectively	
Teaching Methods	
Reasons through issues of medical uncertainty and provides necessary direction	
Challenges learners' assumptions and explores their reasoning	
Highlights key teaching points	
Discusses complex issues in concise and logical manner	
Emphasizes understanding of concepts	
Models and encourages critical thinking	
Cites examples from the literature	
Concludes session with summary of key teaching points	
Additional Comments:	

[a] The intent of this global form is that it may be used for various and diverse teaching venues. It is based on material from Newman et al[8] and Tchekmedyian et al.[9]

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Appendices *continued*

Appendix C. Anonymous Online Surveys Distributed During and/or at the End of the Clinician-Educator Track Program

Academic Year 2020-2021, Anonymous Survey 1 (the first 3 questions are from Brookfield's The Classroom Critical Incident Questionnaire):[14]

1. At what moment in the first 3 sessions did you feel most engaged with what was happening?
2. At what moment in the first 3 sessions were you most distanced from what was happening?
3. What about the sessions so far surprised you the most? (This could be about your own reactions to what went on, something that someone said, or anything else that occurred).
4. Please rank the readings for sessions 1 to 3 in order of helpfulness/relevance/interest (1 being the most interesting).
5. What were your thoughts on doing the Kolb Learning Style Inventory?
6. Do you have any feedback for how the sessions are scheduled?
7. Do you have any feedback for how the sessions are facilitated?
8. How would you feel about doing a 10-minute teaching session for the group and being given feedback by 1 to 2 facilitators and/or the group? Would you prefer to be observed only by 1 to 2 facilitators? Would you appreciate the option to opt out of an observed teaching session?
9. Would you like to continue to meet in person, meet via Zoom, or postpone if there is another COVID surge?
10. Do you have any other thoughts you would like to share?

Academic Year 2020-2021, Anonymous Survey 2 (the first three questions are from Brookfield's The Classroom Critical Incident Questionnaire):[14]

1. At what moment in the last several sessions did you feel most engaged with what was happening?
2. At what moment in the last several sessions were you most distanced from what was happening?
3. What about the sessions overall surprised you the most? (This could be about your own reactions to what went on, something that someone said, or anything else that occurred).
4. Please rank the readings for sessions 4 to 7 in order of helpfulness/relevance/interest (1 being the most interesting)
5. What were your thoughts on the observed teaching session?
6. Do you have any feedback for how the sessions are scheduled?
7. Do you have any feedback for how the sessions are facilitated?
8. Is there anything you think should be kept or changed for the course next year? Any topics you wish had been covered or ones that should not be covered next year?
9. Do you feel that your teaching skills have improved because of this course? If so, how?
10. Are you satisfied with this course overall? Why or why not?
11. Do you have any other thoughts you would like to share?

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Appendices *continued*

Academic Year 2021-2022, Modified Anonymous Survey (the first question is adapted from Brookfield's The Classroom Critical Incident Questionnaire):[14]

1. What about the Clinician-Educator Track sessions overall surprised you the most? (This could be about your own reactions to what went on, something someone said, or anything else that occurred).
2. What were your thoughts on the observed teaching session?
3. Do you have any feedback for how the Clinician-Educator Track sessions are scheduled?
4. Do you have any feedback for how the Clinician-Educator Track sessions are facilitated?
5. Is there anything you think should be kept or changed for the course next year? Any topics you wish had been covered or ones that should not be covered next year?
6. Do you feel that your teaching skills have improved because of this course? If so, how?
7. Are you satisfied with this course overall? Why or why not?
8. Would you be interested in a second, more advanced year of the Clinician-Educator Track? Please explain why or why not.
9. Do you have any other thoughts you would like to share?