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Introducing Trainees to Medical Education Activities and Opportunities for Educational Scholarship

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Abstract

Introduction: The growth of medical schools, faculty attrition, and reports of student disinterest in academia all stress the need to cultivate the next generation of academic physicians. Because medical educators serve as the largest segment of faculty, heightening diverse students' awareness of opportunities to engage in various educational roles and scholarship may help them consider future academic positions. **Methods:** We implemented a workshop utilizing didactics and a small-group case discussion to help students learn how to (1) define educational scholarship and portfolios, (2) recognize the value of educational scholarship, and (3) identify how to get started with educational scholarship. **Results:** One hundred and fifty-six learners participated in the workshop at 11 regional conferences. Of learners from conferences 1-6, 100% (69/69) responded to the statement "The workshop INCREASED my confidence in achieving the following - Performing educational scholarship." Among these learners, 39 (56.5%) strongly agreed and 20 (29.0%) agreed with this statement. Of learners from conferences 7-11, 98.9% (86/87) responded to the question "How much confidence do you have in your ability to succeed along a clinician-educator track and publish your education-related work?" Using a paired-samples *t* test, a statistically significant increase in learner confidence was noted ($p < .01$) before and after the workshop. **Discussion:** Diverse learners appreciated a heightened awareness of educational roles and scholarship, which may help them gain confidence, interest, and experience in becoming future medical educators.

Keywords

Clinician-Educator, Educational Scholarship, Medical Residency

Appendices

- BNGAP Ed. Scholarship Presentation.pptx
- BNGAP Ed. Scholarship Facilitator Guide.docx
- Habits of Successful Scholars.docx
- BNGAP Ed. Scholarship Case Scenarios.docx
- BNGAP Worksheet for Ed. Scholarship Scenarios 1 and 2.docx
- BNGAP Ed. Scholarship Evaluation Form.docx
- BNGAP Train the Trainer Workshop Video.mp4

All appendices are peer reviewed as integral parts of the Original Publication.

Educational Objectives

By the end of this workshop, learners will be able to:

1. Define educational scholarship and an educational portfolio.
2. Recognize the value of scholarship in education.
3. Identify how to get started with educational scholarship.

Introduction

Medical schools and residency programs are charged with raising their trainees' awareness of career opportunities in the areas of clinical, academic, and public service. The recent expansion of medical schools, high faculty attrition, and reports of both medical students' and residents' disinterest in academia all raise concern about a significant shortage of academic physicians in the future.¹⁻⁴ Moreover, whereas student interest groups and research experiences provide trainees with an appreciation of the clinical and research pathways in academia, trainees have fewer opportunities to learn about the medical educator pathway.⁵

The published literature indicates that early academic career awareness and involvement in scholarship can positively influence a trainee's interest in academia.⁶⁻⁸ Teaching experience and having a role model or mentor have been shown to positively influence interest in an academic career.⁹ In a retrospective study of medical school graduates, it was found that those who reported a career-setting preference of

full-time university faculty on the AAMC's Graduation Questionnaire or who had authored a research paper during medical school were more likely to gain a full-time faculty appointment.⁷ In summary, trainees who have the opportunity to meet role models in medical education, who are able to engage in educational activities, and who transform their work into educational scholarship may be more likely than their counterparts to pursue the medical educator track.

Trainees have a number of opportunities to interact with role models and gain educator experience. Students may serve on their institution's curriculum committee, develop an elective, take part in a summer medical education program, or participate in their school's educator scholarly track.⁵ There are also published resources to help medical students, residents, and faculty develop educational research projects. Such resources include instructions on how to write a scientific abstract, conduct a literature review, develop questions for an educational research project, publish a scientific manuscript, and negotiate authorship.¹⁰⁻¹⁶ However, instruction to help trainees consider the relevance of completing educational scholarship during medical school and residency is needed. To raise awareness of how trainees' current activities can be transformed into educational scholarship, formative steps towards a medical educator career need to be provided. Such exposure may better prepare trainees when selecting educator activities and discussing with supervisors or mentors opportunities to present or publish educational content.

In the winter of 2015, the Building the Next Generation of Academic Physicians Initiative (BNGAP) developed a set of workshops to heighten medical student and resident awareness of academic careers. A BNGAP curriculum committee, consisting of 25 diverse trainees and educational leaders from across the country, helped to create and/or review the workshops. This publication focuses on describing the activities of medical educators, as well as opportunities to transform activities into scholarship. It was constructed by authors who have experience in presenting and publishing educational content. The six-step Kern model¹⁷ was applied by the curriculum committee members as a framework for the design, implementation, and evaluation of these workshops, as indicated below:

1. *Problem identification and general needs assessment*: performed via literature review and input from trainees and faculty. Lack of instruction to raise awareness around educational scholarship was identified as an issue.
2. *Targeted needs assessment*: assessed via a mixed-methods study of student perceptions of academic medicine careers, facilitator roles, barriers to academic career intent, and preferences regarding career-development activities.¹⁸⁻²³
3. *Goals and objectives*: Based on the literature review, results of the mixed-methods study, and committee member input, the overall goal of the workshop was to raise awareness and knowledge of educational scholarship. Objectives included defining educational scholarship and an educational portfolio, recognizing the value of scholarship, and identifying how to get started with educational scholarship.
4. *Educational strategies*: To stimulate an active learning environment, the material was presented via an interactive workshop incorporating a case-based small-group discussion. Small groups have a positive effect on learning performance by promoting learner motivation and authenticity and are effective because they encourage active participation, purposeful activity, and face-to-face contact.^{24,25}
5. *Implementation*: The 1.5-hour workshop was administered during an academic medicine career-development conference for medical students and residents. Participants and speakers were from the host medical school or from nearby academic health centers. This venue was chosen because it afforded students opportunities for career-specific learning, skill development, positive learning environments, and networking with individuals beyond their academic health center.
6. *Evaluation and feedback*: Each conference participant was asked to complete a questionnaire and evaluate the workshop design and content.

This workshop has been implemented in the context of a larger curriculum but could also be implemented as a stand-alone resource. The curriculum includes core concepts regarding educator activities and how to transform work into scholarship that can be utilized across health professions (e.g., dental, nursing, physician assistant). If the workshop is adapted, we recommend using speakers and cases that resonate with the respective audience. At a minimum, we are hopeful that workshop participants will experience transformative learning through questioning their own assumptions and beliefs about a medical educator career in academic medicine.

Methods

This workshop features two primary educational strategies: (1) an interactive didactic component to introduce students to basic knowledge and concepts related to a career as a medical educator and to the process of transforming educational work into scholarship and (2) a small-group learning activity in which participants apply newly acquired knowledge in discussing mock cases of common student projects. The cases are meant to provide personal context and highlight how to both categorize educator activities and transform projects into educational scholarship (i.e., publication or presentation). Each session should be restricted to no more than 40 medical students/residents to create a safe space to discuss personal perspectives, professional ambitions, and perceived challenges in respect to their future medical education careers.

In preparation for this workshop, facilitators should review the presentation (Appendix A), slide instructions (Appendix B), case scenarios (Appendix D), and worksheet (Appendix E). Since frequent feedback centered around the recommendation that an instructional video would be useful to supplement the slides, one has been created and is contained in Appendix G. Reviewing the materials should take 1-2 hours, and it is highly recommended that facilitators conduct a practice session. If multiple presenters are collaborating as session leads, a phone conversation and brief face-to-face meeting should be conducted before the session to discuss what roles/sections each presenter will handle. It may work best if one person serves as the main moderator.

This workshop can be presented to medical students and/or residents (and even junior faculty). The ideal facilitator is a faculty member with an MD or DO degree who is on the medical educator track. One to two facilitators can implement the workshop. With two facilitators, we recommend dividing the different sections of the presentation equally in an integrative fashion. The optimal timing for this workshop is 1.5 hours; however, it can be tailored based on resources. For example, the workshop can be shortened to 1 hour by having the facilitator review the cases rather than using them as a small-group learning experience.

Workshop Content by Appendix

Appendix A. BNGAP Educational Scholarship Presentation: The flow and content of the workshop are featured in this 37-slide PowerPoint presentation. The presentation outlines the core content for learners, including key terms and definitions, concepts, and best practices to consider in transforming educational work into scholarship. The presentation also contains case scenarios where participants can apply what has been outlined in the preceding slides. Slide instructions have been created to ensure consistent implementation of the workshop across sites. One challenge to presenting is balancing the educational needs of the trainees with their varied awareness of the role of medical educators.

Appendix B. BNGAP Educational Scholarship Facilitator Guide: This document gives step-by-step instructions for conducting the workshop along with notes for each slide. Facilitators are encouraged to include their own personal experiences for authenticity. For example, slide 36 features an abstract from lead coauthor Renee Williams on an educational project she implemented in fellowship. This can be replaced by the facilitator's own choice of publication.

Appendix C. Habits of Successful Scholars: This handout for participants provides important habits to adopt to be a successful scholar.²⁶ It should be distributed to each participant at the beginning of the workshop and can be discussed by and/or personalized to the audience. For example, the handout may be edited to focus on which step is the biggest barrier or seems the hardest to accomplish.

Appendix D. BNGAP Educational Scholarship Case Scenarios: This document includes two case scenarios for the facilitator to introduce during slides 18 and 19, which describe educational projects implemented by Robert and Joanne, two hypothetical medical students. These cases are analyzed during the 15-minute small-group segment. Breaking participants up into small groups (e.g., medical students and residents) for the case scenarios may result in a richer discussion for participants. Each small group should optimally consist of two to four participants. The two cases are randomly distributed amongst the groups. As an alternative, a group may choose to use its own real case or current project for this exercise.

Appendix E. BNGAP Worksheet for Educational Scholarship Scenarios 1 and 2: This worksheet lists five educator categories (teaching, curriculum development, mentoring and advising, educational leadership, and learning assessment). Participants are asked to use this tool in deconstructing the cases and in categorizing the different activities described in each case. The small groups are then asked to once again form a large group and discuss potential next steps in each case and to identify how Robert and Joanne (or a real case provided by the group) can turn their activities into scholarship.

Appendix F. BNGAP Educational Scholarship Evaluation Form: The questions on this evaluation form evolved over the course of the implementation of the workshop at 11 different regional conferences held between September 2015 and December 2016. Workshop participants were asked to answer a select set of questions prior to and/or after the workshop. Depending on which conference was attended, the participants were asked to answer different questions.

Specifically, participants at conferences 1-11 were asked after the workshop to answer a number of questions using a 5-point Likert scale (1 = *Strongly Disagree*, 5 = *Strongly Agree*). Participants used this scale to indicate “To what extent do you agree that the workshop learning objectives [stated above] were met.” Participants then evaluated each objective. Participants were also asked open-ended questions about what they liked about the workshop and what they would improve. In addition, participants at conferences 1-6 were asked after the workshop to respond using the same Likert scale to the statement “The workshop increased my confidence in achieving the following - Performing educational scholarship.” Finally, using a similar Likert scale (0 = *No Confidence*, 4 = *Complete Confidence*), participants at conferences 7-11 were asked to answer the following two questions pre- and postsession: “How much confidence do you have in your ability to (1) succeed along a clinician-education track, and (2) publish your education-related work?” These latter two questions were added to better assess student self-efficacy as related to educational scholarship. It should be noted that all of the questions are now included in Appendix F. The presession evaluation regarding confidence should be administered before the start of the session. The postsession assessment of confidence and the overall session evaluation should be administered at the end of the session.

Appendix G. Train the Trainer Workshop Video: This video is an adjunct to the discussion guide to help visual and audio learners gain an appreciation of how to implement this workshop. This 13-minute video features Dr. Renee Williams, lead coauthor of this workshop, describing the intent of the slides, how to implement the cases, and how she provided her own anecdotes and experiences.

Materials

Additional materials needed to administer this workshop include pens, audiovisual equipment to show the PowerPoint presentation, chairs and tables to support five to seven participants per table, flip chart and markers to note the small-group comments regarding the cases, and printed copies of the case scenario handouts, evaluation form, and habits of successful scholars form.

Results

At the 11 regional conferences, this workshop was presented by a total of 19 facilitators (seven single presenters and six pairs of cofacilitators). Individuals at various stages in their careers have served as presenters, with one being a resident, 13 being assistant professors, three being associate professors, and two being full professors. All facilitators were on the medical educator track and/or had publications related to medical education.

One hundred and fifty-six trainees participated in the workshop. The 156 respondents were a diverse sample, with 86 (55.1%) identifying as women; 30 (19.2%) as lesbian, gay, bisexual, or queer; 65 (41.7%) as Hispanic/Latino; 42 (26.9%) as white; 36 (23.1%) as African-American/black; 27 (17.3%) as Asian; and three (1.9%) as American Indian. The 142 medical student and 14 resident respondents were based in 21 different US states, Washington, DC, and Puerto Rico.

Of students who attended conferences 1-11, 90.4% (141/156) responded to the question “To what extent do you agree that the workshop learning objectives were met?” Their responses are summarized in [Table 1](#).

Table 1. Conference 1-11 Attendees’ Responses to Evaluation ^a (*n* = 141)

Objective	Strongly Agree		Agree		Neither Agree nor Disagree	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Define educational scholarship and educational portfolio.	105	74.4	31	22	5	3.6
Recognize the value of scholarship.	113	80.2	24	17	4	2.8
Identify how to get started with educational scholarship.	96	68	40	28.4	5	3.6

^a“To what extent do you agree that workshop learning objectives were met?”

Of learners from conferences 1-6, 100% (69/69) responded to the question “The workshop INCREASED my confidence in achieving the following - Performing educational scholarship.” Thirty-nine (56.5%) strongly agreed and 20 (29.0%) agreed with this statement.

Of learners from conferences 7-11, 98.9% (86/87) responded to the question “How much confidence do you have in your ability to: (a) succeed along a clinician-educator track, and (b) publish your education-related work?” Their responses are summarized in [Table 2](#).

Table 2. Conference 7-11 Attendees’ Responses to Evaluation (*n* = 86)

Question ^a	<i>M</i>		<i>p</i> ^b
	Before Workshop	After Workshop	
How much confidence do you have in your ability to:			
Succeed along a clinician-educator track?	2.62	3.37	0.001
Publish your education-related work?	2.03	3.01	0.001

^aLikert-type scale (0 = No Confidence, 4 = Complete Confidence).

^bPaired-samples *t* test.

Comments for the workshop were overall positive, with a few suggestions for improvement. Notable examples included the following:

- “Helpful to identify the importance of academic medicine scholarship. Good case discussion, interesting information was shared about scholarship that I didn’t know before especially concerning curriculum. Could improve by time management somewhat.”
- “Improvement: One-on-one consultations of how to take your work towards educational scholarship.”
- “Very informative. I had no idea you could take the ‘simple’ things you love and turn it into publications for scholarship.”
- “Provided resources on where to find resources on building educational portfolios and gave advice on where to begin which was very helpful. To improve, make it longer!”
- “Quantified the various aspects of educational development.”

- “Fostered my curiosity on education and how I can incorporate that into my medical career.”
- “This was a great workshop to break down scholarship. There were so many fantastic examples. The only thing that would make it better would be to take time to think about one’s own activities/experiences and find out how it could become scholarship.”
- “This was a great workshop and is inspiring for me to invest in educational scholarship. I also feel more empowered to do more scholarly activities. I didn’t realize how many things can be turned into something scholarly.”
- “Great advice on how to turn our medical school involvement into educational scholarship. Very encouraging and eye opening.”
- “The organization of educational scholarships was very helpful. It gave me the tools necessary to organize my extracurricular activities in a way so that I can publish and present my work publicly.”
- “I liked how this group was small and helped with interaction. We only had about 15 people so it made for good interaction.”
- “I have more ideas for research opportunities now that I attended.”
- “Learned the importance of educational scholarship, how doing it can effectively and efficiently advance your career and the importance of disseminating and documenting.”
- “Really taught me how to categorize what I already do and make it presentable.”
- “A great workshop for flushing out what ways to translate out actual work into educational scholarship. The term scholarship was a mystery to me so this was a great way to gain a better understanding.”
- “EXCELLENT workshop. Changed the way I look at scholarship from big picture to specific activities.”

Per evaluation and feedback, this workshop accomplished its goals and objectives and was highly valued by the participants. This was evidenced by the fact that over 90% of learners strongly agreed or agreed that each of the objectives was met and also by a statistically significant increase in a subset of students’ perceived confidence in their ability to both be successful in a clinician-educator track and publish their education-related work. Of particular note, 100% of the residents reported that they strongly agreed or agreed that each of the objectives were met. Based on the open-ended comments, participants considered the workshop “eye-opening,” “encouraging,” “great advice,” and “very helpful” in transforming educational work to scholarship.

Discussion

Utilizing the six-step Kern model, we implemented an interactive workshop to create an active learning environment with the goal of increasing awareness and knowledge of educational scholarship.¹⁷ This workshop incorporates resources currently available within the medical education literature, such as through MedEdPORTAL. A significant portion of the current literature focuses on one aspect of the medical educator pathway. Notable in our workshop is the inclusion of the various steps needed to be successful as a clinician-educator. By giving our trainees a broad overview of the pathway, we are empowering them at an early stage in their career with a heightened sense of awareness, knowledge, and skills required for success.

Particular consideration should be given in the selection of facilitators. Facilitators who are affirming, inspirational, and engaging have the potential to be viewed as role models and can positively influence interest in academia.^{5,9} We worked with conference host leaders to identify facilitators who had received accolades from their institutional trainees for excellence in teaching and had a track record of completing presentations and publications with students as coauthors. Although these attributes are not necessary for a facilitator, they do further substantiate the facilitator’s identity as a role model and experienced mentor who may assist in guiding trainees through the scholarship process.

Additionally, if targeting trainees of a specific demographic group, such as those underrepresented or invisible in academia (e.g., women, LGBT-identified individuals, or underrepresented racial and ethnic

minorities), consideration should be given to identifying a facilitator of the same identity. The literature indicates that these groups lack and desire concordant role models and mentors, especially when considering academic careers.¹⁸⁻²³

The presentation can be delivered to an audience larger than 40 individuals; however, it would be difficult to have a robust discourse of the case scenarios and ensure a safe space for trainees to explore and share their own personal and professional values/alignments with a medical educator track. This latter point is particularly salient for individuals from groups underrepresented or invisible in medicine because of reports that some institutional climates value or support these groups in their professional development less than others.^{27,28} When implementing the workshop on medical school campuses, facilitators should be mindful of this.

Based on the evaluations, we were able to identify some limitations with the workshop. The workshop does not afford participants sufficient opportunity to explore their current educational projects. However, a Q&A component may provide participants with some time to gather the facilitator's recommendations regarding their educational work. Offering one-on-one consultation time (15-20 minutes) with facilitators for interested participants following the workshop may provide opportunities for personalized guidance. This may be helpful and feasible for smaller groups. Although the workshop is slated for 1.5 hours, an audience of more than 40 students may require additional time to allow all students the opportunity to participate in the case discussions. In such instances, presenters should consider reviewing the cases, rather than having the students discuss them in small groups, to save time. An additional limitation of the evaluations is a selection bias since only those attendees interested in the topic attended this specific workshop. Finally, we measured learner satisfaction using self-report; however, the impact of this workshop on scholarly productivity of participants, in either the short or the long term, has not been assessed.

Future plans include expanding this workshop into other health care–related fields. Specifically, we are currently working with educational leaders to modify the workshop for dental students and to create a workshop for pre–health graduate students who exhibit an early interest in educational work.

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Disclosures

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Ethical Approval

This publication contains data obtained from human subjects and received ethical approval.

References

1. Vetter MH, Carter M. Differences between first and fourth year medical students' interest in pursuing careers in academic medicine. *Int J Med Educ*. 2016;7:154-157. <https://doi.org/10.5116/ijme.571b.af3d>
2. Jeffe DB, Andriole DA, Hageman HL, Whelan AJ. Reaping what we sow: the emerging academic medicine workforce. *J Natl Med Assoc*. 2008;100(9):1026-1035. [https://doi.org/10.1016/S0027-9684\(15\)31439-5](https://doi.org/10.1016/S0027-9684(15)31439-5)
3. Straus SE, Straus C, Tzanetos K; International Campaign to Revitalize Academic Medicine. Career choice in academic medicine. *J Gen Intern Med*. 2006;21(12):1222-1229. <https://doi.org/10.1111/j.1525-1497.2006.00599.x>
4. Neacy K, Stern SA, Kim HM, Dronen SC. Resident perception of academic skills training and impact on academic career choice. *Acad Emerg Med*. 2000;7(12):1408-1415. <https://doi.org/10.1111/j.1553-2712.2000.tb00499.x>
5. Blatt B, Plack M, Suzuki M, Arepalli S, Schroth S, Stagnaro-Green A. Introducing medical students to careers in medical education: the student track at an annual medical education conference. *Acad Med*. 2013;88(8):1095-1098. <https://doi.org/10.1097/ACM.0b013e31829a3a33>
6. Bakken LL, Byars-Winston A, Wang M-F. Viewing clinical research career development through the lens of social cognitive career theory. *Adv Health Sci Educ Theory Pract*. 2006;11(1):91-110. <https://doi.org/10.1007/s10459-005-3138-y>
7. Andriole DA, Jeffe DB, Hageman HL, et al. Variables associated with full-time faculty appointment among contemporary U.S. medical school graduates: implications for academic medicine workforce diversity. *Acad Med*. 2010;85(7):1250-1257. <https://doi.org/10.1097/ACM.0b013e3181e10159>
8. Andriole DA, Jeffe DB. The road to an academic medicine career: a national cohort study of male and female U.S. medical graduates. *Acad Med*. 2012;87(12):1722-1733. <https://doi.org/10.1097/ACM.0b013e318271e57b>
9. Greenberg RB, Ziegler CH, Borges NJ, Elam CL, Stratton TD, Woods S. Medical student interest in academic medical careers: a multi-institutional study. *Perspect Med Educ*. 2013;2(5):298-316. <https://doi.org/10.1007/s40037-013-0051-6>
10. Lebeau R. Guiding educational research projects: activity-based workshops on writing a literature review and developing research questions. *MedEdPORTAL Publications*. 2015;11:10143. http://dx.doi.org/10.15766/mep_2374-8265.10143
11. Swanberg S, Dereski M. Structured abstracts: best practices in writing and reviewing abstracts for publication and presentation. *MedEdPORTAL Publications*. 2014;10:9908. http://dx.doi.org/10.15766/mep_2374-8265.9908
12. Onishi K, Karimi DP, Hata J, et al. The Badges Program: a self-directed learning guide for residents for conducting research and a successful peer-reviewed publication. *MedEdPORTAL Publications*. 2016;12:10443. http://dx.doi.org/10.15766/mep_2374-8265.10443
13. Cahn P, Benjamin E. Academic writing workshop for medical school faculty. *MedEdPORTAL Publications*. 2012;8:9289. http://dx.doi.org/10.15766/mep_2374-8265.9289
14. Moore K. A medical writing curriculum for internal medicine residents: using adult learning theory to teach formal medical writing and publication of case reports. *MedEdPORTAL Publications*. 2015;11:10073. http://dx.doi.org/10.15766/mep_2374-8265.10073
15. Pories S, Bard T, Bell S, et al. A writer's toolkit. *MedEdPORTAL Publications*. 2012;8:9238. http://dx.doi.org/10.15766/mep_2374-8265.9238
16. O'Sullivan P, Chauvin S, Wolf F, Richardson D, Bianco M. Authorship issues in publishing and career development workshop. *MedEdPORTAL Publications*. 2013;9:9309. http://dx.doi.org/10.15766/mep_2374-8265.9309
17. Thomas PA, Kern DE, Hughes MT, Chen BY, eds. *Curriculum Development for Medical Education: A Six-Step Approach*. 3rd ed. Baltimore, MD: Johns Hopkins University Press; 2016.
18. Sánchez JP, Peters L, Lee-Rey E, et al. Racial and ethnic minority medical students' perceptions of and interest in careers in academic medicine. *Acad Med*. 2013;88(9):1299-1307. <https://doi.org/10.1097/ACM.0b013e31829f87a7>
19. Yehia BR, Cronholm PF, Wilson N, et al. Mentorship and pursuit of academic medicine careers: a mixed methods study of residents from diverse backgrounds. *BMC Med Educ*. 2014;14:26. <https://doi.org/10.1186/1472-6920-14-26>
20. Sánchez NF, Rankin S, Callahan E, et al. LGBT trainee and health professional perspectives on academic careers—facilitators and challenges. *LGBT Health*. 2015;2(4):346-356. <https://doi.org/10.1089/lgbt.2015.0024>
21. Sánchez JP, Poll-Hunter N, Stern N, Garcia AN, Brewster C. Balancing two cultures: American Indian/Alaska Native medical students' perceptions of academic medicine careers. *J Community Health*. 2016;41(4):871-880. <https://doi.org/10.1007/s10900-016-0166-x>
22. Sanchez JP, Gameda M, Guiliames CE, et al. Interventions to increase and maintain diverse medical student interest in academic careers. Oral presentation at: GDI/GSA/OSR National Meeting; April 26-29, 2014; San Diego, CA.
23. Lu F, Yee LL, An C, Zhang L. Increasing Asian inclusion in academic medicine and leadership [webinar]. Association of American Medical Colleges Web site. <https://www.aamc.org/initiatives/diversity/learningseries/452920/increasingasianinclusionwebinar.html>. Accessed July 28, 2016.

24. van Blankenstein FM, Dolmans DHJM, van der Vleuten CPM, Schmidt HG. Which cognitive processes support learning during small-group discussion? The role of providing explanations and listening to others. *Instr Sci.* 2011;39(2):189-204. <https://doi.org/10.1007/s11251-009-9124-7>
 25. Newble D, Cannon R. *A Handbook for Medical Teachers*. 4th ed. Norwell, MA; Kluwer Academic Publishers; 2001.
 26. Uijtdehaage S, Kalishman S, O'Sullivan P, Robins L. How to succeed as a medical education scholar: identifying your individual strategy and creating a roadmap for scholarship. *MedEdPORTAL Publications.* 2013;9:9472. https://doi.org/10.15766/mep_2374-8265.9472
 27. Mahoney MR, Wilson E, Odom KL, Flowers L, Adler SR. Minority faculty voices on diversity in academic medicine: perspectives from one school. *Acad Med.* 2008;83(8):781-786. <https://doi.org/10.1097/ACM.0b013e31817ec002>
 28. Sánchez JP, Castillo-Page L, Spencer DJ, et al. Commentary: the Building the Next Generation of Academic Physicians Initiative: engaging medical students and residents. *Acad Med.* 2011;86(8):928-931. <https://doi.org/10.1097/ACM.0b013e31822220df>
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