

# Demonstrating Your Work: A Guide to Educators' Portfolios for Graduate Medical Educators

Ryanne J. Mayersak, MD, MS  
Lalena M. Yarris, MD, MCR  
Rebecca C. Tuttle, MD, MS  
David C. Jones, MD, MCR

Anna M. Nelson, MD, PhD  
Rachel R. Bengtzen, MD  
Joshua G. Kornegay, MD  
Holly A. Caretta-Weyer, MD, MHPE

**G**raduate medical educators may struggle to effectively document their contributions in teaching, education scholarship, leadership, and service in a way that accurately represents their work and facilitates timely promotion. Although it has been decades since Boyer and Glassick proposed a definition for scholarship that extended beyond research, criteria for excellence, and a differentiation between scholarship of teaching and scholarly teaching activities, institutions have variably incorporated these principles into formal promotion and tenure processes.<sup>1,2</sup> In addition to a traditional curriculum vitae (CV), educators should also develop and maintain an educator's portfolio (EP), which complements the CV and expands upon activities such as teaching, mentoring, academic administration, educational program development and implementation, service, and leadership.<sup>3-6</sup> EPs help make education work explicit for promotions committees, and they can also promote educational reflection, evaluation and reassessment, professional development, and goal setting.<sup>5,7-9</sup> This perspective provides evidence-based recommendations and practical tips for graduate medical educators seeking to develop and maintain EPs.

## Getting Started

Developing an EP may seem daunting; however, educators may start by reflecting on their professional identity and collecting data to include in the EP. The TABLE demonstrates a general approach to creating and maintaining an EP, along with resources. Not all steps may be necessary, depending on the educator's role and institution.

Next, educators may choose an EP template that works for them, which may be institution-preferred or selected from the literature.<sup>10-13</sup> The Educator

Portfolio Template from the Academic Pediatric Association (APA) is one published example that has been thoughtfully developed, tested, and revised, and may be easily adapted to meet graduate medical educators' needs.<sup>10</sup> The online supplementary data illustrate exemplar sections of the APA template as applied to a hypothetical case.

Educators can start by filling in their preferred template, adding contributions at regularly scheduled intervals, reviewing a senior mentor's portfolio for content and format ideas, and soliciting iterative feedback and guidance on their own EPs. Easily accessible online software, including WordPress, Wix, Weebly, LiveText (by Watermark), and Google Sites, can also be used for electronic portfolios.<sup>5</sup>

## Conveying Quantity and Quality of Educational Contributions

The EP is a place for teaching philosophies, educational works, and achievements.<sup>14</sup> Demonstrate the "quantity" and "quality" of your excellence in detailed tables or appendices describing the *who*, *what*, *where*, and *how* of your scholarly approach, educational endeavors, and their associated outcomes (online supplementary data).

To support the quantity of your work, provide further evidence in an appendix where "representative" and "illustrative" examples of teaching materials are included (eg, syllabi, lecture outlines, visual materials, teaching videos, or links to online content). After developing goals and measurable objectives to align with your teaching philosophy, include supportive, concrete examples to document the quality of your endeavors. Incorporate learner evaluations, internal peer review of specific teaching activities, invitations to teach outside of your institution, chair evaluations, teaching awards, and other related metrics of success.<sup>15</sup>

## Engaging With the Education Community

Engagement with the education community is an important component of scholarship and includes

DOI: <http://dx.doi.org/10.4300/JGME-D-21-00375.1>

*Editor's Note: The online version of this article contains sample sections of an educator's portfolio for a hypothetical graduate medical educator.*

TABLE

Suggested Steps to Preparing an Educator's Portfolio

Steps	Examples and Resources
Articulate your teaching philosophy	<ul style="list-style-type: none"> <li>▪ Incorporation of education theory<sup>16</sup></li> <li>▪ Utilizing a guide such as the Teaching Perspectives Inventory<sup>17</sup></li> </ul>
Develop measurable goals and objectives	<ul style="list-style-type: none"> <li>▪ SMART goals<sup>18</sup></li> <li>▪ Personal development plan spanning current and future goals<sup>9,19</sup></li> </ul>
Design mechanisms to evaluate achievement of objectives	<ul style="list-style-type: none"> <li>▪ Adoption of curricula and assessment tools beyond a single institution or context<sup>4,20</sup></li> <li>▪ Tracking mentee career progress<sup>15</sup></li> <li>▪ Local, regional, or national leadership positions<sup>4,21</sup></li> </ul>
Gather teaching effectiveness data	<ul style="list-style-type: none"> <li>▪ Learner evaluation data<sup>4,20,22</sup></li> <li>▪ Peer review of teaching<sup>4,22</sup></li> <li>▪ Invited grand rounds or teaching sessions<sup>4,20,22</sup></li> <li>▪ Yearly chair evaluations<sup>4</sup></li> <li>▪ Teaching and mentoring awards<sup>4,20,22</sup></li> </ul>
Categorize, analyze, organize, and present your data	<ul style="list-style-type: none"> <li>▪ Keeping prominently displayed on desktop and update frequently</li> <li>▪ Using electronic portfolio options<sup>23,24</sup></li> <li>▪ Sample templates to guide categories<sup>4,19,20,22</sup></li> </ul>
Evaluate your teaching scholarship	<ul style="list-style-type: none"> <li>▪ Iterations to courses and lectures based on participant evaluations<sup>22</sup></li> <li>▪ Evaluation of implemented curricula<sup>20</sup></li> <li>▪ Self-assessment and reflection<sup>19,25</sup></li> <li>▪ Digital scholarship with alt metrics including views and downloads<sup>26</sup></li> </ul>
Apply new approaches and technologies <sup>9</sup>	<ul style="list-style-type: none"> <li>▪ Gamification<sup>27</sup></li> <li>▪ Innovations in teaching remotely<sup>28</sup></li> <li>▪ Design-based approaches<sup>29</sup></li> </ul>

dissemination of educational materials or innovations, peer review, revising work based on evaluation, and translation of your work into other settings. Publications listed on the EP should relate directly to teaching and education and may include primary original research, book chapters, textbooks, editorials, formal presentations, educational software, or multimedia materials. Non-peer-reviewed materials should have a clear description of their utility and evaluations of effectiveness.<sup>5</sup> These may include digital scholarship such as blog posts, podcasts, or a robust social media presence, all of which should document engagement as part of the EP. Additionally, receipt of education and teaching awards also demonstrates engagement with and recognition by the global education community. Emerging virtual communities of practice may provide opportunities for junior educators to share EP formats, receive senior faculty mentoring on EP creation and maintenance, and obtain external EP review prior to pursuing promotion.<sup>30</sup>

## Documenting Curriculum Development

Most educators are involved in curriculum development, but they may miss opportunities to translate curricular work into scholarship. At the beginning of the curriculum development process, start planning for scholarship by reflecting on what knowledge the project adds to the existing literature, considering the target audience, contacting the institutional review board, and working to develop methodologic rigor. Curriculum development can include developing or revising courses or clerkships, composing patient education materials, or developing and implementing new teaching methods. It also includes innovative approaches to learner assessment and designing assessment and evaluation instruments.<sup>15</sup>

It is important to address quantity, quality, and engagement in curriculum development entries on the EP. Document time investment, both in preparation and instruction delivery. Describe the learners who participated. Demonstrate how the curriculum was

shared with a community of practice for program evaluation and subsequently revised, as well as what were the outcomes of the intervention. Supporting evidence of dissemination may include distributed course materials, presentations, and publications and should be included in your appendices.<sup>21</sup>

### **Demonstrating Mentorship, Educational Administration, and Leadership**

EPs should also include mentoring, advising, and educational administrative and leadership contributions. Mentoring activities include advising in research, career planning, or community projects and can involve a broad audience of students, residents, or faculty. Describe mentoring activities, emphasizing high-impact and longitudinal interaction with advisees. Include a description of the mentoring activity, meeting frequency, learners mentored (including their rank, projects, hours, and project outcomes), service as a faculty advisor, professional development facilitation, attendance at professional meetings related to teaching, faculty development workshops, and future mentee career trajectories (online supplementary data).<sup>15</sup> Sometimes including statements of impact from learners as supplementary data can be helpful.<sup>21</sup>

Educational administration and leadership activities may include course directorship, local, regional, or national educational committee service, education program administration, or project or event leadership positions. Documentation related to these activities, such as conference schedules, lecture evaluations, evidence of committee accomplishments, and other materials, should be included in the appendix of the EP.

### **Disseminating Scholarship to the Greater Scholarly Community**

Effective dissemination of work is an important component of scholarship, is valued in the promotions process, and should be reflected in the EP. Everyday activities can be translated into scholarship. For example, a vexing educational problem can lead to the development and implementation of an educational innovation and participating in educational committees may lead educators to apply a quality improvement lens to program improvement—both of which can be disseminated as scholarship. By designing your educational work with the aim of publication, you can aim for “multiple wins,” which acknowledges the educational contributions at each stage of a project, including curriculum development, educational innovation, scholarly presentation, and outcomes-based multispecialty or multi-institution studies.<sup>26,31</sup>

Educators can harness virtual communities of practice and digital scholarship to share resources and network efficiently. Planning multistep projects in advance and developing a program of research in a specific area can improve methodologic rigor, contribute to career satisfaction, and establish the track record of scholarship necessary for promotion and academic advancement.<sup>32</sup>

### **Parting Thoughts**

Maintaining and critically reflecting on your EP can illuminate how each piece of educational work contributes to the overall picture of your success as a clinician educator and how your work can be expanded for future scholarship. Developing an EP provides the opportunity to “take stock” of projects and accomplishments, reflect on that work, and develop future directions for potential scholarship opportunities.

### **References**

1. Boyer EL. *Scholarship Reconsidered: Priorities of the Professoriate*. Princeton, NJ: Princeton University Press; 1990.
2. Glassick CE. Boyer's expanded definitions of scholarship, the standards for assessing scholarship, and the elusiveness of the scholarship of teaching. *Acad Med*. 2000;75(9):877–880. doi:10.1097/00001888-200009000-00007
3. Beasley BW, Wright SM, Cofrancesco Jr J, Babbott SF, Thomas PA, Bass EB. Promotion criteria for clinician-educators in the United States and Canada: a survey of promotion committee chairpersons. *JAMA*. 1997; 278(9):723–728.
4. Lamki N, Marchand M. The medical educator teaching portfolio: its compilation and potential utility. *Sultan Qaboos Univ Med J*. 2006;6(1):7.
5. Sidhu NS. The teaching portfolio as a professional development tool for anesthesiologists. *Anaesth Intensive Care*. 2015;43(3):328–334. doi:10.1177/0310057X1504300308
6. Sheretz EF. Criteria of the “educators’ pyramid” fulfilled by medical school faculty promoted on a teaching pathway. *Acad Med*. 2000;75(9):954–956. doi:10.1097/00001888-200009000-00022
7. McColgan K, Blackwood B. A systematic review protocol on the use of teaching portfolios for educators in further and higher education. *J Adv Nurs*. 2009;65(12):2500–2507. doi:10.1111/j.1365-2648.2009.05189.x
8. Pinsky LE, Fryer-Edwards K. Diving for PERLS: working and performance portfolios for evaluation and reflection on learning. *J Gen Intern Med*.

- 2004;19(5 Pt 2):582–587. doi:10.1111/j.1525-1497.2004.30224.x
9. Reece SM, Pearce CW, Melillo KD, Beaudry M. The faculty portfolio: documenting the scholarship of teaching. *J Prof Nurs*. 2001;17(4):180–186. doi:10.1053/jpnu.2001.24861
  10. Baldwin C, Chandran L, Darden A, et al. Educational Scholars Program of the Academic Pediatric Association. <https://www.chp.edu/-/media/chp/healthcare-professionals/documents/faculty-development/apa-educator-portfolio-instructions.pdf?la=en>. Accessed August 4, 2021.
  11. Baldwin C, Chandran L, Gusic M. Guidelines for evaluating the educational performance of medical school faculty: priming a national conversation. *Teach Learn Med*. 2011;23(3):285–297. doi:10.1080/10401334.2011.586936
  12. Simpson D, Fincher RME, Hafler JP, et al. Advancing educators and education by defining the components and evidence associated with educational scholarship. *Med Educ*. 2007;41(10):1002–1009. doi:10.1111/j.1365-2923.2007.02844.x
  13. Gusic ME, Baldwin CD, Chandran L, et al. Evaluating educators using a novel toolbox: applying rigorous criteria flexibly across institutions. *Acad Med*. 2014;89(7):1006–1011. doi:10.1097/ACM.000000000000023
  14. O'Mara L, Carpio B, Mallette C, Down W, Brown B. Developing a teaching portfolio in nursing education: a reflection. *Nurse Educ*. 2000;25(3):125–130. doi:10.1097/00006223-200005000-00012
  15. Coates WC, Hobgood CD, Birnbaum A, Farrell SE, SAEM Undergraduate Education Committee. Faculty development: academic opportunities for emergency medicine faculty on education career tracks. *Acad Emerg Med*. 2003;10(10):1113–1117. doi:10.1111/j.1553-2712.2003.tb00584.x
  16. Kearns K, Sullivan C. Resources and practices to help graduate students and post-doctoral fellows write statements of teaching philosophy. *Adv Physiol Educ*. 2011;35(2):136–145. doi:10.1152/advan.00123.2010
  17. Robertson AC, Fowler LC, Miller Juve AM. Using the Teaching Perspectives Inventory as an introduction to a residents-as-teachers curriculum. *J Educ Perioper Med*. 2017;19(4):e614.
  18. Drucker PF. *The Practice of Management*. New York, NY: HarperCollins Publishers; 1954.
  19. Dalton CL, Wilson A, Agius S. Twelve tips on how to compile a medical educator's portfolio. *Med Teach*. 2018;40(2):140–145. doi:10.1080/0142159X.2017.1369502
  20. Brodell RT, Alam M, Bickers DR. The dermatologist's academic portfolio, a template for documenting scholarship and service. *Am J Clin Dermatol*. 2003;4(11):733–736. doi:10.2165/00128071-200304110-00001
  21. Cooke M, Irby DM, Debas HT. The UCSF academy of medical educators. *Acad Med*. 2003;78(7):666–672. doi:10.1097/00001888-200307000-00003
  22. Kuhn GJ. Faculty development: the educator's portfolio: its preparation, uses, and value in academic medicine. *Acad Emerg Med*. 2004;11(3):307–311. doi:10.1111/j.1553-2712.2004.tb02217.x
  23. Parslow GR. Commentary: ePortfolios, beyond the curriculum vitae. *Biochem Mol Biol Educ*. 2009;37(2):131–132. doi:10.1002/bmb.20271
  24. Driessen EW, Muijtjens AMM, van Tartwijk J, van der Vleuten CPM. Web- or paper-based portfolios: is there a difference? *Med Educ*. 2007;41(11):1067–1073. doi:10.1111/j.1365-2923.2007.02859.x
  25. Petty G. Self-assessment. <https://geoffpetty.com/for-teachers/self-assessment/>. Accessed August 4, 2021.
  26. Gottlieb M, Chan TM, Sherbino J, Yarris, L. Multiple wins: embracing technology to increase efficiency and maximize efforts. *AEM Educ Train*. 2017;1(3):185–190. doi:10.1002/aet2.10029
  27. Ahmed M, Sherwani Y, Al-Jibury O, Najim M, Rabee R, Ashraf M. Gamification in medical education. *Med Educ Online*. 2015;20:29536. doi:10.3402/meo.v20.29536
  28. Jumreornvong O, Yang E, Race J, Appel J. Telemedicine and medical education in the age of COVID-19. *Acad Med*. 2020;95(12):1838–1843. doi:10.1097/ACM.0000000000003711
  29. Gottlieb M, Wagner E, Wagner A, Chan T. Applying design thinking principles to curricular development in medical education. *AEM Educ Train*. 2017;1(1):21–26. doi:10.1002/aet2.10003
  30. Yarris LM, Chan TM, Gottlieb M, Juve AM. Finding your people in the digital age: virtual communities of practice to promote education scholarship. *J Grad Med Educ*. 2019;11(1):1–5. doi:10.4300/JGME-D-18-01093.1
  31. Blanchard RD, Nagler A, Artino Jr AR. Harvest the low-hanging fruit: strategies for submitting educational innovations for publication. *J Grad Med Educ*. 2015;7(3):318–322. doi:10.4300/JGME-D-15-00228.1
  32. Pangaro LN. *Leadership Careers in Medical Education (ACP Teaching Medicine Series)*. Philadelphia, PA: American College of Physicians; 2010.



**Ryanne J. Mayersak, MD, MS**, is Assistant Professor of Emergency Medicine, Oregon Health & Science University; **Lalena M. Yarris, MD, MCR**, is Professor of Emergency Medicine, Oregon Health & Science University; **Rebecca C. Tuttle, MD, MS**, is Clinical Assistant Professor of Emergency Medicine, Oregon Health & Science University; **David C. Jones, MD, MCR**, is Associate Professor of Emergency Medicine, Oregon Health & Science University; **Anna M.**

**Nelson, MD, PhD**, is Assistant Professor, Department of Emergency Medicine, Oregon Health & Science University; **Rachel R. Bengtzen, MD**, is Assistant Professor, Department of Family Medicine (Sports Medicine), Oregon Health & Science University; **Joshua G. Kornegay, MD**, is Associate Professor of Emergency Medicine, Oregon Health & Science University; and **Holly A. Caretta-Weyer,**

**MD, MHPE**, is Assistant Professor and Associate Residency Program Director, Department of Emergency Medicine, Stanford University School of Medicine.

Corresponding author: Holly A. Caretta-Weyer, MD, MHPE, Stanford University, hcweyer@stanford.edu, Twitter @holly\_cw