

Chapter 13

Teaching as Scholarship

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Two medical teachers are leaving a meeting and a friendly colleague dialogue begins:

Dr. Charlton: “Are you going to the visiting professor workshop on effective teaching techniques tomorrow? It’s the one about the relationship between adult learning principles and teaching strategies.”

Dr. Cole: “I’m not sure. I really have to get my syllabus ready by early next week.”

Dr. Charlton: “Oh, I can help you with that or you could contact the Office of Educational Services. I met with one of their educational consultants and in less than an hour we had updated and presented my syllabus in a way that she confirmed was educationally sound and she taught me how to upload it into our learning management system. If you did that, it would give you time to come with me to the teaching workshop!”

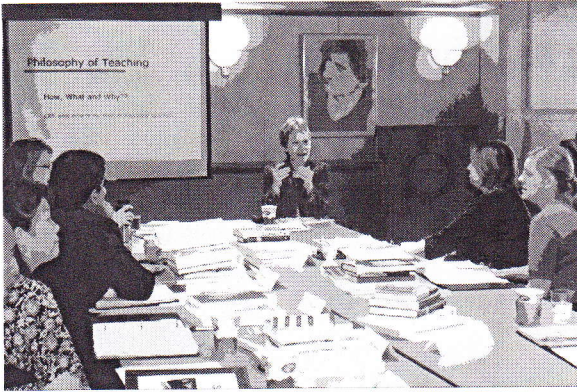
Dr. Cole: “You already get good teaching ratings. Why do you want to go to this session anyway?”

Dr. Charlton: “I do get pretty good teaching ratings, but I want to continue to improve. My students tell me that I have clear goals, I am organized, and they really learn a lot. I ask difficult and challenging questions, but in a way that is non-threatening. The problem for me is, I’m not sure what I actually do; I just teach. So I really want to understand more about what I’m doing that works and why it works. I’ve read some things by this visiting professor and his work is very informative even though it is not in my area.”

Dr. Cole: Alright, you’ve convinced me to go work with Educational Services on my course and that I should go to the workshop. I’ll see you there!”

Drawing inspiration, knowledge, support and challenges from our colleagues and from instructional consultants is how we enhance teaching and learning. Similar to the need to consult with colleagues about patient care or scientific investigators, we as educators must “get together” and discuss our work in medical education. Teaching, like any profession, “advances when people find like-minded colleagues

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to work with, review their efforts and push them to the next stages of thinking” (Hutchings, 2004). Yet sometimes medical teachers work in isolation. We spend significant time and effort developing course materials, lectures, syllabi, assessment tools, standardized patient cases, and evaluation forms without first seeking existing materials or colleague review of our materials.

If you are reading this chapter, it is probably because you, like Drs. Charlton and Cole, are dedicated to educating healthcare professionals who will provide the highest quality of care possible for their patients, their communities and their populations. To achieve this shared goal, we as educators must think of ourselves as members of an educational cooperative – where we exchange and build our collective knowledge about medical education.

Enhancing Our Collective Knowledge About Medical Education: Adopting Educational Scholarship Criteria

Health professions educators should understand and adopt the criteria associated with educational scholarship as teachers, curriculum developers and authors of learner assessment tools. We should seek explanations for why something works or does not work. Glassick and colleagues (1997) have outlined six criteria that can guide our individual work as teachers and allow us to exchange and build our collective knowledge in health professions education.

- *Clear Goals:* The educational purpose/outcome is explicitly defined.
- *Adequate Preparation:* The teacher draws on the collective knowledge and resources in the field and has the required expertise.
- *Appropriate Methods:* The design selected including delivery strategies, tools, and approaches, is matched with the goals and best practices in the field.
- *Significant results:* Outcomes achieved are important to the educator and to the field.

- *Effective Presentation*: Educator's work is shared with the community, clearly articulated and framed to build upon the collective knowledge in the field.
- *Reflective Critique*: Critical self-appraisal resulting in the identification of strengths and opportunities for improvement.

Improving as an Individual

To improve as individual educators, we can use Glassick's criteria as question guideposts.

- What are our goals as educators?
- Are we adequately prepared for our various educational roles, be it as teacher, author of a curriculum, designer of an e-learning module, advisor/mentor, peer reviewer and/or educational leader/administrator?
- What are the appropriate methods to achieve our goal(s) in each role?
- How do we know if we have achieved significant results?
- Have we presented what we learned to our colleagues in an effective way?
- Have we stepped back and critically reflected to determine the key variables influencing our results and how to sustain and improve upon our success?

As educators we often seek to answer these scholarship-derived questions by ourselves. The "results" we review include student evaluations and student performance data as we seek to identify how we can improve. "Reflective critique" is informed by our experiences as teachers and as learners – as demonstrated by an outstanding teacher, a key role model, or mentor. However, at some point our ability to advance our own knowledge and skills as educators is limited by our own thinking, leading to the recognition that we are inadequately prepared! It is at that point when we must seek out other resources, drawing on the knowledge available in the field of education as a means to achieve our goals, expand our methods, perhaps reinforce our findings, and/or improve the effective presentation of our results.

Dr. Charlton is the perfect example of an educator who has recognized the need for adequate preparation. While students rate her teaching highly, Dr. Charlton is unable to explain why what she does as a teacher is valued by her students. Therefore Dr. Charlton seeks to enhance her preparation by drawing upon the collective knowledge in the field. Attendance at the workshop is an appropriate method to achieve her goals, but there are a variety of effective methods that draw upon the available knowledge base.

- Read books like this, reference materials, articles in journals on medical education and teaching.
- Talk to colleagues who are excellent teachers and ask them how they improve, what they would do in this situation, invite them to review materials and observe our teaching.

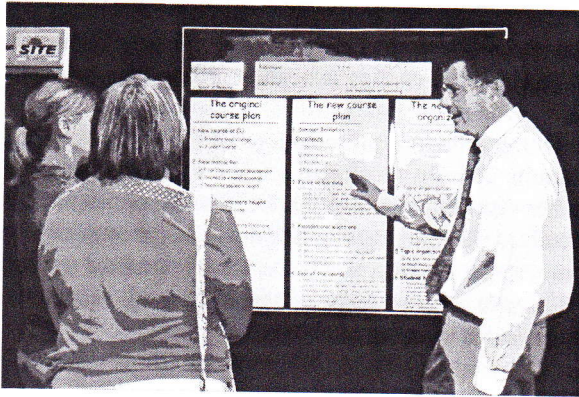
- Attend teaching workshops to learn how to write objectives, design assessment materials, and/or critique literature in the field.
- Critically reflect about a difficult teaching experience. This can range from an informal analysis to the more formal process of recording a critical incident and forcing oneself to step back and think about what worked, what didn't work and why. Share this with a colleague and get their feedback.
- Seek input from learners, asking them what worked, what didn't work and how to improve, both through informal mechanisms (e.g., at the end of a session), or through formal mechanisms (e.g., online questionnaires and surveys).
- Enroll in a faculty development program, medical education fellowship, or formal degree program to continue to build and expand your knowledge, skills and attitudes about medical education and opportunities and resources.
- Attend regional, national, and/or international meetings on medical education to learn about new strategies, techniques and resources in the field.

Replenishing and Enhancing Our Collective Knowledge About Health Professions Education

As an individual, Dr. Charlton can draw on the knowledge available in the field to achieve her teaching improvement goals. However, when we as medical educators only draw from the knowledge and resources in our cooperative community, we ultimately drain the reservoir of our collective knowledge. Our collective knowledge is like a river from which water is drawn to grow crops, when the water is not replenished, the river eventually runs dry.

In order to replenish and enrich our reservoir of knowledge about education, we as medical educators must actively contribute to our collective knowledge about what works, what doesn't work, and why. Again, Glassick's scholarship criteria can be used to determine the value of contributions to our collective knowledge. Does the contribution have clear goals? Was it prepared building on what we already know? Were appropriate methods utilized in its design, development, delivery, assessment, and/or evaluation? Were the results significant? Is the contribution effectively presented so that it can be understood and used by members of our cooperative community of educators? Does it include an assessment of strengths, weaknesses and opportunities?

To achieve the shared goal of preparing health professionals to provide the highest quality of care, as educators we must move from isolation (e.g., giving lectures, presentations, designing curriculum and assessment tools) to engagement with the educational community (drawing resources from and contributing to our collective knowledge). In 2006, the *Association of American Medical Colleges-Group on Educational Affairs* sponsored a consensus conference on educational scholarship. Building on over 15 years of work in defining the attributes of educational scholarship, the Q² Engage model emerged (Simpson et al., 2007). This model emphasized the need to transition from isolation as a teacher to engagement in a community



of educators. This engagement begins by drawing resources from and, as appropriate, contributing resources to the collected knowledge about how best to teach and assess our learners and evaluate our programs toward the goal of outstanding patient, community and population based healthcare.

Let's return to the examples of our two colleagues that began this chapter and use that conversation to highlight the concepts of how faculty can naturally engage with the community of medical educators consistent with Glassick's scholarship criteria.

Replenishing and Enhancing the Collective Knowledge Through Engagement

Dr. Charlton, who sought to understand *why* she is an effective teacher, did indeed attend the teaching workshop by the visiting professor, gaining a new understanding of how students learn. Armed with this new knowledge, Dr. Charlton then expanded her teaching strategies and skills, sought feedback from students and colleagues about her teaching, reflected on the results and revised her goals.

This continuous cycle, starting with Dr. Charlton's clear goal of teaching improvement, to adequate preparation via readings, workshop attendance, discussions with colleagues, through reflective critique demonstrates the use of Glassick's scholarship criteria. This process can also be used to guide an educator's step-wise development of instruction, a learner assessment tool, or a program evaluation instrument, beginning as always with a clear goal and adequate preparation by drawing on what is known in the field.

Contributing to Collective Knowledge Through Consultation and Presentations

For Dr. Charlton, her teaching successes resulted in several teaching awards both within her department and at the school-wide level. Over time, colleagues began

asking Dr. Charlton for guidance about how to improve their teaching. She co-taught a local workshop sponsored by the Educational Services Office on effective teaching and was invited to serve as a visiting education professor in her specialty at another medical school.

During her visiting professor presentation, Dr. Charlton acknowledged the lack of significant results specific to effective teaching in her own specialty. On the way back from her visiting professorship, Dr. Charlton reflected on the audience's questions and realized that they highlighted the need for specialty-specific teaching effectiveness knowledge. Back at work, Dr. Charlton talked to several of her colleagues about this need with an emphasis on clear goals, adequate preparation as teachers, and appropriate teaching methods.

Inquiry into a Gap in Our Collective Knowledge

Through her *effective analysis* of the gaps in our understanding about specialty-specific effective teaching and the Q & A results from her visiting professor lectureship, Dr. Charlton engaged her specialty colleagues, her school's librarian and an Educational Services consultant to help her address this gap. The Educational Services consultant guided Dr. Charlton and the team through the selection of *appropriate methods* to yield the *results* that would answer their questions. The inquiry team then worked on how to *effectively present* and contribute the results to the broader educational community. Upon reflection, Dr. Charlton realized that contributing to the fund of knowledge in the field merely required engagement with her educator colleague community using the scholarship criteria in a stepwise progression beginning with clear goals.

Engaging with Your Colleagues to Address Gaps in Our Collective Knowledge

As practicing health professions teachers who seek excellence in education, questions and curiosities about the teaching and learning process emerge on a daily basis. Almost all the questions begin with "Why," "How" or "What." For example:

- Why did my small group work so well last month but not with this month's students?
- Why is the OSCE performance going up/down when we are teaching the same core content as last year?
- Why don't our students ever talk with patients and address health risk situations/behaviors (e.g., obesity, violence, smoking, unprotected sex, alcoholism/drug abuse – name your topic)?
- How can I improve my course?

- How can I get more students interested in caring for patients who are (geriatric, impoverished, abused) or who have chronic illnesses (diabetes, hypertension, asthma)?
- What would happen if I just stopped lecturing and put everything online?

As soon as you begin to explore your questions you are engaged with the educational community through reading the literature, talking with colleagues, attending workshops, and/or seeking consultations. By drawing on the knowledge in our field you can at least partially answer your questions and you will naturally begin to identify the gaps in what we know and consider ways to fill those gaps. Once you have effectively presented the results that fill a gap, you have contributed to our collective knowledge.

Table 13.1 Engagement with community of educators – Dr. Charlton’s example

Focus of activity → Glassick’s criteria ↓	Engagement with collective knowledge in our field	
	Individual – Draws From	Community of educators – Contributes To
Clear Goals	<ul style="list-style-type: none"> • Understand and improve own teaching effectiveness 	<ul style="list-style-type: none"> • Improve others teaching effectiveness (colleague questions) • Answer question/gap in collective knowledge regarding specialty-specific teaching effectiveness
Adequate preparation	<ul style="list-style-type: none"> • Read literature • Talk with colleagues • Attend visiting professor workshop(s) 	<ul style="list-style-type: none"> • Continue to learn about effective teaching (e.g., read) • Give informal guidance to colleagues in response to requests • Given presentations on effective teaching
Appropriate methods	<ul style="list-style-type: none"> • Try new teaching strategies/approaches • Ask for feedback from learners 	<ul style="list-style-type: none"> • Listen to audience questions • Form a collaborative group with needed expertise to explore questions
Significant results	<ul style="list-style-type: none"> • Review results including student feedback, learning performance measures relative to goals 	<ul style="list-style-type: none"> • Addresses a gap in collective knowledge related to specialty-specific teaching
Effective presentation	<ul style="list-style-type: none"> • Display your results in a form that is available for colleagues to review, critique and provide input 	<ul style="list-style-type: none"> • Share those results in a form that others can understand and build from
Reflective critique	<ul style="list-style-type: none"> • Evaluate strengths/weaknesses and define specific goals for continued improvement 	<ul style="list-style-type: none"> • Reflect on audience questions to identify gap → new goal based on recognition of gap in collective knowledge



It is through this process of engagement – beginning with the question(s) that emerge through your daily work as a teacher and then drawing from and contributing to our collective knowledge about education – that medical educators can advance as individual teachers and advance the field of health professions education. Clear goals, adequate preparation, appropriate methods, significant results, effective presentation and reflective critique are the hallmarks of this engagement process (see Table 13.1).

Effectively Presenting Teaching as Scholarship: Adapting to Audience

What if this chapter had begun by advising you that your advancement and recognition as a teacher depends on your ability to identify an important question, design a study to answer that question, and publish the study results. Would that introduction have motivated you to “publish”? Would that introduction connect with your goals and motivations as a teacher? Effective teachers achieve their objectives by adapting their teaching approach to their learners’ needs, goals and ambitions.

Our experience is that all teachers want to provide the best educational experiences they can for their learners so that their learners will, in turn provide the highest quality of health care possible for patients, communities and populations. However, when the emphasis is on “publishing” and “scholarship” the dynamic relationship between “teaching,” “learning,” and “scholarship” is often lost. Designing and delivering instruction, like medicine, must be an evidence-based performance art. To excel as teachers we must draw from the best practices and resources in our field and as professionals we understand the need to give back, adding to the collective knowledge in our field. Applying the Glassick criteria to our work as teachers provides a common framework making the relationship between our daily work as teachers and our contributions to the field transparent.

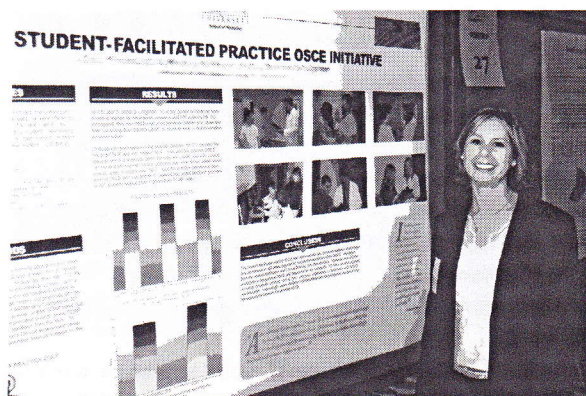
You May Well Be Asking, “How do I begin?” Start with

- *Clear goals:* What do you care about as a teacher? Do you have any “Why. . . , How. . . , What . . . Questions”? Talk to a colleague to help you refine and clarify your goal.
- *Adequate preparation:* Read about it. Talk to colleagues. Attend a workshop or meeting on that topic. If you are interested in more information about teaching as scholarship, and how to document your work as a teacher, see the resources listed in For Further Reading.
- *Appropriate methodology:* Based on this preparation select an appropriate approach and try it.
- *Significant results:* Seek to determine if your approach worked! Engage your learners in this new approach by asking for their feedback and evaluation. Examine the data on your learners’ performance, satisfaction and motivation. In addition to survey data, there are other indicators of effective teaching. For example, do your learners now arrive prepared? Are they early or on time (rather than late)? Do they remain active and alert throughout your session? If the performance data are the same but your learners report that your teaching strategy was more effective, is that a significant result?
- *Effective presentation:* Who else would be interested in what you have learned? Was this a question/problem of local interest only? You could address this by talking to your colleagues, holding a conference, sending a brief e-mail, and/or reporting at a faculty meeting. If this was a “gap” in our collective knowledge in the field (e.g., the literature, peer reviewed educational repositories) then tell us about it in a way that we can understand, use, and build on! As teachers effective presentation should be our strength as we constantly adapt our teaching to effectively communicate with different learners. Presenting our work to colleagues is merely another form of adapting to your learners!
- *Reflective critique:* Self assessment is a critical skill and one that is often hidden in our curriculum. Use the knowledge gained through your adequate preparation, selection of methods, results, and presentation to identify what worked, what did not work and next steps. And as you might guess this step provides you with “clear goals” for your continued teaching, learning, scholarship and engagement with other educators.

Reprise

To demonstrate this dynamic relationship let us pay a return visit, several years later, to Drs. Charlton and Cole:

Dr. Cole: “Dr. Charlton, congratulations on your election as president of our Society of Teaching Scholars! Your leadership will help us build new forums and expand on our established sessions for bringing educators together to critically discuss how our students’ learn and how we teach.”



Dr. Charlton: “Thank you, it is certainly an honor. And I am glad to see you active in our society as well. I hope I can count on you to lead some of our sessions. I remember a couple of years ago when I had to convince you to go to our visiting medical education professor session.”

Dr. Cole: “Indeed, your encouragement and nudging got me out of my office to work with others on education. I had always felt like I had to do it myself or I was somehow not fulfilling my roles and responsibilities as a teacher. Talking and learning from other educators has really improved my teaching and I even have some instructional materials on the assessment and management of common speech pathologies published in one of the peer reviewed repositories.”

Dr. Charlton: “That’s fabulous, congratulations! It often just takes some encouragement from our colleagues to prompt us to participate in the process of drawing from and contributing to our educational community. So can I encourage you again? Would you lead our education journal club for the next year?”

Dr. Cole: I’d be delighted to serve as the education journal club convener. In fact I was thinking that we might want to start an “Educator Reading Club” for our students and residents.

Dr. Charlton: “What a great idea! Are there some students or residents who could help you convene the group?”

Dr. Cole: “Yes indeed! One of my residents is a wonderful teacher and wants to learn more about teaching and learning. He would be ideal to help pull this group together. . . Ah, here he is now. Dr. Charlton, please let me introduce you to Dr. Matthew Scott. Dr. Scott is just finishing his first year of residency and is becoming a wonderful teacher. His students are always telling me about how Dr. Scott’s golf analogies help them really understand. . .”

References

- Glassick CE, Hubert MT, Maeroff GI (1997) *Scholarship assessed: Evaluation of the professoriate*. Jossey-Bass, San Francisco, CA.

- Hutchings P (2004) Building a better conversation about learning. Carnegie Perspectives. The Carnegie Foundation for the Advancement of Teaching. Cited 15 September 2007 Available via <http://www.carnegiefoundation.org/>
- Simpson D, Fincher RM, Hafler JP, Irby DM, Richards BF, Rosenfeld GC, Viggiano TR (2007) Advancing educators and education by defining the components and evidence associated with educational scholarship. *Medical Education* 41(10): 1002–1009.

For Further Reading

Educational scholarship guides. AAMC MedEdPORTAL Cited 15 September 2007, available via <http://services.aamc.org/jsp/mededportal/goLinkPage.do?link=scholarship>

Four guides, each about two pages in length, present the key features of educational scholarship and explain why published educational works (e.g., curriculum materials, learner assessment tools, faculty development workshop guides) are comparable to other forms of scholarship.

Hafler JP, Blanco MA, Fincher RME, Lovejoy RH, Morzinski JA (2005) Chapter 4: Educational scholarship. In: Fincher RME (Ed.) *Guidebook for clerkship directors*, 3rd edn. Alliance for Clinical Education. Cited 15 September 2007, available via <http://familymed.uthsese.edu/ACE/chapter14.htm>

Written for physicians who direct clinical clerkships/rotations for medical students, this easy to read chapter provides a brief historical perspective on educational scholarship and outlines its key elements with examples.

Simpson D, Fincher RME, Hafler JP, Irby DM, Richards BF, Rosenfeld GC, Viggiano TR. Advancing educators and education: defining the components and evidence of educational scholarship. Summary Report and Findings from the AAMC Group on Educational Affairs Consensus Conference on Educational Scholarship. July 2007. Cited 15 September 2007, Available via “publications” link at <http://www.AAMC.org>.

This comprehensive report describes the conference design and format (so that others may build on the approach), provides the conceptual framework for scholarship as engagement, and provides a rich array of examples of how to “effectively present” evidence of one’s excellence and engagement as an educator in each of 5 educator activity categories (teaching, curriculum development, advising/mentoring, educational administration and leadership, learner assessment).

Shulman LS (1993) Teaching as community property: Putting an end to pedagogical solitude. *Change* 25(6): 6–7.

Shulman LS (2004) *Teaching as community property – essays on higher education*. The Carnegie Foundation for the Advancement of Teaching. Jossey-Bass, Inc, San Francisco, CA.

Lee Shulman, PhD is a landmark figure in higher education. He has held an array of leadership roles in higher education and began his career in medical education at Michigan State University and contributed to pioneering work in medical reasoning and clinical problem solving. Dr. Shulman is the Charles E. Ducommun Professor of Education Emeritus at Stanford University, and President Emeritus of the Carnegie Foundation for the Advancement of Teaching. As president, Dr. Shulman articulated, perhaps better than anyone else, the need to make what we do as educators' public, available for peer review, and accessible in a form that others can build upon, so that education becomes "community property." His writings are always a delightful read and should be an author whose work is on every educator's bookshelf. You can read additional essays that are guaranteed to promote reflection, clarity of goals, and remind all of us that we have an obligation as teachers to share and exchange our work.