




Scholarship in Medical Education

Strategies and Habits for Taking Your Scholarship to the Next Level

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Disclosures

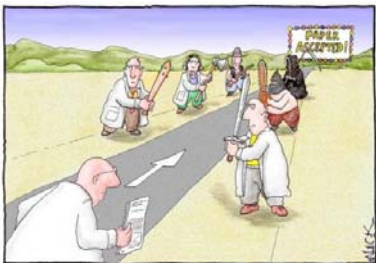



I have no ties to commercial entities; however...

I'm an Assistant Editor for *Academic Medicine* and a Deputy Editor for *JGME*. I'm also a Captain in the U.S. Navy. The views expressed in this presentation are mine; they do not necessarily reflect the official policy or position of *Academic Medicine*, *JGME*, Uniformed Services University of the Health Sciences, U.S. Navy, Department of Defense, or U.S. Government.





The Road to Academic Publishing




Most scientists regarded the new streamlined peer-review process as "quite an improvement."

Image downloaded on April 15, 2014 from <http://phs.org/news/2013-05-publish-perish-career-academics.html>



Agenda

Why Both Publishing?	Peer-Review Process	How to Revise & Resubmit
1	2	3
4	5	
Writing Obstacles & Strategies for Being More Productive		Creating A Personal Scholarship Roadmap



Why Do We Publish?

- Dissemination
 - It's your responsibility to share your research/innovations to improve...
 - Education theory, research, practice
 - Trainee learning
 - Clinical practice
 - Patient care
- Personal satisfaction
- Record of scholarship
 - "Getting credit" for all your hard work
 - Academic promotion and tenure




What Obstacles Do You Face?

• Obstacles identified in the literature:

Lack of experience in research

Lack of protected time (fragmented time)

Competing roles (clinician, teacher, mentor, researcher)

Lack of funding

Difficulty defining relevant, measurable outcomes

Small # of Learners



(Dyrbye 2008; DeAngelis 2004; Carney et. al 2004; Lurie, 2003; Murray 2002; Collins 2006)



2013 AAMC Consensus-Building Workshop


“What barriers do educators face in designing and publishing education research that is most useful to consumers of that research?”

Top 5 barriers, from most to least number of votes (n = 32)

Lack of...

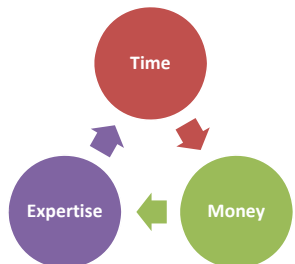

1. Expertise
2. Time
3. Funding
4. Mentorship
5. Rewards

*See Yarris, L. M., Miller Iwaw, A., Artino, A. R., Sullivan, G. M., Rougas, S., Jeyar, B., & Fra, K. (2014). Expertise, time, money, mentoring, and reward: Systemic barriers that limit education researcher productivity—Proceedings from the AAMC GEA workshop. *Journal of Graduate Medical Education*, 6, 430-436.




Obstacles Are Interrelated

- It’s a bit of a catch-22...


Strategies and Habits

What are your top strategies or habits for overcoming obstacles and being a more productive academic writer?




“Does a blog count as being published?”

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My single best advice for overcoming obstacles...

1. **Build a community of education scholars**
 - Expertise**
 - Shared expertise
 - Built-in mentors/mentees
 - Built-in peer review
 - Time**
 - Much less overwhelming and time-consuming
 - Money**
 - Education research is often a low-cost endeavor
 - Others may have funding




Strategies and Habits

2. **Find a mentor**
 - Most of us lack formal training in how to write
 - Mentors can help with...
 - Technical aspects: where to publish; how navigate process
 - How to organize & regulate your time & motivation



Strategies and Habits

3. **Find a critical friend (built-in peer review)**
 - Agree to review and critique each other’s work
 - Feedback is **love**





Strategies and Habits


4. Approach all activities in a scholarly manner (and “count it twice”)

- Approach all your normal educational practices in a scholarly manner^{1,2}
 1. Consult the existing literature
 2. Build on existing work
 3. Use appropriate methods
 4. Disseminate (even if just locally)
- Remember...

We will return to this idea of scholarship later in the session...



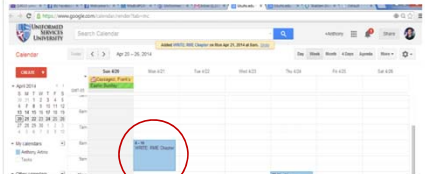

¹ Boyer EL. Scholarship Reconsidered: Priorities of the Professoriate. Princeton, NJ: Carnegie Foundation for the Advancement of Teaching; 1990.
² Glascock CE. Boyer’s expanded definitions of scholarship, the standards for assessing scholarship, and the elusiveness of the scholarship of teaching. Acad Aff. 2006;79(9):877-880.



Strategies and Habits

5. Block your schedule for writing (make time)

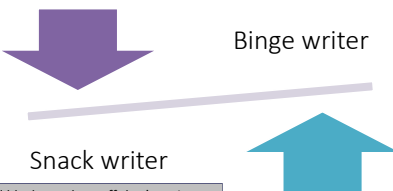
- Treat writing like you would any other work activity
 - Just say “no” to the next committee
- Block 1-2 hours
 - But even 15 minutes can be valuable


Strategies and Habits

6. Give up on binging (break down writing tasks into smaller pieces and add those to your to-do list)

What’s your practice?




Write in small blocks on the stuff that’s easiest (e.g., abstract, methods) or parts that you enjoy!



Truth of the matter is...

“If you want to make your writing better, the first thing you have to do is **let go of the romantic notion that there is some magic formula to make writing easier**. There isn’t. There are rare moments of running downhill, but **most of the time it’s an uphill slog the whole way.**”


--@academicswrite



3-year-old wisdom...

“Mama, it’s really hard to get what’s in your head on paper. Very frustrating. Grrrrr... frustrated!”

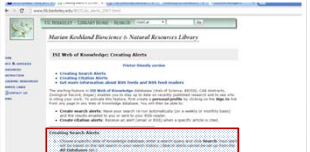

--@meredithyoung1



Strategies and Habits

7. Stay current and connected (*see references)

- The best ideas often come from reading others’ work
 - Volunteer to be a reviewer
 - Get to know a medical librarian!
 - Setup “alerts” with the journals you like to read
 - Or with search engines, such as PubMed or Web of Knowledge

Strategies and Habits

7. Stay current and connected

- Follow your favorite authors/institutes on Twitter
- Create a Google Scholar account
 - Citation alerts
 - Follow co-authors

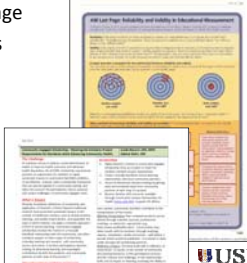





Strategies and Habits

8. Look for opportunities to publish beyond the "original research" article (*see references)

- *Academic Medicine* Last Page
- *JGME* Rip Out & New Ideas
- *MedEd* Really Good Stuff
- Other non-IMRD articles
 - commentaries, perspectives, editorials, letters to the editor
- Blogs, MedEdPortal





Outlets for Disseminating Innovations and Other "Non-Research" Papers

Feature Title	Journal	Word Limit	Description
Educational Innovation	<i>Journal of Graduate Medical Education</i>	2,000	A description of a new approach or strategy in GME that has been implemented/assessed at a minimum with feasibility and acceptability
Perspectives	<i>Journal of Graduate Medical Education</i>	1,200	Evidence-based opinion that can describe an innovative GME educational approach
New Ideas	<i>Journal of Graduate Medical Education</i>	650	Novel GME approach that has been implemented at least once and appears to be successful; numbers of participants may be small and outcomes may be preliminary; annual call and publication
Insights	<i>Clinical Teacher</i>	800	Structured reflection
How We . . .	<i>Medical Teacher</i>	2,500	A description of an idea or topic in medical education that's been implemented, and a reflection on that process
12 Tips	<i>Medical Teacher</i>	3,200	Practical tips or advice, potentially as the result of an innovation
Really Good Stuff	<i>Medical Education</i>	500	Lessons learned through innovation in medical education; annual call and publication
Last Page	<i>Academic Medicine</i>	1-page	Visual display of a concept, idea, theory, or process
Developments	<i>Teaching and Learning in Medicine</i>	2,000	Innovation or development in medical education
N/A	MedEdPORTAL (from the AAMC)	N/A	Curricula, workshops, courses, and tools, with an instructor guide
N/A	MedEdWorld (from the AMEE)	N/A	Curricula, workshops, courses, tools, and research papers

*Table adapted from Blanchard, R., Nagler, C., & Artino, A. R. (2015). Harvest the low hanging fruit: Strategies for submitting educational innovations for publication. *Journal of Graduate Medical Education*, 7, 318-322.



Strategies and Habits



Just do it! – "If you want to run faster, run faster."

Don't do it alone – collaborate!




*See handout




Share Your Stories

- Discuss a memorable experience involving a rejection (or a "revise and resubmit") from a journal or conference


- What happened?
- Was the process fair (why/why not)?
- What did you learn about peer review?





A quick story about persistence...

• "The hardest papers to get published are the best papers and the worst papers." –Robert Sternberg (2009, personal communication)




The fate of one of my favorite short articles...



Journal	Journal Impact Factor
NEJM	~50
JAMA	~30
Health Affairs	~10
MilMed	~5

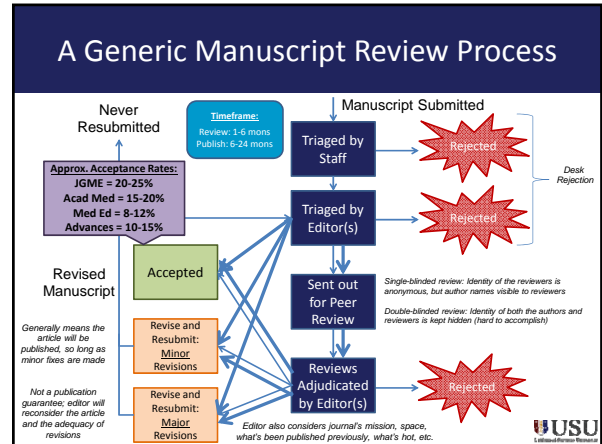
Artino, A. R., Gilliland, W. R., Cruess, D., & Durning, S. J. (2015). America's medical school: 5,000 graduates since the "first class." *Military Medicine*, 280(Suppl), 1-3.



Peer-Review Publishing

Image from Digital Science @digitalsci 30 Sep 2016
Is #peerreview a blackbox? Peer review themed cartoon to get into that #FridayFeeling #PerRevWk16 #sciart #lunfriday @Publons @aahpreston

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Why Papers Get Rejected

What do you think are the top reasons papers get rejected?

"Can you redo this manuscript, John, and make it less stupid?"

Purchased from www.cartoonstock.com

Top 10 Reasons Why Reviewers Recommend Rejection of Health Professions Education Research Papers

Reasons	Reason Frequency
1. Inappropriate or incomplete statistics	11.2%
2. Over-interpretation of results	8.7%
3. Inappropriate or suboptimal instrumentation (e.g., poorly designed survey instrument)	7.3%
4. Sample too small or biased	5.6%
5. Text difficult to follow/understand	3.9%
6. Insufficient or incomplete problem statement	3.9%
7. Inaccurate or inconsistent data reported	3.4%
8. Inadequate, incomplete, inaccurate, or outdated lit review	3.1%
9. Insufficient data presented	2.7%
10. Defective tables or figures	2.5%

*Table adapted from Bortage, G. (2001). Reasons reviewers reject and accept manuscripts: The strengths and weaknesses in medical education reports. *Academic Medicine*, 76(9), 880-896.

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How To Avoid A "Desk Rejection"

- 90% reported at least one questionable research practice
- 61% reported giving honorary authorship
- 22% reported "salami slicing"
- 5% reported plagiarism
- 2% reported fabricating data

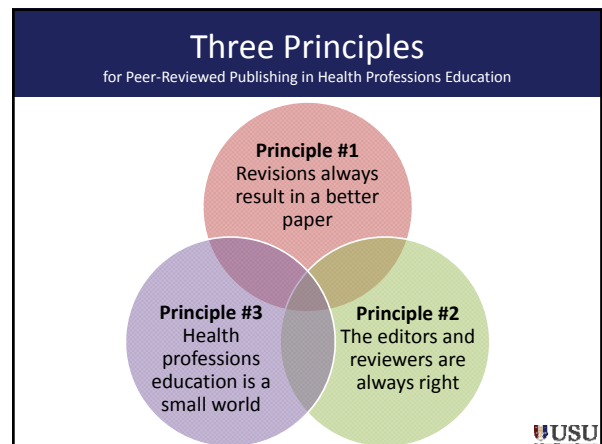
Find the Right Fit

Craft a Clear RQ w/ Appropriate Design

Act Responsibly As A Researcher

*Meyer, H., Durning, S. J., Sikar, D., and Maggio, L. A. (2017). Making the first cut: An analysis of Academic Medicine editors' reasons for not sending manuscripts out for external peer review. *Academic Medicine*.
**Artino, A. R., Oranson, E. W., & Maggio, L. A. (2018, January). Ethical shades of gray: Questionable research practices in health professions education. *Bioethics*. doi:10.1093/bioeth/tyx002

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Educational Scholarship

Let's return to the idea of educational scholarship and "counting it twice"

Five common educational roles:

1. Teaching
2. Curriculum development
3. Assessing
4. Mentoring
5. Educational leadership





Educational Scholarship

1. Teaching

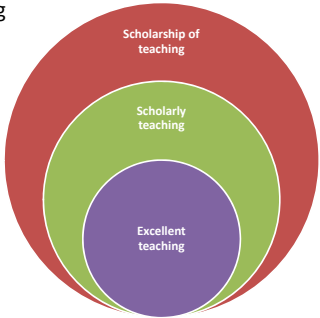

Excellent Teaching

-Teach consistently well
 -Are knowledgeable
 -Stimulate critical thinking in students
 -Work on their craft based on experience



Educational Scholarship

1. Teaching





Educational Scholarship

*Glassick's Criteria (aka, "quality indicators") for scholarship:

- **Clear goals**
- **Adequate preparation**, to include understand prior scholarship
- **Appropriate methods** that match the goals and follow from prior scholarship
- **Significant results** that are meaningful and honest
- **Effective presentation**, which means disseminating results using a clear, organized presentation
- **Reflective critique**, in the context of prior scholarship and study limitations

*Sullivan, G. M. (2018). A toolkit for medical education scholarship. *Journal of Graduate Medical Education*, 10, 1-5.



Create Your Own Personal Roadmap

- How can you turn your educational roles into educ. scholarship?
 - Let's create a roadmap...




In your experience, what are some concrete tips for improving the odds of getting published? (focus on the "revise and resubmit" component)

Tip Menu

#1 Take time to GRIEVE	#2 Engage the POSSE	#3 EXPECT Revisions	#4 Remember KINDERGARTEN Rules
#5 CONTROL Your Emotions	#6 Make it Easy for Them to SAY YES	#7 Engage the Peer- Review Process EARLY AND OFTEN	#8 When Needed, GET CLARIFICATION
	#9 Carefully REVIEW RE-SUBMISSIONS to Other Journals	#10 Be PERSISTENT (Every Paper has a Home)	

10 Tips

for Publishing in Health Professions Education

#1 – Take time to GRIEVE

The 5 stages of grief

10 Tips

for Publishing in Health Professions Education

#2 – Engage the POSSE

- When you're the first author, the paper tends to be "your baby"
- IF NECESSARY, ask another member of the team to take the lead on revisions

10 Tips

for Publishing in Health Professions Education

#3 – EXPECT Revisions

- "Accept with No Revisions" is a rare bird
- In fact, it might be a red flag:
 - Beall's list of predatory publishers and journals: <http://bealllist.weebly.com/>
- Always revise and resubmit; don't let major revisions scare you!

10 Tips

for Publishing in Health Professions Education

#4 – Remember KINDERGARTEN Rules

10 Tips

for Publishing in Health Professions Education

#4 – Remember KINDERGARTEN Rules

- There's an asymmetry of power – editors are gatekeepers

The 3R Approach¹

¹Joireman & Lange (2015)

10 Tips
for Publishing in Health Professions Education


#5 – CONTROL Your Emotions
(and beware the “Reply All” button!)

REPLY ALL From Co-Author after a Desk Rejection:

“...what irritates me most about this... This is not an editorial process; it is arbitrariness. I am really quite *****-off by this... It is because of this and some other incidents that I actually find myself avoiding his journal more and more. If you want me to write this (in very diplomatic terms), just let me know.”

RESPONSE from the EDITOR-IN-CHIEF:

“Thank you for so eloquently expressing your concerns about the decision made on this paper and the focus of our journal in general. I recognize that you haven’t asked for a response, but I do think it worth clarifying my position both on the content and the process followed...”




10 Tips
for Publishing in Health Professions Education

#6 – Make it Easy for Them to SAY YES

- Address **all** comments from reviewers/editors
 - In a clear, organized, thoughtful, and **respectful** manner (see Tip #4)
- Acknowledge → Edit → Direct


“We agree...” → “...so we did the following...” → “See p. 5, line 46-48”


Reviewer/Editor Comments:	Response:
2. I recommend that you provide the full protocol of how you assigned points to various statements that students made. Without that information, the reader is left simply to trust that your scales measure what you say they do.	We agree and have provided the full scoring rubric in our revisions (please see the updated Appendix, pp. 35-36)



10 Tips
for Publishing in Health Professions Education


#7 – Engage the Peer-Review Process EARLY AND OFTEN






10 Tips
for Publishing in Health Professions Education


#7 – Engage the Peer-Review Process EARLY AND OFTEN






10 Tips
for Publishing in Health Professions Education

#7 – Engage the Peer-Review Process EARLY AND OFTEN






10 Tips
for Publishing in Health Professions Education

#8 – When needed, GET CLARIFICATION

- Conflicting reviewer comments:
 - A good editor will de-conflict these for you
 - If not, it’s okay to ask for additional clarification
- It’s also acceptable to make a judgment call and provide a rationale for your decisions
 - Although you risk having to revise again




10 Tips

for Publishing in Health Professions Education

#9 – Carefully REVIEW RE-SUBMISSIONS to Other Journals

- Ensure you change the editor’s title/name in the cover letter
- Fix problems identified by reviewers from initial journal (the one that rejected your paper the 1st time)
 - You may very well get the same reviewer (see Principle #3)




10 Tips

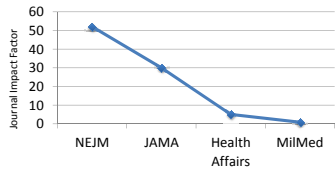
for Publishing in Health Professions Education

#10 – Be PERSISTENT

- “The hardest papers to get published are the best papers and the worst papers” (Sternberg, 2009, personal communication)




The fate of one of my favorite short articles...




Journal	Journal Impact Factor
NEJM	50
JAMA	30
Health Affairs	10
MilMed	5

Artino, A. R., Gilliland, W. R., Cruess, D., & Durning, S. J. (2015). America's medical school: 5,000 graduates since the "first class." *Military Medicine*, 180(Suppl.), 1-3.




Rejection Happens

- Despite our best efforts, papers do get rejected (sometimes after *many* rounds of review/revision)
 - If there are fatal flaws, then rejection is the right call
 - Resubmit as another kind of scholarly article?¹
- Not resubmitting might be the right call
 - If costs of revision > benefits

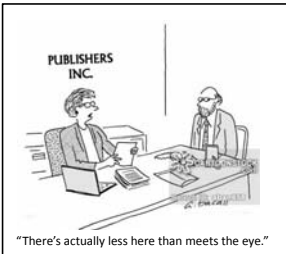


1 Blanchard, R., Nagler, C., & Artino, A. R. (2015). Harvest the low hanging fruit: Strategies for submitting educational innovations for publication. *Journal of Graduate Medical Education*, 7, 318-322.




In Conclusion

- Publishing in the peer-reviewed literature is *really* hard



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