

## Scholarship in Medical Education

Strategies and Habits for Taking Your Scholarship to the Next Level

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## Disclosures

**ACADEMIC MEDICINE**

**Journal of Graduate Medical Education**

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://phys.org/news/2013-09-publish-perish-career-academics.html>



## Agenda

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



## 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?

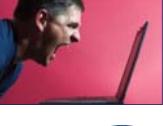
- Obstacles identified in the literature:



Lack of experience in research



Lack of protected time (fragmented time)



Competing roles (clinician, teacher, mentor, researcher)



Lack of funding

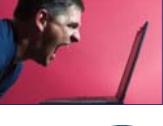


Difficulty defining relevant, measurable outcomes



Small # of Learners

(Dyrbye 2008; DeAngelis 2004; Carmey 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)**

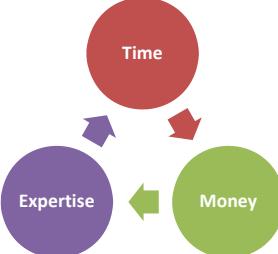
- Lack of...
  1. Expertise
  2. Time
  3. Funding
  4. Mentorship
  5. Rewards

\*See Yarris, L. M., Miller Jave, A., Artino, A. R., Sullivan, G. M., Rougas, S., Joyce, B., & Eva, 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?"  
Used under "fair use" exception, © www.cartoonstock.com

## My single best advice for overcoming obstacles...

1. Build a community of education scholars

- Shared expertise
- Built-in mentors/mentees
- Built-in peer review
- Much less overwhelming and time-consuming
- 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<sup>1,2</sup>
  - Consult the existing literature
  - Build on existing work
  - Use appropriate methods
  - Disseminate (even if just locally)
- Remember...

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

<sup>1</sup> Boyer EL. Scholarship Reconsidered: Priorities of the Professorate. Princeton, NJ: Carnegie Foundation for the Advancement of Teaching; 1990.  
<sup>2</sup> Glasick 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.

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## 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

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## 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?

Binge writer

Snack writer

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

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## 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

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## 3-year-old wisdom...

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

--@meredithyoung1

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## 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

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## 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

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## 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

MedEdPORTAL AAMC USU  
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## Outlets for Disseminating Innovations and Other “Non-Research” Papers

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

\*Table adapted from Blanchard, R., Nagle, C., & Artino, A. R. (2013). Harvest the low-hanging fruit: Strategies for submitting educational innovations for publication. *Journal of Graduate Medical Education*, 7, 318-322.

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## Strategies and Habits

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

Don’t do it alone – collaborate!

\*See handout

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## 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?

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## 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 Impact Factor

Journal	Impact Factor (approx.)
NEJM	55
JAMA	30
Health Affairs	5
MilMed Affairs	2

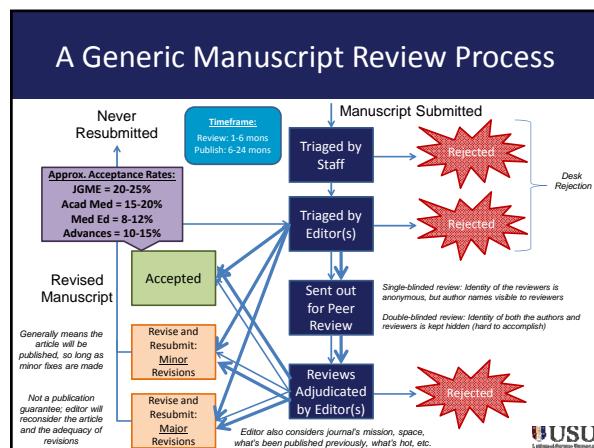
Artino, A. R., Gilliland, W. R., Cruess, D., & Durning, S. J. (2015). America’s medical school: 5,000 graduates since the “first class.” *Military Medicine*, 180(Suppl.), 1-3.

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## Peer-Review Publishing

Image from Digital Science @digitalsci 30 Sep 2016  
Is peerreview a blackbox? Peer review themed cartoon to get into that #FridayFeeling #PeerReview16 #sciret #friday #Publons @imperial

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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 Bondage, G. (2001). Reasons reviewers reject and accept manuscripts: The strengths and weaknesses in medical education reports. Academic Medicine, 76(9), 889-896.

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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**

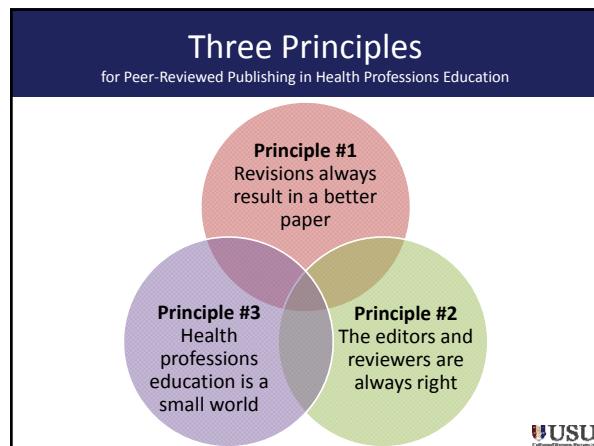
**Craft a Clear RQ w/ Appropriate Design**

**Act Responsibly As A Researcher**

\*Meyer, H., Dunning, S. J., Skar, 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., Orisman, E. W., & Maggio, L. A. (2018, January). Ethical shades of gray: Questionable research practices in health professions education. BioRxiv. doi: <http://dx.doi.org/10.1101/256982>

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## Educational Scholarship

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

Five common educational roles:

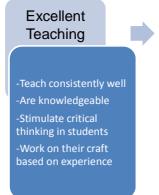
1. Teaching
2. Curriculum development
3. Assessing
4. Mentoring
5. Educational leadership



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## Educational Scholarship

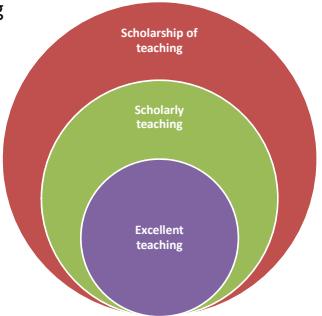
1. Teaching



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## Educational Scholarship

1. Teaching



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## 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.

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## Create Your Own Personal Roadmap

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



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

## Tip Menu

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

## 10 Tips

for Publishing in Health Professions Education

### #1 – Take time to GRIEVE



The 5 stages of grief

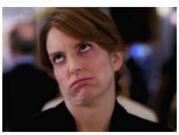
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## 10 Tips

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### #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



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## 10 Tips

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### #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://beallslisit.weebly.com/>
- Always revise and resubmit; don't let major revisions scare you!



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## 10 Tips

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### #4 – Remember KINDERGARTEN Rules



Image downloaded on February 11, 2016 from <http://floresearch.org/research-data/what-you-should-have-learned-in-kindergarten/>

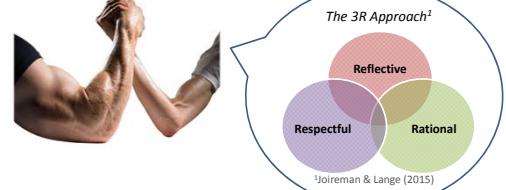
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## 10 Tips

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### #4 – Remember KINDERGARTEN Rules

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



The 3R Approach<sup>1</sup>  
Johreman & Lange (2015)

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Image downloaded on May 28, 2015 from <http://www.leadernetworks.com/2013/07/what-does-online-community-mean-to-your-company.html>

**10 Tips**  
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**#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...”

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**#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”

<b>Reviewer/Editor Comments:</b> 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.	<b>Response:</b> We agreed and have provided the full scoring rubric in our revisions (please see the updated Appendix, pp. 35-36).
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**10 Tips**  
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**#7 – Engage the Peer-Review Process  
EARLY AND OFTEN**

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

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

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**#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

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## 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 1<sup>st</sup> time)
  - You may very well get the same reviewer (see Principle #3)



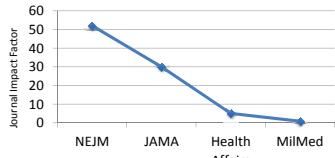
## 10 Tips for Publishing in Health Professions Education

### #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	Impact Factor
NEJM	~55
JAMA	~30
Health Affairs	~5
MilMed	~2

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?<sup>1</sup>
- Not resubmitting might be the right call
  - If costs of revision > benefits



<sup>1</sup> 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



"There's actually less here than meets the eye."

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