Scholarly Activities Redefined

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Dr. Gereige (or spouse/partner) has not had (in the past 12 months) any conflicts of interest to resolve or relevant financial relationship with the manufacturers of products or services that will be discussed in this CME activity or in his presentation.

Dr. Gereige will support this presentation and clinical recommendations with the “best available evidence” from medical literature.
Learning Objectives

At the conclusion of this presentation, attendees are expected to:

1. Learn the categories of Scholarship
2. Identify six standards against which scholarly work can be evaluated
3. Understand the ACGME scholarly Activities requirements for faculty and for residents/fellows
4. Learn about resources, tips, and ways to increase and document their own scholarship
5. Develop an outline to transform a teaching activity into scholarship using the 3 phase model
Outline

1. Pre-test – Test your knowledge (ARS)
2. Definition and Types of Scholarship
3. ACGME and ABP Scholarship Definitions
4. Resources and reporting
5. Post-test – Test your knowledge (ARS)
Pre-Test
1- Which of the following best represents the four types of scholarship as redefined by Ernest Boyer?

A. Patient care, Quality, Research, and Communication

B. Patient care, Teaching, Research, and Communication

C. Discovery, Integration, Application, and Teaching

D. Discovery, Quality, Translation, and teaching

E. Publication, Leadership, Mentorship, and Teaching
2- You have been volunteered by your department to write the weekly health column for your local community newspaper as the newspaper health correspondent. This activity represents which type of scholarship?

A. Teaching
B. Integration
C. Discovery
D. Application
E. This does not constitute scholarly activity

[Bar chart showing 20% for each option]
3- A faculty has taught a Med II course for 5 years now. Based on an audit of the course, the faculty has not changed the course format, content, or delivery method and is not aware of the students’ performance on the subject or students’ feedback/evaluations. Which one of the following best describes the role of the faculty?

A. Faculty role meets the Scholarship of Teaching
B. The course meets the Scholarship of Application as a product
C. The course meets the Scholarship of discovery as it was created by the faculty
D. The course cannot be considered educational scholarship based on Glassick’s criteria
E. The course can be considered scholarship if some lectures are used by other course directors
Documenting in ADS

4- True or False? – A new faculty just joined your program. He just graduated from an accredited program and his scholarly activities have been reported, the same data be entered again for his faculty scholarly activities now that he is a faculty

A. True
B. False
5- True or False? – The scholarly activities for non-physician faculty members should be entered in ADS

A. True
B. False
6- True or False – One abstract that has multiple residents and two faculty who completed it will count only for one faculty and one resident.

A. True
B. False
Traditional Scholarship
The Three-Legged Stool of Academic Medicine
Boyer's model of scholarship

• In 1990 Ernest Boyer redefined scholarship
  – Expanded the traditional academic model
  – Four types of scholarship
• Boyer argued that all four dimensions of scholarship should be rewarded
• Endorsed by the Institute of Medicine’s November 2002 Report, *Who Will Keep the Public Healthy?*
Boyer's model of scholarship

Ernest Boyer, 1990, *Scholarship Reconsidered: Priorities of the Professoriate*
The Scholarship of Discovery

- Includes original research that advances knowledge
- This is traditional research

Ernest Boyer, 1990, *Scholarship Reconsidered: Priorities of the Professoriate*
The Scholarship of Integration

• Making connections, synthesis of information
  – Across disciplines
  – Across topics within a discipline
  – or across time

• Stepping back from a narrow area of research to search for connections between discoveries obtained by different approaches or even from varied disciplines.

• Integration becomes true scholarship when novel insights, both interpretive and interdisciplinary, are discovered.

Ernest Boyer, 1990, Scholarship Reconsidered: Priorities of the Professoriate
The Scholarship of Application

• Interaction between research and practice
• Later called the **scholarship of engagement**
• Goes beyond the service duties of a faculty member to those within or outside the Institution
• Involves the rigor and application of disciplinary expertise with results that can be shared with and/or evaluated by peers
• Connecting the rich resources of the institution to our most pressing social, civic and ethical problems, to our children, to our schools, to our teachers and to our cities
• Building bridges between theory and practice
• Encompasses the **service functions** of academics.
• Asks how knowledge can be used in a practical situation.

Ernest Boyer, 1990, *Scholarship Reconsidered: Priorities of the Professoriate*
Products of Community-Engaged Scholarship

1. **Peer-reviewed articles:** An established number of descriptive or empirical articles in reputable peer-reviewed journals.

2. **Applied products:**
   - Focus on the “immediate” transfer of knowledge into application and serve to “strengthen collaborative ties between academics and practice”
   - Enables faculty to “apply disciplinary knowledge to practice” with communities
   - Include innovative intervention programs; policies at the community, state, and federal levels; training materials and resource guides; and technical assistance.

3. **Community dissemination products:**
   - May include community forums, newspaper articles, Web sites, and presentations to community leaders and policy makers at state and national levels.

The Scholarship of Teaching and Learning

- Involves the creation of new knowledge about teaching and learning
- The systematic study of teaching and learning processes
- It differs from scholarly teaching in that it requires a format that will allow public sharing and the opportunity for application and evaluation by others
- Involves communicating one’s knowledge effectively to students.
- Knowledge gained through basic research, by integrating data from different disciplines, or by applying novel techniques is meaningful only when communicated and understood by others.

Ernest Boyer, 1990, Scholarship Reconsidered: Priorities of the Professoriate
Scholarship of Teaching
Four Dimensions

Set forth by Trigwell, Martin, Benjamin, and Prosser (2000)

1. Being informed about teaching and learning
2. Critically reflecting on teaching
3. Communicating knowledge about teaching
4. How teaching is conceptualized.

Teaching

• Promotion of learning.
• Teaching, in itself, is not scholarship.
• One can be an outstanding teacher without either being a scholarly educator or making any contribution to the scholarship of teaching (Hafler).
• *Scholarly teaching* is the application of the principles and theories of education.
A Scholarly Teacher

• Strives to understand and apply theories of learning to his teaching, curriculum development and evaluation methods

• Reflects on his teaching, invites feedback from learners, and makes changes as appropriate

• *Educational scholarship* requires dissemination of knowledge, experience, or a tangible product to the educational community.

Richlin
Scholarship of Teaching vs Scholarly Teaching

To be scholarship, the work must meet these criteria:

1. Be made public.
2. Be available for peer review and critique according to accepted standards
3. Be able to be reproduced and built on by other scholars within the community of scholars

Shulman
Transforming your teaching into scholarship

*Three-Phase Model*

1. Phase 1: Educational activities (describing what, where, when, and how you teach)
2. Phase 2: Scholarly approach (collecting data to improve your teaching)
3. Phase 3: Scholarship (sharing your findings so as to improve what the teaching community does)
<table>
<thead>
<tr>
<th>Phase 1</th>
<th>Phase 2</th>
<th>Phase 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Educational Activity</td>
<td>Scholarly Approach</td>
<td>Scholarship</td>
</tr>
</tbody>
</table>
| Set of 4 one hour lectures given to ~ 4 pediatric residents/month on a required developmental rotation since 2001 | Starting in the next academic year:  
- Incorporate team based learning, an effective teaching strategy described in the literature, into the lecture series.  
- Collect feedback from the learners on satisfaction and perception of change in knowledge and/or skills.  
- Measure changes in knowledge with an end of rotation exam and changes in skills utilizing a brief structured clinical observation checklist | Present findings regional meeting in a workshop format |
<table>
<thead>
<tr>
<th>Steps</th>
<th>Components and examples</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Refine the Study Question</td>
<td>Literature Review</td>
<td>Identifying existing studies and understanding the relevant scholarly environment</td>
</tr>
<tr>
<td></td>
<td>Problem Statement</td>
<td>Describes the overarching context of the study and conveys how it will advance the literature</td>
</tr>
<tr>
<td></td>
<td>Conceptual Framework</td>
<td>A theory, model or approach that situates the study question within a theoretical context and explains the results</td>
</tr>
<tr>
<td></td>
<td>Statement of Study Intent</td>
<td>May be stated as a question, hypothesis or goal</td>
</tr>
<tr>
<td>2. Identify Designs and Methods&lt;sup&gt;a&lt;/sup&gt;</td>
<td>Experimental</td>
<td>Manipulating an independent variable and studying its effect on a dependent variable</td>
</tr>
<tr>
<td></td>
<td>Observational</td>
<td>Does not involve altering the events under study. Includes various methods for determining relationships between variables that are not manipulated</td>
</tr>
<tr>
<td></td>
<td>Validity</td>
<td>Collecting evidence to support valid interpretations of instrument scores</td>
</tr>
<tr>
<td></td>
<td>Qualitative</td>
<td>Data are words. Has features of both design and method</td>
</tr>
<tr>
<td></td>
<td>Systematic Reviews</td>
<td>Utilizing explicit methods to identify and summarize previously published studies on a specific subject</td>
</tr>
<tr>
<td>3. Select Outcomes</td>
<td>Outcome</td>
<td>Outcomes are conceptual. Examples are attitudes, skills and knowledge</td>
</tr>
<tr>
<td></td>
<td>Outcome Methods</td>
<td>Outcome methods (e.g. surveys) are general approaches to assessing a given outcome</td>
</tr>
<tr>
<td></td>
<td>Instruments</td>
<td>Instruments (e.g. questionnaires) are specific devices for systematically collecting data</td>
</tr>
</tbody>
</table>

Notes: <sup>a</sup>Sometimes the distinction between design and method is uncertain. See text for more detailed discussion. Although this table illustrates study designs and methods commonly used in medical education studies, the list is not intended to be exhaustive.
<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Quantitative</th>
<th>Qualitative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data</td>
<td>Numbers&lt;br&gt;Answers questions like: ‘what percentage of patients are willing to receive a tetanus vaccination?’</td>
<td>Words (e.g. field notes, interviews, focus groups, video tapes) that reflect ordinary events and are grounded in natural settings&lt;br&gt;Answers questions like: ‘why do some patients decline disease prevention?’</td>
</tr>
<tr>
<td>Basic Tenet</td>
<td>The universe is one reality comprising discoverable facts</td>
<td>The universe contains many, socially constructed truths</td>
</tr>
<tr>
<td>Reasoning Process</td>
<td>Hypothetical-deductive</td>
<td>Inductive</td>
</tr>
<tr>
<td>Function of the Investigator</td>
<td>Uninvolved observer</td>
<td>Empathetic participant; integrates findings within the study context</td>
</tr>
<tr>
<td>Goal of the Study</td>
<td>Identify associations and causal relationships between variables</td>
<td>Understand circumstances from the perspectives of the study subjects</td>
</tr>
<tr>
<td>Typical Study Design</td>
<td>Experiment</td>
<td>Grounded Theory: Theories are not identified a priori, but are discovered as the study unfolds</td>
</tr>
<tr>
<td>Generalizing Study Findings</td>
<td>Ideally, quantitative research findings generalize to other settings</td>
<td>Generalizability may not be possible, and the user must determine whether results apply to his/her particular setting</td>
</tr>
<tr>
<td>Limitations</td>
<td>Numerical data can be perceived as less ‘human’, and may therefore be less engaging and persuasive. Also, quantitative methods may fail to reveal unanticipated findings</td>
<td>Subjective analysis increases the potential for biased data interpretation</td>
</tr>
</tbody>
</table>

Notes: Increasingly, qualitative and quantitative methods are used in the same study. (For more information see: Miles & Huberman 1994; Greenhalgh & Taylor 1997; Fraenkel & Wallen 2003; Kennedy & Lingard 2006.)
E-Learning as Academic Scholarship

The following activities could be considered evidence of scholarship for faculty promotion:

– Publication of e-learning materials in a national online peer-reviewed repository
– Faculty and learner evaluations of one’s e-learning material.
– Peer-reviewed publications describing the process, impact, and scientific contributions of e-learning to medical education
– Successful grant awards in e-learning
– Participation in national (and international) societies concerned with the development, application, and use of e-learning in medical education
Beyond Boyer’s Definition
Glassick’s (et.al.) Model

• Six standards to evaluate all types of scholarship.
• Evaluates faculty work as scholarship based on the degree to which a faculty member:
  1. Establishes clear goals
  2. Is adequately prepared
  3. Uses appropriate methods
  4. Has significant results
  5. Creates an effective presentation of the work
  6. Reflects critically on the activity

Summary of Standards\textsuperscript{*}\textsuperscript{,p.36;*}

**Clear Goals**
Does the scholar state the basic purpose of his or her work clearly? Does the scholar define objectives that are realistic and achievable? Does the scholar identify important questions in the field?

**Adequate Preparation**
Does the scholar show an understanding of existing scholarship in the field? Does the scholar bring the necessary skills to his or her work? Does the scholar bring together the resources necessary to move the project forward?

**Appropriate Methods**
Does the scholar use methods appropriate to the goals? Does the scholar apply effectively the methods selected? Does the scholar modify procedures in response to changing circumstances?

**Significant Results**
Does the scholar achieve the goals? Does the scholar's work add consequentially to the field? Does the scholar's work open additional areas for further exploration?

**Effective Presentation**
Does the scholar use a suitable style and effective organization to present his or her work? Does the scholar use appropriate forums for communicating the work to its intended audiences? Does the scholar present his or her message with clarity and integrity?

**Reflective Critique**
Does the scholar critically evaluate his or her own work? Does the scholar bring an appropriate breadth of evidence to his or her critique? Does the scholar use evaluation to improve the quality of future work?

\textsuperscript{*}These six standards can be applied to all four forms of scholarship proposed by Boyer: the scholarship of discovery, of integration, of application, and of teaching. The standards were derived from the analysis of information collected in 1994 by Carnegie scholars from granting agencies, scholarly press directors, and scholarly journal editors.
“To be considered scholarship, every scholarly accomplishment needs be shared with and judged by other scholars”.

Peer-Review is Essential
Diamond and Adam’s Model

Model for scholarship that

1. Requires a high level of discipline-related expertise
2. Breaks new ground or is innovative
3. Can be replicated, documented, peer-reviewed
4. Has a significant impact
American Board of Pediatrics

Definition of Scholarly Activity
For Fellows
Scholarly Activity

Fellows will be expected to engage in projects in which they develop hypotheses or in projects of substantive scholarly exploration and analysis that require critical thinking.
Scholarly Activity

Areas in which scholarly activity may be pursued include, but are not limited to:

– Basic, clinical, or translational biomedicine
– Health services
– Quality improvement
– Bioethics
– Education
– Public policy
Scholarly Activity

Examples of acceptable activities include, but are not limited to:

– Biomedical research
– Critical meta-analysis of literature
– Systematic review of clinical practice with scope and rigor of a Cochrane review
– Critical analysis of public policy
– Curriculum development project with an assessment component
Scholarly Activity Work Product

• ABP allows many options for engagement in SA, but has not diluted the rigor expected
• The work product should be result of completed project of substantive scholarly exploration and analysis
• Abstracts, case reports, review articles, and proposals would not be expected to meet the requirements
Work Product of Scholarly Activity

Generation of a specific written “work product” will be required. Examples of products include:

- Peer-reviewed publication in which a fellow played a substantial role
- In-depth manuscript describing a completed project
- Thesis written in connection with the pursuit of an advanced degree
- Extramural grant application that has either been accepted or favorably reviewed
- Progress report for projects of exceptional complexity, such as a multi-year clinical trial
Scholarly Activity

- An opportunity for residents/fellows and faculty to participate in research, as well as organized clinical discussions, rounds, journal clubs, and conferences. In addition, some members of the faculty should also demonstrate scholarship through one or more of the following: peer-reviewed funding; publication of original research or review articles in peer-reviewed journals or chapters in textbooks; publication or presentation of case reports or clinical series at local, regional, or national professional and scientific society meetings; or participation in national committees or educational organizations. (See Common Program Requirements)
Scholarly Activity

• An opportunity for residents/fellows and faculty to participate in research, as well as organized clinical discussions, rounds, journal clubs, and conferences. In addition, some members of the faculty should also demonstrate scholarship through one or more of the following: peer-reviewed funding; publication of original research or review articles in peer-reviewed journals or chapters in textbooks; publication or presentation of case reports or clinical series at local, regional, or national professional and scientific society meetings; or participation in national committees or educational organizations.

(See Common Program Requirements)

ACGME.org – Glossary of Terms
ACGME
Scholarly Activity: Important Accreditation Standard

• In 2011 alone across specialties and subspecialties, Residency Review Committees (RRCs) issued 402 citations (6.5% of all citations) for scholarly activity
<table>
<thead>
<tr>
<th>Component of Scholarship</th>
<th>Examples</th>
<th>Assessment Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discovery = advancing knowledge</td>
<td>Published paper</td>
<td>All 4 components of scholarship should be present when looking at the sum of the core faculty members’ work.</td>
</tr>
<tr>
<td></td>
<td>Work resulting in abstract</td>
<td>Each resident should be exposed to each of the 4 components of scholarship and should complete at least one scholarly activity during the residency training period.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>More stringent requirements may be instituted by the specialty-specific RRC as needed.</td>
</tr>
<tr>
<td>Integration = synthesizing knowledge</td>
<td>Case studies or reports</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Patient education projects</td>
<td></td>
</tr>
<tr>
<td>Application = applying existing knowledge</td>
<td>Participation in national guideline panels</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Participation in professional societies</td>
<td></td>
</tr>
<tr>
<td>Teaching = disseminating current</td>
<td>Preparing and delivering lecture(s)</td>
<td></td>
</tr>
<tr>
<td>medical knowledge</td>
<td>Curriculum development</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Development of web-based modules, etc</td>
<td></td>
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</tbody>
</table>
ACGME
Common Program Requirements
ACGME
Scholarly Activity Redefined

• The responsibility for establishing and maintaining an environment of inquiry and scholarship rests with the faculty, and an active research component must be included within each program.
• Both faculty and residents must participate actively in scholarly activity.
• Scholarship is defined as one of the following:
  – **The scholarship of discovery** - as evidenced by peer-reviewed funding or publication of original research in peer-reviewed journals.
  – **The scholarship of dissemination** - as evidenced by review articles or chapters in textbooks.
  – **The scholarship of application** - as evidenced by the publication or presentation at local, regional, or national professional and scientific meetings, for example, case reports or clinical series.
  – Active participation of the teaching staff in clinical discussions, rounds, journal club, and research conferences in a manner that promotes a spirit of inquiry and scholarship; offering of guidance and technical support, e.g. research design, statistical analysis, for residents involved in research; and provision of support for resident participation as appropriate in scholarly activities.
Faculty

• The faculty must establish and maintain an environment of inquiry and scholarship with an active research component. (Core)

  a) The faculty must regularly participate in organized clinical discussions, rounds, journal clubs, and conferences. (Detail)
  b) Some members of the faculty should also demonstrate scholarship by one or more of the following:
     a) peer-reviewed funding; (Detail)
     b) publication of original research or review articles in peer reviewed journals, or chapters in textbooks; (Detail)
     c) publication or presentation of case reports or clinical series at local, regional, or national professional and scientific society meetings; or, (Detail)
     d) participation in national committees or educational organizations. (Detail)
  c) Faculty should encourage and support residents in scholarly activities. (Core)
Discovery

Integration

Application

Teaching

<table>
<thead>
<tr>
<th>Faculty Member</th>
<th>PMI D 1</th>
<th>PMI D 2</th>
<th>PMI D 3</th>
<th>PMI D 4</th>
<th>Conference Presentations (#)</th>
<th>Other Presentations (#)</th>
<th>Chapters / Textbooks (#)</th>
<th>Grant Leadership (#)</th>
<th>Leadership or Peer-Review Role (Y/N)</th>
<th>Teaching Formal Courses (Y/N)</th>
</tr>
</thead>
</table>

Definitions:
Pub Med IDs (assigned by PubMed) for articles published in the previous academic year. List up to 4. Pub Med ID (PMID) is an unique number assigned to each PubMed record. This is generally an 8 character numeric number. The PubMed Central reference number (PMCID) is different from the PubMed reference number (PMID). PubMed Central is an index of full-text papers, while PubMed is an index of abstracts.

Number of presentations given (grand rounds, invited professorships), materials developed (such as computer-based modules), or work presented in non-peer review publications in the previous academic year. Articles without PMIDs should be counted in this section. This will include publication which are peer reviewed but not recognized by the National Library of Medicine.

Number of grants for which faculty member had a leadership role (PI, Co-PI, or site director) in the previous academic year.

Had an active leadership role (such as serving on committees or governing boards) in national medical organizations or served as reviewer or editorial board member for a peer-reviewed journal in the previous academic year.

In the previous academic year, held responsibility for seminars, conference series, or course coordination (such as arrangement of presentations and speakers, organization of materials, assessment of participants' performance) for any didactic training within the sponsoring institution or program. This includes training modules for medical students, residents, fellows and other health professionals. This does not include single presentations such as individual lectures or conferences.

or Faculty Scholarly Activity that occurred during the previous academic year between 7/1/2013-6/30/2014
Residents

Residents’ Scholarly Activities

• IV.B.1. The curriculum must advance residents’ knowledge of the basic principles of research, including how research is conducted, evaluated, explained to patients, and applied to patient care. (Core)

• IV.B.2. Residents should participate in scholarly activity. (Core)
  [As further specified by the Review Committee]

• IV.B.3. The sponsoring institution and program should allocate adequate educational resources to facilitate resident involvement in scholarly activities. (Detail)
  [As further specified by the Review Committee]
<table>
<thead>
<tr>
<th>Resident Name</th>
<th>PMID 1</th>
<th>PMID 2</th>
<th>PMID 3</th>
<th>Conference Presentations (#)</th>
<th>Chapters / Textbooks (#)</th>
<th>Participated in research (Y/N)</th>
<th>Teaching / Presentations (Y/N)</th>
</tr>
</thead>
</table>

**Definitions:**
- Pub Med IDs (assigned by PubMed) for articles published in the previous academic year. List up to 3. Pub Med ID (PMID) is an unique number assigned to each PubMed record. This is generally an 8 character numeric number. The PubMed Central reference number (PMCID) is different from the PubMed reference number (PMID). PubMed Central is an index of full-text papers, while PubMed is an index of abstracts.

- Number of abstracts, posters, and presentations given at international, national, or regional meetings in the previous academic year.

- Number of chapters or textbooks published in the previous academic year.

- Participated in funded or non-funded basic science or clinical outcomes research project in the previous academic year.

- Lecture, or presentation (such as grand rounds or case presentations) of at least 30 minute duration within the sponsoring institution or program in the previous academic year.

**Teaching**

**Integration**

**Discovery**
For Residents and Fellows

FIGURE 1. Percentage of residents who rated the following barriers to completion of their research project as important or very important.
*There were no statistically significant differences in responses between residents who presented research abstracts and those who presented clinical vignettes. †Five-point Likert scale: 1 = very important, 2 = important, 3 = neutral, 4 = not important, 5 = not very important.

Documenting Scholarship in Teaching
Documenting Scholarship in Teaching

• Primary documentation: The curriculum vitae (CV), Latin for course of life.
  – Often inadequate to document scholarly activities in teaching
• Educational portfolio: Used as an adjunct method to record educational contributions not usually listed in a CV.
• Five categories have been identified from the literature as the major areas of educational contribution:
  1. Direct teaching
  2. Curriculum development
  3. Advising and mentoring
  4. Educational administration and leadership
  5. Learner assessment.
• Document role and add quantitative metrics of quality
Dissemination

• Without dissemination, there is no scholarship
• Export your material:
  – Start with colleagues in your department
  – Share your creation with other departments at your institution
  – Discuss the process through an abstract, workshop or platform presentation at a regional meeting
  – Send the product to a web-based repository for peer evaluation
Resources

• The Summary Report and Findings of the American Association of Medical Colleges (AAMC) Group on Educational Affairs Consensus Conference on Educational Scholarship provides examples of documentation.

• The Guidebook for Clerkship Directors, a web-based document, also has resources from a number of academic institutions in the chapter entitled “Educational Scholarship” (Hafler).
Ideas and Resources for Improving Your Scholarly Activities
# RESOURCES FOR SCHOLARSHIP OF DISCOVERY

<table>
<thead>
<tr>
<th>RESOURCES/ EXAMPLES</th>
<th>COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Original Research Projects</td>
<td>List in CV or Educator’s Portfolio as “Research projects”</td>
</tr>
<tr>
<td>• Clinical Research</td>
<td></td>
</tr>
<tr>
<td>• Bench Research</td>
<td></td>
</tr>
<tr>
<td>• Medical Education Research</td>
<td></td>
</tr>
<tr>
<td>• Qualitative versus Quantitative</td>
<td></td>
</tr>
<tr>
<td>Peer-reviewed publications of Original Research papers</td>
<td>List in CV or Educator’s Portfolio as “Bibliography” or</td>
</tr>
<tr>
<td></td>
<td>“Peer-reviewed publications”</td>
</tr>
</tbody>
</table>
RESOURCES FOR SCHOLARSHIP OF SCHOLARSHIP OF INTEGRATION

Includes:
Case Reports, Case studies, Patient Education Projects, Poster presentations, non-peer reviewed publications
Journal articles, book chapters and the development of other enduring materials, such as curriculum, evaluation tools, medical images, cases, test questions, educational videos (e-Learning).

<table>
<thead>
<tr>
<th>RESOURCES/ EXAMPLES</th>
<th>COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>• <strong>Pediatrics in Review:</strong></td>
<td>List in CV or Educator’s Portfolio as “Bibliography” or “Peer-reviewed publications”</td>
</tr>
<tr>
<td><a href="http://pedsinreview.aappublications.org/">http://pedsinreview.aappublications.org/</a></td>
<td></td>
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<tr>
<td>o Index of Suspicion</td>
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<tr>
<td>o Visual Diagnosis</td>
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<tr>
<td>• <strong>Pediatrics:</strong> <a href="http://pediatrics.aappublications.org/">http://pediatrics.aappublications.org/</a></td>
<td></td>
</tr>
<tr>
<td>o Diagnostic Dilemmas and Clinical Reasoning Section</td>
<td></td>
</tr>
<tr>
<td>• Peer-reviewed or invited workshops or presentations</td>
<td>List in CV or Educator’s Portfolio as “Invited workshops or presentations”</td>
</tr>
</tbody>
</table>
RESOURCES FOR SCHOLARSHIP OF SCHOLARSHIP OF INTEGRATION

E-Learning: Submission of Educational Material to Peer-Reviewed web-based repositories (see below)

- **AAMC**
  - MedEdPORTAL iCollaborative [https://www.mededportal.org/icollaborative/](https://www.mededportal.org/icollaborative/)

**MedEd PORTAL Publications:** Peer-reviewed. Provides a free platform for health educators to build, share, elevate, and access high-quality health education teaching materials. Submission must be evaluated by learners and conforms to the six criteria of scholarship.

**MedEd PORTAL iCollaborative:** Provides a platform for educators and learners to share educational innovations that are being developed, implemented and tested within the health professions. Your posted iCollaborative resource may be included in your CV in a section which is clearly designated as “Non Peer Reviewed Educational Resources”.

- **AMA**:
  - Author an IPM Module (Submit a proposal)
  - *JAMA Pediatrics* (Formerly *Archives of Children and Adolescent Medicine*) [http://archpedi.jamanetwork.com/journal.aspx](http://archpedi.jamanetwork.com/journal.aspx)
    - New Section called Teachable Moments in Quality of Care. Students and residents develop these articles – Anonymized cases

- **APPD Share Warehouse**: [www.appd.org](http://www.appd.org)
## RESOURCES FOR SCHOLARSHIP OF SCHOLARSHIP OF INTEGRATION

### E-Learning: Submission of Educational Material to Peer-Reviewed web-based repositories (see below)

<table>
<thead>
<tr>
<th>Resource</th>
<th>Description</th>
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</table>
| Academic Pediatric Association (APA): *Academic Pediatrics Journal:* http://www.academicpedsjnl.net/ | Innovation articles are an opportunity for pediatric educators to disseminate projects related to teaching activities, curricular interventions, learner assessment, advising and mentoring, and program evaluation.  
  - New Section “Scholarly Innovations in Pediatric Education,” will comprise papers no more than 1000 words in length and will have no more than 1 table or figure and 3 to 5 key references. |
| HEAL (Health Education Assets Library): http://www.healcentral.org | Peer-reviewed, repository, large number of learning assets |
| MERLOT (Multimedia Educational Resource for Learning and Online Teaching): www.merlot.org | Repository for higher education, links to other online resources with peer-review comments, growing science and technology section |
| End of Life/Palliative Education Resource Center (EPERC): http://www.eperc.mcw.edu | Repository, digital content of end of life issues, peer-reviewed, links to other online resources |
## RESOURCES FOR SCHOLARSHIP OF APPLICATION/ENGAGEMENT

<table>
<thead>
<tr>
<th>RESOURCES/ EXAMPLES</th>
<th>COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Write a health column for a local newspaper</td>
<td>List in CV or Educator’s Portfolio as “Service to Community”</td>
</tr>
<tr>
<td>• Leadership role in a national education group or specialty board.</td>
<td>List in CV or Educator’s Portfolio as “Service to Professional Organizations”</td>
</tr>
<tr>
<td>• Test Question Writing or reviewing:</td>
<td>List in CV or Educator’s Portfolio as “Service to Professional Organizations”</td>
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<tr>
<td>o NBME</td>
<td></td>
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<tr>
<td>o ABP</td>
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<tr>
<td>• Volunteer to review educational manuscripts or abstracts or workshops for regional or national meetings (e.g. PAS)</td>
<td>List in CV or Educator’s Portfolio as “Service to Professional Organizations”</td>
</tr>
<tr>
<td>• Apply for an editorial board position on a medical journal, PediaLink, or the Pediatrics Review and Education Program (PREP).</td>
<td>List in CV or Educator’s Portfolio as “Service to Professional Organizations”</td>
</tr>
<tr>
<td>• Editorial Board of Journal(s)</td>
<td></td>
</tr>
<tr>
<td>• Serve as an editor or manuscript reviewer for a journal</td>
<td>List in CV or Educator’s Portfolio as “Service to Professional Organizations”</td>
</tr>
<tr>
<td>• Educational consultation to other programs</td>
<td></td>
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</tbody>
</table>
## RESOURCES FOR SCHOLARSHIP OF TEACHING

<table>
<thead>
<tr>
<th>RESOURCES/ EXAMPLES</th>
<th>COMMENTS</th>
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<tbody>
<tr>
<td>• As you continue to transform your teaching into scholarship, try to incorporate research into your activities.</td>
<td>Medical Education Research</td>
</tr>
<tr>
<td>• Develop testable hypotheses, gather data, analyze and reflect on the results, and most of all disseminate the findings.</td>
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</tr>
<tr>
<td>• Seek out colleagues who are also interested in educational scholarship and collaborate on investigational projects.</td>
<td></td>
</tr>
<tr>
<td>• Most of all, find a good mentor who can help guide you through your growth and development as an educator.</td>
<td></td>
</tr>
<tr>
<td>• Serve as a course director in your institution</td>
<td>Service to the College of Medicine/ Department</td>
</tr>
</tbody>
</table>
ACGME ADS FAQs

Faculty

Q. Do we need to enter scholarly activity for non-physician faculty members?
A. No, ACGME is only collecting the quantitative scholarly activity for physician faculty members. The scholarly activity, however, will be reported in narrative form on the non-physician CVs for the specialties and subspecialties that require it.

Q. A new faculty member just graduated from an accredited program. If their resident scholarly activity has been reported, should we enter the same data for faculty scholarly activity?
A. Yes.

Q. Do we need to enter scholarly activity for a faculty member who was an active faculty member last year, but has left the program?
A. No. ACGME is only collecting scholarly activity for current faculty members.

Q. Do I need to enter scholarly activity for new faculty members even if they were not in the program last year?
A. Yes. It does not matter where the scholarly activity was completed at.

Q. I have a faculty member who is listed in another program. Can we transfer their scholarly activity information to my program?
A. No. You must manually enter scholarly activity separately for each program.

Q. How do we document an article without a PMID number?
A. Articles without PMID numbers can be counted as ‘Other Presentations’. This includes publications which are peer reviewed but not recognized by the National Library of Medicine.
ACGME ADS FAQs
Residents

Q. Only residents from last year are showing. None of the incoming residents for the current year are showing. Do we need to enter scholarly activity for incoming residents?
A. No. You will only enter scholarly activity for residents who were active or completed your program in the previous academic year. New residents, including residents who transferred to your program, will not require scholarly activity reporting this year.

Q. I have more than 3 PMIDs to enter for a resident/fellow; can I submit more than 3 PMIDs for one person?
A. No. The scholarly activity is used to get an idea of the activity, not necessarily to document it entirely.

Q. I have an off-cycle resident who completes after September 1st; do I need to enter scholarly activity for this resident?
A. Yes.

Q. How do I document an article without a PMID number?
A. Articles without PMID numbers could be counted as ‘Conference Presentations’ only if the article was presented at an international, national, or regional meeting.

Q. Can one abstract or publication count for multiple residents or faculty who had completed it?
A. Yes.
Post-Test
1- Which of the following best represents the four types of scholarship as redefined by Ernest Boyer?

A. Patient care, Quality, Research, and Communication
B. Patient care, Teaching, Research, and Communication
C. Discovery, Integration, Application, and Teaching
D. Discovery, Quality, Translation, and teaching
E. Publication, Leadership, Mentorship, and Teaching
1- Which of the following best represents the four types of scholarship as redefined by Ernest Boyer?

A. Patient care, Quality, Research, and Communication

B. Patient care, Teaching, Research, and Communication

C. Discovery, Integration, Application, and Teaching

D. Discovery, Quality, Translation, and teaching

E. Publication, Leadership, Mentorship, and Teaching
You have been volunteered by your department to write the weekly health column for your local community newspaper as the newspaper health correspondent. This activity represents which type of scholarship?

A. Teaching
B. Integration
C. Discovery
D. Application
E. This does not constitute scholarly activity
You have been volunteered by your department to write the weekly health column for your local community newspaper as the newspaper health correspondent. This activity represents which type of scholarship?

A. Teaching
B. Integration
C. Discovery
D. Application
E. This does not constitute scholarly activity
A faculty has taught a Med II course for 5 years now. Based on an audit of the course, the faculty has not changed the course format, content, or delivery method and is not aware of the students’ performance on the subject or students’ feedback/evaluations. Which one of the following best describes the role of the faculty?

A. Faculty role meets the Scholarship of Teaching
B. The course meets the Scholarship of Application as a product
C. The course meets the Scholarship of discovery as it was created by the faculty
D. The course cannot be considered educational scholarship based on Glassick’s criteria
E. The course can be considered scholarship if some lectures are used by other course directors
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E. The course can be considered scholarship if some lectures are used by other course directors
Documenting in ADS

4- True or False? – A new faculty just joined your program. He just graduated from an accredited program and his scholarly activities have been reported, the same data be entered again for his faculty scholarly activities now that he is a faculty

A. True
B. False
Documenting in ADS

4- True or False? – A new faculty just joined your program. He just graduated from an accredited program and his scholarly activities have been reported, the same data be entered again for his faculty scholarly activities now that he is a faculty

A. True
B. False
5- True or False? – The scholarly activities for non-physician faculty members should be entered in ADS

A. True

☑️ B. False
5- True or False? – The scholarly activities for non-physician faculty members should be entered in ADS

A. True
B. False
6- True or False – One abstract that has multiple residents and two faculty who completed it will count only for one faculty and one resident.

A. True

✓B. False
6- True or False – One abstract that has multiple residents and two faculty who completed it will count only for one faculty and one resident.

A. True
B. False
“Originality is the essence of true scholarship. Creativity is the soul of the true scholar.”

Nnamdi Azikiwe
(First Nigerian President)