Defining and Disseminating Scholarship in the Digital Age

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Significance: BUMC faculty focused on teaching and clinical practice face an unclear pathway to promotion. Their teaching, clinical practice, and other forms of expert service are central to the success of BU's educational function and BMC's mission to provide "exceptional care without exception." Yet the day-to-day work of these faculty members often falls outside the traditional metrics of scholarly productivity, typically measured through grant funding and publications. As a result, many excellent educators and clinicians languish at the assistant professor level or find themselves steered into accepting "modified" titles during the promotion process. Frustration with this unclear promotion process makes retention of valued faculty difficult. BUMC may lose these faculty in their peak years of productivity. Adopting an expanded definition of scholarship and training faculty in innovative means to share and measure the impact of their work will benefit BUMC at the individual, community, and institutional levels.

Objectives: 1. Define scholarship more inclusively using Ernest L. Boyer's four-part framework: scholarship of teaching, integration, application, and discovery; 2. Identify new digital methods to measure engagement with and impact of scholarship; 3. Educate BUMC leadership and faculty about digital and new media resources to enhance dissemination of all types of scholarly work and to document national and international recognition; 4. Clarify specific pathways to promotion for educators and clinicians at all BUMC schools.

Methods: We reviewed literature with a focus on Boyer's expanded definition of scholarship, the limitations of bibliometrics as a measure of scholarly productivity, and the complementary role of alternative metrics for documenting impact in the digital age. We consulted BUMC leadership, librarians, and faculty to identify resources already available at BU and BUMC to support faculty through the promotion process. We also collaborated with digital metrics experts and faculty at other research universities to gain further understanding of the topic and to distill and refine our project, its resultant message, and our recommendations to the campus and beyond.

Findings: Boyer argues that scholarship of engagement (including teaching, integration, and application) is as important to institutional success as the scholarship of discovery (see appendix). Traditional bibliometric benchmarks provide a systematic way of quantifying scholarship of discovery but are inadequate for measuring the impact of scholarship of engagement across disciplines. Alternative digital metrics complement bibliometrics by documenting the numerous ways diverse audiences engage with all forms of scholarly activity. Novel digital tools allow individual faculty to build national and international recognition, connect with potential collaborators, share educational innovations, and build and promote a clinical practice. While BU currently offers many digital resources to assist individual educators in building their impact narrative, these resources remain both under-publicized and under-utilized. Thus, their value remains unrecognized by many educators and members of departmental and university leadership.

Innovation: Empowering members of the BUMC faculty to understand the scholarly value of all their work requires a culture change and specific programs aimed at advancing their professional narrative and pathway to promotion.

Structural Recommendations: 1) Incorporate all forms of Boyer's scholarship into promotion guidelines at all BUMC schools using a combination of traditional and alternative metrics; 2) Educate faculty and administration on the four categories of scholarship and alternative ways to disseminate their work; 3) Support all new faculty to start building and tracking their scholarly narrative from day one of their faculty appointment.

Ideas for Specific Programs: 1) Develop a "telling your scholarly narrative" program for new faculty orientation with continuing review of individual progress at annual meetings with department leadership; 2) Establish recurring digital profile bootcamps available to all BUMC faculty led by librarians and communications and marketing experts; 3) Create online digital profile challenge trainings, such as "10 things to do in 10 days" to enhance scholarship dissemination 4) Establish departmental digital media "gurus" to empower all faculty and each department to increase digital footprint.

Appendix:

Boyer's Model of Scholarship: "What we urgently need today is a more inclusive view of what it means to be a scholar" (Boyer EL, Scholarship Reconsidered: Priorities of the Professoriate, Princeton, NJ. Carnegie Foundation for the Advancement of Teaching, 1990). The "work of the professoriate" consists of scholarship in the form of the following:
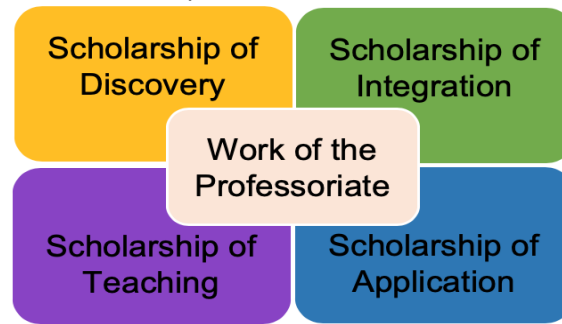
Scholarship of discovery: Encompasses original research for the purposes of advancing knowledge in a particular field. This is traditional research-based scholarship and is currently most common definition used for promotion criteria. In medical schools, scholarship increasingly involves collaboration between basic science and clinical researchers.

Scholarship of integration: Involves the synthesis of information across disciplines, across topics within discipline, or across time. This form of scholarship brings new insight to bear on original research. Integration may consist of a novel meta-analysis, a new text book, or the work of a multi-disciplinary team (e.g. clinicians, biologists, statisticians, engineers, etc.) joining their disparate expertise to provide novel insight on a problem, e.g. in cancer research.

Scholarship of teaching: Involves the systematic study of teaching and learning processes, for example the development of novel teaching methods or unique curricula that enhance learning experience for students. Teaching, at its best, means not only transmitting knowledge, but *transforming* and *extending* it as well.

Scholarship of application: Consists of building bridges between theory and practice, and using knowledge in practical or new consequential situations. For example, the work of our heroes in the health care system in response to COVID-19 represents the scholarship of application at its core.

Available resources at BU

Sci Val
https://scival.com/
Web of Science
https://library.bu.edu/c.php?g=522617&p=7313292#s-lg-box-23200930
Dimensions
https://www.dimensions.ai/
Open BU
https://open.bu.edu/
BU profiles
https://profiles.bu.edu/search/
My CV
https://www.bu.edu/provost/faculty-affairs/my-cv/

Additional Free online resources

30-day impact challenge
http://blog.impactstory.org/wp-content/uploads/2015/01/impact_challenge_ebook_links.pdf
The metrics toolkit
https://www.metrics-toolkit.org/