Reframing Academic Productivity, Promotion and Tenure As a Result of the COVID-19 Pandemic

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Abstract
Faculty members have been impacted in a multitude of ways by the COVID-19 pandemic. In particular, faculty seeking promotion and tenure have been impacted by the disruption and inconsistent levels of productivity. In this article, we consider academic productivity in the context of clinical, research, education and service missions within higher education and the academic medicine professoriate. We offer a series of recommendations to faculty members, to institutions, and to professional societies in hopes we can challenge pre-existing deficits in promotion and tenure processes, and academic worth.

Keywords: productivity, promotion, tenure, pandemic, academic medicine
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Similar to the rest of the world, the higher education community has been shaken by the COVID-19 pandemic. We take this opportunity to commend the strength of those personally challenged by the disease and of those that have gone above and beyond to care for others during this pandemic. Faculty members in academic medicine have been impacted in a multitude of ways. While we speak about wellness and grace during these times, we also recognize that faculty seeking promotion and tenure have already been impacted by the disruption and inconsistent levels of academic productivity, teaching venues, and faculty development opportunities for a period of time, yet to be determined. In light of this, our goal is to launch a much-needed conversation about reframing academic productivity in the midst of a pandemic, to encourage faculty and reemphasize the important role of faculty developers, and to facilitate an intentional discussion of promotion and tenure expectations in relation to productivity during the COVID19 pandemic.

Introduction

The current loss of academic productivity is multifactorial and external to faculty control. Travel restrictions have hampered collaboration with a diminished ability to network with colleagues from other institutions, finish and revise work for publication, attend national conferences, get feedback on academic work, present invited lectures, and build national and international reputations. Many grant funding cycles are being canceled or scaled back; some grants that have been awarded have been rescinded. The impact has been felt in the laboratories where research staff may sit idle with restricted abilities to perform critical research, or obtain tissue samples, while in some cases also being asked to provide their expertise to assist in
COVID-19 related matters. Considerable time is also being spent planning for multiple eventualities - down to what experiments can be performed quickly upon immediate return to provide data to analyze before another wave of infections occurs. Simultaneously, there is an evident reduction of available peer reviewers for all manuscripts and grants. Peers are being asked to review more than their usual share in order to keep processes moving, others simply do not have the time. Many faculty have been asked to shift to alternative roles, which although critical, can often be deemed as service activities and therefore tangential to their research and career trajectory for promotion and tenure.

At Indiana University School of Medicine, like many other institutions, disruptions in our productivity have taken many forms. Clinical faculty have increased clinical duties during time previously reserved for research, scholarship or teaching, without knowing when they will return to their prior schedules. Some have been deployed to different units, and struggling with imperfect technologies for virtual care and conducting meetings remotely. Outpatient clinics have been shuttered. Elective procedures were halted for an extensive period of time. Lack of student trainees and staff on clinical services has resulted in faculty doing additional work while impairing the educational experience. For those who are engaged in clinical research, trials have paused enrollment; many enrolled participants have either not been retained or have ceased their engagement with trials due to fears of entering places where they might contract COVID-19.

Moreover, there are significant financial implications to the COVID-19 crisis that institutions of higher education and faculty are facing. Compensation is increasingly tied to teaching, research, and clinical productivity. Faculty at academic institutions like University of Arizona, Wisconsin, Oregon, Montana, Tulsa, Louisville, and Marquette are experiencing pay cuts of 10% or more and hiring freezes and furloughs have been instituted while they wait for the
COVID-19 outbreak to subside. In addition, furloughs have included (in)voluntary salary cuts for administrators and athletics coaches (Nietzel, 2020). Most institutions are projecting declines in both domestic and international student enrollment and retention, with total tuition shortfalls running into the tens of billions of dollars (ICEF, 2020).

In addition, non-COVID-related work has not disappeared. For faculty in academic medicine, once the immediate crisis has abated, patients still need care. There will be backlogs of patients who could not be served during clinic closures or over telehealth. This has an incredible impact to a health system that has repeatedly, especially during this pandemic, demonstrated stark health disparities and inequities.

The emotional toll of taking on new professional challenges cannot be understated. While we recognize our privileged position compared to so many others in the U.S. and around the world, it is difficult for academic faculty to work from home while embodying the roles of primary caregivers to children and other family members. This role as primary caregivers is rapidly becoming a long-term problem as childcare centers close, summer camps canceled, and schools consider continued at-home options for the upcoming school year. Women faculty, who perform the majority of home duties in many households, are often disproportionately affected by this problem. For many, the disruption means not just a shift in routines, but the loss of meaningful projects that must now be put aside, which adds to mental exhaustion and burnout. For faculty of color academic productivity itself is a moving target, especially in relation to faculty development, promotion and tenure. Faculty of color are often measured by different standards as they take on invisible work and disproportionate service burden (Gutiérrez y Muhs, Niemann, González, & Harris, 2012; Matthew, 2016; Sotto-Santiago, Tuitt & Saelua, 2019).
Therefore, academic productivity was already challenging, but we continue to ask our faculty across higher education and academic medicine to remain productive in the midst of a pandemic.

Academic productivity is not concretely defined and “one size certainly does not fit all when it comes to assessing research productivity in particular and academic work” (Altbach, 2015). For the purposes of this perspective, we define academic productivity as measurable efforts that closely align with criteria for promotion and tenure as the professional goal. As such, we consider academic productivity in the context of clinical, research, education and service missions of the academic medicine professoriate. We offer a series of recommendations to faculty members, to institutions, and to professional organizations in hopes we can challenge and reframe the conversations about academic productivity in the midst of the pandemic. We offer these based on best practices and our own perspectives and circumstances. What we are seeing today will have long repercussions in our careers.

**Discussion**

**Development Efforts Toward Individual Faculty Members**

In 1990 Boyer challenged a “restricted view of scholarship” and proposed four functions: scholarship of discovery, integration, application, and teaching. Here we propose ways in which faculty who need to remain productive in scholarship can integrate COVID-related foci into their existing work or expand what they are doing while continuing to enhance their measurable productivity. The role of faculty developers becomes even more critical during these unprecedented times, especially in supporting faculty through these four functions of scholarship.
Scholarship of Discovery

Many have found their discovery work hindered by the pandemic, some have embarked on novel research into aspects of fighting COVID-19, its origin and effects on scientific and medical questions, and impacts on specific populations. Funding has been repurposed or expanded for those who embark on these lines of discovery. Faculty developers can support individualized development plans by guiding faculty through their reflections about research and scholarship agendas that could be expanded during this period of time. Faculty can be encouraged to consider the following questions: Are there areas in which your research or the populations accessible to you may intersect with pandemic issues? Are there any areas that you have been interested in exploring yet have not had an opportunity? Could this represent an opportunity to reach out to new or former mentors?

Scholarship of Integration

Integration means making connections across disciplines and placing specialties under larger context (Boyer, 1990). Achievement in this area requires the synthesis and critical analysis of new research and interdisciplinary work. Integration may include textbooks, book chapters, the development of open educational resources, which integrate disciplinary knowledge in ways that support teaching and learning. It can also refer to meta-analyses of previous research topics, literature reviews, or similar synthesis of knowledge. However, this type of product is not feasible for all types of faculty, especially those carrying and increased clinical load, educating children at home or those with care giver responsibilities.

Some faculty have developed online followings and forged new relationships over social media during this pandemic. While the social media presence might be helpful in establishing a national and international reputation, these emerging relationships need to continue to be
nurtured so that they lead to interdisciplinary work. Scholarship of integration includes a multitude of modes in which faculty can use professional development. Faculty developers can consider providing the following support: Are there areas in which your research may benefit from another perspective or viewing from the critical lens of another discipline? Remind faculty to track these endeavors and include them on their current curriculum vitae (CV). Developers can provide training on how to perform systematic or narrative reviews, and meta-analyses of literature. They may also connect faculty with virtual resources through library teams.

**Scholarship of Application**

Application involves scholarly service, one that applies and contributes to academic medicine and engages with the community (Boyer, 1990). For example, many of us have done this work through engaging with the media and distributing public health messages. Some have quickly established a local and national presence and expertise. Disseminating public health information via social media could be considered the scholarship of application if the faculty member creates credible, timely, and accurate content readily shared and used by other health professionals to use in educating the public. In order to demonstrate a scholarly approach to this type of work, the faculty member should consider how the impact is measured (e.g. Are you able to get your Twitter account “verified”? (Neiger et al., 2012). Faculty developers can play key supportive roles in assisting faculty with their social media presence and sharing its utility in promotion and tenure (Sotto-Santiago, Sharp, & Mac, 2020).

Other applications may include telehealth or telemedicine initiatives. Establishing telemedicine clinics across all disciplines has ramped up productivity quickly and has given us opportunities to learn from and to do quality improvement work around the experience. The scholarly aspect of this work can be enhanced by applying business or leadership principles to
the work and sharing these best practices with others. In addition, those with leadership or officer positions in national organizations have provided COVID-19 resources to educate and to assist their memberships, while also moving conferences online. This work is time- and labor-intensive and should be considered as important service to all areas.

**Scholarship of Teaching**

The world of education has changed quickly. Novel ways of teaching, advising, mentoring, and assessing students and trainees have been rapidly implemented. Courses were re-developed for online delivery or developed a new, which required many hours of work both for educational and professional development. Our schools’ needs have changed rapidly, requiring flexibility from educators. For example, faculty may be involved in pipeline and outreach programs involving high school students visiting labs. While this was formerly a straightforward introduction to the space and procedures of a lab, developing a substitute experience for an online class is difficult, and subsequently requires additional mentoring efforts in a remote setting. Advising and mentoring have expanded beyond the normal faculty scope. Given COVID-19 federal mandates regarding travel and participation by international students in our higher educational systems, faculty have had to learn about visa provisions, to become outspoken advocates for international students, and ease the stress of international learners.

The learning environment has drastically changed in academic medicine and the educational experience and course content have been greatly affected. As a field, educational development focuses on effective teaching and supporting learning communities. Despite our efforts, it is not clear what impact this will have on our teaching evaluations. Students tend to see technical issues as a lack of preparedness on the part of the teacher, and this can be reflected in teaching evaluations. A plethora of new and still-developing topics related to COVID-19 have
emerged dramatically and need to be incorporated into medical and graduate education during this pandemic. Faculty should be encouraged to consider writing about these experiences and disseminating successful teaching strategies and COVID-related curricula. Faculty developers can also connect faculty with skill enhancement training, which can be delivered remotely through Centers of Teaching and Learning in support of the scholarship of teaching.

Development Efforts Targeted Toward Institutions: Rethinking Productivity, Promotion and Tenure

The thread unifying the following recommendations are the uncertainty of times, reconciliation of academic productivity, weariness of promotion and tenure, and opportunity to make much-needed change. All terms remain in the abstract because the promotion and tenure process differs from institution to institution, while its general criteria equally instills stress and aspiration. Faculty handbooks do not address the subjectivity of academic productivity and its interpretation at various levels (i.e. department, school, campus) (Matthew, 2016). The need to dialogue about higher education constructions that tend to devalue service, social action, and narrow views of scholarship have always needed to be challenged. In the midst of a pandemic, the number of challenges increase while the structural barriers become more visible. The pandemic offers an opportunity to disrupt graduate/medical education, clinical care, health inequities, administrative work, and institutional policies and processes. Academic medicine is not immune to disruption and overall, higher education leaders have had to make difficult decisions during this pandemic (Christensen & Eyring, 2011; Stein, Chen, & Ackerly, 2015). We offer the following recommendations in an effort to adapt and forge a way to realistic expectations.
First, this pandemic demands a faster pace towards recognizing that bias exists in the promotion and tenure process. Anthologies like *Presumed Incompetent* or *Written/Unwritten* clearly argue against women and faculty of color not being productive enough or scholarly enough (Gutiérrez y Muhs et al., 2012; Matthew, 2016). However, we must recognize that this pandemic has also had a disproportionate impact on women and communities of color. In addition to its economic impact, caregiving falls disproportionately on women worldwide, often at a cost to personal needs and health (Garijo, 2020). Moreover, the pandemic has had disproportionate effect on communities of color, especially Black/African American, Hispanic/Latinx, and Native American groups (Ayesh, 2020; Despres, 2020; Kendi, 2020a, 2020b; Walker & Cochrane, 2020). How do we expect our faculty of color to not be impacted by this? We recommend institutions continue to educate their promotion and tenure committees to recognize their own biases while also educating them about the experiences of women and faculty of color in the realm of academia.

Second, reaffirm your commitment to your faculty and recognize these as uncertain times. In addition, to the “COVID-19 asterisk” in CVs indicating acceptance to conferences that did not/are not taking place, institutions should request an addendum to promotion and tenure dossiers to provide faculty the opportunity to reflect and express the impact of the pandemic on productivity and overall career (McAdoo, 2020; Modern Language Association, 2020). The time committed to the clinical enterprise during this pandemic should not be lost or seen as a period of lost productivity. Saving lives, being on the frontlines, supporting your colleagues and your community are not counter to productivity. We recognize that some faculty members have taken great advantage of these unusual times to catch-up and produce scholarship. However, some journals have already seen unusual gendered patterns in submissions-with women losing out-
during this pandemic (Flaherty, 2020). In some fields, faculty of color are already at a disadvantage, underrepresented amongst articles published as first authors and with lower citation rates (Chakravartty, Kuo, Grubbs, & McIlwain, 2018).

Third, in rethinking productivity and scholarship, institution leaders can realize that during this pandemic, there has been real work not only serving, but partnering with communities. Civic and community engagement is scholarship and it aligns with academic medicine’s commitment to our communities. Curricular engagement and opportunities that include meaningful community service should be counted as such, especially as our faculty engage in significant ways with communities during this pandemic.

Fourth, given the impact of COVID-19 to the learning environment, teacher evaluations during this period should not have the same level of weight, if any. First, we are aware of the bias that exists against women and faculty of color in course evaluations, but during this pandemic the sudden shift to virtual modes of education has disadvantaged innumerable faculty members and impacted the educational environment of our students and trainees (MacNell, Driscoll, & Hunt, 2015; Smith & Hawkins, 2011). In regards to peer review of teaching, these evaluations should be waived at this time and their weight or emphasis reconsidered during promotion and tenure. Not only has the environment changed, but both faculty and peer reviewers may need appropriate educational development to deliver and assess new virtual learning environments. Online education is not a matter of sharing PowerPoints on Zoom®; it takes effective educational development.

Fifth, extend bridge funding to researchers. The hibernation of research and laboratories has resulted in great costs to scientific discovery and advancements for diseases that are already
here. The pipeline for future research has been disrupted, in the form of supplies, animal husbandry, and the employment of research staff. Bridge funding will help prevent continued lost productivity years after the pandemic is over. Furthermore, faculty developers should consider their role in the overall wellness of our faculty. This is a time in which faculty developers can talk to faculty about the symptoms of burnout and how to cope. In medicine, physician burnout rate continues to hover just below 50% among doctors in the U.S (Berg, 2020). This is not an issue exclusive to wellness officers; it is everyone’s job. Faculty developers should consider how these efforts can be measured and documented for the purposes of their own promotion and tenure efforts.

Lastly, continue to provide mentoring and faculty development opportunities that influence the success of all faculty through the promotion and tenure process. It is time for faculty developers to rethink the way programs are delivered and how their own efforts influence success (i.e. virtual mentoring, writing groups, faculty orientations, networking events). We do not suggest these recommendations are exhaustive, but we invite our colleagues to question what their own institutions can do to challenge the meaning of productivity during this pandemic. We need to reframe how we speak about academic productivity and notions of academic success. We are including Table 1 as a source of additional ideas that can challenge current practices.

**Professional Societies: Rethinking Their Value to Members**

Many professional societies formed to advance our profession and the interests of its members, to raise public awareness, to expand our networks, to provide professional development, and so forth. Their construction is founded on a two-way relationship, in which faculty members are part of what keeps these societies moving forward, through contributing as
officers, in working groups, drafting guidelines, etc. Professional societies need to facilitate knowledge sharing in relation to this pandemic. We have been pleased to see many of our societies doing exactly that. Second, we understand the unfortunate loss caused by travel and gathering restrictions, but the truth is that participation in these events has always been time- and cost-prohibitive to many. In particular, conference costs can quickly become significant shares of budgets and limited continuing education allowances (Flaherty, 2017). Although many societies are conscious of these barriers, they inevitably disparately affected graduate students, trainees and early career faculty. A recent study revealed that larger associations were more likely to have canceled an event during the pandemic and/or expanded virtual access than smaller societies (Bergeron, 2020).

Virtual platforms or hybrid conference models may offer an opportunity to reach out to faculty that are unable to travel, while also providing alternative ways to network and even increase engagement. We invite professional societies to continue to evaluate their business models and along with their members be creative in the way they deliver value to all members.

Conclusion

The issues we highlight in this perspective have not all been created by the COVID-19 pandemic, but their visibility has been opportunistically elevated. The pre-existing deficits in institutional processes for assessing productivity, promotion and tenure, and academic worth are now amplified and evident. We provided recommendations for helping faculty members consider Boyer’s (1990) scholarship of discovery, integration, application, and teaching as a way to remain productive in scholarship. We also posit that the need to dialogue about higher education structures that tend to devalue service, social action, and narrow views of scholarship have
always needed to be challenged. Institutions of higher education must rethink what they reward in promotion and tenure process, especially while assessing candidate’s productivity in the midst of a pandemic. Lastly, we invite professional societies to revisit their conference and meeting models, which could positively impact their membership and engagement.

We acknowledge the thread unifying these recommendations are the uncertainty of times brought to light by a pandemic, along with the need to reconcile academic productivity, and continued disillusionment or weariness of promotion and tenure. However, we must guide our colleagues, institutions and professional societies in ways that bring us safely through this crisis and leave the system better.
Table 1. Additional recommendations

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<th>Topic</th>
<th>Traditional approach</th>
<th>Adaptive approach</th>
<th>Innovative approach</th>
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<td>Abstract submissions to conferences</td>
<td>Submit abstract if you plan to attend the conference. Use feedback to move your work forward.</td>
<td>Faculty should submit abstracts even if conference might be held in virtual format. Use feedback to move your work forward. Professional societies should make every effort to move the conference online or use a hybrid format.</td>
<td>Absence of live conference can allow for “rolling” deadlines for abstract submission. Posters and presentations could be in virtual format on institutional or professional society websites. By using social media, immediate feedback can be provided. This also reduces bias against women and faculty of color, who may find it more difficult to travel.</td>
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<td>Grant submissions</td>
<td>Submit grant applications and list them on the CV, whether they are funded or not.</td>
<td>As the pool of funding shrinks, apply for more grants. Funding agencies should acknowledge the inevitability of delays in planned research.</td>
<td>Collaborate with potential competitors from other institutions. Explore collaborations with industry. Institutions could consider focusing less on grant money brought in and more on evidence of impact on the community.</td>
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<td>Time spent on activities that fill a unique need, such as conducting faculty wellness sessions, educating the</td>
<td>Note the distraction from normal scholarship due to COVID-19</td>
<td>Track time spent on these activities and record on CV and/or personal statement and study the effect of these activities and publish the results. Choose metrics for assessing impact of</td>
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<td>public, mentoring learners, etc.</td>
<td>explain the value to the institution/society.</td>
<td>public health messages.</td>
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<td><strong>Online presence</strong></td>
<td><strong>Contributes to national/international reputation</strong></td>
<td><strong>Expand your online presence. When your invited talk becomes a recorded presentation, make it publicly available and advertise it on your professional online profiles.</strong></td>
<td><strong>Choose metrics for tracking impact of posting recorded talks and visual aids, and track these. Seek out collaborations with peers met through social media connections.</strong></td>
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<td><strong>Peer review of manuscripts</strong></td>
<td><strong>Individuals agree to review as feasible.</strong></td>
<td><strong>Track number of manuscripts reviewed and record on your CV.</strong></td>
<td><strong>Editorial staff could expand the pool of reviewers by offering peer review training to senior trainees and early career faculty members, consider having both early career and senior reviewers for each manuscript. Require review of two manuscripts for each manuscript submitted. Journals could encourage thoughtful reviews by using their ratings of reviews to create rankings such as “master reviewer” that faculty members can use as evidence of expertise and effort.</strong></td>
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<td><strong>Mentorship</strong></td>
<td><strong>Mentors try to make time for their mentees</strong></td>
<td><strong>Mentor meetings can move online</strong></td>
<td><strong>With virtual meetings, mentors and mentees</strong></td>
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mentees. Some faculty will take on extra mentorship responsibilities. no longer need to be from the same institution. Professional societies could facilitate pairings and provide training. Pairs could use collaboration software to maintain relationships. Institutions and professional organizations could develop platforms for distance and asynchronous mentoring.

<p>| Institutional presentations/conferences | Live conferences canceled or postponed due to social distancing. | Move to virtual or hybrid format or record talks for asynchronous viewing; consider inviting early career faculty and/or faculty from outside of the institution. | Instructional technologies could be used to enhance virtual/hybrid presentations and promote interactivity. Conferences such as grand rounds can be streamed to other institutions or made public. Recorded presentations could be posted on social media and used to promote collaboration and enhance the reputation of the institution and the presenting faculty member. Best practices for building community in a virtual environment should be developed and disseminated. |
| Peer review of teaching | Teaching observations are necessary for | Institutions could waive this requirement | Observations of online teaching, including assessment of novel |</p>
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<td>Promotion for some faculty members. These would be canceled due to social distancing.</td>
<td>during the pandemic.</td>
<td>approaches to curriculum development, use of instructional technology, and innovative instructional strategies could be provided.</td>
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<td>Teaching evaluations</td>
<td>Student ratings of instructors may be suboptimal with changes in planned curricula</td>
<td>Institutions could make it optional for faculty to include student ratings on their promotion dossiers. This would decrease bias against women and faculty of color.</td>
<td>Faculty members and institutions could develop alternative, evidence-based measures of teaching effectiveness. These could include student outcomes, independent reviews of teaching materials and curricula for bias reduction, evidence that faculty engage in critically reflective teaching.</td>
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<td>Tensions between faculty and staff, and institutions</td>
<td>Institutions must ensure their faculty, student, and staff safety when classrooms re-open.</td>
<td>Institutions should ensure that faculty and trainees are trained and compensated appropriately for the work they do.</td>
<td>All should be aware of the potential for exploitation of faculty and trainees. Potential mental health impact of pandemic-related changes should be studied and addressed proactively.</td>
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References


