

SCHOLARLY PRODUCTION AMONG RECENTLY TENURED LANDSCAPE ARCHITECTURE FACULTY: A LONGITUDINAL STUDY

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ABSTRACT

The career development and success of landscape architecture faculty hinges increasingly on their scholarship. Landscape architecture education, often emphasizing the preparation of practitioners, does not easily fit the traditional academic teaching model. As a result, it becomes necessary for landscape architecture faculty to describe the academic context in which they engage in scholarship, which may place them at a disadvantage when evaluated. The purpose of this study was to revisit two previous studies of scholarly productivity among landscape architecture faculty by replicating those studies conducted over the 2008 to 2015 academic years, assessing findings for faculty tenured since that time to establish a more longitudinal understanding of the trajectory of faculty scholarly productivity.

The study employed direct content analysis of the curricula vitae of landscape architecture faculty members who were awarded tenure at public universities in the 2016-17 academic year or thereafter. Common scholarly outputs, such as refereed journal articles, juried competition participation, reports, etc., were assessed by the research team. Two researchers independently analyzed each vita, thereafter comparing the individual results, and negotiating any discrepancies with a third researcher.

The results describe the mean scholarly productivity of landscape architecture faculty during the tenure evaluation period and after the awarding of tenure. The findings suggest landscape architecture faculty members' scholarly productivity continues to be relatively low in comparison with other non-design academic disciplines. An evolving, or new standard of scholarship, among landscape architecture faculty increasingly emphasizes traditional academic refereed products. Landscape architecture as an academic field needs greater training in conceptualizing, acquiring support for, conducting, and reporting research to be successful in an academic environment and provide a much-needed foundation for current practice.

Keywords

Scholarship, Faculty, Tenure, Academia, Productivity, Promotion

1 BACKGROUND

The career development and success of landscape architecture faculty continues to be based increasingly on their scholarship (Deming & Swaffield, 2011). Academic institutions often emphasize research performance, with assessments of faculty productivity tending to be based on quantifiable research behaviors (Milburn & Brown, 2003). Faculty in the process of demonstrating their scholarly productivity and its merits for securing academic promotion and tenure must often balance the demands of scholarship and the preparation of future practitioners. Landscape architecture does not easily fit the traditional academic department model (Milburn et al., 2003). Prior studies of landscape architecture scholarship indicate that faculty productivity is hindered by relatively high instructional loads and student contact time (Milburn, Brown, & Paine 2001; Chen et al., 2011; Christensen & Michael, 2014). As a result, it often becomes necessary for landscape architecture faculty to describe the academic context in which they engage in scholarship (Gobster, Nassauer & Nadenicek, 2010), which may place them at a disadvantage when evaluated with other faculty across their institutions.

There has been ongoing investigation into the type, quality, and quantity of scholarship on which faculty may be appropriately evaluated in the diverse context of landscape architecture (Chenoweth, 1992; LaGro, 1999; Milburn, Brown & Paine, 2001; Milburn & Brown, 2003; Milburn & Brown, 2016). In particular, Milburn and Brown (2016) followed up on their earlier study (2003) to identify whether research productivity of landscape architecture faculty in North America had changed over the past 15 years, providing a rare and valuable longitudinal assessment. The findings, which will be discussed further herein, indicate that both the research attitudes and behaviors of faculty have improved, with faculty producing research at a rate higher than ever before (Milburn & Brown, 2016). In 2014, Christensen and Michael published a study examining a smaller cohort of similar landscape architecture programs faculty research productivity. In 2019, Christensen, Michael and Sleipness published a subsequent study of faculty productivity at the same two career points. This study's purpose was to revisit those studies conducted for the 2008 to 2015 academic years (Christensen & Michael, 2014; Christensen, Michael, & Sleipness, 2019) and assess findings for faculty tenured from 2016 to 2022 to add to a more longitudinal understanding of faculty scholarly productivity.

2 METHODS

This study replicates Christensen and Michael's (2014) initial study by employing direct content analysis, specifically systematic intuitive interpretive analyses to classify and quantify the curricula vitae of landscape architecture faculty members who were awarded tenure in the 2013-14 academic year or thereafter. Participant selection was framed by the specific need to communicate expectations for landscape architecture faculty productivity across similar university programs. As a result, participant selection involved first identifying 22 similar programs in public land-grant universities offering both accredited bachelors and masters degrees in landscape architecture. These institutions are the same as those from the two previous studies by Christensen and Michael (2014) and Christensen, Michael and Sleipness (2019), and represent roughly one third of all accredited programs in the U.S.

Starting in November of 2022, the administrators for each of these 22 academic programs were contacted and asked to identify their faculty who had been awarded tenure in the 2016-17 academic year or thereafter. Eight program administrators were unresponsive after repeated requests, and their programs were excluded from the study. The remaining 14 administrators (~64%) identified 30 faculty who were awarded tenure during the defined period. According to the purpose of the study, faculty members who were not successful in garnering tenure were excluded from the study. No indication of overall tenure success rates among landscape architecture faculty could be identified in the published literature.

Participation of the 30 identified individuals was solicited by an email request wherein they were asked to provide their current full curriculum vita. Participants were assured anonymity in the reported results. Thirteen faculty members were unresponsive after three repeated requests. Ultimately, 17 (~57%) faculty members representing 10 academic programs participated in the study.

2.1 Measures

Scholarship in landscape architecture may be defined as creative intellectual work that is validated by peers and communicated through a variety of venues. Accordingly, scholarly productivity is primarily assessed by peer review as a measure of the quality of a faculty member's contribution, and the number of publications, presentations, and secured external funding as measures of communication productivity or

quantity (Rudd, 1988 in Milburn et al., 2003). Although these generalities cannot fully elucidate the complexity of scholarship in landscape architecture, an important step toward a more coherent academy is the acceptance of increasingly precise terminology regarding scholarly outputs (LaGro, 1999). This is still the case. Accordingly, to establish a coherent metric for this study the authors identified categories of scholarly output felt to be generally recognized, as shown in Table 1, the definitions for which were taken from established definitions/specifications such as the 2012 Higher Education Research Data Collection (HERDC) specifications and the Australia Research Council (HERDC, 2012; ERA, 2012; Deakin, 2012), and were those used in the preceding studies by Christensen and Michael (2014) and Christensen, Michael and Sleipness (2019).

2.2 Procedures

Content analysis of the curricula vitae was conducted during the first part of 2023. The textual content was individually coded and quantified for the year tenure was awarded along with the prior five years. The post-tenure period was the year following award of tenure through the fall semester of the 2022 academic year. In consideration of publication lags, all works reported as accepted or in-press were counted as published in the year indicated. Single and multi-authored publications or creative works were not assessed differently. Grant award amounts were assessed as gross totals, and not by portions assigned to the individual.

Two researchers independently coded the textual content of each vita according to the pre-defined operational terms/categories and their subjective perspective, for both pre- and post-tenure periods. The categories under which individual faculty presented their scholarly output were not strictly adhered to, but rather the textual information was coded according to the previously agreed upon operational definitions for this study. The individual results were then compared to identify any discrepancies, whereupon consensus agreement concerning alternative interpretations was reached through dialogue with a third researcher (Graneheim & Lundman, 2004). The agreed upon findings were then interpreted to address the purpose of the study.

3 RESULTS

The study results are reported descriptively in Table 2 as the *total* mean productivity by category during the tenure evaluation period and after the awarding of tenure. The information in Table 2 is not presented for comparison between the pre- and post-tenure award periods as the post-tenure period varies in length between participants. However, the total mean productivity from the prior studies by Christensen and Michael (2014) and Christensen, Michael and Sleipness (2019) are included for comparison, with an asterisk where there appears to be a substantial increase from the prior study. Five participants are outliers with significantly higher scholarly productivity in numerous categories, being at least two standard deviations greater than the mean. For example, of the 132 total pre-tenure peer reviewed journal articles published by the cohort, 80 were published by the five outliers. And of the \$11,861,981 in funding secured by the participants pre-tenure, over \$6M was secured by one outlier. The total mean productivity is also reported with these five participants excluded from the sample for clarity.

Participants' curricula vitae were very unclear regarding the distinction between grants and contracts, and internal and external funding. As the researchers were unable to achieve agreement in coding these data into separate categories, it was decided to aggregate all such funding as external funding, although this category does include internal academic institution awards. Across the participants it was also difficult to assess the accuracy of journal articles and conference proceedings designated as peer-reviewed. These categories required substantial careful investigation of the referenced journals and proceedings by the researchers to determine the review process and establish consensus agreement. Similarly, presentations and awards were rarely presented in a consistent or straightforward manner.

The mean *yearly* scholarly productivity is reported in Table 3. To calculate the yearly productivity for participants after the awarding of tenure, the overall scholarly productivity was divided by the mean post-tenure period for participants. The data are presented with the total mean productivity from the prior studies (Christensen & Michael, 2014; Christensen, Michael, & Sleipness, 2019) included for comparison, with an asterisk where there appears to be a substantial increase from the prior study.

4 DISCUSSION

A major criticism of the academic field in supporting the profession (Milburn, Brown & Paine, 2001), scholarly productivity in landscape architecture is low relative to that of non-design discipline collegiate scholars, where yearly publication rates range between 0.74 in the fine arts, 1.46 in the physical sciences, 2.54 in health sciences, and 3.38 in engineering for example (Dundar & Lewis, 1998; Fairweather, 2002; Fox, 2005; Prpić, 2009). Prior research indicates landscape architecture faculty publish 0.93 refereed articles per year (Milburn & Brown, 2016) and give 2.25 conference presentations per year (Milburn & Brown, 2016). Further, Milburn and Brown (2016) suggest that 54% of refereed journal articles are produced by 20% of the landscape architecture faculty.

This study supports this finding, with 35% of the faculty participants having produced 60% of the total refereed journal articles pre-tenure, and 32% post-tenure. With such a disparity it is difficult to know how to best represent the scholarly productivity of landscape architecture faculty, hence this study presents the findings with these 'outliers' both included and excluded. Using this distinction, the study findings indicate that during the evaluation period for tenure landscape architecture faculty published between 0.7 and 4.3 peer reviewed journal articles per year, between 0.1 and 0.5 peer reviewed articles in conference proceedings per year, give 1.5 to 9.3 invited conference presentations, and delivered 2.6 to 15.7 contributed conference presentations per year. Peer-reviewed publication rates, when the outliers are excluded, are similar to those reported in the previous iteration of this study (Christensen, Michael, & Sleipness, 2019), and by Milburn and Brown (2016), perhaps suggesting a consistent focus on peer reviewed journal articles as a recognized academic product in the tenure assessment process. However, presentation rates increased from 2019 to 2022.

It is important to recognize that measuring publication rates is likely not a reliable indicator of article quality, nor does it account for the effect of co-authorship, journal quality, etc. Future research studies might further examine sole authorship versus co-authorship of publications, as well as inclusion of graduate students on publications, particularly as co-authorship relates to publication numbers of outlier faculty. The use of citation rates as a proxy for article quality and impact is common in promotion and tenure decision processes. However, citation analysis, such as the *h*-index, are criticized for being discipline-dependent; skewed toward science and technology, while design fields are disadvantaged and made to appear deficient in their scholarly representation (Gervits & Orcutt, 2016). It is likely that citation rates among landscape architecture faculty are low in comparison with other fields. This study did not formally examine citation rates among the participants and their publications.

With regard to external funding, landscape architecture faculty secured between \$234,976 and \$39,163 per year of their pre-tenure evaluation period. This is a significant increase over the external funding secured pre-tenure reported in 2019, and similar to that reported in 2014. It is unclear from the data available what may have been contributing to this decrease (2016) and subsequent increase (2022) in external funding. While this finding warrants additional research, possible explanations may include institutional shifts toward requiring faculty members to procure funding for the purpose of supporting their research, to viewing external funding as a form of scholarly productivity in its own right. Additional explanations may include faculty pursuing research topics that have higher funding potential instead of pursuing topics that may not require extramural funding. Future research might also examine funding sources as well as whether awarded proposals were secured solely, or in collaboration with proposal co-author collaborators.

After being awarded tenure, landscape architecture faculty published between 1.4 and 1 peer reviewed journal articles per year, 0 articles in peer reviewed conference proceedings per year, gave approximately one invited presentation, and delivered 0.5 to 3.5 contributed conference presentations per year. Post-tenure, landscape architecture faculty secured between \$273,694 and \$45,616 in external funding each year, an increase from pre-tenure. These results suggest that overall publication rates do not appear to significantly decline post-tenure, although conference proceedings receive much less focus. Conference presentation rates appear to decline. It is interesting to see that scholarly productivity in peer reviewed publication and external funding does not decline post-tenure, and in the case of external funding increases somewhat.

Table 1. Scholarly output categories and definitions (Christensen & Michael, 2014).

Category	Review	Definition
Journal Article	Peer -	A written work published in an academic/professional journal. The journal is published by a recognized publisher and possesses an ISBN ³ .
Conference Proceedings	Peer -	A fully written work published in the collection of papers of an academic/professional conference.
Abstract	Peer -	A written abstract, extract, extended abstract, or synopsis published in an academic/professional journal or conference proceedings.
Presentation – Invited	-	Presentation at an academic/professional conference where the organizers independently approach the author.
Presentation – Contributed	-	Presentation at an academic/professional conference where the author approaches the organizers.
Presentation – Poster	-	Presentation of a display at an academic/professional conference.
Book	-	A major written work bound and published. Preferably by a recognized commercial press or publisher, and possessing an ISBN.
Book Chapter	-	A written work contributing to a compilation subject to editorial scrutiny.
Article – Working Paper	-	A written work distributed independently or in an unrecognized journal.
Article – Popular Press	-	Newspaper or magazine articles, media interviews, internal newsletters and the like.
Report	-	A written work completed in behalf of an independent entity.
Website	-	An online work.
Illustration	-	A graphic work distributed independently or in a recognized outlet.
Exhibit	Refereed -	Curated exhibition of original creative work in an independent public venue.
Design Competition	Refereed	A competition sponsored by an independent organization inviting the submission of proposals.
Creative Work, Design/Planning Project	-	Original work for which copyright law could conceivably apply.
Built Work	-	The manifestation of original work/design common to landscape architecture and its allied disciplines.
Award	-	An award offered by an independent organization according to a publicly understood process. The independent organization is at least an academic institution or equivalent.
Grant Award	Refereed	Funding allocated through competitive granting schemes.
Contract Award		Funding allocated in response to an independent organization's request.

Peer – Peer reviewed work involved a formal, impartial, and independent assessment or review of the work in its entirety before publication/presentation, conducted by qualified experts independent of the author.

Refereed – Refereed exhibits involved a publicly understood refereeing process conducted by an independent review panel formed from qualified peers.

ISBN – International Standard Book Number.

Table 2. Total mean productivity by scholarly output category.

Category	Tenure Timing	2013 Mean Productivity excluding Outliers	2016 Mean Productivity excluding Outliers	2022 Mean Productivity	2022 Mean Productivity excluding Outliers
Journal Article	Pre	2.4	3.5*	7.8	4.3
Peer Reviewed	Post	1.1	0.8	1.5	1.4
Journal Article	Pre	1.9	1.7	1.7	2.3*
	Post	1.8	0.3	0.6	0.8
Conference Proceedings	Pre	1.8	2.2	1.1	0.5
Peer Reviewed	Post	0.9	0.3	0	0
Conference Proceedings	Pre	0.9	2.1*	1.4	1.7
	Post	0.6	0	0.3	0.4
Abstract	Pre	0.4	1.2*	8.9	6.7
Peer Reviewed	Post	0	0	0.9	0.9
Abstract	Pre	0.1	0.7*	0.5	0.5
	Post	0	0.1	0.1	0
Presentation – Invited	Pre	6.6	6.0	9.2	9.3*
	Post	6.1	1.1	1.6	1.1
Presentation – Contributed	Pre	5.2	10.4*	19.6	15.7*
	Post	4.7	1.2	3.4	3.5*
Presentation – Poster	Pre	0.3	1.3*	2.8	1.4
	Post	0.3	0.1	0.4	0.6
Book	Pre	0.5	0.4	0.2	0.3
	Post	0.2	0.3*	0.1	0.1
Book Chapter	Pre	0.4	0.8*	1.4	1.3*
	Post	0.8	0.1	0.5	0.7*
Article – Working Paper	Pre	0	0	0	0
	Post	0	0	0	0
Article – Popular Press	Pre	9.4	0.9	0.7	0.7
	Post	5.7	0	0.1	0.1*
Report	Pre	2.9	0.9	1.1	1.3*
	Post	0.6	0.1	0.1	0.1
Website	Pre	0.3	0	0.4	0.3*
	Post	1.3	0	0.1	0.1*
Illustration	Pre	0	0	0.1	0.1*
	Post	0	0	0	0
Exhibit	Pre	0	0.1	0	0
Refereed	Post	0	0	0	0
Exhibit	Pre	1.0	1.4*	1.6	2.3*
	Post	0.7	0.4	0.4	0.5
Design Competition	Pre	0.3	0.7*	1.2	1.7*
Refereed	Post	0.1	0.1	0.1	0.2*
Creative Work, Design/Planning Project	Pre	1.2	3.0*	0.2	0.2
	Post	0.6	0.4	0	0
Built Work	Pre	0.1	0.1	0.1	0.1
	Post	0	0	0	0
Award	Pre	3.0	9.1*	5.0	5.7
	Post	2.1	2.4	0.6	0.5
External Funding	Pre	\$344,915	\$120,509	\$607,681	\$234,976*
	Post	\$81,146	\$28,843	\$600,254	\$273,695*

* Denotes at least a 25% increase from previous study.

Table 3. Mean yearly productivity by scholarly output category.

Category	Tenure Timing	2013 Mean Yearly Productivity excluding Outliers	2016 Mean Yearly Productivity excluding Outliers	2022 Mean Yearly Productivity	2022 Mean Yearly Productivity excluding Outliers
Journal Article	Pre	0.4	0.58*	4.3	0.7
Peer Reviewed	Post	0.35	0.50*	1.4	1.0*
Journal Article	Pre	0.31	0.29	2.3	0.4*
	Post	0.58	0.17	0.8	0.5*
Conference Proceedings	Pre	0.3	0.37	0.5	0.1
Peer Reviewed	Post	0.29	0.17	0	0
Conference Proceedings	Pre	0.15	0.36*	1.7	0.3
	Post	0.19	0	0.4	0.3*
Abstract	Pre	0.06	0.20*	6.7	1.1*
Peer Reviewed	Post	0	0	0.9	0.7*
Abstract	Pre	0.01	0.12*	0.5	0.1
	Post	0	0.04	0	0
Presentation – Invited	Pre	1.1	1	9.3	1.5*
	Post	1.97	0.63	1.1	0.8
Presentation – Contributed	Pre	0.86	1.73*	15.7	2.6*
	Post	1.52	0.71	3.5	0.6
Presentation – Poster	Pre	0.05	0.21*	1.4	0.2
	Post	0.09	0.04*	0.6	0.4*
Book	Pre	0.08	0.06*	0.3	0.1*
	Post	0.06	0.17*	0.1	0.1
Book Chapter	Pre	0.06	0.13*	1.3	0.2
	Post	0.25	0.08	0.7	0.5*
Article – Working Paper	Pre	0	0	0	0
	Post	0	0	0	0
Article – Popular Press	Pre	1.56	0.14	0.7	0.1
	Post	1.84	0	0.1	0.1*
Report	Pre	0.48	0.15	1.3	0.2*
	Post	0.19	0.04	0.1	0.1*
Website	Pre	0.05	0	0.3	0.1*
	Post	0.42	0	0.1	0.1*
Illustration	Pre	0	0	0.1	0
	Post	0	0	0	0
Exhibit	Pre	0	0.02	0	0
Refereed	Post	0	0	0	0
Exhibit	Pre	0.16	0.23*	2.3	0.4*
	Post	0.22	0.25	0.5	0.4*
Design Competition	Pre	0.05	0.12*	1.7	0.3*
Refereed	Post	0.03	0.08*	0.2	0.1
Creative Work,	Pre	0.2	0.50*	0.2	0
Design/Planning Project	Post	0.19	0.25*	0	0
Built Work	Pre	0.01	0.02*	0.1	0
	Post	0	0	0	0
Award	Pre	0.5	1.51*	5.7	0.9
	Post	0.67	1.39*	0.5	0.4
External Funding	Pre	\$57,485	\$20,085	\$234,976	\$39,163*
	Post	\$26,260	\$16,966	\$273,694	\$45,616*

* Denotes at least a 25% increase from previous study.

While low overall when compared with non-design disciplines, the results suggest that landscape architecture faculty are emphasizing traditional academic refereed products. Further, scholarly products historically associated with landscape architecture, but less so with other academic disciplines, such as exhibits, design competitions, and creative work, are being largely ignored likely in favor of the more institutionally accepted outlets needed to garner support in the academic environment. This emphasis is reflected in the way faculty scholarship is presented in vitae, which can appear highly variable without widely understood and adhered to definitions of scholarly products. In lieu of establishing specifications for scholarly products in the field of landscape architecture, it would be beneficial if landscape architecture faculty adhered more closely to commonly accepted definitions of scholarly products, as suggested previously (Christensen & Michael, 2014; Christensen, Michael, & Sleipness, 2019). However, we recognize this issue deserves a great deal more discussion within the discipline and its research institutions.

Publication of faculty research is currently occurring primarily in recognized scholarly outlets; no participants reported the independent distribution of working papers and very few articles in the popular press. This may portend a negative impact on the translation of research to practice, which is a long-standing criticism of academia. The vast majority of the peer reviewed abstracts are associated with the annual conference of the Council of Educators in Landscape Architecture (CELA). There are very few other outlets which employ a similar dissemination strategy of peer reviewed abstracts. Landscape architecture faculty members appear to be endeavoring to maximize this outlet during the tenure review period, and much less so post-tenure. It is unknown to what extent this is beneficial to the tenure and promotion process.

The results of this study are similar to those reported by Milburn and Brown (2016) in suggesting that a minority of landscape architecture faculty are responsible for a majority of the scholarly productivity. When considering all of the participants and all of the identified scholarly products, the results suggest that faculty productivity does not decrease significantly post-tenure to the degree found in 2016, but is consistent with that reported in the 2014 study, which found external funding levels were maintained post-tenure. It appears that in part, an experienced faculty member is better positioned to garner funding and will continue to do so, but this experience needs to be gained during tenure process. The findings that faculty maintain productivity in peer-reviewed journal articles and external funding immediately post-tenure suggests that given the job security and academic freedom afforded by tenure, landscape architecture faculty members do maintain scholarly productivity, at least by these measures.

The proportion of faculty who hold doctoral degrees in this sample (7 of 17; 41%) is similar to that reported in 2014 (8 of 18; 44%) (Christensen & Michael, 2014) as well as that reported in 2019 (9 of 17; 53%) (Christensen, Michael, & Sleipness, 2019). [NOTE: the following sentence is confusing, insofar as it's unclear how it relates to the prior sentence—what does “this assertion” refer to?] A careful examination of the results supports this assertion in that productivity measured for scholarly categories that are often less valued in the academic environment, such as exhibits, popular press articles, and contributed presentations, actually *rises* when those faculty who do *not* possess doctoral degrees are excluded. While the scholarly categories typically most valued in the academic environment, such as peer reviewed publication, are lower.

However, some caution should be exercised as the data are reported for the six years of the tenure period, while productivity post-tenure is reported for individual periods that together averaged just 1.4 years. Further, sabbatical leave that may have been awarded post-tenure is not accounted for in this study. While an argument can be made that scholarly activities continue during a sabbatical period, the opposite may be true in that faculty on sabbatical leave may not be engaged in scholarly output activities. It is also concerning that 13 of the identified 30 faculty who are reported to have received tenure during the study period chose not to participate in the study. What impact this might have on the findings is unknown, nor are the reasons they opted to not take part. It is interesting, however, to recognize that 30 faculty receiving tenure during the study period is a significant increase from prior studies. Many landscape architecture faculty are finding success in securing tenure.

4.1 Limitations

This study has a number of limitations. We were unable to evaluate the level of responsibility individual participants had for externally funded research as few faculty members reported whether they were the principal or co-principal investigator. We were unable to assess the level of responsibility for multiple author publications as few respondents reported their role in the publication. Nor were we able to assess the role played in individual faculty member's professional practice experience or whether their

experience was academic or professional practice experience. Guest or invited jury participation was not measured in this study given the variability of reporting.

Most unfortunately, there are a host of well-studied factors which influence scholarly productivity, such as age, gender, subfield specialization, collaboration, etc., which the authors did not assess (see Helsi & Lee, 2011 for a more complete presentation of these factors), although Milburn and Brown (2016) suggest that age, gender do not influence scholarly productivity. It is very likely that instructional loads have a great deal of impact on scholarly productivity. Teaching in landscape architecture is time intensive. With studio-based curricula and faculty/student ratios being accreditation requirements, landscape architecture faculty typically have high student contact time overall as well as per credit hour, and labor-intensive teaching loads (Milburn, Brown & Paine, 2001). The high instructional load is often offered as justification for the lower scholarly productivity among landscape architecture faculty. However, we were unable to accurately assess instructional load as very few respondent's curricula vitae indicated the number of credits or contact time for the listings of courses taught. Similarly, no distinction was drawn between individuals' position types, which may vary substantially from program to program (e.g., professors of practice, research faculty, etc.). In addition, the difference between academic institutions' credit equivalents was not known, nor was whether they were on semester or quarter systems.

5 IMPLICATIONS

The purpose of this study was to establish a current longitudinal understanding of landscape architecture faculty scholarship. The findings indicate that scholarly productivity in landscape architecture is lower than non-design disciplines overall but does not decrease after the awarding of tenure. The role of instructional loads needs to be examined for possible impacts on scholarly output. During the evaluation period for tenure, faculty members focus on more commonly valued categories of academic scholarship. In addition to establishing the scholarly productivity rates of landscape architecture faculty, the most significant finding of this study suggests that a minority of landscape architecture faculty are responsible for a majority of the scholarly productivity.

Considered together, the overall low scholarly productivity levels, along with a minority of faculty accounting for the majority of the scholarly productivity, points toward a critical need for greater preparation of the landscape architecture academy in conceptualizing, acquiring support for, conducting, and reporting meaningful scholarship. Doing so will lead to greater success in the academic environment, support for evidence-based professional practice, and provide a much needed theoretical foundation for the future of landscape architecture. At the same time, instruction (e.g., loads, relation to scholarly productivity, etc) in the field needs to be examined. The low overall scholarly productivity of faculty may be hindered by high instructional loads, which is likely. Evidence for this assumption should be sought to provide an evidence base for future faculty members cases for promotion and tenure in the academic environment. Additionally, the inherent tensions and delicate relationship between institutional differences in expectations of scholarly output and faculty capacity for preparing graduates who are ready for professional practice needs further examination.

Despite national discussions regarding the future of the tenure model in higher education, the majority of new and emerging landscape architecture faculty positions employ this system. Consequently, success for the emerging faculty nationally will rely upon effective performance within the tenure track system. In a climate of increasing demands for transparency and accountability by the public and legislators, emerging academics can expect to face calls for performance at or above national standards. Doing so within the realm of scholarship requires clarity in benchmarks among peers at peer institutions. This study contributes to continuing efforts to establish an understanding of these benchmarks and their longitudinal trends. The current findings offer an expanded foundation for understanding productivity among successful early career scholars in the discipline.

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