

2019

ACSA White Paper on  
**Assessing the Quality of  
Architectural Research  
& Scholarship**

WORKING DOCUMENT

# White Paper on Assessing the Quality of Architectural Research and Scholarship – Working Document

<b>1.0 INTRODUCTION AND BACKGROUND</b>	<b>3</b>
1.1. Report Objectives	4
1.2. Report Structure	4
1.3. Audience	4
<b>2.0. EXISTING APPROACHES</b>	<b>5</b>
2.1. Curation	5
2.2. Funding	6
2.3. Practice Recognition	8
2.4. Publication	11
2.5. Public Presentation	12
2.6. Community Engagement	13
<b>3.0. Existing Policies for Assessing Research Quality</b>	<b>17</b>
3.1. Baccalaureate/Associate's Colleges	19
3.2. M1: Master's Colleges and Universities – Larger programs	20
3.3. M2: Master's Colleges and Universities – Medium programs	20
3.4. M3: Master's Colleges and Universities – Smaller programs	20
3.5. D/PU: Doctoral/Professional Universities:	21
3.6. R1: Doctoral Universities – Very high research activity	21
3.7. R2: Doctoral Universities – High research activity	21
3.8. Canadian Universities	22
3.9. SFI: Special Focus Institutions	23
3.10. Observations	23
<b>4.0. International Models of Assessing Research</b>	<b>24</b>
4.1. National/Governmental Frameworks	24
4.2. Associations of Schools and Professional Organizations	26
4.3. Universities Abroad	26
4.4. Observations	27
<b>5.0. Existing Challenges</b>	<b>28</b>
<b>6.0. Recommendations for Future Work</b>	<b>30</b>
<b>7.0. References and Resources</b>	<b>31</b>
<b>Appendices</b>	<b>32</b>
<b>Committee Members</b>	<b>38</b>

## 1.0 INTRODUCTION AND BACKGROUND

Architecture is a diverse discipline that draws from a variety of areas of interest. Each brings diverse practices, activities, and measures for assessing quality. This range of faculty areas of expertise, research, scholarship, and creative activities presents challenges to schools of architecture in developing policies and standards for assessing the quality of these activities that respect and support all their faculty. It also makes it difficult for the faculty themselves to effectively frame their own work and objectively demonstrate its quality to external audiences within the discipline and beyond. Administrators in schools of architecture also frequently face challenges in presenting the work of their schools and faculty to university administrators. Currently, there is a lack of consensus within the discipline regarding the best approach for assessing the diverse work of architectural faculty.

This report explores the topic of assessing the quality of research, scholarship, and creative activities in architecture and related fields. The report aims to respond to the growing need in schools of architecture for a standard disciplinary approach for objectively assessing the quality of research, scholarship, and creative activity in order to effectively meet the needs of the wide variety of research paradigms, forms of investigation, modes of dissemination, and peer assessment typically found within the work of architectural faculty and sometimes within the work of a single faculty member.

The report represents the outcome of the work of the ACSA Research + Scholarship Committee. The committee is charged by the ACSA board with leading ACSA's efforts to support faculty in scholarly endeavors. Over the last two years, the committee has worked to address issues related to the diversity of approaches to research and scholarship in the discipline of architecture. In 2017, the committee produced a White Paper on Tenure and Promotion<sup>1</sup> that developed a classification of the different areas of expertise of architectural faculty as well as the different modes of production and evaluation that faculty typically utilize. In 2018, the committee produced a report on the role of STEM in architectural education and research<sup>2</sup> which included a survey of funded research activities in ACSA member schools. This year, the committee was charged with developing a review of institutional measures of quality in research, as judged both within and outside the discipline.

The current report builds on the previous work of the committee within the promotion and tenure white paper. In particular, the report is based on the classification of modes of production and evaluation developed in the white paper. These modes of production are used as the starting point for the review included in this report. These modes of production include: curation, funding, practice recognition, publication, and public presentation. This report adds community engagement as a sixth mode of production and evaluation in recognition of the increasing prevalence and significance of these activities in schools of architecture as well as the challenges that typically face faculty working in this area in framing their work with any of the more conventional modes of production.

<sup>1</sup> ACSA. 2017. Research and Scholarship for Promotion, Tenure, and Reappointment in Schools of Architecture. Association of Collegiate Schools of Architecture. Available at: [www.acsa-arch.org/Tenure-Promotion-WhitePaper](http://www.acsa-arch.org/Tenure-Promotion-WhitePaper)

<sup>2</sup> ACSA. 2018. ACSA White Paper on Architectural Education, Research and STEM. Association of Collegiate Schools of Architecture. Available at: [www.acsa-arch.org/STEM-WhitePaper](http://www.acsa-arch.org/STEM-WhitePaper)

## 1.1. Report Objectives

The report aims to achieve the following objectives:

1. To provide a review of existing approaches in the discipline for assessing the quality of research, scholarship and creative activities in each of the six modes of production typically found in schools of architecture.
2. To provide a preliminary review of existing promotion and tenure policies in ACSA member schools focusing on their approaches toward quality assessment of different modes of production.
3. To explore and draw from more established frameworks for assessing the quality of research, scholarship, and creative activity in other relevant disciplines as well as from existing and more established international frameworks.
4. To identify existing challenges, constraints, and barriers facing the development of disciplinary norms for quality assessment of research, scholarship, and creative activity.

## 1.2. Report Structure

The report consists of five sections. The first presents a comprehensive review of existing approaches to quality assessment in each of the six modes of production and evaluation identified in the report. The second presents a review and summary of existing policies for assessing the quality of research, scholarship and creative activity in ACSA member schools. The review is based on collected policies from 79 ACSA member schools, representing approximately 60% of the total ACSA membership. The review includes policies at the department, school, college, and university levels as available and applicable. The third section presents examples of more established international models for quality assessment. The fourth section presents an overview of existing challenges facing architectural faculty and administrators in this area. Finally, the fifth section presents recommendations for future work needed to achieve the goal of developing disciplinary norms for rigorous and objective quality assessment.

## 1.3. Audience

This report is aimed at several audiences. First, it is intended to provide a resource for architecture faculty regarding the best approaches they can use to frame their own work and demonstrate its quality for the purposes of the promotion and tenure process and beyond. Second, it is intended to provide administrators in schools of architecture with a comprehensive review of existing approaches and policies of quality assessment in schools of architecture, related disciplines, and internationally. This review aims to inform their own approach and policies, and to help them provide guidance to their faculty. Third, the report is directed at university administrators with the aim of presenting a comprehensive overview of existing approaches to quality assessment in the discipline, as well as the current challenges that face architectural faculty and administrators in this area.

## 2.0. EXISTING APPROACHES

The following sections describe approaches to quality assessment in each of the six modes of production addressed in this report. Please see the ACSA Promotion and tenure report for a more detailed discussion of each of these modes of production and the type of scholarly or creative products included in them.<sup>3</sup> The order in which the different modes of production are presented below is not meant to represent their relative significance. As shown in section 3.0, individual institutions may rank the significance of each of these modes of production differently based on institution type and objectives.

### 2.1. Curation

The following discusses curation as a mode of production in the academic context and its potential for evaluation and impact assessment. Curation as a mode of production is defined as the selection, organization and public presentation of material.

This review outlines assessment measures specific to curatorial practices in architecture as well as within disciplines external yet related to architecture such as art, art history, and design (specifically, graphic and industrial design). Samples were sourced from independent art schools, art schools that are part of a department or college within an R1 and art/architecture schools that share common tenure and promotion norms.

In general, standards for assessing outstanding performance for promotion and tenure in the disciplines of art, art history and design are similar to architecture in that they are based on external measures of excellence in their field. There are several curatorial profiles that faculty can self-identify with as follows:

#### 2.1.1. Curator as Exhibition Curator

Publicly present work by one or more authors that have been selected by the candidate. Evaluation is based on the significance and scope of the exhibiting institutions, e.g., international, national, regional, and local. Other measures of importance include the substance of work being represented, the manner in which the exhibition is organized (meaning whether the candidate was a sole curator or co-curator for the exhibition), and the review of the exhibition by an outside source.

#### 2.1.2. Curator as Exhibition

Publicly present a candidate's own art, architectural, and related design projects. Again, evaluation is based on the significance and scope of the exhibiting institutions, e.g., international, national, regional, and local. Other measures of importance include the substance of work being represented (meaning its relevance to the candidate's identified area of expertise) and the review of the exhibition by an outside source.

#### 2.1.3. Curator as Author/Editor

Publishing of exhibition catalogs, articles, and peer-reviewed papers. This includes another type of curation in the sense that curators will often solicit essays or sole-author their own essays for inclusion in an exhibition catalog. These catalogs often include the curation of creative work or research documentation that serve as a scholarly foundation for the works being exhibited. These catalogs are often published in-house; on occasion, however, the process is peer-reviewed.

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<sup>3</sup> ACSA. 2017. Research and Scholarship for Promotion, Tenure, and Reappointment in Schools of Architecture. Association of Collegiate Schools of Architecture. Available at: [www.acsa-arch.org/Tenure-Promotion-WhitePaper](http://www.acsa-arch.org/Tenure-Promotion-WhitePaper)

#### 2.1.4. Curator as Conference, Symposium, Workshop Chair

Publicly present a candidate's own art, architectural, and related design projects in a group discussion/panel or workshop format. This includes curation as a means to assemble work under a research focus that broadens the conversation and audience for the work as well as invites peers to participate in the discussion, dissemination and production of work.

#### 2.1.5. Additional External Measures

Additional external measures of quality and excellence for curation are written exhibition reviews published in peer-reviewed, refereed, or notable print or digital publications. These articles offer critical peer-review of the contribution of the candidate's exhibition to the discipline, the profession, and the public at large.

### 2.2. Funding

External funding for research is an established metric in the sciences and engineering for promotion and tenure. However, external funding should not be viewed as an end unto itself. Funding provides faculty the ability to increase the scope and impact of their scholarly agendas, and the results of funded research should be disseminated through peer-reviewed modes of production. As universities, colleges and departments look for new sources of revenue, there is an increasing emphasis placed on external funding in all disciplines, including architecture. This section will address the opportunities and roles for external funding in the academic discipline of architecture.

#### 2.2.1. Internal vs. External Funding

External funding is defined as any funding coming from outside the university to support research, creative practice, or community engagement. While many universities offer research funding to seed new endeavors or partnerships, this is considered internal funding even when a competitive, peer-reviewed process is implemented. As other disciplines place a very high value on external funding and little to no value on internal funding during the promotion and tenure process, it is important that architecture faculty make a clear distinction between these two types of funding. Other disciplines see internal funding as the vehicle for producing preliminary results or a pilot study that will be in turn used in a future application for external funding. While generally considered less valuable than external funding, internal funding based on a competitive peer-review process especially those at the university level can offer value.

#### 2.2.2. Disciplinary Context for External Funding

As outlined in the 2017 ACSA white paper on promotion and tenure,<sup>4</sup> "architecture faculty produce a wide variety of scholarship and research." This is due to the wide range of subject matter taught in architecture programs ranging from architectural history to engineering to design to social science. In turn, there is a wide range of external funding sources, and no single expectation can be set on all architecture faculty members for the type and quantity of external funding that could and should be obtained. Funding sources for architectural faculty are generally smaller than those available for other disciplines. The survey of external funding in ACSA member schools described within the 2018 ACSA white paper on Architectural Education/Research and STEM reported that 62% of externally-funded projects in schools of architecture are less than \$100,000 and 41% are less than \$50,000. While these amounts are very small compared to other disciplines, they offer considerable value to architecture faculty and in many cases provide them with sufficient resources for their projects. Most architecture programs focus on pre-professional and professional degrees. Many faculty members hold the terminal degree, M.Arch., and do not have doctoral degrees. As a consequence, many faculty members have few if any publications when hired for a tenure-track position. This can put them at a disadvantage for federal funding opportunities, such as NSF, that require a CV with ten publications or other outputs.

<sup>4</sup> ACSA. 2017. Research and Scholarship for Promotion, Tenure, and Reappointment in Schools of Architecture. Association of Collegiate Schools of Architecture. Available at: [www.acsa-arch.org/Tenure-Promotion-WhitePaper](http://www.acsa-arch.org/Tenure-Promotion-WhitePaper)

### 2.2.3. Peer-reviewed External Funding

As external funding in architecture can range from thousands to millions of dollars depending on the discipline and source, it is important to understand and put into context the competitiveness of the external funding opportunity. For example, many federal agencies list the percent of applicants awarded in the same fashion as journals or conferences publish acceptance rates. Receiving a highly competitive grant should be valued regardless of the grant amount as many of the funding opportunities for architectural research and creative practice are in the \$10,000 range. The 2018 ACSA white paper on Architectural Education/Research and STEM highlights that architecture faculty with STEM-related scholarly agendas should be encouraged to apply for external funding as “STEM-Related projects also appear to be more successful in obtaining larger funding amounts.” A list of possible funding sources can also be found in the same white paper.

### 2.2.4 Role in External Funding

Architecture faculty members are ideal candidates to be co-Principal Investigators (PI) on large federal grants as they can contribute to broader impacts or assess the potential applications of the scientific research conducted in related disciplines. Consequently, architecture faculty members should keep track and be given credit during the promotion and tenure process for their contributions to externally funded projects when serving as a co-PI. Several schools currently have external policies that require PIs/Co-PIs to specify the percentage of shared credit within a project in the proposal phase. This shared credit percentage is frequently independent of the amount of funding each PI/Co-PI is responsible for and aims to represent the share of intellectual contribution to the project, making them a better measure of the contribution of Co-PIs.

### 2.2.5. Non-peer Reviewed External Funding

As many architecture faculty members are practicing architects or practice architecture before becoming academics, they have experience finding clients to pay for architectural services. This skill set can be applied to convincing industry partners, local governments, or other non-profits to contribute financially to a research, community engagement, or design-build project without a formal grant application, peer review, and selection process. Consequently, there are opportunities for non-peer reviewed external funding that may require building relationships over a number of years before financial support is given. This external funding can be more aligned with a gift from a donor or as a sponsored project or studio depending on the reporting requirements and expectations of the funder.

### 2.2.6. Applying for External funding

Applying for external funding is a time-consuming endeavor. With funding rates at fifteen-percent or less for many federal and foundation sources, applying for external funding can be discouraging. Combined with the reality that it often requires multiple submissions to the same funding source before being successful, many faculty members determine that it is not worth the effort when using the same time to write a journal article, book chapter or focus on creative practice will more likely yield tangible scholarship outcomes for promotion and tenure. Consequently, architecture faculty should be incentivized through the promotion and tenure process (stick) or course releases (carrot) to apply for external funding. At least one set of promotion and tenure guidelines for architecture faculty reviewed for this report includes the requirement for every faculty member to apply for an external grant each year. There is no written expectation of receiving funding or external funding as a requirement for tenure or promotion. However, if each faculty member regardless of discipline is applying for a grant each year, then the odds are much higher that the faculty as a whole will receive funding to increase the scope or impact of their scholarship. There is also the opportunity to use text from a grant proposal as the foundation of a journal article. This is most often the case when the grant proposal requires a significant literature review as a justification for the project. Once written, the text for one external funding source can often be adapted for other funding sources.

### 2.2.7. Funding Amounts and Sources

The 2018 ACSA white paper on Architectural Education/Research and STEM provides overview of funding available to architecture faculty members. In particular, Appendix C of that white paper lists sources where architecture faculty have previously received funding and ranges from major federal agencies (NSF, NIH, DOE, NEA, NEH), national organizations, industry and private foundations. Funding amounts vary widely, but the median grant size for STEM and non-STEM project from 189 external grants recorded in the survey conducted for the white paper was \$50,000. As noted earlier, the level of competition for a particular funding source should be valued more if not as much as the amount of a given grant.

### 2.3. Practice Recognition

The following discusses Design practice as a mode of production in the academic context and its potential for evaluation and impact assessment. In general, without dissemination and peer-review, the impact of design practice cannot be acknowledged and evaluated in the academic context. A university's primary mission is to create or discover, preserve, and disseminate knowledge to expand the field. Through research and scholarship, a systematic and rigorous investigation, new knowledge (replicable/adaptable information and processes) is created and captured, validated through peer-review for accuracy/relevancy, and disseminated through various venues.<sup>5</sup> Quality and impact of research and scholarship is the primary indicator for faculty assessment. It is gauged in several ways, such as the prestige of the publication, award recognition, and citations.

Design practice itself is not distinct from research nor scholarship. The function of design activity is "to plan and to communicate a course of action to others explored and achieved through the creativity of the designer's individual area of interest."<sup>6</sup> In other words, the outcome of design practice, the materials produced as deliverables (drawings, models, prototypes, mock-ups, etc.) in the process are projections of what is to be realized to organize actions to get there.<sup>7</sup> Whether furniture or building or landscape design, the realized projects themselves are mute and pose a challenge for practitioners as such work is at odds with the convention of the academy. Design practice is always a solution to a problem generating new or improved knowledge in the process. Research and scholarship opportunities are embedded in practice. However, without a concerted effort to frame and capture them in a relevant form transferable to other contexts, none can be disseminated and validated. Similar to the field of fine art, it narrows the opportunity for assessment, limiting the time and scale of production especially for faculty in the probationary period of tenure and promotion. In this section, traditional architectural design practice is considered as a mode of production. Unique modes of practice such as design-build and digital fabrication practices require further studies. Painting, sculpture and other creative endeavors such as filmmaking as a means to an end should be considered under art practice and evaluated as such. Community outreach and engagement is covered under section 2.6. See section 2.2 Funding to assess the impact of funding sources.

<sup>5</sup> Boyer acknowledges discovery, integration, application, and teaching as four categories of scholarship. Boyer, E. *Scholarship reconsidered: priorities of the professoriate*. John Wiley & Sons, NY. 1990. p24-25.

<sup>6</sup> *ibid.*

<sup>7</sup> Charles Eames defined design as "A plan for arranging elements in such a way as to best accomplish a particular purpose." T Faste, H Faste. *Demystifying "design research": Design is not research, research is design*. IDSA Education Symposium, 2012



### 2.3.1. Design Practice Outcomes and Opportunities for Dissemination

Direct practice outcomes (deliverables/constructed artifact) bounded in blue in fig. 1 are suitable, with some editing and packaging, for dissemination in the venues shown inside the blue in fig. 2. It is clear from the figures that the direct practice outcomes suitable for dissemination and evaluation are limited. Venues for dissemination also reflects this constraint and do not include traditional academic venues of conference papers and journal articles. Recently, ACSA has made efforts to expand the venue by including project-oriented poster sessions and presentations into academic conferences.

On the other hand, any activities within the design practice inside the red in fig. 1 can be framed as research and scholarship if a rigorous methodology is applied to capture hidden knowledge produced in the design process. If you can systematically argue that strategies, methods, media, assembly, etc. employed in the process have generated a new or improved knowledge worthy of academic consideration. Receiving a patent for something created in the design process is an example. In such a case, any of the well-established academic dissemination venues shown inside the red in fig. 2 apply.

### 2.3.2. Impact Assessment of Disseminated Work and Faculty Achievement Evaluations

In general, design and research outcomes disseminated through peer-reviewed venues validating the results are valued over non-peer-reviewed venues. Impact of the work can be further assessed through the selectiveness and the prestige of the venue itself. More credit accrues to the faculty for self-authored outcomes than those authored by others about them. These conventions generally work well, particularly for the research and scholarship-based outcomes. For design outcomes, a positive article written by a well-respected critic in the field about the project disseminated through a non-peer-reviewed magazine with significant reach may eclipse the impact of self-authored paper in a peer-reviewed conference proceeding. It is encumbered on the faculty to make the case and the institution to review on case by case basis. See section 2.4 Publication and 2.5 Public Presentations for further information on this subject.

### 2.3.3. Other Potential Opportunities for Direct Design Outcomes

As stated earlier, efforts were made to include academic peer-review of direct design outcomes in the form of posters sessions and presentations in ACSA conferences. There may be other ways to increase dissemination and validation opportunities. Some potential and unique examples are described below. Further studies are needed in these areas.

- Although well-reviewed by various peers and authorities in the process and published and accessible (on-line) by the public, permitted construction documents are not independently considered an achievement. How can we properly evaluate and credit such design outcomes as a faculty achievement in the academic context?
- Can Instagram hits and Twitter retweets of the project be considered as a form of impact assessment?
- What is the role licensing and associated commercialization of products and services as extensions of practice outcomes?

Typical design process based AIA Handbook for Professional Practice

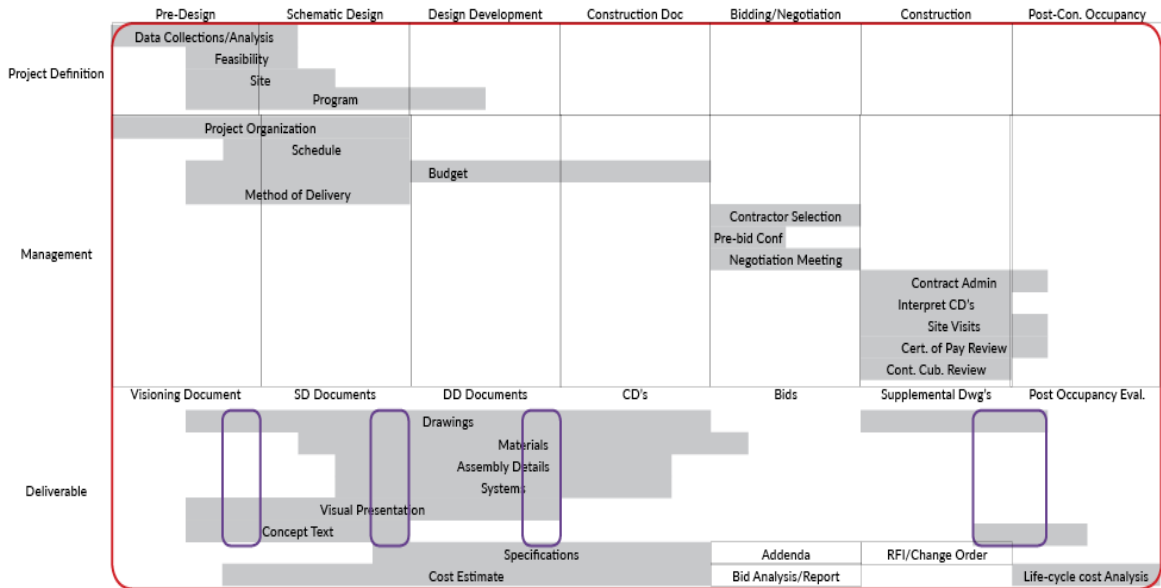


Fig. 1. Mapping of typical design process and opportunities for dissemination/impact evaluation.

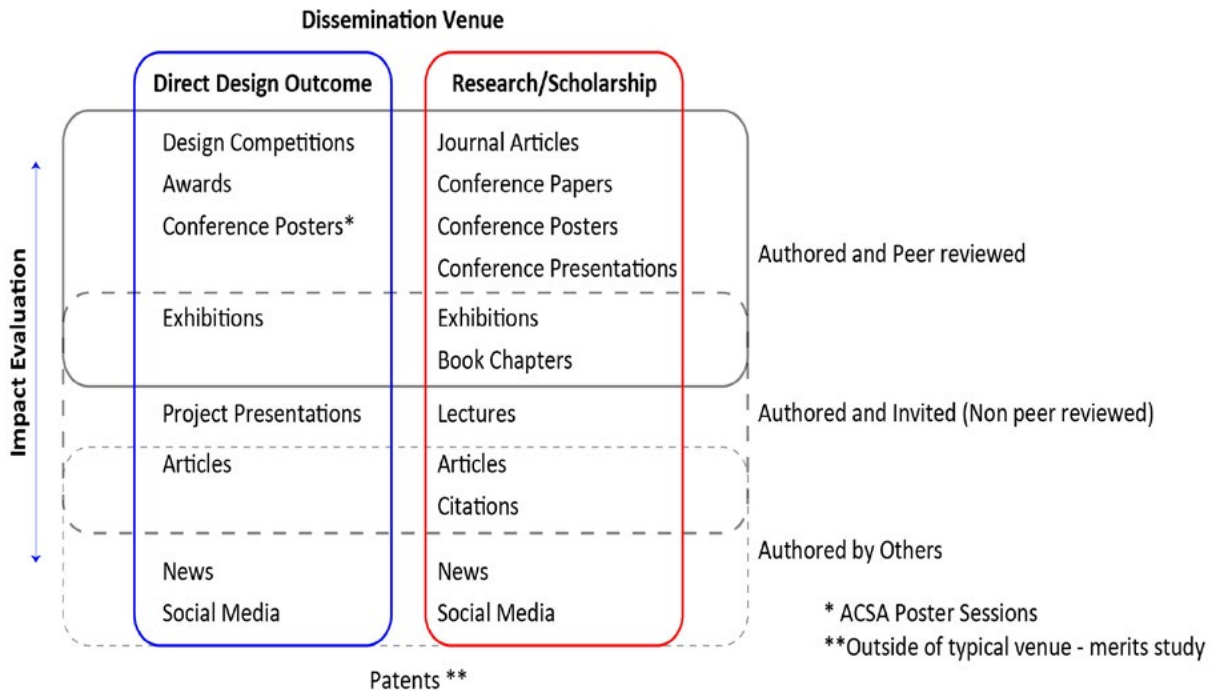


Fig. 2: Classification of dissemination venues and impact evaluation

## 2.4. Publication

The following covers different forms of scholarly and research publications including books, book chapters, journal article, conference proceedings, among others. A more detailed description of these different types of publications can be found in the ACSA white paper on tenure mentioned earlier.

### 2.4.1. Value

Traditionally, scholarly writing was valued by the venue in which it was published and peer-review was the standard method by which to ensure merit was based on the scholarship rather than the author. A monograph published by a University press was considered to be the best mode of production followed by edited volumes, chapters, and conference proceedings. Journal publications were also valued by prestige of journal, distribution (print run), and the peer-review process again ensured merit. It was also recognized that certain solicited publications were considered valuable because the inclusion of the author's work implied expertise in a certain field.

While peer-review helps to maintain a certain value, the system does not account for other forms of writing such as journalism and/or opinion essays in scholarly journals and or popular press, which may certainly have value as well as impact.

### 2.4.2. Impact

Although not new, citation indexes began to appear in the late 1990s. The intention behind the indexes was to determine impact. The way an index would work is to determine how often an essay was referenced by another essay. The more references, the bigger the impact. Journals were also ranked for the number of times the content of the journal was referenced. Again, the more references, the bigger impact.

In theory, this system makes sense. The system is predicated, however, on being able to track all references, which is not possible. Google Scholar and Cite Seer have expanded the networks of essays and do list citation data but are also still limited. For many architectural essays and journals, however, the model of research is not one of reference. Unlike law or medical scholarship, much of traditional architectural scholarship does not rely as heavily on citation and therefore the proposed "impact" is inherently limited.

More recently, publishing houses have included other ways of measuring impact, to include number of downloads, number of times an essay was posted on social media, and the number of times the essay was tweeted.

### 2.4.3. Influence

What is not accounted for in either of the two sections above is the potential influence of architects through Instagram and other social media outlets. While perhaps not scholarship, the impact of these sites far exceeds any journal or other scholarly publication and does so to a population of people outside of the academy.<sup>8</sup>

<sup>8</sup> [https://www.youtube.com/channel/UChGJGhZ9SOOHvBB0Y4DOO\\_w](https://www.youtube.com/channel/UChGJGhZ9SOOHvBB0Y4DOO_w)  
7 years old, 18 million followers, 11 million in revenue last year. He opens toys.

## 2.5. Public Presentations

The value of public presentations as a mode of disseminating research, scholarship, and creative work varies between disciplines. In architecture, public presentations are a recognized form of dissemination and in some cases could signal a level of peer-recognition. For certain faculty areas of expertise, such as architectural design, design pedagogy, and community engagement, public presentations could be considered as a primary means of dissemination. For other areas of faculty expertise, public presentations may be less valuable a mode of production compared to other modes such as peer-reviewed publication and funding.

Some of the measures to be taken into consideration in assessing the quality of public presentation include 1) peer-review, 2) quality and scale of event and host organization, 3) level of recognition indicated, and 4) potential impact. Similar to publication, having a peer-review process is an important indicator of the quality of a public presentation. This applies primarily to presentations in conferences, symposia, and similar events. Acceptance rate is an additional factor to consider. From the point view of the venue, presentation in national and international events and those organized by major organizations in the discipline should be valued more than those in regional or local events. The level or recognition indicated by certain public presentations, such as presenting a keynote speech in a major conference, could also be used a measure of quality in lieu of a peer review process. However, the assessment of such activities should be linked to the quality and scale of the venue. Finally, the potential impact of the public presentation could also be used as an indicator of quality.

### 2.5.1. Keynote Speaker in a Conference

Invitations to present a keynote lecture in a conference or a symposium is a measure of the level of peer recognition of the presenter in the discipline. The level of this recognition, however, is related to the quality of the event. Keynote presentations in major conferences in the discipline, or in other disciplines, as well as those in national and international level events are valued more than those in smaller events or in event at the regional or local levels.

### 2.5.2. Peer-reviewed Paper Presentations

Presenting the outcomes of peer-reviewed work in conferences and symposia is a recognized form of dissemination distinct from the publication of that work in the proceedings of the event. The quality of such a presentation is also linked to the quality and scale of the event itself. Non-peer-reviewed presentations do not indicate the same level of quality as peer-reviewed ones.

### 2.5.3 Lectures and Invited Presentations in Other Institutions

Invitation for public lectures and presentation in other institutions are an indicator of peer-recognition, and can therefore be used as an indicator of quality. This quality is linked to the type and level of recognition of the host institution or organization itself within the discipline.

### 2.5.4 Poster Presentation in Academic Conferences

Poster presentation are a recognized method of dissemination of research outcomes that is used by many conferences. Poster presentations can be made for projects in the development phase to solicit feedback as well as for more graphical types of outcomes. Similar to paper presentations, the quality of the posters is linked to the peer review process and the quality and scale of the venue.

### 2.5.5 Guest Critics, Design Reviews, and Juries

Participation in design reviews as a guest critic or as a member of an architectural jury is a common form of activity among architectural faculty. However, such activities, in general, should not be considered as a form of research or scholarship and should instead be considered as part of a faculty member's service work. If, for special reasons, such an activity has a greater impact, then it is up to the faculty member to demonstrate that using objective measures of impact.

## 2.6. Community Engagement

Community Engagement (also called Community Outreach, Public Engagement, Participatory Engagement, and Public Interest Design) is a type of research and scholarship that has re-emerged in architecture over the last fifteen years following a hiatus from the mid-1970s to the mid-1990s. Initiatives such as the Rural Studio (Auburn University) and the Detroit Collaborative Design Center (University of Detroit Mercy) initiated this revival in the mid-1990s. Many universities have embraced Community Engagement as part of their missions, actively demonstrating the importance of academic research to addressing contemporary issues. Initiated in 2005, the Carnegie Foundation for the Advancement of Teaching's elective Community Engagement Classification has become one of the most accepted definitions of community engagement within the context of higher education. It describes "collaboration between institutions of higher education and their larger communities (local, regional/state, national, global) for the mutually beneficial exchange of knowledge and resources in a context of partnership and reciprocity" (Campus Compact). This is part of what the Engagement Scholarship Consortium describes as "the continuing dialogue on the nature of knowledge and the role of academic institutions in society" that has emerged over the past twenty years (Engagement Scholarship Consortium). Disciplines such as Public Health and Education has been leaders in defining engaged teaching, research, and scholarship and there is need for the same in architecture.

### 2.6.1. Relevance to Architecture

In his seminal 1990 work, *Scholarship Reconsidered: Priorities of the Professoriate*, Ernest L. Boyer states, "The scholarship of engagement means connecting the rich resources of the University to our most pressing social, civic and ethical problems, to our children, to our schools, to our teachers and to our cities." As a practice-oriented discipline, architecture has many affinities with the broader understanding of research and scholarship that are part of engagement scholarship. While the academic discussion of scholarship has expanded over the last twenty years, community engaged architecture inside and outside the academy has increased tremendously, creating new opportunities for faculty, students, and practices to take on issue-driven work in collaboration with partners who were previously outside the scope of architectural clientele. Research on engaged scholarship shows that it has the following benefits:

- Addresses and solves public problems and issues.
- Attracts and retains students.
- Creates civically engaged students and faculty.
- Enhances the public value of higher education.
- Improves revenue generation.
- Improves and integrates research and learning.
- Makes higher education more relevant and responsive to the public.
- Supports a diverse campus climate.

While there has been some improvement in recent years, architectural education continues to struggle to become more racially, ethnically, and gender diverse with respect to students, faculty, and administrators. For example, the National for Education Statistics research on 2012-2013 architecture graduates shows that white males continue to dominate all other groups and racial/ethnic minorities represent a tiny fraction of architecture students. Numerous studies on the impacts of engaged research and teaching show that commitment to engagement as a valid area of inquiry can have significant positive impacts on faculty and student recruitment from underrepresented populations.

## 2.6.2. Current Status of Community Engagement in Architectural Education

Of the 126 schools in the U.S. with accredited architecture programs, 53 are designated as Carnegie Community Engagement institutions. In addition, of the 75 schools that submitted Promotion and Tenure documents for this report, 49 mention community engagement or an equivalent phrase in their submitted documents; 27 of these do not have Carnegie Engagement designation. Based on the ACSA's 2014 Community Design Directory, there are 78 community design organizations located within or related to schools of architecture.

The Architecture Promotion and Tenure documents that provide the greatest clarity regarding engagement scholarship and research as well as its evaluation come from programs located within universities that also have high commitment to engagement and clearly articulate this in documents such as Faculty Handbooks. These provide structures within which Architecture schools can describe specific disciplinary products and criteria. In addition, these tend also to be schools that require clear descriptions of faculty responsibilities and workloads, considering how time percentages and product numbers can vary depending on type of research and teaching. This is very important for Community Engagement as it often involves long-term building of community trust and relationships in addition to design and research.

Unfortunately, while many schools mention engagement in their performance documents, it is most typically listed under Service and not adequately distinguished from other types of service outside the university. In some cases, Community Engagement may be listed as a type of research/creative activity but understanding of scholarship types and appropriate evaluation is not included. Community Engagement work is also frequently incorporated into courses and student work can become an important component of reports and other types of community and/or applied scholarly products (see 2.6.4). In addition, faculty may also write papers, for example, about how engaged courses contribute to architectural pedagogy. As Scholarship of Teaching and Learning this is an academic product of Community Engagement as well as Publication. It is quite typical for Community Engagement work to weave together teaching, research, and service. While this can exemplify the integrated approach to academic work that many schools advocate, it is challenging to fit into the typically siloed structures of tenure packages and cv templates. Two articulate descriptions of Community Engagement and its related scholarly products and methods of evaluation are those of Auburn University and Portland State University. Both schools have university and architecture program documents that reinforce each other and are consistent, connecting architectural engagement work to the broader missions of the universities. In their documents, Community Outreach is clearly indicated as a specific type of research and scholarship and a specific format is given for presenting this work as part of promotion and tenure review. Examples from these documents will be included in the following sections.

## 2.6.3. Products of Community Engagement Research and Scholarship

There are three types of engagement scholarship products that are recognized across disciplines. These are academic products, applied products, and community products. It is important that faculty pursuing community engagement as the primary area for promotion and tenure consider including scholarship in all of these areas.

The most familiar are academic products, including:

- Articles
- Books/texts/chapters/monographs
- Conference posters/presentations/abstracts/proceedings
- Grants/competitive contracts
- Honors and awards connected to community engagement

According to Portland State University, publications and presentations should be highly valued that occur in contexts that advance the scholarship of community outreach.

Applied products demonstrate the application of disciplinary knowledge to public contexts:

- Curricula/texts
- Educational materials and instructional activities
- Guides/handbooks
- Policies
- Research briefs
- Social marketing/Apps
- Electronic products
- Training and technical assistance
- Copyrights, patents, and inventions
- Contracts, grants, and gifts
- Community products include:
  - Community attained grants/funding
  - Community awards
  - Designs
  - Displays/exhibitions
  - Forums/workshops/seminars (intended for public attendance)
  - Newsletters
  - Presentations
  - Reports
  - Websites

The Auburn University documents require that Community Outreach work be organized in two sections. The first, Commentary, asks the candidate to describe their work and frame it in terms of its mission, scholarly characteristics and impacts. The second is the discussion of Activities and Products. The Commentary section is particularly important in that it demonstrates criteria essential to the evaluation of Engaged Scholarship.

#### 2.6.4. Evaluation

Measuring the quality of engaged scholarship as part of faculty evaluation can be difficult because methods of evaluation may not be as clear as those used for other types of scholarship. Scholarship Assessed: Evaluation of the Professoriate by Charles E. Glassick, Mary Taylor Huber, and Gene Maeroff continues the examination of the changing nature of scholarship in today's colleges and universities that was begun by Ernest L. Boyer's foundational study *Scholarship Reconsidered: Priorities of the Professoriate*. While Boyer discusses the range of scholarship types, Glassick's report focuses on methods of assessment and documentation of different scholarship types in order to maintain quality and rigor. The following characteristics, derived from Glassick, provide criteria for evaluation of engaged scholarship as part of faculty evaluation. These are intended to be used for evaluation of overall engaged scholarship packages/projects, not individual products:

- Clear Goals
- Adequate Preparation
- Appropriate Methods
- Significant Results
- Effective Presentation

Peer review is an important component of scholarly evaluation. However, who constitute appropriate peers for review of Community Engagement work and its varied products is rarely discussed in Promotion and Tenure documents and the assumption is therefore that only academic peer review should be considered adequate. As described in Auburn's document, criteria for evaluating engaged scholarship include "externally peer reviewed activities at a level appropriate to both the faculty's rank and disciplinary expectations." It expands on this to describe engagement scholarship as either meritorious or scholarly and to be considered scholarship they must demonstrate "meritorious performance as evidenced by some form of peer review or other measurable impacts." Auburn's criteria clearly point to potential for peer review outside the academy and outside venues such as academic publications. This demonstrates understanding of the nature of engaged work and the differences it has from other types of research and scholarship. In the Auburn University Faculty Handbook, it is specifically stated that while "demands for quality in outreach are the same [as other types of research] outreach activities are different in nature from other activities and must be evaluated accordingly."

Portland State University states that the quality and significance of scholarship are the primary criteria for promotion and tenure for all faculty. Significance of outreach scholarship includes the following:

- Defining or resolving relevant social problems or issues
- Facilitating organization development
- Improving existing practices or programs
- Enriching the cultural life of a community

They go on to say the faculty evaluation "should focus on the quality and significance of work rather than on categories of work," implying that specific types of products are less important than the ways in which they engage community needs. Significance can also be demonstrated by:

- Honors and awards
- Adoption of models, instruments developed by faculty
- Substantial contributions to public policy or influence upon professional practice
- Models that enrich the artistic and cultural life of the community
- Evaluative statements from clients and peers regarding the quality and significance of documents, performance by faculty member.



### 3.0. EXISTING POLICIES FOR ASSESSING RESEARCH QUALITY: An Examination of Tenure Documents from ACSA Member Schools

As part of the examination about measurements of quality in research tenure guidelines are obvious sources. These documents provide information about tenure standards and identify what areas are to be included in a tenure dossier. The guidelines are distributed to new tenure-track faculty members, used by promotion and tenure committees as evaluation criteria, and aid those administrators who are supporting candidate cases at various levels across campus. Thus, if research quality is a necessary component of a tenure dossier, these documents should contain guidance on research expectations. An additional characteristic of tenure documents is that they are likely to have been adopted by a faculty, a college, and a campus. This means that there is some consensus in making and applying these standards and acknowledgement of them, implicit or explicit.

For this portion of the study, a list of ACSA membership schools was obtained from the organization and the 133 American Schools were solicited by email for their tenure documents as well as that of any College or University level document or policies that apply. (A list of these schools can be found in Appendix A). These schools were approached on multiple occasions and sometimes through multiple people. Many of the University level documents are publicly available on the institution's website, often through faculty handbooks or policies. At the time of writing, 79 or 59.4% of the Schools responded.

The analysis of these documents is in the initial stages, given the amount of material received, and further efforts are being made to reach out to those institutions that have not yet responded. With the wide range of architectural schools and corresponding institutions, the documents were analyzed in classifications as determined by the Carnegie Classification of Institutions of Higher Education (<http://carnegieclassifications.iu.edu/>), and follow the 2018 classification update. The distribution of all ACSA members according to this classification is included in figure 3, the distribution of schools included in the analysis is shown in figure 4, while a listing of these classifications can be found in Appendix B.

From these classifications, it is noted that Doctoral Universities with Very High Research Activity make up over half of the schools and when combined with Doctoral Universities with High Research Activity comprise 73% of ACSA architecture schools within the U.S. There are currently no architectural schools that are members of the American Indian Higher Education Consortium, and Special Focus Institutions: Arts, Music & Design Schools are 8% of the total.

Carnegie Classifications for All ACSA American Member Schools

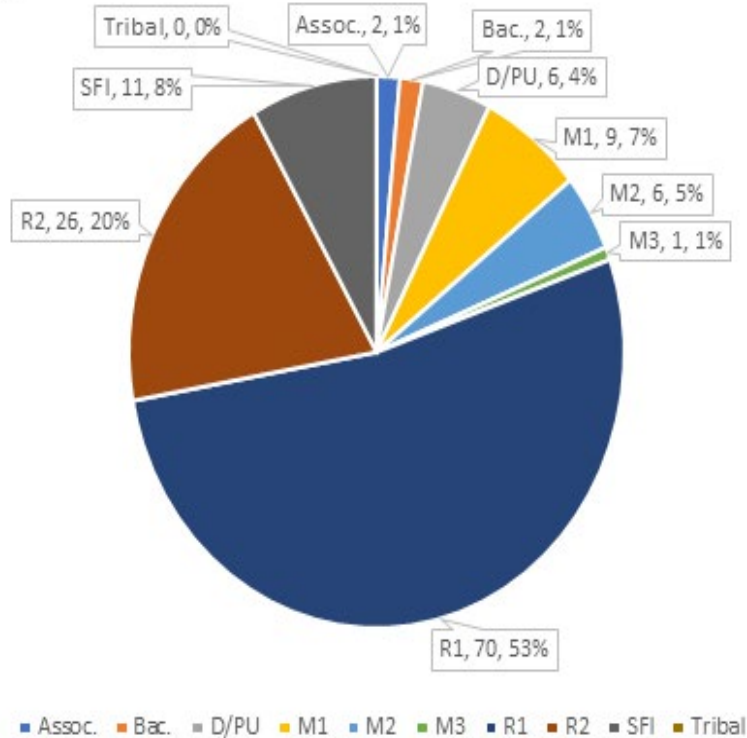


Fig. 3: Carnegie Classification of all ACSA member schools

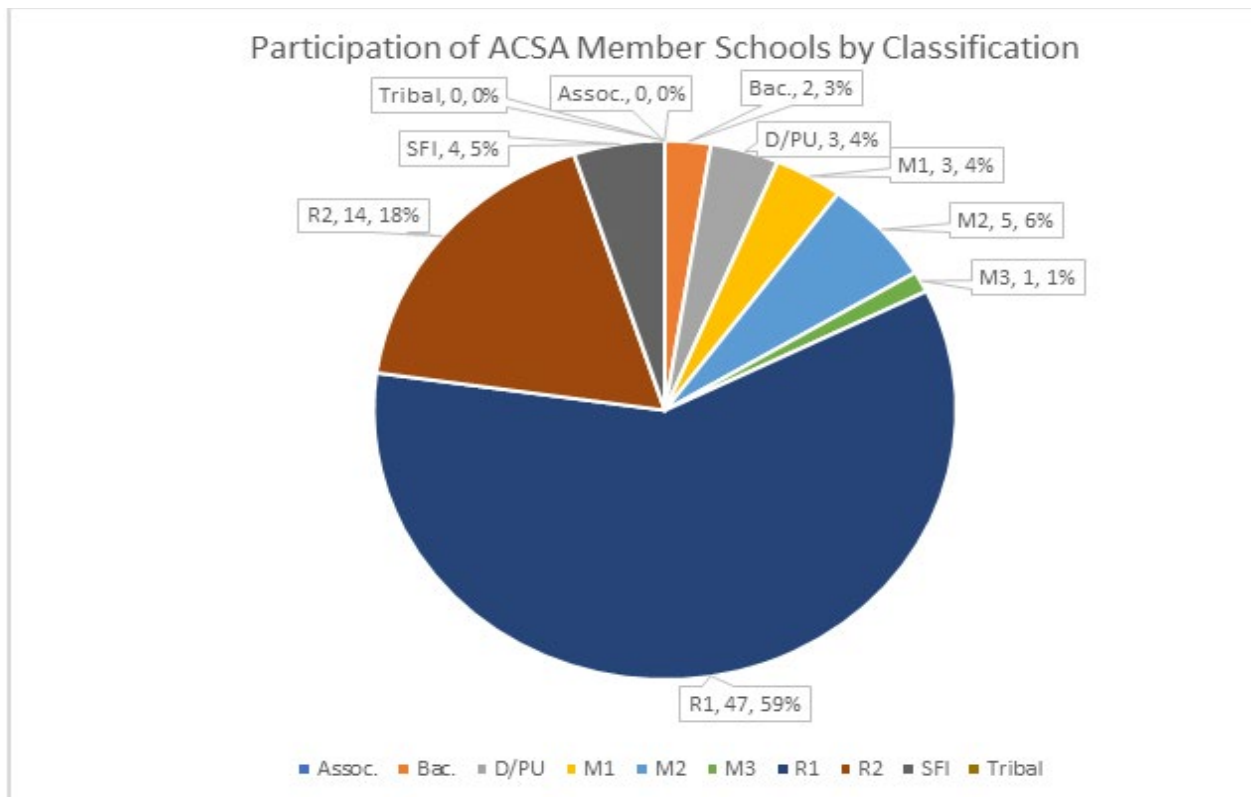


Fig. 4: Carnegie Classification of participating ACSA member schools

Based on responses, as shown in table 1, there is data from each category of ACSA Member School except from either of the two Associate's Colleges.

Carnegie Category	Total # of Schools	% of Participation
Assoc.: Associate's Colleges	2	0.00 %
Bac.: Baccalaureate/Associate's Colleges	2	100 %
M1: Master's Colleges & Universities–Larger programs	9	33.3 %
M2: Master's Colleges & Universities–Medium programs	6	83.3 %
M3: Master's Colleges & Universities–Smaller programs	1	100 %
D/PU: Doctoral/Professional Universities	6	50 %
R1: Doctoral Universities–Very high research activity	70	67.1 %
R2: Doctoral Universities–High research activity	26	53.9 %
SFI: Special Focus Institutions	11	36.4 %
Tribal	0	0.00 %

Table 1: Types of participating ACSA member schools compared to their number in overall ACSA membership

In addition to the basic Carnegie categories, Schools are identified by “Public” and “Private, not for profit,” and “Private, for profit.” This designation will be addressed more fully in each category, where applicable. The percentage of each of these types within overall ACSA membership is included in figure 5.

The analysis of the tenure documents began with an identification of responsibilities of full-time tenure stream faculty. The delineation of duties was found in a familiar triad of responsibilities “Teaching, Service, and .” It is that third area that informed this portion of the study. The documents were searched to see how this area was classified. For example, some schools titled this area “Scholarship” and for others “Research.” Alternate terms appeared including “Professional Growth.” After the area of interest was found, the documents were searched for definitions, explanatory notes, and evaluation criteria. The documents were evaluated by grouping them in the Carnegie Classifications and inductively identifying patterns and overlap. The results of the preliminary analysis are listed by classification below.

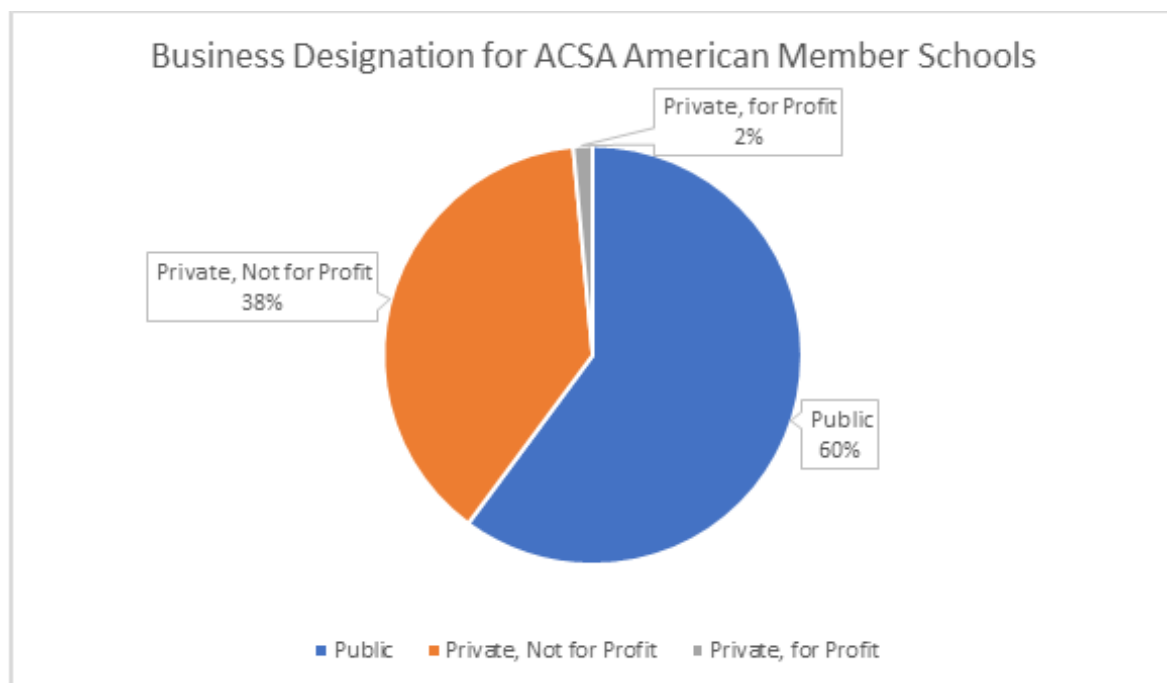


Fig. 5: Business designation of ACSA american member schools

### 3.1. Baccalaureate/Associate’s Colleges

Of the two Schools in this category, one stated that the tenure policy was be rewritten at the School and University level and expected to be reissued. No documents were shared. The other was part of a unionized faculty meant that there were no specific school documents and followed the campus level documents or contract only. Unionized faculty and campus level contracts which include tenure guidelines can be seen in other categories as well. In addition to procedural material in the 2017-2019 document, “Publications and papers,” research, and scholarly writing are listed as responsibilities of faculty members and part of the mission of the University. Evaluation was to be determined at the unit level by peers using the unit’s own criteria. This case is an example, one of many, where little information is provided about research expectations, and what is provided is circular in nature. No indication of research quality can be gathered from these two schools, one private and one public.

### 3.2. M1: Master's Colleges and Universities – Larger programs

The three schools that responded include two Private (Not for Profit institutions) and one Public. One of the institutions follow only the campus guidelines for tenure, dated 2018. The two schools provide an example of departmental specific guidelines with one dating to 2009 and one undated. In all three cases, there is an emphasis on scholarship and professional development. Teaching is also in the forefront of these institutions. In two of the three cases, scholarship is further defined by the four types articulated by Ernest Boyer in *Scholarship Reconsidered: Priorities of the Professoriate*. (discovery, integration, teaching, and application). Creative work, performance, and public presentations are identified as scholarly contributions, including specifically identifying architectural design and construction as evidence of scholarly activity. Outcomes include a publication track where scholarly research is disseminated in journals, books or other media. Another approach includes what one school calls “Pragmatic Scholarship” with “grants, consultantships, policy analysis, program evaluation, accreditation documents, or other forms of scholarship unique to each discipline” encouraged. Schools and universities in this category delineate acceptable forms of outcomes of scholarly work, demonstrating the range of acceptable products. Though “significant” shall be defined by the department, the criteria of evaluation include benefitting teaching, the profession, the growth of the person, the department and University, and “human achievement.” These schools and universities have determined the types of scholarship activities that meets the institutions’ goals, and work of the faculty is to align with those aims. Within the category classification, there is an emphasis on scholarship, of which research is only one subset.

### 3.3. M2: Master's Colleges and Universities – Medium programs

Of the five schools that submitted data, one does not award tenure, two are unionized, and three of the four rely on campus tenure documents dated 2015, 2018-2019, 2017-2021. One participating institution has both School and University standards. For each of the four schools, scholarship, rather than research, is the priority in the list of faculty responsibilities. Scholarship remains broadly defined with two institutions once again using Boyer’s four areas. One institution added Glassick et al. *Scholarship Assessed: An Evaluation of the Professoriate* as a guiding document. Lists of acceptable scholarly activities are provided and range from research, publications, creative works, inventions, patents, instructional material, professional consultancies, grants, discipline related professional education courses. Architectural projects are an additional example. These lists appear to relate directly or indirectly to Boyer and are similar to the scholarly activities as described by M1 schools. For three of the schools, there is an alignment of scholarship with professional activities and keeping current in their fields of expertise. Two institutions are explicitly teaching dominant with such descriptions as “scholar-teacher-participant model of faculty engagement.” Keeping current on one’s expertise is to ensure that faculty members are developing their teaching skills. In both cases, teaching is the primary means of granting tenure with one stating such and the other rating levels of scholarship (does not meet professional standards, needs improvement, outstanding, and distinguished) through how that scholarship evolves the teaching and students.

### 3.4. M3: Master's Colleges and Universities – Smaller programs

There is only one ACSA Member School in this category, and the program follows the campus guidelines from 2015-2016. The document describes the value of tenure for the institution, to the faculty member, and to the student experience (with an emphasis on teaching) but does not describe scholarship or research in depth.

### 3.5. D/PU: Doctoral/Professional Universities

Two of the three participants in this classification use campus level documents (2015, 2017) and the other college level (2008). In one case, scholarship was found in a section that described “Leadership in the discipline,” where knowledge of the field was required. Examples of this leadership included reviewing conference papers, giving public lectures, serving on grant reviews, or editing a book. Another stated that the primary evaluation for tenure was teaching.

Here, scholarship activities such as developing new course techniques, consulting, publishing book, obtaining professional registration, participating in continuing education seminars as a presenter. The emphasis on teaching can be further seen in the faculty member evaluation form which described fourteen points of evaluation for teaching, and only one for research listed under professional development. The third institution clustered research and creative activities with teaching. Published or creative work is required, though the work appears to need to be linked with teaching and learning processes. While each of these institutions were classified as doctoral universities, there appears to be little or no emphasis on original research in tenure evaluation of faculty.

### 3.6. R1: Doctoral Universities – Very high research activity

This category has both the most ASCA Member Schools and also the most responses. Because of the amount of material, the results presented here are in progress at the time of writing.

Forty-seven institutions submitted documents with twelve being Private, Not for Profit. The dates of these documents range from 2013-2018 with a few exceptions. Research is the dominant description of faculties’ responsibilities, though “Creative Works” remain recognized at the university, college, and school levels. Research is identified as in the top two priority and in some cases the primary means to a successful tenure case. At least one institution specifies the well-known, but not highly documented distribution of time with 40% of a tenure stream’s faculty week to be spent on research. It is within this classification of schools that the field of architecture is understood to span several disciplines or specializations. Those listed correlate with those described in the 2017 ACSA white paper on Research and Scholarship for Promotion, Tenure, and Reappointments: architectural design, building science and Tech., history and theory, and the study of the profession of architecture. In parallel, the types of research outcomes would then be judged by the standards of those areas of expertise. Lastly, Boyer’s scholarship of discovery is present, but the main emphasis for research is on original work rather than Boyer’s definitions.

Quality is general more broadly defined in this classification than that of the R2 schools, though one institution lists the appropriate level of peer-reviewed venues by name. Peer-reviewed publications is the main form of dissemination, and the quality of the publisher or organization is essential. Here are terms or phrases like “significant,” “demonstrated excellence,” and “nationally known” are used. External funding as a component of research is identified and viewed as a positive indicator of the value of the research. To summarize, quality in research in this classification is judged by the quality and originality of the idea; the peer-reviewed venues of dissemination determine value; and the work is to be nationally or internationally recognized for advancing the discipline.

### 3.7. R2: Doctoral Universities – High research activity

Of the fourteen institutions that participated, twelve were Public and two Private, Not for Profit schools. With so few “Private” universities in this category, it is not possible to identify patterns or differences between the two funding structures. Among the group, one institution was unionized with only a campus document, and one was able to submit only one document as the university document was under development. The dates of the documents ranged from 2015-2018, with the exception of two schools where documents from one was 2010 and the other 1995. Terms used to describe the third branch of faculty responsibility (teaching, service, and..) include “scholarship,” “scholarship and creative activities,” “scholarly research,” and “research.” Two institutions refined this classification to “professional development/growth” and away from their universities use of “research.” These terms are more than semantics but inform the definition and application of guidance and evaluation. “Research” is thoroughly considered among this category of institution. This is unsurprising as they have been classified as having “High research activity,” but with the exception of R1 institutions, this has not been the case.

Another observation is the equating of creative works with research within the tenure evaluation process. Almost every institution had the option to produce creative work as an alternative to conducting research. Creative work adds value to the discipline as research does, and therefore is recognized within faculty responsibilities. The outcomes of the two bodies of work differ, though some institutions established measures of quality that were encompassing of both such as “nationally or internationally recognized.” A few institutions stressed that creative work should not fall under the metrics of science. As this study is focusing on measurements of research quality, creative works will not be addressed more fully in this portion of the paper.

Boyer’s four areas of scholarship are included within this classification on institution, though not predominantly. When used the “Scholarship of Discovery” was where research is placed. Research is defined though creating new knowledge for the discipline and as creative intellectual work. There is more emphasis, however, put on the outcomes of research. The products of research for this category of institution include what would be seen as traditional: books, book chapters, and peer-reviewed articles. Additional acceptable formats for research were identified as: invited lecture, non-peer reviewed work, media, professional magazines, software, conference papers, and patents, among others. Within the documents studied, teaching and research can be found to intertwine with research on teaching and research to improve the classroom experience. Additionally, research (or creative works) is a major responsibility of faculty, but for several institutions one could meet the basics of research and excel in teaching and service. Meaning, research was one of three components of a faculty position and all do not have to be addressed equally, nor was there a hierarchy.

Quality of research was measured through a series of adjectives, with defined metrics, by the outcomes, and by peer-review. The specificity of the tenure documents for this classification of school varied from generalizations to charts with measurements of quality. For some institutions, research must be of the “appropriate quality,” have “impact,” be “significant,” be “substantive,” and have “high quality.” More definition was not given, but the use of these terms alludes to what one institution described as the challenge of fairly evaluating a candidate with what must include “substantial judgment.” Metrics for quality came in a variety of formats. Two institutions defined quality based on Glassick’s work using: Clarity and Relevance of Goals, Mastery of Existing Knowledge, Appropriate Use of Methodology and Resources, Effective Communication, Significance of Results and Consistently Ethical Behavior. Another institution delineated work by “Primary, Sustain, and Supplemental.” Those that used charts used “Distinction, Excellence, and Competence,” or “Excellent to Poor.” For most using this type of measurement, examples were given, though these still left room for further definition. For example, “Demonstrated record of publication” does not provide a number of publications that comprise a “record” or venue for such publications. (One participating School stated a requirement for two research and/or creative works per year.) External funding was another indicator of quality, but at least one institution noted the difficulty of achieving funded research for architecture in comparison to science fields. “Unfunded” research was called out as a valid form of research for this School and noted to University Administration. Most institutions equated quality with a type of research outcome with books, book chapters, and peer-reviewed articles being the most common, though alternate forms were acceptable (as described above). Thus, a measure of quality was provided by the external bodies that accepted, produced, and validated the product. The “quality” of the publisher and journal are to be considered as well. Uniformly, however, these institutions recognized that dissemination of research and its external evaluation through peer-review was the measure of quality for research.

### 3.8. Canadian Universities

ACSA membership includes a number of universities based in Canada. In response to this committee’s inquiries, several schools shared their documents related to tenure and promotion of faculty. The text below summarizes the documents and strategies shared. In the future it would be desirable to consider inviting a representative of a school in Canada to be part of the committee to allow an expansion and further refinement of the data collection.

In general, the examples shared show clear guidelines of evaluation for faculty scholarship and research. Schools individually distinguish priorities related to their mission which will be valued higher than others (e.g. internationalization).

### 3.9. SFI: Special Focus Institutions

There are four institutions that provided information for this study. Three of the Schools do not award tenure, and thus will be considered no further. For the fourth, there is college-wide guidelines, but none at the school level. Professional engagement and achievement are required as well as external recognition through grants, panels, competitions, and juries. Teaching is the stated emphasis of this institution.

### 3.10. Observations

In all examples, a multiplicity of formats is listed as acceptable if published to the public domain and peer-reviewed. In some examples an addendum offering more specific information regarding research in architecture is part of the promotion package. Several schools publish one set of documents for all, mentioning the different nature of “clinical work” and “creative work” within the larger descriptions of assessment. “Different pathways to academic and scholarly excellence” appear to be acceptable to all institutions. Scholarship output is typically defined as research articles in “refereed journals, research monographs, books, expository articles at all levels, innovative designs and patents, curated exhibitions and publications of designs, conference papers, reports, reviews, invited talks and addresses to professionally/learned societies, etc.” One school describes that “it is recognized that involvement in committees responsible for national or international design standards is a form of scholarship.” Another school states the “supervision of postdoctoral fellows and non-student research personnel” will be regarded as research. It is widely recognized that the value of the output differs in the different fields of scholarship and research. The technical fields might value refereed-journal articles higher than books. Some confirm that especially in architecture journals might have high impact but not undergo peer-review. They “deliver well-informed and influential opinions (e.g., Log), set new trends (e.g., Architectural Design), or may indeed be indistinguishable from traditional peer-reviewed journals (e.g., AA Files).”

Most documents mention creative work as a possible part of “scholarly activities.” Creative work in architecture is mentioned with the fine arts several times, where built work can be a “valid research component.” The evaluation of the creative work is also based on the impact and the role faculty played. Any kind of consultancy is typically excluded from work that qualifies for promotion.

All schools cite different forms of peer review as crucial for the evaluation of the work. Specifically recognized is interdisciplinary team work. Public acknowledgement, jury decisions (award-winning) and informed peer review are considered as suitable evidence. All documents shared recognize and state that evidence of scholarly work varies among disciplines. Many documents refer to “accepted standards” regarding the academic graduate field and point out the importance of interdisciplinary and collaborative work. For scholarship different formats are acknowledged: “scholarship of synthesis, of application, of dissemination and teaching as well as discovery.” Successful research/scholarship is closely related to “the original nature of the work documented and its potential to lead to the advancement of knowledge within the profession, as well as demonstrated impact.” One school defines “High level outcomes and mid-level outcomes linked to dissemination, however little is mentioned about actual metrics of the evaluation.

Though still being completed, the analysis of tenure documents by Carnegie Classification of Institutions of Higher Education is beneficial and revealing. For most classifications, scholarship has a specific yet encompassing definition in which research is only one segment. The value of this definition corresponds to the needs and goals of these institutions and of the education being provided. For example, for those schools that defined themselves as primarily teaching institutions, the research on pedagogy has the most value, if needed at all. Similarly, the research and its quality at R1 and R2 institutions should exemplify the standards for architectural research for the field and its many specializations as research is a core component of these schools. Thus, when the standards, quality, and expectations of research are described, the context of the institution and the institutional requirements should be known. There is no one definition of quality and one may go so far as it is a mistake to confuse the word scholarship with research.

## 4.0. INTERNATIONAL MODELS OF ASSESSING RESEARCH

This compilation of international models of evaluation is not comprehensive but analyses a series of examples of research assessment systems from predominantly English-speaking environments. The sources of the metrics documented range from governmental funding organizations, professional institutions and associations, to colleges and universities.

### 4.1. National/Governmental Frameworks

#### 4.1.1 European Union Research Framework Program

The European Research Council's (ERC)<sup>9</sup> mission is "to encourage the highest quality research in Europe through competitive funding and to support investigator-driven frontier research across all fields, on the basis of scientific excellence."<sup>10</sup> The ERC complements other research and funding initiatives such as the Union's Research Framework Horizon 2020. A European Research Area (ERA) was formed to coordinate research programs and act as instrument for investment in research and innovation. This recent framework places research and innovation with the potential of economic growth at the core of evaluation criteria.<sup>11</sup>

Horizon 2020 is a research and innovation program of the European Union, their largest to date. It features a process called "from lab to market" encouraging research and innovation that turns into business opportunities. It administers grants based on submitted proposals. Three key areas are targeted: excellent science, industrial This framework administers grants in fields such as future and emerging technologies, infrastructure, industrial leaderships and technologies. With a focus on generating teaming up research institutions. All evaluations of this program are specifically focused on research with economic growth potential.

The criteria applied are:

- bold, inspirational, with wide societal relevance
- a clear direction: targeted, measurable and time-bound
- ambitious but realistic research and innovation actions
- cross disciplinary, cross-sectoral, and cross-actor innovation
- multiple bottom-up solutions
- strong EU added value<sup>12</sup>

Proposals are evaluated by expert panels based on excellence, impact, quality and efficiency of the implementation.<sup>13</sup>

<sup>9</sup> European Research Council, <https://erc.europa.eu>, accessed February 23, 2019.

<sup>10</sup> European Research Council, Mission, <https://erc.europa.eu/about-erc/mission>, accessed February 23, 2019. <sup>11</sup> European Research Council, Research areas, [https://ec.europa.eu/info/research-and-innovation\\_en](https://ec.europa.eu/info/research-and-innovation_en), accessed February 23, 2019.

<sup>12</sup> Publication office of the European Union, A New Horizon for Europe, <https://publications.europa.eu/en/publication-detail/-/publication/00d78651-a037-11e8-99ee-01aa75ed71a1/language-en/format-PDF/source-77975709>, accessed February 23, p.57

<sup>13</sup> Horizon 2020 Work Programme 2014-201, General Annexes, [http://ec.europa.eu/research/participants/data/ref/h2020/wp/2014\\_2015/annexes/h2020-wp1415-annex-h-esacrit\\_en.pdf](http://ec.europa.eu/research/participants/data/ref/h2020/wp/2014_2015/annexes/h2020-wp1415-annex-h-esacrit_en.pdf) (accessed 1/31/19).



#### 4.1.2 United Kingdom: Research Excellence Framework

Founded as the Research Assessment Exercise (RAE) in the early 2000s, later renamed Research Excellence Framework (REF), this funding organization was formed to evaluate research conducted at UK universities. The resulting framework consequently served as a model to set up similar initiatives abroad (e.g. in Australia and Hong Kong). The overall assessment is conducted by the four major UK higher education funding councils.

The purpose of the framework is the “continuation of a world-class, dynamic and responsive research base across the full academic spectrum within UK higher education. We expect that this will be achieved through the threefold purpose of the REF:

- To provide accountability for public investment in research and produce evidence of the benefits of this investment.
- To provide benchmarking information and establish reputational yardsticks, for use within the Higher Education (HE) sector, and for public information.
- To inform the selective allocation of funding for research.”<sup>14</sup>

Assessed are:

- The quality of outputs,
- Their impact beyond academia and,
- The environments that support research.

The assessment criteria are based on a four-star rating. They are applied to all disciplines. Evaluation is conducted by panels and subpanels for the 34 subject-based units of assessment (UOA's), all of which are given criteria for the application of the star rating and level definitions.<sup>15</sup>

The primary outcome of the assessment produces an overall quality profile for each submission, illustrating the proportion of the submission that meets each of the following starred levels:

Four star	Quality that is world-leading in terms of originality, significance and rigor.
Three star	Quality that is internationally excellent in terms of originality, significance and rigor but which falls short of the highest standards of excellence.
Two star	Quality that is recognized internationally in terms of originality, significance and rigor.
One star	Quality that is recognized nationally in terms of originality, significance and rigor.
Unclassified	Quality that falls below the standard of nationally recognized work. Or work which does not meet the published definition of research for the purposes of this assessment.

Table 2. Assessment criteria and level definitions<sup>16</sup>

In forming the overall quality profile, the sub-panels develop a sub-profile for each of the three elements of the assessment: outputs, impact and environment. Results are published organized by unit of assessment and by institution.

<sup>14</sup> REF 2021, <https://www.ref.ac.uk/about/what-is-the-ref/> (accessed 1/31/19).

<sup>15</sup> Panel criteria and working methods, <https://www.ref.ac.uk/2014/pubs/2012-01/#d.en.69569> (accessed 1/31/19).

<sup>16</sup> See: <https://www.ref.ac.uk/2014/panels/assessmentcriteriaandleveldefinitions/>

<sup>17</sup> <https://www.arc.gov.au/about-arc> (accessed 1/31/19)

The Australian framework Excellence in Research for Australia (ERA) is modeled after the Research Excellence Framework (REF) developed by the United Kingdom (described above). The Australian Research Council (ARC) advises the Australian Government on research matters and is in charge of the National Competitive Grants Program.<sup>17</sup> The ARC comprehensively documents and evaluates research data along similar parameters as laid out above for the RAE. The Australian evaluation initiative Excellence in Research for Australia publishes results in an annual report that gives an overview of quantity and quality of research across all disciplines.

## 4.2. Associations of Schools and Professional Organizations

### 4.2.1 European Association for Architectural Education

The European Association for Architectural Education (EAAE) Charter on Architectural Research defines research as original investigation to generate “knowledge, insights and understanding based on competencies, methods and tools proper to the discipline of architecture.”<sup>18</sup> The charter lists the following conditions:

- the research is meaningful and relevant for practice, for the discipline, and for society; it explores limits and expands them;
- it contributes to design practice, to the exploration of spatial understanding and/or the creative design process;
- it contributes to knowledge through intellectual work that is characteristic of architecture and design practice;
- the results are consistent with experience in practice;
- the research endeavors to make its processes and foundations as clear and explicit as possible;
- method, context, process and results are communicated and submitted to regular peer review; they refer to the work of peers;
- the research explores emotional, intuitive and/or artistic aspects of the domain, it engages architectural competences and experience in practice;
- it creates and exploits trans-disciplinary connections.<sup>19</sup>

### 4.2.2 Professional Associations

Professional Associations of architects such as the Royal Institute of British Architects (RIBA) also seek to define different modes of architectural research production and their and their assessment. The RIBA initiated a series of reports produced by the Research Information Network. Architects and Research-based Knowledge: A Literature Review of Knowledge Management Practices” was published in 2017, representing an overview of available literature and approaches.<sup>20</sup> The “Research in Practice Guide”<sup>21</sup> also illustrates the need to create links between practice encouraging knowledge transfer and offers methods of initial evaluation.

## 4.3. Universities Abroad

Most universities publish general guidelines for their tenure and promotion process evaluating research, scholarship and creative activity. Assessment guidelines specific to architecture and related fields are typically handled as addendum outlining modes of production and metrics.

<sup>18</sup> EAAE Charter of Architectural Research, <http://www.eaae.be/about/statutes-and-charter/eaae-charter-architectural-research/> (accessed 1/31/19).

<sup>19</sup> EAAE Charter of Architectural Research, <http://www.eaae.be/about/statutes-and-charter/eaae-charter-architectural-research/> (accessed 1/31/19).

<sup>20</sup> Research Information Network, Architects and Research-Based Knowledge: A Literature Review of Knowledge Management, <https://www.architecture.com/knowledge-and-resources/resources-landing-page/architects-and-research-based-knowledge> (accessed 1/31/19).

<sup>21</sup> RIBA, Research in Practice Guide, <https://www.architecture.com/-/media/gathercontent/home-improvements-housing-research-in-practice/additional-documents/ribaresearchinpracticeguidepdf.pdf> (accessed 2/22/19).

The assessment of several years of practice/research is typically judged by the following criteria:

- quantity, quality and appropriateness of the work (written, scientific or creative)
- quantity of peer reviewed, possibly solicited work or publicly acknowledged projects
- grant applications and funding from various sources (government, public and/or private foundations and other sources)
- provided evidence of scholarly, creative and/or professional achievements/competence

Committees typically comprised of members of the faculty, sometime the administration or external evaluators examine submitted dossiers. The committee is tasked to produce a narrative assessment and share that with the relevant decision makers. Some institutions identify a special focus within their goals for tenure and promotion such as internationalization or interdisciplinary work. Reference is made to the submitted works being evaluated according to “scientific” standards.

Individual works are typically judged by the following criteria:

- originality of process and results
- clarity and correctness
- relevance to the field/significance
- completeness/accuracy/coherence
- influence and recognition

#### **4.4. Observations**

The assessment criteria for architectural research reviewed in this section (based on somewhat coincidental access to documents from international institutions and organizations) shows that a rather wide variety of metrics exists, from general guidelines, reliance on expert committees and detailed assessment criteria. The specific nature of architecture research production is frequently not addressed and relies on being grouped with metrics from engineering, science, and the humanities.

## 5.0. EXISTING CHALLENGES

- A number of existing challenges and barriers have been identified through the work described above., these are summarized below and will form the foundation for the recommendation discussed in the following section.
- There are currently no uniform disciplinary standards for assessing the quality of architectural research, scholarship or creative activity. As shown in section 3.0, considerable variation exist between schools of architecture both in their expectations and in how they assess different modes of production. While differences in expectations are to be expected, the lack of common standards for assessing quality poses challenges for faculty in different schools as well as for how the discipline interacts with other disciplines with more established measures of quality. This lack of common standards also poses challenges for architectural administrators in their interactions with university administrators.
- The inherent diversity of areas of expertise and modes of production between architecture faculty makes it difficult to have one set of criteria to evaluate the work of all faculty. Future standards should take that into consideration and aim to adequately address the different modes of production of the faculty.
- While there are a number of very high-quality dissemination outlets for the research and scholarship work of architecture faculty, the number of these outlets is limited compared to other disciplines. Increasing the number of these outlets, including journals, academic conferences, and other types of outlets, will provide architectural faculty with more opportunities to disseminate their work. Such outlets however should provide the needed level of rigor in the peer-review process.
- While obtaining external funding is quickly becoming a desired objective in many schools especially at the R1 & R2 levels, the number and size of funding sources typically available to architecture faculty are limited compared to other disciplines. The evaluation of external funding within the discipline should take this into consideration.
- As discussed in sections 2.1. and 2.3., some modes of production of architecture faculty, such as creative work and architectural practice, do not lend themselves to the more conventional methods of quality assessments. Alternative approaches to assessing these modes of production should be explored.
- Some modes of production used by architecture faculty are inherently long-term. Examples include built work, materials research, among others. These typically pose challenges when included within the fixed-term promotion and tenure process. An assessment framework that allows for the evaluation of work in-progress may help to alleviate this issue.
- As shown in section 3, schools of architecture vary, sometimes considerably, in their expectations from faculty based on their respective missions and institutional expectations. These variations need to be considered in developing any disciplinary standards. These variations, however, should not impact how high-quality work should be assessed and recognized within each mode of production identified in this report.
- Architecture faculty and the advancement of the architectural education benefit substantially from rigorous and scholarly approaches to teaching, teaching evaluation, peer-review of pedagogical innovation, evaluation, learning outcomes and products. There is significant opportunity to have and demonstrate broader impact on the field through dissemination via publication and presentation. Yet, the field of architectural education lacks common disciplinary standards in this area but would benefit from them. For architecture faculty, teaching and studio instruction activities often take a larger percentage of overall time and resources than in many other fields. Faculty may also link their teaching and studio instruction directly or indirectly to their research and creative work. It is thus important that faculty understand the scholarly opportunities presented by thorough documentation of intentions, processes and innovation, student learning outcomes, evaluation and products.

- As many institutions and funding agencies increasingly encourage interdisciplinary collaboration, issues of authorship and of shared credit between collaborators, either in grants, publications or other modes of production, is becoming more important. This is more significant for architectural researchers who work as Co-PIs in large grants led by researchers from other disciplines. Similarly, clearer standards should be established with regard to student work.
- Community engagement work in particular poses a number of unique challenges. Aspects of community engaged work and scholarship challenge the structure and culture of the research university as described above. For engagement, the academy and the public need to be seen as equal with research coming from a process of co-creation. This goes against the accepted idea of research as produced in the academy, separated from the public, with its value determined by other researchers rather than its relevance to addressing issues valued by the public. Other issues include:
  - o The time required to establish successful relationships with community entities and integrate these into research and teaching structures can delay production of scholarship.
  - o Peer-reviewed journals and books are more likely to be considered appropriate scholarship venues for untenured faculty than many of the scholarship types created through community engagement.
  - o There are no peer reviewed journals focused on engagement scholarship in the design disciplines. Some design journals will include work related to engagement scholarship.
  - o Untenured faculty are often encouraged to put off community engagement work until after they have received tenure.
  - o Faculty and administrators are often unfamiliar with engagement scholarship including its types and how to evaluate it.
  - o Community engagement work often bridges between research, teaching, and sometimes service, making it difficult to describe and locate this work in tenure dossier formats that rely on teaching, research, and service as siloed faculty activities.
  - o Community engagement is typically mentioned in RPT documents as part of Service which is typically not a critical component of promotion and tenure evaluation.

## 6.0. RECOMMENDATIONS FOR FUTURE WORK

The work described in this report focused mostly on providing a review of approaches and policies for assessing the quality of research and scholarship in ACSA member schools, in related disciplines, and internationally. Parts of that review, namely the analysis of promotion and tenure policies in ACSA member schools, still need further work identify and extract any common policies and standards.

This report, however, is intended to be a first step in a larger effort aiming at developing a general framework and potentially some common standards and measures for assessing the quality of research, scholarship and creative activity in schools of architecture. Those standards should be informed by the data and analysis included in the current report and should take into consideration the different challenges identified in the previous section. Such standards should be developed for each of the modes of production addressed in this report and should address the range of areas of research and scholarship pursued by faculty in architecture schools, including design process, architectural education, architectural history and theory. Sustainability and high performance, urban design, etc. A detailed overview of these areas of research expertise can be found in the ACSA Index of Scholarship.

Developing such standards will help architecture faculty to frame their own work and to plan their different dissemination activities to best demonstrate the quality of that work both in relation to promotion and tenure processes and beyond. It will also help architectural administrators in providing guidance to their faculty and in making the case for the work of their respective schools.

## 7.0. REFERENCES AND RESOURCES

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**APPENDIX A: List of ACSA Full & Candidate Member Schools**

Institution	Public/Private	Carnegie Classification
Academy of Art U.	Private for-Profit	Master's/L: Master's Colleges & Universities (larger programs)
American U. in Dubai	Private for-Profit	Bac/Diverse: Baccalaureate Colleges—Diverse Fields
American U. of Sharjah	Private Not for profit	Bac/Diverse: Baccalaureate Colleges—Diverse Fields
Andrews U.	Private Not for profit	DRU: Doctoral/Research Universities
Arizona State U.-Tempe	Public	RU/VH: Research Universities (very high research activity)
Auburn U.	Public	RU/VH: Research Universities (very high research activity)
Ball State U.	Public	RU/H: Research Universities (high research activity)
Boston Architectural College	Private Not for profit	Spec/Arts: Schools of art, music, & design
Bowling Green State U.	Public	RU/H: Research Universities (high research activity)
California Baptist U.	Private Not for profit	Master's/L: Master's Colleges & Universities (larger programs)
California College of the Arts	Private Not for profit	Spec/Arts: Schools of art, music, & design
Ca. Polytechnic State U.-San Luis Obispo	Public	Master's/L: Master's Colleges & Universities (larger programs)
California State Polytechnic U.-Pomona	Public	Master's/L: Master's Colleges & Universities (larger programs)
Carleton U.	Public	Canada
Carnegie Mellon U.	Private Not for profit	RU/VH: Research Universities (very high research activity)
Catholic U. of America	Private Not for profit	RU/H: Research Universities (high research activity)
CUNY City College	Public	RU/H: Research Universities (high research activity)
Clemson U.	Public	RU/VH: Research Universities (very high research activity)
Columbia U. in the City of New York	Private Not for profit	RU/VH: Research Universities (very high research activity)
Cornell U.	Private Not for profit	RU/VH: Research Universities (very high research activity)
Dalhousie U.	Public	Canada
Drexel U.	Private Not for profit	RU/VH: Research Universities (very high research activity)
Drury U.	Private Not for profit	Master's/M: Master's Colleges & Universities (medium program)
Dunwoody College of Technology	Private Not for profit	Assoc/PrivateNFP4: Associate—Private Not-for-profit 4-year, Primarily Associate
Florida Agricultural and Mechanical U.	Public	RU/H: Research Universities (high research activity)
Florida Atlantic U.	Public	RU/H: Research Universities (high research activity)
Florida International U.	Public	RU/VH: Research Universities (very high research activity)
Frank Lloyd Wright School of Arch.	Private Not for profit	Master's/S: Master's Colleges & Universities (smaller programs)
Georgia Institute of Technology	Public	RU/VH: Research Universities (very high research activity)
Hampton U.	Private Not for profit	RU/H: Research Universities (high research activity)
Harvard U.	Private Not for profit	RU/VH: Research Universities (very high research activity)
Howard U.	Private Not for profit	RU/H: Research Universities (high research activity)
Illinois Institute of Technology	Private Not for profit	RU/H: Research Universities (high research activity)
Iowa State U.	Public	RU/VH: Research Universities (very high research activity)
Judson U.	Private Not for profit	Master's/S: Master's Colleges & Universities (small programs)
Kansas State U.	Public	RU/VH: Research Universities (very high research activity)
Ferris State U.	Public	Master's/L: Master's Colleges & Universities (larger programs)
Kennesaw State U.	Public	RU/H: Research Universities (high research activity)
Kent State U. at Kent	Public	RU/H: Research Universities (high research activity)
Lawrence Technological U.	Private Not for profit	Master's/L: Master's Colleges & Universities (larger programs)
Lebanese American U.	Private Not for profit	Bac/Diverse: Baccalaureate Colleges—Diverse Fields
Louisiana State U. and A & M College	Public	RU/VH: Research Universities (very high research activity)
Louisiana Tech U.	Public	RU/H: Research Universities (high research activity)
Marywood U.	Private Not for profit	Master's/L: Master's Colleges & Universities (larger programs)
Mass. College of Art and Design	Public	Spec/Arts: Schools of art, music, & design
Mass. Institute of Technology	Private Not for profit	RU/VH: Research Universities (very high research activity)
McGill U.	Public	Canada



Institution	Public/Private	Carnegie Classification
Mississippi State U.	Public	RU/VH: Research Universities (very high research activity)
Montana State U.	Public	RU/VH: Research Universities (very high research activity)
Morgan State U.	Public	RU/H: Research Universities (high research activity)
New Jersey Institute of Technology	Public	RU/H: Research Universities (high research activity)
New York Institute of Technology	Private Not for profit	Master's/L: Master's Colleges & Universities (larger programs)
Newschool of Architecture and Design	Private for-Profit	Spec/Arts: Schools of art, music, & design
North Carolina State U. at Raleigh	Public	RU/VH: Research Universities (very high research activity)
North Dakota State U.-Main Campus	Public	RU/H: Research Universities (high research activity)
Northeastern U.	Private Not for profit	RU/VH: Research Universities (very high research activity)
Norwich U.	Private Not for profit	Master's/L: Master's Colleges & Universities (large programs)
Ohio State U.-Main Campus	Public	RU/VH: Research Universities (very high research activity)
Oklahoma State U.-Main Campus	Public	RU/VH: Research Universities (very high research activity)
The New School Parsons	Private Not for profit	RU/H: Research Universities (high research activity)
Pennsylvania State U.-Main Campus	Public	RU/VH: Research Universities (very high research activity)
Philadelphia U. / Jefferson U.	Private Not for profit	RU/H: Research Universities (high research activity)
Polytechnic U. of Puerto Rico	Private Not for profit	Spec/Engg: Schools of engineering
Pontifical Catholic U. of Puerto Rico	Private Not for profit	DRU: Doctoral/Research Universities
Portland State U.	Public	RU/H: Research Universities (high research activity)
Prairie View A & M U.	Public	Master's/L: Master's Colleges & Universities (larger programs)
Pratt Institute-Main	Private Not for profit	Spec/Arts: Schools of art, music, & design
Princeton U.	Private Not for profit	RU/VH: Research Universities (very high research activity)
Rensselaer Polytechnic Institute	Private Not for profit	RU/VH: Research Universities (very high research activity)
Rhode Island School of Design	Private Not for profit	Spec/Arts: Schools of art, music, & design
Rice U.	Private Not for profit	RU/VH: Research Universities (very high research activity)
Rochester Institute of Technology	Private Not for profit	RU/H: Research Universities (high research activity)
Roger Williams U.	Private Not for profit	Master's/S: Master's Colleges & Universities (smaller programs)
Ryerson U.	Public	Canada
Savannah College of Art and Design	Private Not for profit	Spec/Arts: Schools of art, music, & design
School of the Art Institute of Chicago	Private Not for profit	Spec/Arts: Schools of art, music, & design
South Dakota State U.	Public	RU/H: Research Universities (high research activity)
Southern Ca. Institute of Architecture	Private Not for profit	Spec/Arts: Schools of art, music, & design
Southern Illinois U.-Carbondale	Public	RU/H: Research Universities (high research activity)
SUNY College of Technology at Alfred	Public	Bac/Assoc: Baccalaureate/Associate's Colleges
Syracuse U.	Private Not for profit	RU/VH: Research Universities (very high research activity)
Temple U.	Public	RU/VH: Research Universities (very high research activity)
Texas A & M U.-College Station	Public	RU/VH: Research Universities (very high research activity)
Texas Tech U.	Public	RU/VH: Research Universities (very high research activity)
Cooper Union	Private Not for profit	Bac/Diverse: Baccalaureate Colleges—Diverse Fields
Tulane U.	Private Not for profit	RU/VH: Research Universities (very high research activity)
Tuskegee U.	Private Not for profit	Master's/S: Master's Colleges & Universities (smaller programs)
U. of Puerto Rico-Rio Piedras	Public	RU/H: Research Universities (high research activity)
Universidad Del Turabo	Private Not for profit	DRU: Doctoral/Research Universities
Universite de Montreal	Public	Canada
Universite Laval	Public	Canada
U. at Buffalo	Public	RU/VH: Research Universities (very high research activity)
U. of Arizona	Public	RU/VH: Research Universities (very high research activity)
U. of Arkansas	Public	RU/VH: Research Universities (very high research activity)
U. of British Columbia	Public	Canada
U. of Calgary	Public	Canada

Institution	Public/Private	Carnegie Classification
U. of California-Berkeley	Public	RU/VH: Research Universities (very high research activity)
U. of California-Los Angeles	Public	RU/VH: Research Universities (very high research activity)
U. of Cincinnati-Main Campus	Public	RU/VH: Research Universities (very high research activity)
U. of Colorado Denver	Public	Master's/L: Master's Colleges & Universities (larger programs)
U. of Detroit Mercy	Private Not for profit	DRU: Doctoral/Research Universities
U. of the District of Columbia	Public	Master's/S: Master's Colleges & Universities (smaller programs)
U. of Florida	Public	RU/VH: Research Universities (very high research activity)
U. of Hartford	Private Not for profit	DRU: Doctoral/Research Universities
U. of Hawaii at Manoa	Public	RU/VH: Research Universities (very high research activity)
U. of Houston	Public	RU/VH: Research Universities (very high research activity)
U. of Idaho	Public	RU/H: Research Universities (high research activity)
U. of Illinois at Chicago	Public	RU/VH: Research Universities (very high research activity)
U. of Illinois at Urbana-Champaign	Public	RU/VH: Research Universities (very high research activity)
U. of Kansas	Public	RU/VH: Research Universities (very high research activity)
U. of Kentucky	Public	RU/VH: Research Universities (very high research activity)
U. of Louisiana at Lafayette	Public	RU/H: Research Universities (high research activity)
U. of Maine at Augusta	Public	Bac/Diverse: Baccalaureate Colleges—Diverse Fields
U. of Manitoba	Public	Canada
U. of Maryland-College Park	Public	RU/VH: Research Universities (very high research activity)
U. of Massachusetts-Amherst	Public	RU/VH: Research Universities (very high research activity)
U. of Memphis	Public	RU/H: Research Universities (high research activity)
U. of Miami	Private Not for profit	RU/VH: Research Universities (very high research activity)
U. of Michigan-Ann Arbor	Public	RU/VH: Research Universities (very high research activity)
U. of Minnesota-Twin Cities	Public	RU/VH: Research Universities (very high research activity)
U. of Nebraska-Lincoln	Public	RU/VH: Research Universities (very high research activity)
U. of Nevada-Las Vegas	Public	RU/VH: Research Universities (very high research activity)
U. of New Mexico-Main Campus	Public	RU/VH: Research Universities (very high research activity)
U. of North Carolina at Charlotte	Public	DRU: Doctoral/Research Universities
U. of Notre Dame	Private Not for profit	RU/VH: Research Universities (very high research activity)
U. of Oklahoma-Norman Campus	Public	RU/VH: Research Universities (very high research activity)
U. of Oregon	Public	RU/VH: Research Universities (very high research activity)
U. of Pennsylvania	Private Not for profit	RU/VH: Research Universities (very high research activity)
U. of South Florida-Main Campus	Public	RU/VH: Research Universities (very high research activity)
U. of Southern California	Private Not for profit	RU/VH: Research Universities (very high research activity)
U. of Tennessee-Knoxville	Public	DRU: Doctoral/Research Universities
The U. of Texas at Arlington	Public	RU/VH: Research Universities (very high research activity)
The U. of Texas at Austin	Public	RU/VH: Research Universities (very high research activity)
The U. of Texas at San Antonio	Public	RU/H: Research Universities (high research activity)
U. of Toronto	Public	Canada
U. of Utah	Public	RU/VH: Research Universities (very high research activity)
U. of Virginia-Main Campus	Public	RU/VH: Research Universities (very high research activity)
U. of Washington-Seattle Campus	Public	RU/VH: Research Universities (very high research activity)
U. of Waterloo	Public	Canada
U. of Wisconsin-Milwaukee	Public	RU/VH: Research Universities (very high research activity)
Virginia Tech.	Public	RU/VH: Research Universities (very high research activity)
Washington State U.	Public	RU/VH: Research Universities (very high research activity)
Washington U. in St Louis	Public	RU/VH: Research Universities (very high research activity)
Wentworth Institute of Technology	Private Not for profit	RU/VH: Research Universities (very high research activity)
Woodbury U.	Private Not for profit	Master's/M: Master's Colleges & Universities (medium program)
Yale U.	Private Not for profit	RU/VH: Research Universities (very high research activity)

## 32 APPENDIX B:

### 2018 Carnegie Classification of Institutions of Higher Education – Basic Definitions Doctoral Universities

Includes institutions that awarded at least 20 research/scholarship doctoral degrees during the update year and also institutions with below 20 research/scholarship doctoral degrees that awarded at least 30 professional practice doctoral degrees in at least 2 programs. Excludes Special Focus Institutions and Tribal Colleges.

The first two categories include only institutions that awarded at least 20 research/scholarship doctoral degrees and had at least \$5 million in total research expenditures (as reported through the National Science Foundation (NSF) Higher Education Research & Development Survey (HERD)).

- R1: Doctoral Universities – Very high research activity;
- R2: Doctoral Universities – High research activity
- D/PU: Doctoral/Professional Universities

### Master's Colleges and Universities

Generally includes institutions that awarded at least 50 master's degrees and fewer than 20 doctoral degrees during the update year (with occasional exceptions – see Methodology). Excludes Special Focus Institutions and Tribal Colleges.

- M1: Master's Colleges and Universities – Larger programs
- M2: Master's Colleges and Universities – Medium programs
- M3: Master's Colleges and Universities – Smaller programs

### Baccalaureate Colleges

Includes institutions where baccalaureate or higher degrees represent at least 50 percent of all degrees but where fewer than 50 master's degrees or 20 doctoral degrees were awarded during the update year. (Some institutions above the master's degree threshold are also included; see Methodology.) Excludes Special Focus Institutions and Tribal Colleges. The formal expression of these classifications is (Classification):(Subset). For example: Baccalaureate Colleges: Diverse Fields.

- Arts & Sciences Focus
- Diverse Fields

### Baccalaureate/Associate's College

Includes four-year colleges (by virtue of having at least one baccalaureate degree program) that conferred more than 50 percent of degrees at the associate's level. Excludes Special Focus Institutions, Tribal Colleges, and institutions that have sufficient master's or doctoral degrees to fall into those categories. The formal expression of these classifications is (Classification):(Subset). For example: Baccalaureate/Associate's Colleges: Associate's Dominant.

- Mixed Baccalaureate/Associate's Colleges
- Associate's Dominant

### Associate's Colleges

Institutions at which the highest-level degree awarded is an associate's degree. The institutions are sorted into nine categories based on the intersection of two factors: disciplinary focus (transfer, career & technical or mixed) and dominant student type (traditional, nontraditional or mixed). Excludes Special Focus Institutions and Tribal Colleges. The formal expression of these classifications is (Classification):(Subset). For example: Associate's Colleges: Mixed Transfer/Career & Technical-Mixed Traditional/Nontraditional.

- High Transfer-High Traditional
- High Transfer-Mixed Traditional/Nontraditional
- High Transfer-High Nontraditional
- Mixed Transfer/Career & Technical-High Traditional
- Mixed Transfer/Career & Technical-Mixed Traditional/Nontraditional
- Mixed Transfer/Career & Technical-High Nontraditional
- High Career & Technical-High Traditional
- High Career & Technical-Mixed Traditional/Nontraditional
- High Career & Technical-High Nontraditional

### Special Focus Institutions

Institutions where a high concentration of degrees is in a single field or set of related fields. Excludes Tribal Colleges. The formal expression of these classifications is (Classification):(Subset). For example: Special Focus Two-Year: Technical Professions.

#### Two-Year

- Health Professions
- Technical Professions
- Arts & Design
- Other Fields

#### Four-Year

- Faith-Related Institutions
- Medical Schools & Centers
- Other Health Professions Schools
- Engineering Schools
- Other Technology-Related Schools
- Business & Management Schools
- Arts, Music & Design Schools
- Law Schools
- Other Special Focus Institutions

## APPENDIX C: Additional Resources for Community Engagement

### C.1. Resources from Related Disciplines

A number of disciplines have developed excellent resources for understanding and articulating Community Engagement in academic contexts. These include:

- Community-Engaged Scholarship for Health (CES4Health) has a substantial body of information about community-engaged research and scholarship. They also have a peer review system to which work from multiple disciplines (not just public health) can be submitted for peer review. The formatting of this work is somewhat outside what architects normally do so it is recommended that faculty consult this resource and organize projects so that they can be easily submitted via this system. <http://www.ces4health.info/index.aspx>
- Community-Campus Partnerships for Health, of which CED4Health is a component, is a public health organization dedicated to promoting "health equity and social justice through partnerships between communities and academic institutions." It has a variety of resources and initiatives related to engaged scholarship, best practices, and evaluation. <https://www.ccphealth.org/>
- Imagining America is an organization engaging the arts, humanities, and design in expanding the scope of engaged work in colleges and universities and providing resources for faculty. Their journal *Public* is online and therefore able to support an array of media in addition to writing. They have a national conference (typically in early October) and multiple publications related to civic engagement. The report "Scholarship in Public: Knowledge Creation and Tenure Policy in the Engaged University" is particularly relevant to disciplines such as architecture. <https://imaginingamerica.org/>
- Engagement Scholarship Consortium is an organization promoting engagement scholarship in higher education. They have a number of tools and resources for faculty and hold an annual conference, typically in early October. This includes an Emerging Engagement Scholars Workshop held as part of the Pre-Conference activities. This organization tends to have most participants from social sciences, education, and public health but many tools are useful for setting up engaged design projects, creating effective community engagement, and documenting impacts. <https://engagementscholarship.org/>

### C.2. Suggestions for Faculty Doing Engaged Work

- Because of the time needed to reach the end of community engaged work, faculty should document and write about the engagement process based on project phases or benchmarks.
- Document impacts of community engagement in terms of different groups and work phases. For example, a project may impact local residents, community organizations, and students.
- Document publications about your work such as local media references, university publications, etc. These can be included in a tenure portfolio as evidence of impact and may be referred to as citations.
- Investigate opportunities to publish in journals about community engagement. A list is available at <https://apps.carleton.edu/ccce/scholarship/publish/>. It should be noted that none of these journals specifically deal with arts or design disciplines.

For more information regarding the White Paper on Architectural Education/Research & STEM, please contact the ACSA Offices at:

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Special thanks to the 2019 Research and Scholarship Committee for their hard work in researching and compiling this document.

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