Now More Than Ever: An Argument for the Humanities

Suzanne Ortega, President, Council of Graduate Schools

No matter our place on the political spectrum, results of the 2016 presidential election clearly suggest that our national identity is frayed or fraying. Campaign rhetoric and, indeed, election results suggest a nation that is split, with little sense of shared purpose. In her opening plenary at the CGS Annual Meeting this past December, acclaimed journalist Mara Liasson made precisely this point. A sense of national identity based on shared values, she noted, is perhaps our only alternative to a story of national belonging built on claims of “blood and land,” that is, based on racial or ethnic heritage or control of geographical places and resources. Going further, I would argue that it is, perhaps, only through a renewed commitment to understanding our past and present experiences as a nation that we can negotiate and reap the rewards of our diversity. Without some common foundation, it will be nearly impossible to make progress in solving the problems that affect us all.

But how do we in the academy and as leaders in graduate education address this pressing need? Now, more than ever, I would argue, we must harness the power of the humanities to catalyze an examination of what it means to be an American, and, perhaps even more importantly, what it means to be an American living in an increasingly interconnected world. The sciences, of course, will also play a critical role in this work. They can, for example, instill a sense of shared destiny by uncovering and addressing the common challenges we face in areas such as health, technology, the environment, our economy and political life. But I focus here on the humanities for two reasons. First, they offer tools for parsing the particularities of specific times, places, and social locations as manifested in the stories we tell and the way we experience the world. Going further, I would argue that it is, perhaps, only through a renewed commitment to understanding our past and present experiences as a nation that we can negotiate and reap the rewards of our diversity. Without some common foundation, it will be nearly impossible to make progress in solving the problems that affect us all.

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Looking Outward

A skeptic might argue that the humanities are not up to the task of repairing our divisions because they have not yet established their relevance to life outside of academe. Without a doubt, we will need to build bridges between humanities scholarship and public life if we want to benefit from the powerful lessons of history, philosophy, foreign languages, literature, and the arts.

Already, however, there are some positive signs that humanities scholars are looking outward. A recent article in *The Chronicle Review* profiles a series of young scholars, many of them in the humanities, who have gained influence as journalists and public intellectuals. While they have largely worked outside of the academy—indeed, one of the author’s arguments is that the lack of academic jobs has helped create this blossoming of scholarship in other spheres—they are raising social and political questions of pressing national importance. As leaders in graduate education, we must ensure that scholarship on questions of broad public relevance is encouraged in graduate programs.

Recently, CGS has been partnering with The National Endowment for the Humanities (NEH) to support this aim. The NEH awarded grants to 28 colleges and universities to broaden the career preparation of PhD students to careers in fields beyond academe, and CGS is coordinating the network of grantees, all of which are CGS member institutions. The Next Generation Humanities PhD program empowers PhD programs to consider the broader implications of their research, and to involve students in public outreach. For example, at Wayne State University, a planning grant recipient, the project team is seeking to create a cohort of faculty fellows who could use their humanities training to address challenges faced by the city of Detroit and nearby Flint, Michigan.

Looking beyond scholarship, we must also encourage humanities faculty to make their field accessible and relevant to undergraduates. In teaching undergraduates about the history of ideas, humanities faculty help students to understand the breadth and changing nature of human experiences, giving them a context for understanding their present. By teaching them to analyze texts and other cultural objects, they help undergraduates to practice skills that are important for responsible, informed citizenship: critically evaluating truth claims and examining the values that underwrite them. In philosophy, political theory, history and elsewhere, students can explore not only the myriad ways that Jefferson’s appeal to “truths we hold to be self-evident” have fallen far short of their promise, but they can explore also the power of those values to motivate social action and catalyze political change. Like faculty in all disciplines, humanities faculty will be most effective in their work if they can create environments where respectful discussion and debate of ideas can take place. If they succeed, their students will be better prepared to engage in important public debates outside the classroom.

Exploring Human Diversity and Connection: Core to Humanities Scholarship

One of my central claims is that the humanities (in addition to many of the social sciences) offer special tools for understanding a diverse and evolving human history. In a plenary presentation to CGS members five years ago, Seth Lerer explained that the humanities fields have made the study of class and power central to their concerns. For both intellectual and ethical reasons, the humanities treat diversity “as both an object of inquiry and a motive of professional association.”

It is this attention to issues of diversity – diversity in the literature and stories we produce as well as our identities and our understanding of the world around us - that makes the humanities particularly important in addressing the problems of a diverse society. By showing us that there is more than one way of living a human life, they caution us against the solipsism of believing that our own way is the
only, or best, way of living. They warn us against simplistic accounts of human nature that do not consider the diversity of human lives lived in the past or the present. And they challenge us to examine the limitations and biases in our own perspectives. In so doing, they provide an important foundation for openness to diversity in American society and in the larger world.

At the same time, I would argue, the humanities can also play a special role in mapping our similarities and interdependencies. The field of philosophy, for example, has taken up important questions concerning the definition of “the human” and the special rights and privileges that flow from that status. Literary studies have provided us with occasions for appreciating common human experiences such as love and grief, thanks in part to the inclusion of underrepresented literary voices in course syllabi at American universities. And philosophers, cultural theorists, and others have pursued questions about the viability of the concept of global citizenship, which has the potential to connect people across national boundaries, as an alternative to national identity. This work can give us a finer appreciation of the group dynamics at play among individuals living in the U.S., and a deeper understanding of the way we choose to affiliate, or don’t.

These questions are not only moral and social, of course, but lead us also to questions of truth and value. Humanities scholarship can expose the historical and social differences that lead reasonable people to totally different interpretations of the world. From Platonic notions of truth to today’s relativism, from the idea that fairness in the media requires equal representation of all points of view, to the process we as individuals or as members of particular communities use to understand how we “choose” what we will accept as truth and from what sources, all of these topics are deeply worthy of humanistic inquiry— not just for those of us in the academic/intellectual community but for everyone interested in finding our way back to a more civil society.

**The Challenge: Telling the Story of the Humanities**

Perhaps the most fundamental challenge to telling the story of the power and importance of the humanities is a lack of evidence documenting the value of the humanities to our society.

To make this case, we simply must first do a better job of identifying and characterizing the full range of humanities careers. This is the aim of [Understanding PhD Career Pathways for Program Improvement](#), CGS's recently-announced pilot project supported by the Andrew W. Mellon Foundation. Working with 15 institutional partners, CGS will support the collection of data on the career aspirations of PhD students in the humanities and the career pathways of PhD alumni.

While we don’t yet know what the survey results will uncover, we do know, anecdotally, that humanists occupy leadership positions in the business, government and non-profit sectors. What we still need to know is: the extent to which humanists work in fields related to their field of study; whether they find career satisfaction; what skills they use in their professions; and the extent to which their graduate education prepared them for their careers. Our Mellon-funded project will help answer these questions, allowing CGS member institutions to better establish the value of a humanities PhD to individual degree holders and to their communities, and to use the information they collect to improve programs. This information should broaden our conceptions of the purpose of graduate education in the humanities, which in turn will facilitate the recruitment and success of the next generation of humanities scholars and leaders.
To complement the data collected in this career-mapping effort, we will also need better examples of the ways that the humanities are contributing to the public good. CGS recently announced GradImpact, an effort to collect examples of graduate education making a difference, and the humanities will be given an important place in this work. To date, most submissions to the GradImpact project have come from the social sciences and STEM fields. This is perhaps not a surprise; because of the nature of science funding, the STEM fields are more accustomed to linking their scholarly activities and the public good. (Most humanists do not have to write “Broader Impacts” statements in their proposals for funding, but this should perhaps change.) Given this underrepresentation, please hear this call: tell us your stories of the humanities making the difference. CGS seeks to share these examples far and wide.

Concluding Thoughts
Have we created the conditions that will allow the humanities to support the work our country urgently needs? We are getting there. The humanities are evolving, as all disciplines do, in tandem with social and economic forces and needs. As William D. Adams, chairman of the National Endowment for the Humanities, has said, the doctorate in the humanities has real potential to contribute to American society.v To realize this potential, we need to give current students the opportunity to use their preparation in a broader range of careers, and to help them envision and execute work of real social impact.

A crucial part of this work is helping our humanists tell a story about themselves that is meaningful to leaders in the discipline and to those it will serve. This means challenging narratives that the humanities are in a state of paralyzing crisis (often heard within the field), or that the humanities have nothing to contribute to our society (often heard from outside). To be successful, the humanities will need to tell a different, more compelling story; to take credit for its successes; and to engage diverse American voices in the telling.

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ii Commenting on this emergence of “new intellectuals,” Richard Greenwald, a professor of history and dean of the School of Humanities and Social Sciences at Brooklyn College, argues that universities must make room for this kind of scholarship by rewarding faculty members who do it. Greenwald, R.A. (2016, November 18). Going public: Why young scholars should take their ideas beyond academia. The Chronicle of Higher Education, pp. B9.
iv The feasibility study on which this work is based was supported by the Alfred P. Sloan and Andrew W. Mellon foundations, and a survey-development phase was supported by Sloan, Mellon and the National Science Foundation (NSF #1534620).
The Alignment Framework for the Master’s Degree
Robert Augustine, Senior Vice President, Council of Graduate Schools

In January of 2016, the Council of Graduate Schools reported that 18 deans from across the United States convened to launch the Project on the Master’s Degree. The committee initiated its study by posing questions about master’s degrees that remained unanswered even after several decades of research. The committee’s work culminated in the development of the Alignment Framework for the Master’s Degree. This article summarizes the questions, the emerging answers, the important findings, and future directions for a project that has piqued the interest of many in and beyond the graduate community during the past year.

The Challenge

Through multiple traditional and electronic venues over the course of 15 months, more than 300 graduate deans and stakeholders who lead master’s education engaged with the Committee on the Emerging Master’s Degree. Their mutual discoveries created further excitement, passion, and curiosity about the current and future potential of the master’s degree. That enthusiasm escalated when leaders of business, industry, agencies, and disciplinary societies were invited to contribute their expertise to the discussion. The committee’s understanding advanced with ongoing reviews of data documenting that the master’s degree continues to grow in value, in demand, and in distinctiveness. The committee verified that graduate deans from across the Carnegie continuum are actively seeking more successful approaches for leading their master’s programs. Repeatedly, the committee verified that institutional leaders look to the expertise of graduate deans to find the datasets and practices essential for advancing the competitiveness of master’s programs in order to create a portfolio of future-focused degrees. However, the committee further discovered that graduate deans lack access to datasets and practices that impact master’s education. We verified that other stakeholders, especially employers of master’s candidates, are motivated to learn what datasets and practices will help them locate the most talented degree holders through partnerships with universities to achieve mutually beneficial goals.

The Data

Data from two sources informed the first questions that drove the development of the Alignment Framework: the 2005-2015 CGS/GRE Graduate Enrollment and Degrees Report by Fine Field (Okahana, Feaster, & Allum, 2016) and the CGS International Graduate Admissions and Enrollment Fall 2015 Report (Okahana & Allum, 2016).

- What expertise will the 1.7 million master’s degree candidates (73.5% of all graduate school enrollments) who were enrolled in master’s programs in 2015 add to the workforce?
- Why did 1.52 million people (70% of all applicants for graduate study) from around the globe apply for admission to master’s programs at CGS member institutions in 2015?
- How do the 77% of the first-time international students applying for graduate study in a master’s degree or certificate program discover the value of U.S. master’s degrees?
- How will degree programs ensure that the 577,000 master’s candidates (88.3% of all candidates completing graduate degrees) who completed master’s degrees in 2015 represent the hallmarks of excellence that these programs aspire to achieve?

The Alignment Framework

The committee’s foundational work aimed to find answers to the questions that initially emerged from the data on enrollment and degrees. Through a review of available literature and ensuing discussions, we identified three major concepts that
are central to the requirements and ultimately the definition of a master’s degree. Our analyses revealed that the master’s degree is currently defined by certain types of competencies, shaped by demand for these competencies, and distinguished by the metrics that are used to assess the quality of the degree.

The Alignment of Competencies
In response to questions about the expertise that 1.7 million master’s candidates expect to acquire, the committee affirmed that applicants for master’s programs seek these degrees because they provide a versatile set of competencies. First, the degrees create career pathways important to employers (Gallagher, 2014 and 2015) who consistently identify “transferable” competencies such as team leadership and collaborative skills that are essential to the workforce. Second, the degrees provide the advanced disciplinary and interdisciplinary expertise that the degree holders seek (CGS 2006; Frances, Goodwin, & Lynch, 2011). Finally, the degree requirements foster competencies that make important public good contributions to the communities and to the regions where the degree recipients reside (Sheridan and Sindt, 2016).

Research on the Alignment Framework determined that a master’s degree is defined by the competencies built around traditional degree requirements. Additional analysis revealed that graduate schools were actively adopting new approaches. Examples included competency-based education (CBE) (Brower, Gemperline, Grady, and Schelffler, 2016), stackable credentials (Beshimov, Taber, & Wilks, 2016), and prior learning assessments (Ayres, Romagni & Wojtowicz, 2016). The evidence affirmed that these approaches are innovative and responsive because they attract successful candidates while also meeting employer and community demand for talent. Analysis of the existing processes for collecting data on competencies suggested this competency taxonomy:

- **Disciplinary and Interdisciplinary Competencies**: Competencies specific to a discipline and which define the parameters of that discipline.
- **Professional Competencies**: The knowledge, skills, abilities and dispositions necessary for professional practices including competencies needed to pass a licensing exam or other practice credential.
- **Foundational or Transferable Competencies**: The skills that transcend any specific discipline but are fundamental to being successful with the degree such as communication skills, leadership skills, ability to work in groups, etc.
- **Research Competencies**: The ability to apply the scientific method, apply statistical analysis, conduct fieldwork in a systematic manner, etc.

The Alignment of Demand
In response to the questions that focused on why 1.52 million people applied to master’s degree programs and how do international applicants discover the value of a master’s degree, the committee’s research determined that economic and workforce demand for the competencies that master’s candidates hold are responsible for much of the growth in these programs. To advance study in this area, meetings were held with key agencies that analyze issues of demand. These included the Economic, Human Service and Workforce Division of the National Governors Association, the Business-Higher Education Forum, College for America, the Business Roundtable, the National Association of Colleges and Employers, and the Microsoft Innovation & Policy Center. In addition to these meetings, CGS convened a Colloquium on the Alignment Framework to engage additional stakeholders including the American Historical Association, the American Speech-Language-Hearing Association, D2L Brightspace, Keypath, Lumina, and the National Science Foundation. Through these meetings, the committee created identifiable factors that these organizations examine and use to understand and guide demand for
master’s degrees. The team also highlighted the importance of continuously examining the demand for master’s degrees as disciplinary policies and expertise evolves and changes. This taxonomy for demand emerged:

**Economic and Workforce Factors:** Demand shaped by economic and workforce expectations within our regional, state, national, and international communities.

**Non-Workforce/Policy Factors:** Demand shaped by non-workforce and non-economic factors: policy may create an immediate demand for expertise before such demand is manifested in the workforce; new or revised credentialing, societal concerns manifested in demand for new expertise emerging from new areas such as security, health care or educational areas; and demographic opportunities may emerge from new opportunities in regions, states, or globally.

**Student Demand:** Demand shaped by learners who seek expertise in new and emerging areas of knowledge.

**The Alignment of Metrics**

In response to questions about hallmarks of excellence that institutions and programs aspire to achieve, the committee verified that colleges and universities collect measures of quality of their master’s programs and use these data to distinguish their degrees. The committee adopted the term metrics to refer to these measures of quality. The metrics used vary by institutional mission and degree focus. Finding and using metrics to create distinctive degrees consistently emerged as an area of need. The team affirmed that degrees could be distinguished by metrics and the following metrics taxonomy emerged:

**Curriculum Metrics:** Measures of the curriculum include credit hour metrics and related measures of curricular elements.

**Students Metrics:** Measures of student performance include those used for admission, matriculation, and degree conclusion.

**Faculty Metrics:** Measures of faculty performance include those used to achieve and maintain graduate faculty appointment.

**Professional Metrics:** Measures of professional experience such as practicum and internship experiences.

**Research Metrics:** Measures of research focus on evidence of the creation, application, and dissemination of knowledge.

**Resources Metrics:** Measures in this category include those that provide evidence of investment in the degree programs.

**Further Analysis**

Next, the committee conducted an in-depth examination of the master’s degree by studying existing sources and holding discussions with stakeholders. As they shared their answers to the initial questions; more questions about the master’s degree emerged:

- What specific resources did more than 150-member institution deans who participated in the CGS Webinar on the Alignment Framework for the Master’s Degree state that should be developed to create the framework’s datasets and processes in August of 2016?
- Why business, industry, disciplinary societies and other stakeholders also require datasets and processes to advance quality master’s education as evidenced by their many contributions and questions during the CGS Colloquium on the Alignment Framework held in October of 2016?
- How can resources shared throughout this project be organized and made available to the broader CGS membership?

To address these questions, the committee documented prior efforts to harness a framework to advance quality. Hallmark publications including research by Conrad, Haworth, and Millar, 1993; Haworth and Conrad, 1997; Kohl & LaPidus, 2000; Burgess, 1997; Rhodes, 2001; Council of Graduate
Schools, 2006; and Frances, Goodwin, & Lynch, 2011 documented the degree’s status as one of education’s most valuable assets based on demand and enrollment. These authors identified frameworks to guide assessment of existing degrees and lead development of new degrees. However, these frameworks were never broadly adopted because they were not accompanied by the datasets and practices essential for their utility or they focused only on a very limited number of disciplines. In both cases, the resulting outcome was lack of wide application within the graduate community. In addition to studying prior quality frameworks, the committee documented past efforts that focused on setting the minimum standards for master’s degrees. These included establishing the minimum number of credit hours, the minimum criteria for a research degree and the minimum criteria for a professional-focused degree. These minimum criteria frameworks became the most well-known, most applied, and most distributed. They now appear in regional accreditation documents, in collegiate handbooks, and in state guidelines for development of degrees. The wide adoption of frameworks for minimums resulted in a one-sided approach where the only well-applied frameworks were those for minimums. Reducing reliance on minimum frameworks and replacing these with a framework that represents the other end of the spectrum: ensuring quality of current and future degrees represents a significant challenge because the minimum standards are so deeply embedded in practice. From an analysis of the early frameworks for guiding master’s education, several guiding principles emerged. The first was to ensure that a framework for guiding the degree includes the datasets and practices required for utility and adoption. The second was to ensure that the framework has sufficient breadth and depth to guide a wide range of disciplinary needs. Finally, the framework must be an effective tool for balancing the current minimums.

To consider the lessons of prior frameworks for the master’s degree, the committee asserted that the Alignment Framework should include the integration of a repository of datasets and practices that can be accessed by program leaders and other stakeholders to align competencies, demand, and metrics as the basis for the definition of a quality master’s program. The Alignment Framework for the Master’s Degree is a unique contribution to the literature because it fosters the degree’s maximum potential and is designed to provide deans and stakeholders with the applied datasets and processes needed to create the most innovative, responsive, and distinguished degrees.

The Future
The project progresses to the dataset collection, synthesis, gap analysis, and testing phase. The committee will be addressing these questions:

- What broadly defined questions about competencies, demand, and metrics can be adequately answered with currently available datasets?
- What questions remain unanswered with available datasets?
- What processes can be used as consistent and effective approaches to answering questions about competencies, demand, and metrics that define current degrees and future degrees?

As the committee’s work progresses, partnerships will be considered that can support the analyses of datasets available through federal, state, and regional sources, as well as purchased datasets. The team will review the time and expertise required to locate key datasets, to fully understand the elements that they were designed to explain, and then synthesize these datasets for decision making. Current datasets are complex and dispersed, so our analysis will also involve understanding where datasets are incomplete or unavailable for addressing key questions.
Please stay informed about the evolution of this project! The CGS website maintains a summary of the project’s activities.

- Slides from the presentations from the 2016 Summer Workshop in Savannah and the 2016 Annual Meeting in Washington, DC, are also available on the CGS website.

Contact me at raugustine@cgs.nche.edu if you have questions or comments. I look forward to our continued dialogue on the Emerging Master's Degree!

**The Participants**

I acknowledge the work of the original 18 deans who contributed to the development of the Alignment Framework: Beth Boehm (University of Louisville), Maria Cowles Green (formerly Hood College), Jack DeRochi (Winthrop University), Joan Ficke (Montclair State University), Cynthia Forehand (University of Vermont), Paul Gemperline (East Carolina University), Dennis Grady (Radford University), Kent Holsinger (University of Connecticut), Jack Kirby (Fairmont State University), John Kiss (formerly University of Mississippi), Kathleen Kitto (Western Washington University), James Marshall (California State University Fresno), Cosmas Nwokeafor (Bowie State University), Mary Owens Southall (Coppin State University), Troy Terry (Furman University), Sheryl Tucker (Oklahoma State University), Jerry Weinberg (Southern Illinois University Edwardsville), and Nan Yancey (Lewis University).

Other contributors included: Andrea Golato, (Texas State University), Karen Elzy (Business Higher Education Forum), Emily Swafford (American Historical Association), Loretta Nunez (American Speech-Language-Hearing Association), Dean Evasius (National Science Foundation), Christopher Sessums (D2L Brightspace), Cindy Whealey (Keypath), Kate Kazen (College for America), and Holly Zanville (Lumina).

Members of the CGS staff supporting the project included Jeff Allum, former Assistant Vice President, Research & Policy Analysis; Beth Buehlmann, Vice President for Public Policy and Government Affairs; Edelma Huntley, 2016 CGS Dean in Residence; Hironao Okahana, Assistant Vice President, Research & Policy Analysis; and Kenneth Polishchuk, Best Practices Associate.

**References**


A Quick Look into the Latest Survey of Earned Doctorates Data

Hironao Okahana, Assistant Vice President, Research & Policy Analysis

It’s that time of year again! The NSF’s National Center for Science and Engineering Statistics (NCSES) has released the latest Survey of Earned Doctorates (SED) data tables. SED is the comprehensive source of information about newly-minted research doctorates since 1957, collecting the annual census of this population. The higher education community monitors this survey with keen interest, as the SED data is often used as a key national indicator of doctoral education in the United States. The latest release of the data is based on those students who earned research doctorates between July 1, 2014 and June 30, 2015. While the full NSF report is forthcoming, we have already seen the following headlines in leading media outlets for the higher education community: The New Ph.D.s: New federal data show American universities awarded a record number of Ph.D.s in 2015 and Economic Realities Have Altered Ph.D. Recipients’ Plans for Future.

This article offers a quick look at statistics from the latest data release of SED compiled by the CGS research team. Full data tables are available on the NSF website and table numbers referenced in this article correspond to the web tables.

In the 2014/15 academic year, 55,006 earned research doctorates from U.S. institutions, and a little less than two-thirds of them (64%) were U.S. citizens and permanent residents. Among U.S. citizens and permanent residents, women continue to hold the majority of earned doctorates (51%); however, only a little over one-third (36%) of
international doctorates were earned by women. The overall share of international degree recipients among all earned doctorates has been relatively stable over the last decade, while the number of earned doctorates has grown steadily (Table 18). In the past seven years, about 70% of international doctoral recipients intended to stay in the United States after earning their degrees (Table 53).

Interests vary substantially by their countries of origin. For example, Saudi Arabian (14%) and Thai (21%) students were least likely to intend to stay in the United States after earning their doctorates. Of those students from the two top countries of origin for earned doctorates with a temporary visa, China and India, more than 80% of earned doctorates intended to stay in the United States.

Over the last decade, an increasing number of underrepresented minority (URM) students have earned research doctorates from U.S. institutions. Table 19 shows that during the 2014/15 academic year, record-breaking numbers of U.S. citizens and permanent residents of Hispanic/Latino heritage (2,451) and of Black/African American background (2,281) earned research doctorates. Also the number of earned doctorates by American Indian/Alaska Native students was the second highest in the last decade. While these are encouraging signs to achieving greater access and inclusivity in doctoral education, relative shares of these URM students have continued to stagnate (See Figure 1). Among U.S. citizens and permanent residents, American Indian/Alaska Native students have less than a 0.5% share of earned doctorates with 7.0% and 6.5% shares respectively for Hispanic/Latino students and Black/African American students. Facilitate more diversity in doctoral education will therefore remain a priority for the graduate education community.
A notable new statistic included in this latest data release was median times to doctorate since starting a doctoral program (Table 31). In the prior iterations, median times to doctorates were only reported as times since starting any graduate school and since earning bachelor’s degrees. The inclusion of this new data point offers the most precise national benchmark for doctoral time-to-degree. Overall, the median time to earning a doctorate since starting a doctoral program was 5.7 years, with the longest time-to-degree being 6.9 years for humanities and arts and the shortest time-to-degree being 5.2 years for engineering.

A little over two-thirds (68%) of doctoral recipients also hold a master’s degree, though not necessarily in related fields (Table 29). About 1 in 5 of those who hold a master’s degree earned a degree in a field not related to their doctorates. American Indian/Alaska Native (82%) and Black/African American (84%) students were particularly likely to have earned master’s degrees, suggesting that master’s programs are an important pathway for URM students leading to doctoral education. Interestingly, of those Black/African American students who earned master’s degrees, 3 in 10 hold a master’s degree in fields not related to their doctorates. Master’s attainment was the lowest in life science fields (49%), followed by physical science and earth science fields (51%), while it was the highest in education (86%), humanities and arts (83%), and psychology and social sciences fields (81%). Consequently, earned doctorates from these three fields had the longest times to doctorate since earning a bachelor’s degree, 14.8 years, 11.0 years, and 9.3 years, respectively. Also, about 1 in 5 U.S. citizens and permanent residents who earned research doctorates attended community college (Table 30).

Each year, the Survey of Earned Doctorates offers a wealth of information about the individuals who completed their doctorates in the United States. We encourage you to check out data tables as a benchmarking resource. Each institution also receives an individualized data report from NSF that includes some comparative national data, and institutions can contact NSF to obtain micro data for earned doctorates from their institutions. If you have not taken advantage of these data resources, we highly encourage you to do so, and add them to your go-to data points to support program improvement.

**UAB’s Discoveries in the Making Program Highlights Cutting-Edge Graduate and Post-Doctoral Research to the Birmingham Community**

*Julie Clark McKinney, Communications & Events Specialist, The University of Alabama at Birmingham*

Graduate students are making groundbreaking, world-changing discoveries in the 90 city blocks that make up the University of Alabama at Birmingham’s campus. But venture outside those 90 blocks, and do greater Birmingham residents know about the important research being done in the heart of their city? Furthermore, would people without an extensive science background be able to understand it?

UAB Graduate School Dean Lori McMahon wants to be able to answer those questions with an indubitable “Yes!” That’s why she began creating the Discoveries in the Making program as soon as she was named dean in October 2015.

“The goal of Discoveries in the Making is to help the lay public understand the critical work going on at UAB and research universities, what drives us, what their tax dollars are paying for, and how the
work our trainees do, and the faculty do, improves the lives of the public – whether it’s developing new computer technology and data analysis software to help the power company, new medicines to help a person with diabetes or Parkinson’s disease, or whether it helps us learn better ways to care for the planet and the environment,” Dean McMahon said.

Even before Dr. McMahon officially stepped into the graduate school dean role, she envisioned an educational community outreach program modeled after her already successful “Neuroscience Café.” The café is a monthly event hosted by UAB’s Comprehensive Neuroscience Center that features both a researcher and a clinician explaining their sides of the same neuroscience topic at Birmingham public libraries. But instead of using faculty speakers, Dr. McMahon wanted this new program to highlight graduate students and postdoctoral fellows.

Graduate School staff helped Dr. McMahon recruit and train graduate students and postdocs to communicate their complicated research to a non-specialist audience. The staff created online training materials based on the mechanics of TED Talks, highlighting in particular the 2016 TED Prize-winning talk by UAB professor Dr. Sarah Parcak as a model. Interested speakers reviewed the online materials and then signed up for a presentation slot on campus before being scheduled for the community events. Student writers volunteered to post about Discoveries speakers on the Graduate School’s blog, and student organizers helped the Graduate School staff spread the word about upcoming events.

In February 2016, the first two Discoveries speakers kicked off the series at Hoover Public Library: Elizabeth Bevan, a biology student who uses drones with cameras to study sea turtle mating habits, and Ali Darwish, an engineering student who designs and builds drones to deliver humanitarian aid to war-torn and disaster-ravaged areas. Each following month throughout 2016, UAB graduate students and postdocs told audiences from different vocational backgrounds about what they are working to discover at UAB. Topics have ranged from eating disorders to Cystic Fibrosis to distracted driving to tourism versus wildlife conservation.

Graduate School staff are working to expand Discoveries for the new year. In January, the program will move to two types of venues in and near downtown Birmingham: coffee shops and craft beer breweries. “Discoveries Coffee Break” and “Discoveries Happy Hour” will provide educational entertainment to weekend coffee shop patrons and to after-work bar and brewery goers. The audience is encouraged to ask questions throughout the talks, and the speaker will stop and clarify points if needed. The informal atmosphere in both types of venues should make audience members feel comfortable discussing the topic of the evening with the speaker even after the presentation is over.

Discoveries in the Making continues to develop as we work to find the best ways to engage the community. What we know for sure is that the greater Birmingham community is hungry for more of the knowledge being uncovered in our 90 city blocks.

Note from the Editor: This article is one of a series exploring member efforts to educate the public about the impacts of graduate education. If you are interested in submitting a piece, please contact Katherine Hazelrigg at khazelrigg@cgs.nche.edu.
Credential Engine: Driving the New, Transparent Credentialing Ecosystem
Stephen Crawford, Research Professor & Co-P.I., Credential Transparency Initiative, George Washington University

The past decade has seen enormous growth in the number and variety of degrees, certificates, and other credentials students pursue to advance their careers and that job seekers present as evidence of their abilities. One result is increasing uncertainty about the quality and value of credentials and how they relate to one another. Individuals seeking to improve their career prospects wonder about the value of a particular credential, compared to others, as they consider whether to invest time and money to obtain it. Employers wonder what the holders of various credentials really know and can do. At the same time, graduate schools struggle to communicate the performance components of their degrees and certificates to prospective students and to their graduates’ potential employers. Unfortunately, the existing maze of credentials lacks the transparency to meet these needs. We find ourselves faced with a “tower of Babel.”

Transparency through Technology
There is broad agreement that we need a better system for creating and communicating comparable information about credentials. Fortunately, through the efforts of a groundbreaking technology initiative supported by the higher education, business, and credentialing communities, such a system is now within reach and opportunities exist for graduate schools to get involved and take advantage of it.

The non-profit organization Credential Engine (previously known as the Credential Transparency Initiative) has been working to address the “tower-of-Babel” problem by: (1) developing common terminology for describing the key features of all kinds of workforce credentials (degrees, certificates, certifications, licenses, badges, etc.); (2) creating an open, voluntary, web-based Credential Registry for sharing the resulting comparable information; and (3) developing and testing a practical software application that enables access to this information and serves the needs of institutions of higher education, employers, job-seekers, and others.

Funded by the Lumina Foundation, the Credential Transparency Initiative has been led by George Washington University’s Institute of Public Policy; the American National Standards Institute’s affiliate, Workcred; and Southern Illinois University’s Center for Workforce Development. Its strategic advisory committee has been comprised of senior representatives of the American Council on Education, American Association of Community Colleges, Business Roundtable, Committee for Economic Development of the Conference Board, National Association of Manufacturers’ Manufacturing Institute, U.S. Chamber of Commerce Foundation, and University Professional and Continuing Education Association. In addition, nationally respected consultants and hundreds of volunteers contributed to the effort.

Beginning in 2013, the initiative proceeded to establish the common language and build and test the Credential Registry and a prototype credential search app. In September 2016, the project team presented a live demonstration of the system, using real data from dozens of credential-issuing registry participants, to about 800 in-person and online attendees of a major conference in Washington, DC. The reception was very positive, and 96 percent of attendees responding to the post-event survey viewed the registry as valuable for higher education and employers. Such enthusiasm is one reason that in the spring of 2017, leadership will shift to the board and staff of Credential Engine to sustain the system and take it to scale.
How Does the System Work?
Maintained by Credential Engine, the **Credential Registry** uses web 3.0 technologies to capture, connect, archive, and share information about credentials, credentialing organizations, quality assurance organizations, competency frameworks, and more to support an open software applications marketplace. Apps developed on the registry enable users to search the registry’s data repository and find credentials that meet their criteria for value – just as travel apps enable one to search for and compare flights and hotels.

The Credential Registry is based on a common language known as the **Credential Transparency Description Language (CTDL)** that was developed with broad input from hundreds of credentialing stakeholders in an iterative process. The CTDL establishes the common language in the form of metadata schema and vocabulary that describe key features of credentials, credentialing organizations, quality assurance organizations, and competency frameworks critical for determining the quality and value of credentials. The CTDL conforms to the World Wide Web Consortium’s (W3C) specifications and builds on Schema.org.

The key features of credentials and credentialing organizations that the CTDL defines continue to evolve in response to input from stakeholders, but at present include: learning or competency requirements, location of those requirements in selected competency frameworks, primary scope of the competency set’s application (e.g., targeted industry, occupation, and geographic area), type of assessment and how it was developed, costs and time to attain the credential, labor market value, transfer value, location in education and career pathways, role in occupational regulation and licensing, third-party approval status, credential holder authentication, and credential version control and management. The CTDL can be viewed at [http://credreg.net](http://credreg.net).

The first app created on the registry is **WORKIT**, an open-source prototype credential search app maintained by Credential Engine to demonstrate the power of the registry and promote the development of additional software apps. As a prototype, WORKIT enables the existing community of system builders and registry participants to evaluate and improve the system. It also allows early end-users – students, career counselors, institutions of higher education, employers, and others – to search for credentials of interest and specific information about them. But WORKIT’s most important purpose is to activate a competitive apps marketplace by enabling app developers to use WORKIT’s open-source code to develop more specialized apps. New apps emerging in a competitive apps marketplace will provide students, higher education institutions, employers, and others with unique ways to uncover new opportunities. Such apps could also be used by agencies and associations to create directories of endorsed or approved credentials that they publish on their own websites.

At present, WORKIT is available to the organizations that are putting information about their credentials on the registry, but it is expected to go public in the spring. For more information about WORKIT, visit [http://credentialfinder.com](http://credentialfinder.com).

**Getting Involved**
By all indications, this effort is paving the way to a more coherent credentialing ecosystem, and momentum is building. Dozens of higher education institutions, including Stanford and Purdue, are already posting information on the registry. And now that Credential Engine has been established as a 501(c) (3) nonprofit to take the system to scale, other credentialing organizations, including graduate school programs, are encouraged to join. There are no fees for participating, and the time and effort required are surprisingly small.
The benefits, by contrast, are substantial. Participation allows schools or programs to gain visibility to a large market of students, employers, and others who are increasingly using virtual search tools to find and compare credentials of interest. Participation also demonstrates a commitment to transparency and the confidence to display the quality of the credential involved. Finally, participants receive a suite of services that are useful for short- and long-term technology planning, including information about web 3.0 technologies and a customized roadmap for advancing their capacity to operate on the emerging web of linked data.

Credential Engine is building a promising new system for creating and communicating critical information about all forms of workforce and academic credentials, including graduate degrees and certificates. As more institutions put information about their credentials on the registry, the system becomes more valuable and a major component of an emerging credentialing ecosystem that is on the verge of replacing today’s chaotic marketplace. The new credentialing ecosystem will be characterized by transparency, trust, coherence and reliable consumer information. That will not only improve the efficiency of the labor market in today’s knowledge-based economy; it will also improve the lives of students, educators, job seekers and employers. For more information, visit www.credentialengine.org.

CGS 2016 Annual Meeting Highlights
Heidi Shank, Senior Director of Meetings, Council of Graduate Schools

The 2016 Annual Meeting was held December 7-10 in Washington, DC and brought together nearly 700 attendees representing graduate education both in the US and abroad. Six dynamic and informative plenary sessions, 16 breakout sessions on current topics, and networking opportunities and other activities engaged attendees seeking information about current issues and future directions for graduate education.

This year’s meeting, as in prior years, offered a full range of pre-meeting workshops with sustained, in-depth discussions and training on a range of topics including legal issues, empowering first-generation and underrepresented students to navigate graduate school, and crisis communications. Plenary topics ranged from admissions and access to higher education in a post-Fisher era to strategic business-higher education partnerships; and concurrent sessions covered issues including the emerging master’s degree, the role of mentoring in enhancing graduate student diversity, and reinventing graduate education.

Exhibitors at the meeting included:
• Academic Analytics
• American Speech-Language-Hearing Association
• Cabell’s International
• Cambridge English
• CollegeNet
• Educational Testing Service
• Epigeum
• Gradschools.com
• Hobsons
• IELTS USA
• Keypath Education
• Kira Talent
• Liaison International
• National Opinion Research Center (NORC)
• National Science Foundation
• ProQuest
• PTE Academic/Pearson
• TIAA
• Wiley
In addition to exhibiting, we would like to thank the following sponsors for their support of the meeting:

- Cambridge English
- Educational Testing Service
- ProQuest

Refreshment breaks were well appreciated by the meeting attendees. Sponsors for these events were:

- Bowie State University
- Duquesne University
- George Mason University
- Howard University
- James Madison University
- Michigan Technological University
- Morgan State University
- Rutgers University
- Temple University
- University of Maryland, Baltimore County
- University of Maryland, College Park
- University of Minnesota
- University of Pennsylvania
- University of the Sciences
- Virginia Tech
- Wayne State University
- West Chester University of Pennsylvania

The complete meeting program and presentations are available on the CGS website: http://cgsnet.org/2016-cgs-56th-annual-meeting.

Meet Our New Chair and Chair-Elect for 2017 CGS Board of Directors

Nancy H. Marcus  
(Current Chair). Dr. Marcus earned her B.A. from Goucher College in 1972 and her Ph.D. in Biology from Yale University in 1976. She was a Postdoctoral Scholar and member of the scientific staff at the Woods Hole Oceanographic Institution for the next 11 years. In 1987 she joined the Department of Oceanography at Florida State University. She served as Director of the FSU Marine Laboratory from 1989-2001, Director of the Women in Math, Science, and Engineering (WIMSE) program from 2001-2005, and Chairperson of the Department of Oceanography from 2003-2005. In 2001, Dr. Marcus was recognized with the Robert O. Lawton Distinguished Professor Award, which is the highest award given to a faculty member at Florida State University.

Dr. Marcus became Dean of The Graduate School at Florida State University in 2005. Presently she serves as the Chair of the Council of Graduate Schools Board of Directors. She was President of the Conference of Southern Graduate Schools from 2011-2012. During her tenure as Dean, Marcus has sought to enhance and complement the experience graduate students gain in their individual academic units by establishing programs such as the Office of Graduate Fellowship and Awards, The Fellows Society to promote interdisciplinary engagement, fellowships for international study, and an online tracking system to monitor graduate student progress.

Throughout her career, Dr. Marcus has been committed to increasing the participation of underrepresented groups in science. This commitment was recognized in 2008 through the establishment of the Nancy Marcus Professorship by an anonymous donor. The award recognizes a faculty member at Florida State University who is professionally known as a superior researcher and who has demonstrated extraordinary effort and commitment in service to students from groups that are underrepresented in math and science to attract them to and advance their careers in these fields.
**Dr. Karen Butler-Purry (Chair-Elect).** 
Dr. Butler-Purry is the associate provost for graduate and professional studies at Texas A&M University, a position she has occupied since 2010. Butler-Purry is also a professor in the department of electrical and computer engineering, having served at all faculty levels beginning with her initial appointment as visiting assistant professor of electrical engineering in 1994. Butler-Purry possesses comprehensive experience in graduate education as a faculty member, administrator, researcher and program leader. From 2001-2004, she served as Assistant Dean for Graduate Programs in the College of Engineering, and served as Associate Department Head in the Electrical and Computer Engineering Department from 2008-2010. Further, Butler-Purry has directed several fellowship and education projects promoting recruitment and retention at the undergraduate and graduate level, particularly for historically underrepresented minority students. She also serves in numerous capacities on committees for the college, university and professional societies. Dr. Butler-Purry developed a successful research program, securing funding from federal agencies such as NSF and ONR and also industry sources such as electric utility companies. She has supervised and funded over 40 graduate and 65 undergraduate research students.

During her inaugural year as associate provost at Texas A&M, Butler-Purry responded to public higher education funding reductions and led a campus review of distribution policies for university graduate student support funds. Her efforts resulted in a plan that prioritized providing necessary financial support to attract the brightest doctoral students while concurrently allowing individual colleges to align the funds received with their specific strategic priorities. Also under Butler-Purry’s leadership, the TAMU Office of Graduate and Professional Studies (OGAPS) built a new university initiative to promote and support graduate student participation in professional development opportunities. This professional development initiative, called Graduate Resources and Development for Aggies (G.R.A.D. Aggies), aligned closely with the university’s novel Quality Enhancement Plan, *Aggies Commit to Learning for a Lifetime*. Additionally, in 2012 Butler-Purry’s office facilitated the first graduate-student focused climate survey at Texas A&M. Butler-Purry continues to champion efforts to address its findings and create a more nurturing, diverse campus climate.

**CGS New Members**

*Regular Members:*

- Chapman University (California)
- St. Mary’s University (Texas)
CGS New Deans and Titles

- Abhijit Bhattacharyya is the Interim Vice Provost for Research and Dean of Graduate School at the University of Arkansas at Little Rock.
- Kelly Burke is the Associate Vice Provost for Graduate Education at the University of North Carolina at Greensboro.
- Diana Cone is the Associate Provost at Georgia Southern University.
- Hinrich Eylers is the Executive Dean, School of Advanced Studies and Center for Competency Based Education at the University of Phoenix - Sperling Center.
- Holly Hansen-Thomas is the Interim Dean, Graduate School at Texas Woman's University.
- Chad Harris is the Associate Vice President of Curriculum and Academic Effectiveness at Metropolitan State University of Denver.
- Richard Redding is the Vice Provost for Graduate Education at Chapman University.
- T. Clark Saunders is the Associate Provost and Dean of Graduate Studies at the University of Hartford.
- Aaron Tyler is the Provost and Vice President for Academic Affairs at St. Mary's University.

2017 Regional Affiliate Annual Meetings

**Conference of Southern Graduate Schools**
*March 2-5, 2017*
Loews Annapolis Hotel
Annapolis, Maryland

**Western Association of Graduate Schools**
*March 19-22, 2017*
Motif Seattle Hotel
Seattle, Washington

**Midwestern Association of Graduate Schools**
*April 5-7, 2017*
Omni Severin Hotel
Indianapolis, Indiana

**Northeastern Association of Graduate Schools**
*April 6-8, 2017*
New York Marriott East Side
New York City, New York

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