

External review letters for promotion and tenure decisions at research-intensive institutions: An analysis of the content of template letters for bias and recommendations for inclusive language

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She earned a doctor of geology degree from the University of Padova (Italy), and a Doctor of Natural Sciences and Doctor of Science (Habilitation) from the Swiss Federal Institute of Technology (ETH) in Zurich, Switzerland. Her geoscience research focused on geochemistry and sedimentology. She led the CHRONOS project, a collaborative NSF-funded geoinformatics project to connect stratigraphic, sedimentological, and geochemical data.

A Fellow of the Geological Society of America, she has led numerous projects funded by NSF focused on reforming science education, especially in large enrollment introductory courses and labs. She was coPI of two Howard Hughes Medical Institute awards to transform math and science courses and embed research projects in introductory labs.

Dr. Canan Bilen-Green, North Dakota State University

Canan Bilen-Green is Vice Provost for Faculty Advancement at North Dakota State University. She is also Dale Hogoboom Professor of Industrial and Manufacturing Engineering and PI of the ADVANCE Program at North Dakota State University. She holds Ph.D. an

Dr. Adrienne Robyn Minerick, Michigan Technological University

Adrienne R. Minerick is Immediate Past President of ASEE, Director of ADVANCE at Michigan Tech and Professor of Chemical Engineering. She has served as Associate Dean for Research and Innovation in the College of Engineering, Assistant to the Provost for Faculty Development, Dean of the School of Technology, founded the College of Computing and most recently served as Interim Dean of the Pavlis Honors College.

She has received numerous honors and awards, including the distinction of Fellow of AAAS and ASEE, a National Science Foundation CAREER Award, the Raymond W. Fahien Award from the Chemical Engineering Division of ASEE, and Michigan Tech's Fredrick D. Williams Instructional Innovation Award. She and her students have published over 75 archival journal publications, book chapters, or proceedings articles and earned 23 best paper/presentation awards.

Adrienne previously served as the President of the American Electrophoresis Society and on the ASEE's Board of Directors as First Vice President and Professional Interest Council I Chair. She also chaired ASEE's National Diversity Committee. Her research and service interests regularly intersect and involve underserved individuals with an emphasis on research experiences to increase engagement and retention.

Dr. Carla Koretsky, Western Michigan University

Carla M. Koretsky earned a B.A. degree in Earth and Planetary Sciences from Washington University in St. Louis in 1993, and M.A. and Ph.D. degrees in Earth and Planetary Sciences from Johns Hopkins University in 1995 and 1998, respectively. She currently serves as Dean of the College of Arts and Sciences at Western Michigan University and Professor of Geological and Environmental Sciences. She has previously served as Associate Dean and Dean of the Lee Honors College at Western Michigan. She is currently co-lead of the WMU Aspire Change Alliance and is the WMU lead of the NSF ADVANCE Joining Forces Midwest Partnership grant.

She has received numerous awards and honors including the Michigan ACE Network Distinguished Woman in Higher Education Leadership Award; the Geochemical Society Distinguished Service Award;

the WMU Excellence in Diversity Rising Star Award; the WMU College of Arts and Sciences Faculty Achievement in Teaching Award; the WMU College of Arts and Sciences Dean's Appreciation Award; and the WMU Emerging Scholar Award. She was named a 2019 Crain's Notable Women in STEM, and is the recipient of numerous grants from state and federal agencies including the Department of Energy, the Michigan Department of Environmental Quality, the Office of Naval Research, and the National Science Foundation, including an NSF CAREER award. Together with her undergraduate and graduate students, she has published more than thirty peer-reviewed journal articles and over a hundred conference abstracts in the area of aqueous geochemistry and biogeochemistry.

Malia Cockrell, ADVANCE Midwest Partnership - Joining Forces

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External letters for tenure and promotion to associate professor

- Often requires letters from 3-20 external reviewers
- Requests typically sent to full professors with relevant content expertise from equivalent or higher ranked institutions
- Pulled from one pool provided by candidate and one by department
- External letters carry significant weight in P&T cases
- Cognitive biases and lack of accountability of external reviewers can lead to biased reviews, particularly against women faculty and faculty of color (Stewart & Valian, 2018)



Letters of recommendation - a flawed review instrument

- Tone of letters of recommendation for geoscience postdoctoral scholars identified gender differences (Dutt et al., 2016)
- More superlatives used to describe chemistry and biochemistry faculty candidates identifying as men (Schmader et al., 2007)
- Study of >1,400 external letters for ~300 promotion and tenure candidates showed that language stereotypes influence how women and faculty of color scholarship is devalued (Edema-Sillo et al., 2022)



This study

- Focus on tenure-track faculty at research-intensive doctoral-granting institutions with comparable expectations for P&T
- Searched 146 R1 and 133 R2 U.S. institutions, both public and private
- Identified 75 publicly available template letters for external P&T review requests
- Analyzed language and content that could reduce or amplify bias



Content analysis

- Mentions evaluation in context of COVID-19 impact
- Notes potential bias associated with gender, race, ethnicity, ability or other characteristics of candidate
- Describes how to evaluate changes to length of standard probationary period
- Requests specific evaluation focus on scholarship, teaching, service and/or DEI contributions
- Indicates whether letter will remain confidential
- Asks reviewer to explicitly evaluate or not evaluate candidate's potential to earn tenure at reviewer's institution
- Includes a specific description of P&T criteria



Findings - focus of evaluation

- All R1 and 23 of the 133 R2 institutions require external reviews
- 70% of templates ask reviewer to evaluate candidate's research
 - 48% of templates explicitly noted creative work; 58% explicitly noted scholarship
- 52% of templates also ask reviewer to evaluate candidate's teaching and 50% request reviewer to evaluate service contributions
- Only one R1 template (1.9%) and no R2 templates asked to evaluate candidate's contributions to DEI
- Consideration of any change to length of probationary period included in one-third of R1 templates (34.6%) and one R2 template (4.3%)
 - *"Please note that Professor <<< Last name >>> received a <<< number of year(s) >>> extension of their tenure clock by virtue of university policy. We ask that you recognize this extension's adjustment to the candidate's time in rank and evaluate their work as if it were accomplished in the period of service that excludes their extension years." (Texas A&M University)*



Findings

- About one third of templates at both R1 (36.5%) and R2 (30.4%) institutions asked if candidate would earn tenure at reviewer's institution
- Three R2 institutions (13%) requested to not state eligibility of candidate at reviewer's institution
- R1 institutions more likely than R2 to include statement about COVID-19 impact (32.7% vs. 13%)
- Most common P&T criterion comparison with other scholars at similar career stage (80.7% of R1 templates, 56.5% of R2 templates)
- Confidentiality of letter more likely at R1 (53.8%) than R2 (26.1%) institutions



Implications for evaluation of candidate

- External reviewers selected for discipline expertise yet are asked to evaluate teaching, service, and/or DEI contributions
- Evaluation of candidate's teaching relies solely on teaching statement and biased student evaluations, without any opportunity for direct observation
 - Gender and racial biases in student evaluations are well documented (e.g., Bavishi et al., 2010; Boring, 2017)



Other potential sources of bias

- Lack of external reviewer accountability and bias training may lead to using language that negatively impacts women and faculty of color (Edema-Sillo et al., 2022; Stewart & Valian, 2018)
- Reviewers from different and possibly higher ranked institutions with stronger research support structures and fewer teaching and service expectations, are asked to comment on the candidate's tenure eligibility at their institution
- Tenure-clock extensions may trigger bias and/or productivity penalty if viewed by external reviewers as deviation from norm of committed faculty.



Sample Contributions to Diversity and Inclusion Statement

“The University of Arizona is also a Hispanic Serving Institution (HSI) which values the contributions of faculty that advance the capacity of the institution to serve Latinx students, and students from all underrepresented backgrounds, through scholarship, creative activity, teaching, mentoring and service.”



Sample Consideration of COVID-19 Impact Statements

“We urge you to consider that the COVID19 pandemic, and related deepening of racial gaps, have taken a serious toll on faculty productivity and interrupted the career plans for many. In order to provide a fair review of the quality and impact of work, we ask that you consider the vastly different circumstances that faculty have been operating under, and adapting to, during the pandemic period. We require all candidates to describe how institutional and professional changes due to the pandemic may have impacted their workload distribution, productivity or trajectory of work.” (University of Arizona)

“Texas A&M also recognizes that this has had disproportionate impacts on certain categories of faculty, including but not limited to faculty who have significant caregiving responsibilities at home. [...] In order to ensure a fair and equitable review process, we ask that you evaluate the quality and impact of the candidate’s work within the context of the pandemic.”



Recommendations

- External reviews should focus on candidate's scholarship
- Letters should specifically ask reviewers NOT to comment on candidate's potential for tenure at another hypothetical institution
 - Reviews should be based on the tenure standards the institution wanted the candidate to accomplish
- Letters soliciting external reviews should openly note tenure clock extensions and COVID impacts, and potential sources of bias against specific groups, citing relevant literature
- Institutional discussions on the need for and appropriate use of external reviews for fair evaluation of candidates
 - P&T committee members should form their own judgment of the candidate before reading external letters (Stewart & Valian, 2018)

