Faculty Matter: So why doesn't everyone think so?

by Adrianna Kezar and Dan Maxey

I n K-12 education, teachers are typically regarded as central to student learning and success. As a result, teacher education programs, standards and certification for teachers, as well as teachers' professional development receive a great deal of attention and support from policy makers.[1] It is fully accepted that teachers matter to student learning.

For whatever reason, the same assumptions are not always made in higher education. Whether faculty matter, as well as why and how, is not often considered by policymakers, the leaders of our colleges and universities, and other key constituencies in higher education. This lack of consideration is not without consequence, we believe. Because people do not understand the importance of faculty to learning, faculty roles have come under increased scrutiny from the public and policymakers, and the academic profession has been degraded in the public sphere. Moreover, a lack of understanding about how faculty members shape student learning has underpinned the rise of a mostly contingent academic workforce.

Today, 51.2 percent of all instructional faculty in non-profit higher education are part-time employees.[2] Whereas part-time (or adjunct) faculty were historically professionals practicing in their fields of study, increasingly, institutions are hiring

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off the tenure track simply to save money.[3] Typically, these individuals are paid far less than their full-time colleagues for the same work, and also lack access to institutional supports that would enable them to better help students.[4] As we argue in this article, the emergence of the "new faculty majority" not only reveals the general lack of understanding around faculty's central role in providing a high-quality education to students, but this shift also threatens to undermine one of the most important predictors of student success: frequent and high-quality interactions between faculty and their students.[5]

A substantial body of research, conducted over more than 50 years, makes

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clear that faculty-student interaction is a key factor in promoting student success, particularly among those students who most need support, such as first-generation college students and students of color.[6] This research is consistent, pervasive, and has informed the development of major surveys and projects in higher education.

By writing this article, we hope to remind our colleagues of the important ways that faculty facilitate postsecondary student learning and outcomes. We also suggest that higher education leaders communicate this research to external stakeholders and policy-making groups. Making use of these arguments can improve the support provided to the majority of faculty members today and also ensure that faculty continue to foster student success in the future. Major consideration should be given to the impact of current working conditions on faculty-student interactions, and how improving these conditions could enhance learning.

HOW DO STUDENTS BENEFIT FROM FACULTY-STUDENT INTERACTIONS?

Interactions between faculty members and students have long been shown to improve the quality of students' learning and their educational experiences.[7] The host of positive outcomes includes increased persistence and completion rates, better grades and standardized test scores, and the development of leadership, critical thinking, sense of worth, career and graduate school aspiration, and self-confidence. As Cox and others note: "No shortage exists of empirical studies of the nature, quality, and frequency of faculty-student contact and their educational consequences for students."[8]

Other practices, of course, have also been proven to promote student success, such as academic challenge, active and collaborative learning, and the existence

of a supportive campus environment. Yet, studies repeatedly show that faculty-student interactions on their own have an independent impact. Additionally, the positive outcomes associated with frequent and high-quality contact between students and their professors remain relevant across the decades, even as campus and student demographics have changed dramatically.[9] More than 50 years ago, institutions where faculty-student interactions were "normal and frequent and students find teachers receptive to unhurried and relaxed conversations out of the class" were identified as strongly impacting student learning.[10] Since then, literally hundreds of subsequent quantitative and qualitative studies have said the same

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thing about the importance of faculty-student interactions.[11] Whether it's being a guest in a professor's home or working on a research project with a faculty member, Kuh and others conclude, "In general, for most students most of the time, the more interaction with faculty the better."[12]

PERSISTENCE AND OTHER OUTCOMES, ESPECIALLY FOR STUDENTS OF COLOR

Many important outcomes have been associated with faculty-student interactions.[13] Of these, persistence toward degree completion is one of the strongest. We know that the amount of time that students spend interacting with faculty, and the quality of these faculty-student relationships, effectively decreases student dropout rates and increases their persistence toward degrees.[14] Studies also have associated frequent and high-quality interactions with better grades and performance on standardized tests—particularly for students with lower SAT scores.[15]

And that's not all. Researchers also have explored the cognitive and affective outcomes fostered by faculty-student interactions. Leadership ability and development, critical thinking and problem solving, self-authorship or the ability to define one's capacity and identity, as well as better communication skills, sense of purpose, and character development—all have been linked to faculty-student interactions.[16] Current studies suggest that quality faculty-student interactions make a difference not just in measurable outcomes, such as graduation rates, but in the breadth and depth of learning that occurs among students.

For students of color and first-generation college students, the positive effects of faculty-student ineractions are particularly strong. Indeed, no other factor

plays as strong a role for students of color—making this a particularly important finding for our increasingly diverse institutions.[17] Students of color note that faculty interactions encourage them to engage more with learning, try harder, and meet high academic expectations.[18] For example, students attending Historically Black Colleges and Universities have attributed their success to faculty and staff's encouragement and support, while Latina/o students' say faculty-interactions enhance their sense of belonging and their feeling that they are valued and "matter" in the community.[19] Meanwhile, first-generation students who report positive interactions with faculty also are more likely to experience academic success (e.g.,

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satisfactory grades and persistence) and express satisfaction with their academic experience.[20]

WHY ARE FACULTY-STUDENT INTERACTIONS IMPORTANT?

Underlying these different outcomes are several mechanisms that are deeply human and speak to the ways that interaction with faculty members promotes student success. Research on faculty-student interactions suggests how these relationships contribute to students' aspirations, promote student engagement and a passion for learning, increase motivation to learn, boost academic self-confidence, and provide validation for students, all described below.

Various theories suggest learning is inherently social and support why faculty matter, including situated learning theory, social learning theory, and the most recent research from neuroscience.[21] These theories are the most prominent and well-established theories of learning and explain how and why faculty-student interactions enhance learning.

Student Aspirations

Numerous studies have found that faculty play a major part in increasing students' aspirations, including their desires to major in a certain area, their commitment to degree completion, and their desires to transfer from a two- to four-year institution or attend graduate school.[22] For example, in a recent study in STEM [science, technology, engineering, math] disciplines, faculty-student interaction was the most significant factor in whether students decided to persist in their majors.[23] Faculty can also help to encourage students to pursue careers that match their interests and skills.[24]

Interest, Passion, and Motivation for Learning

Faculty have been shown to positively influence their students' interest and engagement in their studies.[25] Some of this has been attributed to faculty's passion for their fields of study—it may encourage students' interest and engagement. But whatever the reason, it's true that faculty-student interactions increase students' motivation to work on course materials or continue their studies. And motivation is one of the most significant factors in retention, student success, and degree completion.

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Academic Self-Confidence

Studies also show that faculty-student interactions, specifically the encouragement and support provided through those contacts, significantly increase a student's own sense of academic ability and value. This is an important finding since students who lack confidence in their ability to succeed may also lack willingness to engage in their courses.[26] Similarly, feelings of intimidation and inadequacy may prohibit students from fully participating in class.[27]

Meanwhile, students who sense that their instructors care about them also have demonstrated increased levels of engagement in their courses, resulting in student success and retention.[28] Faculty demonstrate their care for students by showing them respect and personalized attention, by valuing student contributions, and also by encouraging participation and inquiry in the classroom. When instructors validate and affirm students' responses to questions, they also increase students' willingness to participate and engage in class.

HOW CAMPUS POLICIES AND PRACTICES SHAPE FACULTY-STUDENT INTERACTIONS

As we have shown, decades of research affirm the important role of faculty in promoting student learning and educational outcomes through frequent and substantive contact. However, as the composition of the faculty has shifted from mostly tenured and tenure-track to mostly contingent and part-time, scant effort has been made to ensure that the new majority of instructors are able to foster student success so completely. We are concerned that the practices and policies commonly faced by part-time faculty have the potential to threaten student success.

We know how institutional environment (e.g., resources, mission, student

body composition) can impact faculty roles and expectations (i.e., educational practices, behaviors, and productivity).[29] The very nature of part-time employment suggests that these faculty will have fewer opportunities to engage with students in the meaningful and substantive ways that are integral to ensuring the positive outcomes associated with faculty-student interaction.[30]

There are, however, many other working conditions that frequently reduce the capacity of part-time faculty to contact and form supportive relationships with students.[31] For example, part-time instructors often lack office space where they can meet with students to provide support or feedback. When they are able

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to hold office hours, they are often not paid for that time. They may lack school-issued e-mail addresses that help to facilitate communication with students. Additionally, they are often excluded from the broader life of their campuses and departments, and may not be invited or encouraged to participate in activities or to serve as advisors for individual students or student groups.

It is important for administrators, faculty, and policy makers to understand and consider how policies commonly associated with non-tenure-track faculty roles and working environments impact student learning. In the sections that follow, we explore these issues.

The Depth and Quality of Faculty Interactions

Earlier studies focused on the frequency of contact between faculty and students and found more interactions to be related to greater outcomes for students.[32] But, in more recent years, the purpose, depth and quality of student-faculty interactions has been found to be more important. This has been demonstrated in studies of students' development of higher-order cognitive skills, and also of students' motivation, aspiration, persistence and achievement.[33] Specifically, more meaningful interactions, such as working with a faculty member on a research project or spending time together socially outside of class, are important in developing these outcomes.[34] Faculty mentoring through undergraduate research programs, course-connected internships, and faculty-led student clubs all provide deep opportunities for faculty to interact with students—and also have been related to student success.[35] More tutorial-style classrooms where faculty meet with students individually and interact with them each week are associated with greater student learning, as well.[36]

Focused interactions appear to have a greater impact on knowledge acquisition

and skill development than more casual contacts.[37] However, informal and infrequent contact also is associated with persistence, increased graduation and student development.[38] These interactions include talking after class about academic or personal issues, simple greetings, and advice about a major or job. In general, studies have specifically identified four qualities of a high-quality faculty interaction: (1) faculty members were approachable and personable; (2) faculty members had enthusiasm and passion for their work; (3) faculty members cared about students personally; and (4) faculty members served as role models and mentors.[39]

It is important to note that part-time faculty are the least likely to have fre-

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quent interactions with students or deep relationships through undergraduate research, project work, or mentoring relationships since they are typically hired to teach only and may be on campus less frequently. They also are not often invited or encouraged to participate in departmental or campus activities, or to advise student groups, which denies them other opportunities to connect with students in substantive ways. Although they may be excellent teachers in the classroom, their working conditions make it nearly impossible for them to be as involved as their full-time peers in the lives of students and to provide those students with similar support outside of class. And while part-time faculty may be able to demonstrate some of the characteristics associated with high-quality faculty-student interactions, such as being approachable, their general inaccessibility or lack of engagement outside of class may make them seem to students to be distant, unsupportive, or unapproachable.

Availability of Professional Development

Faculty members who work off the tenure track tend to use less student-centered and active teaching approaches—the kinds of approaches associated with learning—and also fewer high-impact teaching practices, such as service learning, undergraduate research, and study abroad.[40] Conversely, tenure-track faculty use more student-centered and engaging practices, like getting to know students and having more frequent and substantive interactions with them.[41] While it's unclear why part-time faculty use these positive teaching approaches less often, it is likely that their employment contracts and work arrangements exclude them from professional development, mentoring, and interactions with colleagues that would result in better teaching practices. When faculty are provided these opportunities, research has suggested a positive impact; indeed, a recent study of full-time non-tenure-track faculty recently found that non-tenure track faculty members who are

well supported and use strong teaching practices produce student outcomes that are comparable to those of tenure-track faculty members.[42]

The Importance of Faculty-Student Interactions in the First Year of College

We know that students are most vulnerable in their first year of college, and that faculty have a significant role in determining the success of students during this transition period.[43] In various studies, students' relationships with faculty predicted their academic competence in the first year of college and helped sophomores succeed as well, in terms of grades and satisfaction.[44] Additionally, students'

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earliest interactions with faculty shape their future relationships with professors and whether they even seek them out.[45] When these initial contacts are not successful, students are less likely to pursue interactions later.[46] Yet, first-year courses, particularly developmental courses that serve the most at-risk students, increasingly are taught by part-time faculty—the people with the least amount of time for the kind of interactions that we know help students most. This suggests that the prevalence of part-time faculty leading introductory courses may be an even greater problem than we imagined.

Openness and Accessibility

When students feel respected by their instructors or when faculty members make time for them and demonstrate care through personal attention or quick response to e-mail, students benefit.[47] These signal to students an instructor's accessibility, approachability, and willingness to support students' needs. When students feel isolated or alienated from faculty or develop poor relationships with them, there are adverse outcomes: less motivation, lower aspirations, less satisfaction with college, a lack of engagement, and less persistence and student success.[48] These risks are of particular concern for underrepresented minority students and women.[49] One study found that students of color look for cues about faculty's openness and accessibility in their in-class behavior and demeanor.[50] Students in that study noted, in particular, that if posted office hours were not clearly available or were limited, students believed faculty did not want to interact with students.

Our growing reliance on part-time faculty not only undermines students' chances for high-quality faculty-student interaction, but it also sets up these instructors to be less accessible and seem less welcoming, despite their own best efforts to serve their students well. When part-time faculty members are not pro-

vided an institutional e-mail address or office space, students may have difficulty discussing their interest in course material, receive feedback on assignments, or get help. Similarly, when part-time faculty have limited office hours, it may signal inaccessibility. Also, because part-time faculty are often paid very little and may have their hours capped by their institutions, many work on multiple campuses to piece together a living wage. This means many instructors must rush out of class to drive across town for their next course, leaving behind or putting off students seeking help after class. Even when they are making efforts to be involved, part-time faculty may seem less supportive or approachable.

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In-Classroom Versus Out-of-Classroom Contact

Most studies find that in-class interactions, particularly for students of color, have a stronger impact than out-of-class interactions on persistence, engagement, motivation, aspirations.[51] This may be related to changes on campuses where students currently commute more, are older, and also less likely to participate in out-of-class activities. Nonetheless, a combination of in- and out-of-class activities produces the strongest outcomes for students. Again, this a challenge for part-time faculty, who typically spend limited time with students outside of class and are much less likely to be involved in student activities and co-and extra-curricular activities (e.g., leadership programs, student clubs, residential programming).[52]

WHERE TO GO FROM HERE

While it may always be necessary for institutions to employ some part-time faculty, there is growing support for action toward hiring more full-time employees—and with good reason. As we have shown in this article, faculty do matter. Study after study demonstrates that faculty contact and relationships with student are a critical key to student success. Students, parents, policy-makers and faculty should understand that full-time faculty employment would enable more faculty to undertake more frequent and substantive contact with students—the kind that has been found, time and again, to have a meaningful, positive impact on student success. Where part-time faculty are necessarily employed however, it is imperative that we take into account and find ways to address the limitations placed on these instructors—through no fault of their own. The research we have summarized here should be shared with various stakeholders within and outside higher education as we work together to improve the educational experience and success

of our students. For too long, we have taken for granted that our leaders understand faculty's value to learning, and the important role faculty have in our core academic mission. We need to share these findings widely and ensure that all faculty members can foster their students' development through substantive faculty-student interaction. **nea**

ENDNOTES

1. See Darling-Hammond, "Teacher Quality and Student Achievement: A Review of State Policy Evidence" and "Teacher Learning that Supports Student Learning."

2. See National Center for Education Statistics, "Integrated Postsecondary Education Data System."

3. The terms non-tenure-track faculty and contingent commonly denote both full- and part-time academic staff who are not on the tenure track; they are ineligible to be considered for tenure. This is not a homogeneous group. Individuals may have very different reasons for taking non-tenure-track jobs and the nature of work and working conditions can vary substantially, even on campus. Full-time, non-tenure-track faculty may be referred to as lecturers, instructors, or clinical faculty. Titles and formal classifications may vary by campus and might even differ among the numerous academic units at an institution. They typically work at one institution because they hold full-time appointments. Part-time faculty are commonly referred to as adjunct faculty. Depending upon their individual circumstances, some part-time faculty might work only work at one institution. However, they are more likely to have positions at multiple institutions and may aspire to full-time or tenure-track positions.

4. A 2013 salary analysis by the American Association of University Professors concluded that the average compensation received by a part-time faculty member teaching a three-credit course is $2,700. Additional details regarding non-tenure-track faculty working conditions and connections to student learning can be found at **www.thechangingfaculty.org**.

5. The term "new faculty majority" denotes the status of part-time faculty as the largest subset of the instructional faculty among nonprofit institutions in the United States. New Faculty Majority is also the name of an organization founded to improve the quality of higher education by advancing professional equity and securing academic freedom for all adjunct and contingent faculty. Information about the organization can be found online at **www.newfacultymajority. info.**

6. In our work bringing together accreditors, academic leaders, policymakers, and other important constituent groups in higher education, we have observed that there is not a well-grounded understanding of the research on faculty members' impact on students or a clearly articulated rationale for why faculty are important to student outcomes and learning. The Delphi Project has created a number of resources that summarize research and contribute to building greater awareness about the connections between faculty and their working conditions and student learning outcomes, which are available on our website at **www.thechangingfaculty.org**.

7. See, for example, Chickering and Gamson, "Seven Principles for Good Practice in Undergraduate Education," Kuh, "The Other Curriculum: Out-of-Class Experiences Associated with Student Learning and Personal Development," Kuh et al., "What Matters to Student Success: A Review of the Literature; and Light, "Making the Most of College: Students Speak Their Minds."

8. Cox, et al., "Pedagogical Signals of Faculty Approachability: Factors Shaping Faculty–Student Interaction Outside the Classroom," p. 768.

9. In a study examining historical findings about faculty-student interactions between 1950 and 2000, Kuh and Hu found that the positive outcomes associated with frequent and high-quality contact between students and their professors remain relevant even as campus and student demographics have changed over time. See Kuh and Hu, "The Effects of Student-Faculty Interaction in the 1990s."

10. See Jacob, *Changing Values in College: An Exploratory Study of the Impact of College Teaching*.

11. See Kuh et al., "What Matters to Student Success: A Review of the Literature."

12. See Astin, *What Matters in College? Four Critical Years Revisited*, Kuh, "What We're Learning About Student Engagement from NSSE: Benchmarks for Effective Educational Practices," Kuh and Hu, "The Effects of Student-Faculty Interaction in the 1990s," and Kuh et al., "What Matters to Student Success: A Review of the Literature."

13. It is important to note that studies control for incoming characteristics and other college experiences. However, there is no way to control for students who perform well or who are inclined to persist tending to seek out more faculty interactions. Finally, the effects of student-faculty interaction are conditional. For example, students who were better prepared academically and who devoted more effort to their studies interacted more frequently with faculty members. It is not clear whether this is because such students were more assertive in seeking out faculty members or whether faculty members invited students who performed well academically to make contact (e.g., writing laudatory comments in the margins of a student's paper suggesting they talk further about the topic). See Kuh and Hu, "The Effects of Student-Faculty Interaction in the 1990s."

14. See Braxton, Bray, and Berger, "Faculty Teaching Skills and Their Influence on the College Student Departure Process," Johnson, "Commuter College Students: What Factors Determine Who Will Persist and Who Will Drop Out?" Lundquist, Spalding, and Landrum, "College Student's Thoughts About Leaving the University: The Impact of Faculty Attitudes and Behaviors," and Wang and Grimes, "A Systematic Approach to Assessing Retention Programs: Identifying Critical Points for Meaningful Interventions and Validating Outcomes Assessment."

15. See Anaya, "Cognitive Development Among College Undergraduates," Anaya and Cole, "Latina/o Student Achievement: Exploring the Influence of Student-Faculty Interactions on College Grades," and Carini, Kuh, and Klein, "Student Engagement and Student Learning: Testing the Linkages."

16. See Anaya and Cole, "Latina/o Student Achievement: Exploring the Influence of Student-Faculty Interactions on College Grades," Bjorkland, Parente, and Sathiyananthan, "Effects of Faculty Interaction and Feedback on Gains in Student Skills," Carini, Kuh, and Klein, "Student Engagement and Student Learning: Testing the Linkages," Jenney, "The Holistic Development Of College Students: Spirituality as a Predictor Of College Student's Pro-Social Character Development," Martin, "The Relationship of College Experiences to Psychological Outcomes in Students," and Wawrzynski and Pizzolato, "Predicting Needs: A Longitudinal Investigation of the Relation Between Student Characteristics, Academic Paths, and Self-Authorship."

17. See Lundberg and Schreiner, "Quality and Frequency of Faculty-Student Interaction as Predictors of Learning: An Analysis by Student Race/Ethnicity."

18. See Allen, "The Color of Success: African-American College Student Outcomes at Predominantly White and Historically Black Public Colleges and Universities," Anaya and Cole, "Latina/o Student Achievement: Exploring the Influence of Student-Faculty Interactions on College Grades," and Himelhoch et al., "A Comparative Study of the Factors Which Predict Persistence for African American Students at Historically Black Institutions and Predominantly White Institutions."

19. Fries-Britt and Turner found that students attending HBCUs attributed their success to the encouragement and support they received from faculty and staff. See Fries-Britt and Turner, "Uneven Stories: Successful Black Collegians at a Black and a White Campus." Similarly, research by Dayton and others suggests strong relationships with faculty and staff contribute to Latina/o students' sense of belonging and their feeling that they are valued and "matter" in the community. See Dayton et al., "Hispanic-Serving Institutions Through the Eyes of Students and Administrators."

20. See Amelink, "Predicting Academic Success Among First-Year, First Generation Students."

21. See Lave and Wegner, *Situated Learning: Legitimate Peripheral Participation, Bandura, Social Learning Theory,* Vygotsky, *Mind in Society: The Development of Higher Psychological Processes*, and Immordino-Yang, "Implications of Affective and Social Neuroscience for Educational Theory."

22. See Arredondo, "Faculty-Student Interaction: Uncovering the Types of Interactions That Raise Undergraduate Degree Aspirations," Braxton, Bray, and Berger, "Faculty Teaching Skills and Their Influence on the College Student Departure Process," Hearn, "Impacts of Undergraduate Experiences on Aspirations and Plans for Graduate and Professional Education," Johnson, "Commuter College Students: What Factors Determine Who Will Persist and Who Will Drop Out?" Lundquist, Spalding, and Landrum, "College Student's Thoughts About Leaving the University: The Impact of Faculty Attitudes and Behaviors," and Wang and Grimes, "A Systematic Approach to Assessing Retention Programs: Identifying Critical Points for Meaningful Interventions and Validating Outcomes Assessment."

23. See Hurtado, et al., "'We do science here': Underrepresented Students' Interactions with Faculty in Different College Contexts."

24. See Lee, "Striving Toward Effective Retention: The Effect of Race on Mentoring African American Students."

25. See Arredondo, "Faculty-Student Interaction: Uncovering the Types of Interactions That Raise Undergraduate Degree Aspirations," Braxton, Bray, and Berger, "Faculty Teaching Skills and Their Influence on the College Student Departure Process," Chickering and Gamson, "Seven Principles for Good Practice in Undergraduate Education," Cokley, "Perceived Faculty Encouragement and its Influence on College Students," Johnson, "Commuter College Students: What Factors Determine Who Will Persist and Who Will Drop Out?" Kuh and Hu, "The Effects of Student-Faculty Interaction in the 1990s," Light, *Making the Most of College: Students Speak Their Minds*, Lundquist, Spalding, and Landrum, "College Student's Thoughts About Leaving the University: The Impact of Faculty Attitudes and Behaviors," Pascarella and Terenzini, *How College Affects Students*, and Wang and Grimes, "A Systematic Approach to Assessing Retention Programs: Identifying Critical Points for Meaningful Interventions and Validating Outcomes Assessment."

26. See Rocca, "Student Participation in the College Classroom: An Extended Multidisciplinary Literature Review."

27. See Fassinger, "Understanding Classroom Interaction: Students' and Professors' Contributions to Students' Silence," and Weaver and Qi, "Classroom Organization and Participation: College Students' Perceptions."

28. See Crombie, et al., "Students' Perceptions of Their Classroom Participation and Instructor as a Function of Gender and Context," Dallimore, et al., "Classroom Participation and Discussion Effectiveness: Student-Generated Strategies," and West and Pearson, "Antecedent and Consequent Conditions of Student Questioning: An Analysis of Classroom Discourse Across the University."

29. See Blackburn and Lawrence, *Faculty at Work: Motivation, Expectation, Satisfaction*, and Fairweather, *Faculty Work and Public Trust: Restoring the Value of Teaching and Public Service in American Academic Life*, and "The Mythologies of Faculty Productivity: Implications for Institutional Policy and Decision Making."

30. See Cox, et al., "Pedagogical Signals of Faculty Approachability: Factors Shaping Faculty–Student Interaction Outside the Classroom," Eagan and Jaeger, "Effects of Exposure to Part-time Faculty on Community College Transfer," Ehrenberg and Zhang, "Do Tenured and Non-Tenure Track Faculty Matter?" and Umbach, "How Effective Are They? Exploring the Impact of Contingent Faculty on Undergraduate Education."

31. See Street, et al., "Who is Professor 'Staff:' And How Can This Person Teach So Many Classes?" For additional examples and information, please also see our resources at **http://resources.thechangingfaculty.org**.

32. See Pascarella and Terenzini, *How College Affects Students*.

33. Cox, et al., "Pedagogical Signals of Faculty Approachability: Factors Shaping Faculty–Student Interaction Outside the Classroom."

34. See Arredondo, "Faculty-Student Interaction: Uncovering the Types of Interactions That Raise Undergraduate Degree Aspirations."

35. See Hurtado, et al., "'We do science here': Underrepresented Students' Interactions with Faculty in Different College Contexts."

36. See Smallwood, "Me and My Professor: Oxford Style Tutorials."

37. See, for example, Kuh and Hu, "The Effects of Student-Faculty Interaction in the 1990s."

38. See Komarraju, Musulkin, and Bhattacharya, "Role of Student–Faculty Interactions in Developing College Students' Academic Self-Concept, Motivation, and Achievement."

39. See Alderman, "Faculty and Student Out-of-Classroom Interaction: Student Perceptions of Quality of Interaction."

40. See Baldwin and Wawrzynski, "Contingent Faculty as Teachers: What We Know; What We Need to Know."

41. See Umbach, "How Effective Are They? Exploring the Impact of Contingent Faculty on Undergraduate Education" and Umbach and Wawrzynski, "Faculty Do Matter: The Role of College Faculty in Student Learning and Engagement."

42. See Figlio, Schapiro, and Soter, "Are Tenure Track Professors Better Teachers?"

43. See Pascarella and Terenzini, *How College Affects Students*.

44. See Reason, Terenzini, and Domingo, "Developing Social and Personal Competence in the First Year of College."

45. See Graunke and Woosley, "An Exploration of the Factors that Affect the Academic Success of College Sophomores" and Juillerat, "Assessing the Expectations and Satisfactions of Sophomores."

46. See Reason, Terenzini, and Domingo, "Developing Social and Personal Competence in the First Year of College."

47. See Hurtado, et al., "'We do science here': Underrepresented Students' Interactions with Faculty in Different College Contexts," and Lindquist, Spalding, and Lundrum, "College Student's Thoughts About Leaving the University: The Impact of Faculty Attitudes and Behaviors."

48. See Cole, "Do Interracial Interactions Matter?: An Examination of Student Faculty Contact and Intellectual Self-Concept" and Komarraju, Musulkin, and Bhattacharya, "Role of Student–Faculty Interactions in Developing College Students' Academic Self-Concept, Motivation, and Achievement."

49. See Sax, Bryant, and Harper, "The Differential Effects of Student–Faculty Interaction on College Outcomes of Women and Men."

50. See Hurtado, et al., "'We do science here': Underrepresented Students' Interactions with Faculty in Different College Contexts," and Lindquist, Spalding, and Lundrum, "College Student's Thoughts About Leaving the University: The Impact of Faculty Attitudes and Behaviors."

51. See Anaya and Cole, "Latina/o Student Achievement: Exploring the Influence of Student-Faculty Interactions on College Grades," Kuh and Hu, "The Effects of Student-Faculty Interaction in the 1990s," and Umbach and Wawrzynski, "Faculty Do Matter: The Role of College Faculty in Student Learning and Engagement."

52. See Kezar and Sam, "Understanding the New Majority of Non-Tenure-Track Faculty in Higher Education: Demographics, Experiences, and Plans of Action."

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