Success Factors:

Policies & Practices That Inspire Faculty & Strengthen Teaching

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Abstract

What motivates faculty to engage and persist in professional development offerings to strengthen their teaching? For the past 5 years, ACUE has annually analyzed the institutional, programmatic, and individual characteristics of more than 16,000 faculty across the United States, the District of Columbia, and Canada as associated with their participation in ACUE certification programs. Findings in this paper result from the 2022 analysis of 6,992 faculty enrolled in 350 ACUE course cohorts across 129 institutional partners and 33 Open **Enrollment (i.e., mixed institution) cohorts. Two cohort-level** dependent variables—number of invited coursetakers and drop rate—and two coursetaker-level dependent variables completion and average number of practices implemented per module—were analyzed. Independent variables included 154 institutional, programmatic, and individual characteristics. We find a number of factors significantly associated with stronger rates of faculty engagement including the prominence of institutional leadership, quality course facilitation, strong program starts, professional incentives, and a sense of community. Other factors typically assumed to be important to professional development experiences, such as disciplinespecific offerings and financial incentives, may not be as motivating as conventional wisdom suggests. These findings provide practical and specific guidance to college and university leaders and policymakers on how to best engage faculty and center effective instruction in the student success and equity movement.

Introduction

What Kind of Education Is Worth Students' Commitment of Time and Scarce Resources?

It's the first and "fundamental" question posed by the American Academy of Arts & Sciences in its 2017 report The Future of Undergraduate Education, The Future of America. The Academy notes that much public discourse has focused on affordability and completion: to educate "as many students as possible," overcome the "challenge of quantity," and meet civic need and economic demand for a college-educated populace. But in looking forward, the Academy emphasizes that we increasingly face "a challenge of educational quality," if we are to ensure that "all students receive the education they need to succeed" [emphases added].

Many factors contribute to student success, but on one element the Academy is unequivocal: The "primary determinant" of a quality education is "the teaching and learning relationship between faculty and students." Whether in "classrooms, lecture halls, and laboratories" or online, "the richness and rigor of undergraduate learning depends upon the quality of instruction being offered." Such a firm conclusion is based on decades of research on the positive effects of evidence-based teaching methods. As ACUE's own body of research confirms, students are more engaged, earn higher grades, complete more courses, and persist into more semesters, more equitably with their peers, when faculty teach well.2

¹ Commission on the Future of Undergraduate Education. (2017). *The future of undergraduate education: The future of America*. American Academy of Arts & Sciences. https://www.amacad.org/publication/future-undergraduate-education

² Allen, D., McPherson, M. S., Nilson, L. B., & Sorcinelli, M. D. (2019). ACUE student, faculty, and institutional impact research: Independent review process and findings. https://acue.org/wp-content/uploads/2019/06/ACUE-Research-Review-Findings-2019.pdf; Candio Sekel, J. (n.d.). The essentials of college instruction: ACUE's course in effective teaching practices: A comprehensive bibliography. Association of College and University Educators & American Council on Education. https://acue.org/wp-content/uploads/2018/07/ACUE_Bibliography_v3fnoMarks.pdf; Pippins, T., Tipton, E., Lawner, E.K., & Snow, M. Positive average effect of ACUE-certified faculty on student course outcomes: A meta-analysis [forthcoming]. Association of College and University Educators.

Higher Ed's Perverse Incentives

One might think that America's 4,000-plus institutions of higher education prioritize quality teaching through career-long support to all full- and part-time faculty and in graduate students' doctoral training. But it's rarely the case. Historian Jonathan Zimmerman, in the first booklength examination of college teaching in America, shows decades of policies, practices, and professional norms that undervalue effective instruction.3 Scholar Corbin Campbell, in her forthcoming book summarizing the first broad-scale, crossdisciplinary, multi-institutional observational research of college teaching in the United States, finds only "middling" quality, despite the best intention of faculty.4

The reasons are institutional. As the Academy asserts, "faculty are rarely trained, selected, and assessed as teachers, and their effectiveness as instructors is rarely recognized or rewarded. Tenuretrack faculty are typically hired and promoted for their research, while part-time adjunct faculty receive little, if any, coaching and resources on teaching methods." Campbell adds that great teaching doesn't increase an institution's national reputation or ranking and therefore doesn't assist with student recruitment and enrollment. Nor does teaching typically increase federal funding and private grants or help faculty garner prestige, professional advancement, and job security.

³ ACUE Community. (2020, August 27). Interview: Jonathan Zimmerman on the history of college teaching. *The 'Q' Blog*. https://community.acue.org/blog/interview-jonathan-zimmerman-on-the-history-of-college-teaching/; Zimmerman, J. (2020, October 27). *The amateur hour: A history of college teaching in America*. Johns Hopkins UP. https://www.press.jhu.edu/books/title/12000/amateur-hour

⁴ Campbell, C. M. Great college teaching: Where it happens and how to foster it everywhere [forthcoming]. Harvard Education Press.

Mobilizing Faculty

America's institutions of higher education have every reason to strengthen the quality of collegiate instruction. Writ large, faculty have not yet developed their practice to effectively include a body of proven approaches, and students learn more, more equitably with their peers, when taught in such ways. But colleges and universities cannot place all the responsibility at the feet of faculty as a personal obligation. Instead, a holistic approach is required, in which institutions create and resource the employment, professional, and cultural incentives that make teaching a priority. Campbell highlights promising examples in her call for collegial, individual, and organizational steps that "develop the cultures, policies, and practices that support teaching excellence." Similar recommendations are made by the Education Commission of the States in its paper "Success and Equity Through Quality Instruction" and by the Academy in "Policies and Practices to Support Undergraduate Teaching Improvement."

The Study: What Motivates Faculty?

Since 2016, the Association of College and University Educators has awarded nearly 50,000 credentials in effective college instruction to more than 20,000 faculty across the United States, the District of Columbia, and Canada. These educators have satisfied the requirements of ACUE courses of study which require faculty to learn about, implement, reflect on, and refine their use of evidence-based teaching approaches across a set of foundational teaching competencies. In aggregate, data collected from these programs represent one of the largest national datasets on faculty development, through which we can study questions of faculty motivation and engagement.

⁵ Association of College and University Educators & Sova. (n.d.). Success & equity through quality instruction: Bringing faculty into the student success movement. Strong Start to Finish and Education Comamission of the States. https://acue.org/wp-content/uploads/2021/09/SSTFToolkit_ACUE_Final.pdf; Pallas, A. M., Neumann, A., & Campbell, C. M. (2017). Policies and practices to support undergraduate teaching improvement. American Academy of Arts & Sciences. https://acue.org/wp-content/uploads/2018/08/CFUE_Undergraduate-Teaching.pdf

Methodology & Approach

ACUE consistently collects
data from faculty on three key
measures: the degree to which
faculty find its certification
programs engaging, the number
of practices faculty learn from their
ACUE courses, and the number of
effective teaching practices they
implemented.

In addition, ACUE tracks the number of faculty who are invited to each cohort, the number who drop during the add/drop period, and the number of enrolled faculty who, following the add/drop period, persist in the program to earn a full certificate or microcredential. Observing variance in these rates of enrollment, dropping, implementation, and completion presents an opportunity to better understand faculty engagement and motivation, particularly as most programming occurs in

partnership with the faculty member's college or university. Such partnerships allow us to analyze the institutional and faculty characteristics and program features associated with higher rates of faculty enrollment, implementation, and certification.

For the past 5 years, ACUE has annually analyzed certification data for all cohorts from the prior academic year for the purposes of continuous improvement.

The findings below come from the 2022 analysis of 8,012 faculty enrollments (6,992 unique faculty) in 350 course cohorts across 129 institutional partners and 33 Open Enrollment (i.e., mixed-institution) cohorts. Exact results have varied somewhat from year to year; however, the general themes have largely remained consistent.

In the 2022 analyses, two cohort-level dependent variables—number of invited coursetakers and drop rate—and two coursetaker-level dependent variables—completion and average number of practices implemented per ACUE course module—were analyzed. Independent variables included 154 institutional, programmatic, and individual characteristics. Preliminary exploratory analyses examined the separate effects of all 154 variables on completion and implementation rates.

Since analyses of enrollment and dropping were at the cohort level, individual characteristics were excluded, as well as any programmatic characteristics that are chronologically irrelevant to the outcome. For example, facilitator characteristics were not considered in analyses of enrollment, since coursetakers' most significant interactions with facilitators occur after enrolling.

Analyses of drop rates examined 97 independent variables, and analyses of enrollment examined 63 independent variables.

For each outcome variable, characteristics that had significant bivariate associations⁶ were then combined into multivariate regression models with other related characteristics. For instance, all institutional characteristics were examined together. Independent variables that were still significant with variables in the same "cluster" were then examined all together, dropping any that did not remain significant at that step, resulting in a final model for each dependent variable of the strongest associations that were significant or marginally significant. Since completion is a binary outcome, it was analyzed using logistic regression, while all other outcomes were analyzed using linear regression.

⁶ For cohort-level analyses, an alpha-level of .10 was used instead of .05 due to the smaller sample size leading to lower statistical power.

Findings: Faculty Enrollment

Enrollment Factor #1: Prominent Leadership—Four More Faculty per Cohort

Visible institutional leadership that raises awareness and communicates the importance of the faculty development program is associated with stronger enrollment. Specifically, institutions that have identified more than one person to lead the effort tend to have more success in recruiting faculty, with about four additional faculty enrolled per cohort (β = 0.23, p < .001). When institutions have multiple campus leads, the leaders typically vary in their level of authority. This provides more peer-to-peer support, such as from a teaching center director, as well as prestige through the direct involvement of provosts, vice presidents, or other senior staff responsible for faculty.

Enrollment Factor #2: Choice of Credential—Two More Faculty per Cohort

ACUE offers a catalog of certifications to meet different needs. Offerings focused on online teaching and inclusive teaching tend to enroll more faculty—two additional faculty per cohort (β = 0.13, p = .017). This is a combination of faculty who have already earned other ACUE certifications as well as faculty who are new to ACUE programming. These content areas may also address specific areas in which faculty seek to grow. This was largely the case during the start of the COVID-19 pandemic, when many faculty sought to strengthen their online pedagogy. Results from ACUE's annual member survey show that most credentialed faculty are interested in the inclusive teaching course and most faculty who have earned the full certificate are interested in completing the ACUE Advanced Certificate, which covers both face-to-face and online teaching.

Enrollment Factor #3: Full Certification Versus Microcredentials—Three More Faculty per Cohort

ACUE's full certifications in effective teaching practices (ETP) and effective online teaching practices (EOTP) address all 25 core instructional competencies defined in ACUE's Effective Practice Framework. These certifications typically take two semesters to earn, as compared to ACUE's 6- to 8-week microcredentials which "stack" to full certification.

Although institutions are sometimes concerned about enrolling faculty in a year-long experience, these full-certificate cohorts actually tend to see higher enrollments—three additional faculty members—as compared to microcredential cohorts (β = 0.18, p = .001). It is possible that faculty are attracted to the range of teaching competencies addressed in the full course, such that any faculty member can identify with at least some areas of content. And given the flexible pathway to certification that microcredentials afford, institutions tend to offer many concurrent microcredential course options per term; this may lead to slightly lower enrollment in each cohort but typically results in larger overall institutional faculty enrollment per term.

Enrollment Factor #4: Summer Recruitment—Three More Faculty per Cohort

Recruiting faculty over the summer tends to be more successful, with those cohorts having about three additional enrolled faculty (β = 0.17, p = .003). It may be that when faculty are planning their courses for the coming year, they are more open to opportunities to improve their teaching practice.

Findings: Faculty Persistence

Persistence Factor #1: Campus-Based Community Building—4% Higher

Cohorts composed of faculty from a single institution have persistence rates that are 4% higher than "mixed institution" cohorts of faculty from different colleges and universities (β = 0.12, p = .003). This is likely due to a stronger sense of community within the cohort as well as greater clarity around the importance of the effort to the institution, alongside any institutional incentives relevant to all cohort participants.

Persistence Factor #2: Institutional Incentives—7% Higher

Employment and professional incentives that create a culture which values and rewards effective teaching increases the likelihood of faculty remaining enrolled through to completion. Specifically, public recognitions (β = 0.20, p = .001) and consideration of faculty development credentials in promotion, tenure, and re-hire decisions (β = 0.09, p = .087) each increase the proportion of faculty who remain enrolled by 7%.

Findings: Faculty Completion

Completion Factor #1: Campus-Based Community Building—2.8X Higher

Similar to the findings on keeping faculty enrolled, faculty are 2.8 times as likely to earn a credential when participating in cohorts with faculty from only their institution or university system. Again, this is probably due to a stronger sense of community within such cohorts and perhaps a greater sense that their efforts are valued by the institution and will help the student community (OR = 2.84, p < .001)

Completion Factor #2: Required Participation—2.8X Higher

Faculty are 2.8 times as likely to satisfy ACUE course requirements and earn a credential when participating in a program that is, in some way, mandatory (OR = 2.77, p < .001). This finding contradicts long-standing beliefs about faculty autonomy. On closer examination, we find creative ways in which leadership has made certification a requirement without feeling like a mandate. Some have written the program into offer letters to new faculty. Others have made various professional opportunities, such as teaching online courses, dependent on first holding a credential in online instruction. Additionally, some institutions link the requirement to other initiatives and strategic goals, such that required participation is meaningfully connected to a broader culture that prioritizes teaching and strives to improve student success. Thus, participation is not a standalone mandate imposed on faculty.

Completion Factor #3: Strong Starts—3.4X Higher

In regard to student success, the importance of a "strong start" has become an article of faith. Interestingly, when faculty enroll in an ACUE certification program—and become, again, students themselves—the same phenomenon appears to exist. Like undergraduates, faculty who are actively engaged in course content and complete assignments early in the experience and on time are more likely—up to 3.4 times higher—to complete all program requirements and earn their credential (days between receiving invite and completing enrollment survey, OR = 0.98, p < .001; discussion posts in first two modules, OR = 1.06, p = .001; number of on-time submissions in first two modules, OR = 1.31, P < .001; number of returned reflections in first two modules, OR = 0.59, p < .001).

Completion Factor #4: Quality Facilitation—1.2X Higher

Teaching matters. Similar to the undergraduate experience, the quality of course facilitation influences a faculty member's likelihood of completion. Faculty are 1.2 times as likely to complete when there is one fully-engaged facilitator, as opposed to two or three (OR = 1.21, p = .018). Faculty are 1.1 times as likely to complete when their facilitator is a more active coach and guide⁷, such as in program discussion boards (OR = 1.004, p = .080).

Completion Factor #5: Repeat Participants—2.2X Higher

Another strong predictor of completion is past behavior. Faculty who have previously earned an ACUE credential are 2.2 times as likely to complete (OR = 2.23, p < .001). This is likely because they enter the experience already knowing what is involved, have had a positive experience, and wish to keep learning.

⁷ Estimate of 1.1 times as likely to complete is based on 1 standard deviation above the mean for discussion board activity.

Findings: Faculty Implementation

Faculty development efforts should only be considered successful if faculty learn new approaches and change their practices. Otherwise, there is no reason to expect a positive impact on students. Implementation from a choice of evidence-based practices is the hallmark of ACUE's learning design; an ACUE certified faculty member is expected to implement at least 25 proven approaches—one per competency across ACUE's Effective Practice Framework.

Implementation Factor #1: Years of Experience—2.5 More Practices

Faculty with fewer than 5 years of teaching experience implement about 0.1 additional practices per module, equating to 2.5 more practices when in a full certificate program, compared to colleagues with 20 or more years of experience (β = -0.05, p = .003). This is likely a function of novices still developing their craft.

Implementation Factor #2: Job-Embedded—7.5 More Practices

Faculty who are teaching while enrolled in an ACUE course implement about 0.3 additional practices per module, equating to 7.5 more practices when in a full certificate program (β = 0.07, p < .001). This is to be expected as ACUE's learning design is job-embedded; faculty learn new practices and are expected to implement and reflect in writing on the experience before they move onto new competencies. As such and not surprisingly, administrators with fewer real-time teaching opportunities implement about 0.1 fewer practices per module (β = -0.03, ρ = .038).

Implementation Factor #3: Job Stability—2.5 More Practices

Full-time, non-tenure track faculty implement about 0.1 fewer practices per module, or 2.5 fewer approaches when in a full certificate program, as compared to other coursetakers (β = -.04, p = .009). We suspect that this is due to larger issues affecting these adjunct or contingent faculty.⁸ With fewer job supports and often larger teaching loads, these faculty likely have less bandwidth. Trying something new is also a risk, and contingent faculty may be disincentivized to implement a new approach for fear it will negatively affect their course evaluations and jeopardize renewal of their employment agreement. Incentives that address these challenges, such as considering the credential in contract renewals or stipends that allow faculty to earn the same salary while reducing their teaching load, could increase implementation.

Implementation Factor #4: Teaching Loads—Five More Practices

Faculty who teach fewer than 50 students per year implement about 0.2 additional practices per module, or five total when fully certified, as compared to those who teach more than 250 students per year (β = -0.06, p = .002). This difference is likely indicative of the benefits of small seminars versus large lectures and of smaller teaching loads. Both potentially give faculty more time to apply more of the evidence-based practices they are learning.

Implementation Factor #5: Well-Informed Participants—2.5 More Practices

As found in higher rates of persistence, faculty are more likely to implement new practices when they understand the rationale. Attendance at an information session (β = 0.04, p = .010) at the stage of faculty recruitment and attendance at a course launch (β = 0.04, p = .006) both contribute to greater changes in teaching practice. Each is associated

⁸ American Federation of Teachers. (2020). *An army of temps: AFT 2020 adjunct faculty quality of work/life report*. https://www.aft.org/sites/default/files/media/2020/adjuncts_qualityworklife2020.pdf; Scott, D., Dizon, J. P. M., & Kezar, A. (2019). *State of the faculty*. USC Rossier Pullias Center for Higher Education. https://pullias.usc.edu/download/state-of-the-faculty/

with about 0.1 additional practices implemented per module, or 2.5 when in a full certificate program. Such information sessions and orientations make expectations clear and emphasize benefits of implementation to students.

Implementation Factor #6: Formative Feedback—2.5 More Practices

One of the services that ACUE offers is a validated, bias-free student survey⁹ to gather formative feedback. Items ask students to describe the degree to which they experienced various evidence-based practices, rather than normative judgements of quality. Any faculty member who chooses to administer it and gets at least 15 student responses receives a confidential report summarizing student responses. Receiving this formative feedback likely encouraged faculty to adjust their teaching and implement more practices, as faculty learn about those areas where students have noticed their efforts and where there is likely still room for improvement. As evidence, faculty members in cohorts that were offered the student survey implemented about 0.1 additional practices per module, or 2.5 when in a full certificate program ($\beta = 0.06$, p = .001).

Implementation Factor #7: Quality Facilitation—2.5 More Practices

Faculty supported by facilitators who make greater use of the coaching resources provided by ACUE implement about 0.1 additional practices per module, or 2.5 more when in full certificate programs (β = 0.03, p = .038).

Implementation Factor #8: Engaged Faculty—7.5 More Practices

Finally, faculty engagement is positively associated with change in practice. For example, faculty who consistently use the "note to self" course feature implement about 0.3 additional practices per module, or 7.5 when in a full certificate program, compared to colleagues who do not use that feature at all (β = 0.04, p = .021).

⁹ Association of College and University Educators. ACUE student survey shows no evidence of bias [forthcoming].

Challenges to Conventional Wisdom

In addition to the above findings on the factors that have a strong impact on faculty enrollment, persistence, completion of the ACUE credentialing programs and implementation of evidence-based practices, ACUE's 5 years of analysis also provide insights that challenge the conventional wisdom regarding faculty motivation.

Discipline-Specific Development

A common belief is that faculty development should be discipline specific, and ACUE's 2022 analysis did find some initial bivariate differences by discipline for likelihood of completion. But once the discipline variable was combined in a model with other faculty demographics, such as teaching responsibilities and employment type, it was no longer significant. In other words, differences between disciplines in the likelihood of completing the ACUE faculty development program are likely due to other factors that tend to be somewhat confounded with discipline, suggesting that disciplinespecific approaches may not be as necessary as commonly believed.

Some other differences by discipline were found in ACUE's prior years of analyses, mostly for the number of evidencebased teaching practices faculty members learned. However, most of these findings were inconsistent, being significant in one year but not another. The only consistent finding was that non-STEM faculty learned slightly fewer new practices—about 0.2 fewer practices per module on average, or five fewer practices in a full course. This was found in both years of analyses that examined learning as an outcome.

Stipends

Another common belief is that stipends are necessary to incentivize faculty to participate in faculty development programs. Indeed, ACUE's 2022 analysis did find that stipends were associated with a greater likelihood of completion when examined on their own and alongside other incentives. But surprisingly, once other factors were added to the model, stipends were no longer significantly associated with completion. Furthermore, stipends have not consistently been an important factor in the prior years' analyses. Stipends were associated with somewhat greater likelihood of completion in the 2018 and 2019 analyses, but not in 2020 or 2021.

We note that these findings may have to do with the size of the stipend; it is possible that larger financial incentives, such as permanent increases in pay, would hold their statistical significance. Nor should this finding be interpreted to mean that money doesn't matter, given the economic pressures on the professoriate. Stipends, in combination with incentives tied to professional role and recognition, can be helpful; they are not, however, a viable substitute for motivating and rewarding faculty in cultural and professional ways that elevate the importance of teaching on the campus.

Conclusion

We agree with the American Academy of Arts & Sciences that "it is time for colleges and universities to elevate the importance of good teaching and to treat the practice of teaching as a central skill to be developed and supported." To do so, we must elevate the importance of pedagogical development in the workday lives and professional norms of faculty members, such that they are encouraged and want to invest meaningful time and effort in their growth as teachers.

Our analysis of 154 institutional, programmatic, and individual characteristics on rates of faculty enrollment, persistence, completion, and implementation sheds helpful light on the leadership and culture needed to encourage and recruit faculty into pedagogical development activities as well as what faculty find motivating to complete such programs.

It is worth pausing on this last point. Impactful professional development occurs when faculty learn about and implement new teaching practices and reflect on these efforts in a meaningful way to refine and sustain the practice over time. Comprehensive approaches that cultivate this kind of change, as found in ACUE certification programs, require sustained time and effort—through an experience and context that faculty find motivating.

The motivating influences identified in this study suggest that there is a good deal in an institution's control that keeps faculty engaged and learning through sustained and meaningful professional development experiences. In short, leadership and culture matter. Community among faculty is important. Incentives play a part, but costprohibitive financial incentives may not be as important as is popularly believed. Nor do institutions need to first overhaul the formal incentive regime in order to start or expand work that prioritizes teaching.

¹⁰ American Federation of Teachers. (2020). *An army of temps: AFT 2020 adjunct faculty quality of work/life report.* https://www.aft.org/sites/default/files/media/2020/adjuncts_qualityworklife2020.pdf; Gyurko, J. (2022, March 7). Higher ed's dangerous disconnect. *Medium*. https://medium.com/@jonathangyurko/higher-eds-dangerous-disconnect-30d8521cb4bb

As we reflect on these motivating influences, we see the emergence of two dimensions: factors that influence faculty as employees and those that motivate faculty as learners. Although beyond the scope of this current study, it is likely that employment incentives, created by leadership and culture, are important at an initial stage to engage and recruit faculty in pedagogical development efforts.

This gets things started. But once involved, it is plausible that the intrinsic and extrinsic motivators of faculty as learners become more important. Effective facilitation (i.e., good teaching) with real-time feedback, a sense of community with group accountability, recognition, and overall relevance are all powerful motivators of students. We are not surprised that these factors motivate faculty too when faculty are themselves in the role of student.

Faculty chose their profession because they love to learn. Unlike many college students who get their degrees as a means to an end outside of academia, faculty want to keep learning and sharing their insights with their students, colleagues, and the world. Elevating teaching and the quality of collegiate education will take deeper structural change as to how the professoriate is prepared, recruited, promoted, and rewarded. But we can spur this change along by developing interventions that honor the innate desire and curiosity within our faculty to keep learning.