

Our “Directive”: Quality Teaching and Learning

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Our “Directive”: Quality Teaching and Learning

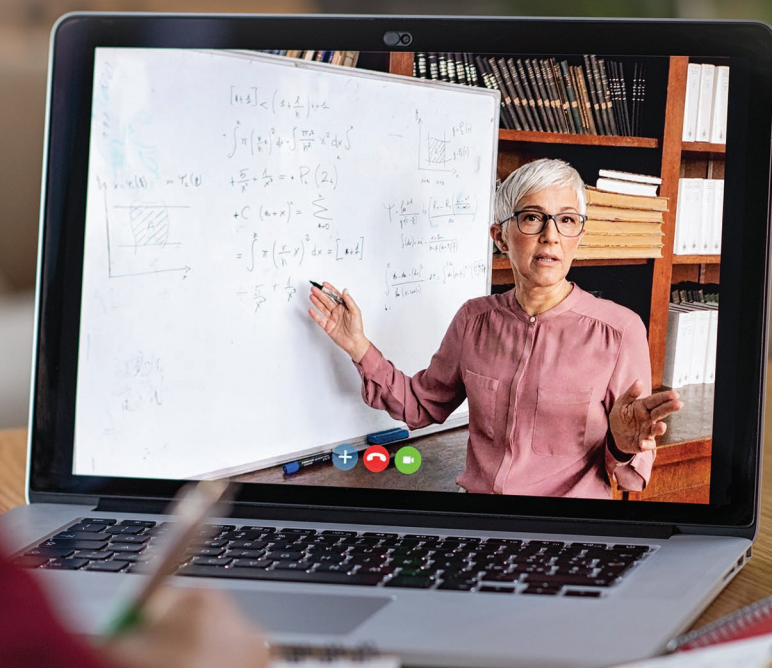
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In Short

- The coronavirus pandemic has made clear: teaching and learning is the core of higher education's mission.
- The sudden shift to remote learning exposed a lack of preparation across the professoriate in proven teaching methods for both online and in-person instruction.
- Research by the Association of College and University Educators and independent evaluators finds that faculty are strengthening their teaching practices through faculty development.
- Studies further confirm that more students succeed, and greater equity is achieved, when professors implement proven approaches.

OUR “DIRECTIVE”: QUALITY TEACHING AND LEARNING

Over the past few months, we have turned to familiar things for comfort. Cooking a treasured family recipe. Watching a favorite movie. Sorting through boxes of old photographs and reconnecting with old friends.

There's a poem we often revisit for some solace and inspiration, Robert Frost's (1947) "Directive." Its journey "out of all this now too much for us" takes us past "a town that is no more a town," deep into the woods, to a time "made simple by the loss of detail" (p. 7). For a time, our empty campuses and college towns have seemed no more. Some moments felt too much.

But when the dorms closed, libraries emptied, and fields quieted, our mission was made clear by this loss of detail. Faculty and students ingeniously found ways to come together—to teach and to learn. Among the many lessons of the coronavirus pandemic, we realize more than ever the fundamental importance of quality instruction.

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Absent the benefits of campus life, the value of higher education depends on our ability to create high-quality learning experiences, as our colleagues have written before in the pages of *Change* (MacCormack et al., 2019). Under normal circumstances, students spend more time with their professors than with anyone else. Given family and work responsibilities, many students do not have time for extra-curriculars. For them, the college experience *is* their professors and their courses. With the sudden shift online, this was made true for all their peers too.

The rapid shuttering of campuses last spring also revealed, perhaps unavoidably, a lack of preparation. Institutions and faculty went above and beyond to finish the semester, but training was stopgap, often focused on the basics of online instruction. These "emergency measures sustained operations, but 'remote learning' shouldn't be confused with quality online instruction and the depth of professional development necessary to teach online with proven approaches that lead to stronger, more equitable student outcomes" (Cates, 2020, para. 4). Few faculty receive comprehensive training during their PhD programs on evidence-based teaching practices for in-person or online instruction. In-service professional development is scattershot, and professional incentives largely emphasize papers published over measures of teaching effectiveness.

As a result, too few students get to experience in person the instructional methods shown to promote engagement, deeper learning, and success in college and beyond. This gap only widened with the move to teaching at a distance. Although many factors affect a student's academic achievement, some of which are

outside of an institution's control, the systemic failure to invest in a faculty member's ability to teach ignores a proven lever that is within higher education's grasp.

Recent events demonstrate the need for better pedagogical preparation, particularly for online instruction. We have seen a sudden burst of professional development nationwide in light of the glaring need. But across higher education more broadly, questions still persist: Isn't teaching more art than science? Will faculty learn about and implement new practices? If they do, will more students succeed? And are such changes even measurable?

In this article, we aim to put any lingering doubts to rest. Over the past 6 years the Association of College and University Educators (ACUE) has pulled together research on collegiate teaching and learning into a framework of evidence-based teaching competencies. We have employed a logic model to study the impact of professional development on professors' teaching and the impact of better teaching on student outcomes. This article reviews these efforts and summarizes our quantitative, longitudinal, and independently validated findings.

THE SCIENCE BEHIND THE ART OF TEACHING

What constitutes good teaching? Over the years, scholars have offered theoretical constructs and high-level descriptions. Arthur Chickering and Zelda Gamson (1987) and Vincent Tinto (1993) pioneered work on student identity and development and effective teaching practices. Lee Shulman's (1986) emphasis on pedagogical content knowledge, Gloria Ladson-Billings' (1995) call for culturally relevant pedagogy, and, more recently, Aaron Pallas and Anna Neumann's (2019) proposal for "convergent teaching" are all examples of progress in this tradition (p. 3).

At a smaller scale, we have a good understanding of specific and proven teaching practices. Decades of scholarship on teaching and learning have identified practices associated with stronger student outcomes. Collectively, these are the teaching approaches that every college educator should know and be able to do in order to design effective courses and class sessions, establish a productive and inclusive learning environment, promote active learning and higher-order thinking, and assess in ways that strengthen achievement.

To catalog and promote these practices, ACUE conducted a comprehensive literature review and worked closely with experts to publish its Effective Practice Framework (https://acue.org/?acue_courses=acues-effective-practice-framework). This framework identifies 25 core teaching competencies, organized into five major areas of practice, that constitute effective instruction regardless of discipline or type of institution. It is supported by more than 300 citations, was refined in collaboration with scholars in teaching and learning, professors, and faculty developers, and was independently validated by experts convened by the American Council on Education (n.d.; Sekel, 2018).

"CONNECTING THE DOTS" FROM PEDAGOGICAL DEVELOPMENT TO STUDENT SUCCESS

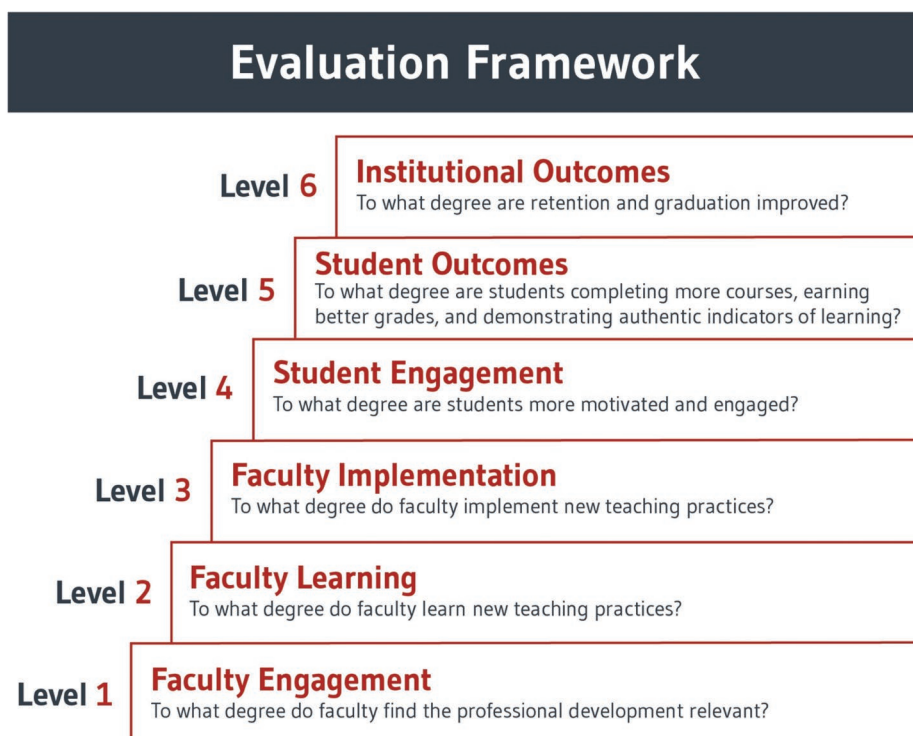
Naming best teaching practices in such a framework is one thing. Will faculty learn them? Use them? And will they improve student outcomes?

To answer these questions, ACUE developed a logic model that guides the evaluation of our faculty development programs (MacCormack et al., 2018). It describes what changes to expect among faculty and students in a sequence of leading and lagging indicators. This approach was informed by the model developed by Donald Kirkpatrick and James Kirkpatrick (2007) to assess industry training and Thomas Guskey's (2000) and Susan Hines' (2011) application to professional development. Figure 1 displays the various elements and sequence in the model.

Level 1 of this six-level model begins with faculty engagement. Specifically, when faculty are exposed to professional development, to what extent do they find the experience relevant? Research suggests that the degree to which professional development meets its overarching goals begins with this initial reaction (Guskey, 2000; Hines, 2011; Kirkpatrick & Kirkpatrick, 2007). Those who are satisfied or find the experience engaging are more likely to learn, and ultimately apply, what is intended.

Level 2 examines faculty learning. Specifically, to what degree are evidence-based practices new to a professor or an approach they learned about more deeply? Such learning is a prerequisite for the next step to Level 3: implementation of recommended practices with preplanning and postreflection for further refinement (Haras, 2018). In our experience,

FIGURE 1. EVALUATION FRAMEWORK FROM “CONNECTING THE DOTS: A PROPOSED ACCOUNTABILITY METHOD FOR EVALUATING THE EFFICACY OF FACULTY DEVELOPMENT AND ITS IMPACT ON STUDENT OUTCOMES.”



this cycle of learning, preparation, implementation, and reflection leads to sustained change of practice. It also results in attitudinal changes in faculty members’ mindset and confidence about their own teaching abilities and educational agency, and students’ ability to learn.

Skeptics may still note that these first three levels all reside on the “input” side of the equation. They are changes in what faculty know and do, and with what confidence; they do not examine student effects. The next three levels in our evaluation approach go further, to track the consequent impact on student outcomes. Specifically, when faculty members teach with evidence-based practices, to what extent are their students more engaged in their studies and develop a more positive academic mindset (Level 4)? These attitudinal changes are, as with faculty, leading indicators of behavioral changes—stronger academic work and outcomes.

Level 5 examines student achievements, including rates of course completion, changes in grades, and, when available, other indicators of learning. Finally, Level 6 anticipates changes in rates of student retention and graduation. These

institutional effects are expected when effective instruction comes to characterize the majority—if not the entirety—of the academic experience.

FINDINGS: FROM BETTER TEACHING TO STUDENT SUCCESS

ACUE has put this logic model to work in collaboration with colleges and universities nationwide. These institutions have partnered with ACUE to support, prepare, and credential faculty through ACUE’s courses in effective teaching practices. These courses recommend hundreds of evidence-based teaching practices applicable to in-person and online instruction across the 25 core teaching competencies defined in ACUE’s Effective Practice Framework. To satisfy course requirements and earn an ACUE credential or microcredential in effective instruction, faculty select and implement recommended practices for each core competency addressed in their course. As a result, we can study changes in teaching practices and the consequent impact on student outcomes.

As of June 2020 and together with independent and institutional researchers, ACUE has conducted



14 studies and examined data from more than 700 ACUE-credentialed faculty and more than 69,000 “impacted students” in course sections taught by faculty who had earned, or were in the process of earning, their ACUE credential. Many of these studies compared the outcomes of students taught by ACUE-credentialed faculty to student achievement data for more than 75,000 non-unique student enrollments from courses taught by more than 5,300 colleagues who had not yet participated in an ACUE program or to student outcomes prior to the faculty member’s participation.

Independent reviewers noted that, collectively, this constitutes an impressive body of research that reinforces the link between faculty development, changes in teaching practices, and the consequent impact on student outcomes (ACUE, 2019c). At each level on our evaluation framework measured to date, we find positive change, from faculty mindset to student achievement and equity.

Faculty Are Engaged; Mindsets Are More Positive (Level 1)

A 2018 study by Hanover Research involved 228 faculty from six public and private community

colleges and universities across Kansas and Missouri teaching over 10,000 students. These faculty were enrolled in ACUE’s course in effective teaching practices through support from KC Scholars and the Kaufman Foundation. Overwhelmingly—98 percent or greater—faculty reported that recommended practices were relevant to their teaching (ACUE, 2018a). Hanover’s finding is consistent with ACUE’s subsequent survey research of course-takers nationwide. Based on nearly 45,000 responses, 98 percent of faculty find course modules relevant to their teaching (Lawner et al., 2020).

Hanover’s 2018 finding held regardless of faculty members’ years of experience, discipline, employment status (e.g., full time, adjunct), and type of institution, with no statistical significance in mean differences. ACUE’s subsequent research similarly found small to no differences across nearly all faculty demographic groups and high agreement across all groups, suggesting that recommended practices are broadly relevant to faculty teaching in a variety of settings. Findings showed a difference in the degree to which tenure-track and nontenure-track faculty found the content relevant, although both groups still agreed in high numbers (Lawner et al., 2020).

Faculty were also more confident teachers. In Hanover's 2019 follow-up study, faculty reported much higher levels of confidence in using evidence-based practices than they felt prior to their ACUE coursework (ACUE, 2019b). These findings were repeated in ACUE's analysis of more than 1,700 faculty who participated in one of ACUE's courses in effective teaching practice during the 2018–2019 academic year, which found a significant increase in overall confidence using evidence-based teaching practices. Following an ACUE course, average confidence was close to 1 point greater, on a 5-point Likert scale, than before (Lawner et al., 2020). This was also true when teaching online, as 49 percent of ACUE faculty course-takers reported teaching at least one online course.

Faculty were also asked a series of questions about their “mindset,” specifically beliefs about their students' ability to learn and their own self-efficacy in helping students learn. On every measure, faculty reported positive, meaningful, and significant changes in their beliefs, such as “all students can be successful in my course” and their ability to “influence how students perceive their intelligence” (Lawner et al., 2020, p. 14).

Faculty Are Learning and Improving Their Practice (Levels 2 and 3)

Among data collected within the learning modules that constitute ACUE courses, faculty report the practices they learned and implemented. To satisfy program requirements, they must also submit a written, rubric-guided reflection on their experience implementing each selected practice. These reflections are independently scored by ACUE, to ensure reliability and validity in awarding ACUE certificates.

Recent data indicate that the average course-completer learns 70 new teaching practices (2.8 per module) and learns more deeply about 83 teaching practices (3.3 per module). Among thousands of faculty members who have earned their ACUE credential, a typical individual implements 30 evidence-based teaching practices (1.2 per module) and plans to implement 65 additional evidence-based teaching practices (2.6 per module; Lawner et al., 2020).

Faculty also report sustained use of newly developed teaching practices. ACUE's 2019 member

survey found that 96 percent of faculty certified in fall 2018 or earlier reported that the changes they made to their teaching have continued (Lawner et al., 2020). A third reported sustained use of evidence-based teaching practices once or more per class session; 80 percent reported using the practices more than once per week. These data are consistent with findings from ACUE's 2018 survey of credentialed faculty (ACUE, 2018c).

These and other findings make the case that ACUE-credentialed faculty learn about—and implement—evidence-based teaching practices recommended in ACUE courses. The sheer volume of practices learned and implemented further demonstrates the need, across the professoriate, for such professional development. Most importantly, the use of recommended teaching practices has a positive and meaningful impact on student and institutional outcomes.

Student Engagement is Greater (Level 4)

Student engagement has long been recognized as a key leading indicator of stronger academic outcomes. For example, High Impact Practices, identified and promoted by George Kuh and colleagues at the National Institute for Learning Outcomes Assessment (<https://www.learningoutcomesassessment.org>), are based on data from the National Survey of Student Engagement (Indiana University Center for Postsecondary Research, 2007).

To examine this relationship between better teaching and student engagement, researchers from the Johns Hopkins University Center for Research and Reform in Education conducted a longitudinal study with Miami Dade College in 2016–2017. Researchers examined 6,100 student course evaluations from 57 faculty. Students gave ACUE-credentialed faculty statistically higher marks when compared to college-wide averages. Focusing on measures of better teaching and engagement, students perceived stronger instruction across 14 of 15 indicators for both new and experienced faculty. Additionally, student course evaluations for the ACUE-credentialed faculty improved over time and were significantly higher than university averages in the semester after faculty completed their ACUE course (ACUE, 2018a; Morrison, Ross, et al., 2017; Morrison, Wilson, et al., 2017).

ACUE also administers a validated student survey to learn about the experience of students in their courses with professors who are implementing practices that promote active learning, inclusivity, and higher-order thinking. The survey asks students to reflect on the instructional practices used by the instructor. This approach is similar to Wieman and Gilbert's (2014) work, part of which asks students to describe the learning conditions created by their professors. In a small longitudinal study with Broward College, 270 students experienced more evidence-based practices in the spring semester compared to fall, suggesting faculty's increased use of such techniques over the time of their enrollment in their ACUE course (ACUE, 2018b).

Student Achievement is Stronger and Sustained (Level 5)

A follow-up longitudinal study with Miami Dade College found a statistically significant improvement in average grades in courses taught by ACUE-credentialed faculty. This study involved 78 faculty teaching more than 12,000 non-unique students and examined student course data for the fall 2017 and spring 2018 semesters. ACUE researchers found an increase in average class grades equivalent to 19 percent of students in each course improving a full letter grade. No similar change was observed among comparison faculty over the same time frame (Lawner & Snow, 2019a).

A longitudinal study at City College of San Francisco (CCSF) produced similar results. Conducted in 2018 by ACUE researchers with support from the Multicultural Infusion Project, the study involved 32 faculty teaching more than 7,600 students. ACUE researchers found a significant increase in the rate of students receiving A grades and a significant decrease in the rate of students receiving Fs in sections taught by ACUE-credentialed faculty during the time period when faculty earned their credential. No similar improvement was seen in comparison sections of nonparticipating faculty (Lawner et al., 2019a).

Similarly, at Delta State University (DSU) in Cleveland, Mississippi, ACUE researchers noted a significantly higher rate of A, B, and C grades and Credit awarded, and lower rates of D and F grades, Withdrawals, and No Credit, in courses taught by ACUE-credentialed faculty compared to courses

taught by matched faculty (Lawner & Snow, 2018). The study examined final grades for more than 4,600 (non-unique) students across 314 course sections. As DSU's provost Charles McAdams (2018) noted, the stronger completion rates "increased the odds of graduating nearly 3% more [DSU] students" (para. 12).

In 2019, a pair of studies found higher academic performance and stronger course evaluations among students taught by ACUE-credentialed faculty at Rutgers University–Newark (RU–N) and the University of Nevada, Reno (UNR; Hecht, 2019; Lawner & Snow, 2019b). The studies measured outcomes from 106 ACUE-credentialed faculty members and 19,338 impacted student enrollments in longitudinal comparisons.

The RU–N evaluation, conducted by the Center for Advanced Study of Education at the CUNY Graduate Center, found that students were significantly more likely to earn A, B, or C grades in courses taught by ACUE-credentialed faculty than in comparison classes. At UNR, students gave stronger marks on course evaluations that improved over time for ACUE-credentialed faculty and earned higher grades than comparison course sections. Kevin Carman, executive vice president and provost, described the findings as evidence of UNR's "ongoing commitment to a culture of student success that is facilitated by excellence in teaching" (ACUE, 2019d, para. 4).

Outcomes Are Promoting Equity (Level 5)

These positive findings were observed at institutions with high rates of traditionally underserved students. At Delta State, 97 percent of students depend on federal, state, and local aid (McAdams, 2018). City College of San Francisco's project was funded by its Office of Student Equity; participating faculty taught at least one course with achievement gaps among students at risk of dropping out, including underrepresented minorities and nontraditional or returning students. RU–N consistently ranks as the most ethnically diverse college in America (Rutgers Today, 2012).

Moreover, two recent studies find direct evidence of closed achievement gaps by race and income as a result of ACUE's programs. A 2020 longitudinal evaluation with Broward College found that an additional 282 students completed their courses

and an additional 435 students passed their courses than would have otherwise when controlling for student demographics and the overall improvements that occurred at Broward. Among Pell-eligible students, the gap in passing rates was eliminated and larger effects were seen on course completion rates. For Black students, the gap in course completion closed and the gap in passing rates was cut in half compared to White students (Lawner & Snow, 2020).

At Texas Woman's University (TWU), ACUE researchers and TWU's Center for Faculty Excellence conducted a longitudinal study involving 18 faculty teaching more than 3,700 students, including nearly 700 Black/African American students. The study found that course completion rates for Black/African American students taught by ACUE-credentialed faculty improved from the year before faculty participated to the year during which they earned their ACUE credential. This improvement in rates of course completion for Black/African American students eliminated a preexisting, albeit modest, completion gap as compared to all other students (Lawner et al., 2019b).

Institutional Outcomes: Retention and Graduation (Level 6)

Under the umbrella of "student success," improved rates of student retention and graduation were a priority well before the coronavirus pandemic. These goals are central to delivering more value to more students and meeting economic demand for a well-educated workforce. Now, student retention is an existential imperative for nearly every institution, given the costs of enrollment declines.

Studies are under way to estimate the effects of quality instruction on these longer-term institutional outcomes. One predictive calculation bears noting. Delta State University's Center for Teaching and Learning used a return on investment (ROI) calculator, developed by Ithaka S + R, to estimate the financial return on their investment in faculty development (Rossman et al., 2019). Based on improved student success rates, DSU found an estimated single-year ROI over five times their investment in effective teaching (ACUE, 2019a).

Moreover, as institutions need to make tough choices due to extraordinary fiscal circumstances, it is hard to overstate the value and year-over-year benefits of investments in faculty. Given typical teaching loads, each faculty member reaches well over 100 students every year. As noted above, 33 instructors at CCSF taught more than 7,600 (non-unique) students over 2 years. At Miami Dade, 78 faculty reached more than 6,100 in a single semester. Few other "student success" interventions, at comparable levels of investment, have this magnitude of potential reach and impact.

THE COMPELLING CASE

Overall, we find that faculty are eager to learn about and implement evidence-based teaching practices. This demand has grown in recent months as they seek to learn how to teach well online. When faculty are better prepared and more confident in their work, their students learn more and achievement gaps close. Students succeed in greater numbers, and institutional outcomes are stronger.

An independent committee charged with reviewing ACUE's research findings through spring 2019 noted that the studies "were conducted in a variety of higher education settings, including public and private baccalaureate and community colleges and universities across all regions of the country ... [providing] a diverse laboratory in which to track faculty and student outcomes." Reviewers, including Michael McPherson, Linda Nilson, Mary Deane Sorcinelli, and Drew Allen concluded that this "impressive body of work" reinforces "the link between faculty development, teaching improvement, and student learning" (ACUE, 2019c, p. 9).

It's time to set aside any lingering skepticism and turn our efforts, with renewed confidence, to the steady work of improving instruction. In faculty we find a ready partner, welcoming of the support. The benefits to students are clear. The extraordinary circumstances in which we find ourselves have made clear what matters most in our work and our students' education.

Let's ensure that every faculty member has the preparation they seek to teach well, so that every student receives the education they deserve. The Directive is clear. ☐

REFERENCES

- American Council on Education. (n.d.). *Contributors to ACE's Teaching and Learning Scholarship* [Blog post]. <https://www.acenet.edu/Research-Insights/Pages/Student-Support/Contributors-to-ACEs-Teaching-and-Learning-Scholarship.aspx>
- Association of College and University Educators. (2018a, April). *ACUE course content highly relevant to instructors across KC Scholars institutions* [Research Brief 2]. https://acue.org/wp-content/uploads/2018/07/ACUE_Research_Brief_2_v2-1.pdf
- Association of College and University Educators. (2018b, May). *Broward students report stronger instruction among ACUE-credentialed faculty* [Research Brief 3]. https://acue.org/wp-content/uploads/2018/08/ACUE-Research_Brief_3_v2.pdf
- Association of College and University Educators. (2018c, July). *Faculty sustain their use of evidence-based teaching practices over time* [Research Brief 5]. https://acue.org/wp-content/uploads/2018/08/ACUE_Research_Brief_5_v2.pdf
- Association of College and University Educators. (2018d, November). *More As and fewer Fs across 150 classes, enrolling 4,582 CCSF students, taught by ACUE-credentialed faculty* [Research Brief 6]. https://acue.org/wp-content/uploads/2019/06/ACUE_Research_Brief_6_v2.pdf
- Association of College and University Educators. (2019a, March). *Estimated, single-year return over 5x on investment in effective teaching through ACUE* [Research Brief 9]. https://acue.org/wp-content/uploads/2019/03/ACUE_Research_Brief_9.pdf
- Association of College and University Educators. (2019b, March). *Gaps in faculty confidence and behavior reduced or eliminated after taking the ACUE course in effective teaching* [Research Brief 10]. https://acue.org/wp-content/uploads/2019/03/ACUE_Research_Brief_10.pdf
- Association of College and University Educators. (2019c, April). *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>
- Association of College and University Educators. (2019d, September 19). *Two new studies find higher academic performance and stronger course evaluations among students taught by ACUE-credentialed faculty* [Press release]. <https://acue.org/wp-content/uploads/2019/09/ACUE-Efficacy-Press-Release-UNR-RUN-09.19.19-1.pdf>
- Cates, S. (2020, April 27). *The remote-learning response to COVID-19 is remarkable. It also highlights a problem* [Blog post]. Big Think. <https://bigthink.com/Charles-Koch-Foundation/teacher-education>
- Chickering, A. W., & Gamson, Z. F. (1987). Seven principles for good practice in undergraduate education. *American Association of Higher Education Bulletin*, 39(7), 3–7. <https://aahea.org/articles/sevenprinciples1987.htm>
- Frost, R. (1947). Directive. In *Steeple bush*. (pp. 7–9). Holt.
- Guskey, T. R. (2000). *Evaluating professional development*. Corwin Press.
- Haras, C. (2018). *Improving teaching through reflection*. California State University, Los Angeles, and Association of College and University Educators. <https://acue.org/wp-content/uploads/2018/11/ImprovingTeachingThroughReflection-Cat-Haras-1.pdf>
- Hecht, D. (2019). *A study of ACUE professional development at Rutgers University–Newark*. [Technical report]. Association of College and University Educators. https://acue.org/wp-content/uploads/2019/09/091218_ACUE_CASE_technical-report.pdf
- Hines, S. R. (2011). *How to evaluate the impact of faculty development programs* [White paper]. Magna.
- Indiana University Center for Postsecondary Research. (2007). *National survey of student engagement* [Annual report]. https://nsse.indiana.edu/NSSE_2007_Annual_Report/docs/withhold/NSSE_2007_Annual_Report.pdf

REFERENCES (CONT'D)

- Kirkpatrick, D. L., & Kirkpatrick, J. D. (2007). *Implementing the four levels: A practical guide for effective evaluation of training programs*. Berrett-Koehler.
- Ladson-Billings, G. (1995). Toward a culturally relevant pedagogy. *American Educational Research Journal*, 32(3), 465–491. <https://doi.org/10.3102/00028312032003465>
- Lawner, E., & Snow, M. (2018). *Teaching makes the difference: Higher student success rates at Delta State University*. Association of College and University Educators. https://acue.org/wp-content/uploads/2018/09/ACUE_StudentImpactReport_DeltaState_122018_v7.pdf
- Lawner, E., & Snow, M. (2019a). *Improved learning at democracy's college: Findings from Miami Dade College [Part B]*. Association of College and University Educators. https://acue.org/wp-content/uploads/2020/09/ACUE_MDC-Tech-Report_22Feb19.pdf
- Lawner, E., & Snow, M. (2019b). *Stronger instruction sustained: Higher student evaluations and grades at the University of Nevada, Reno*. Association of College and University Educators.
- Lawner, E., & Snow, M. (2020). *Advancing academic equity at Broward College: Improved course completion and passing, Particularly among Pell-eligible and Black students*. Association of College and University Educators. https://acue.org/wp-content/uploads/2020/09/ACUE_Broward-Tech-Report_15May20.pdf
- Lawner, E., Snow, M., & Burt, T. (2019a). *Grades up: Quality teaching at the heart of student success in San Francisco*. Association of College and University Educators. https://acue.org/wp-content/uploads/2020/09/ACUE_CCSF-Grades-Up-Report_09Jan19.pdf
- Lawner, E., Snow, M., MacCormack, P., & Waltje, J. (2019b). *Better in Texas! Impact of ACUE-credentialed faculty on student course completion*. Association of College and University Educators. https://acue.org/wp-content/uploads/2019/03/ACUE_StudentImpactReport_TWU_050719_v2.pdf
- Lawner, E., Snow, M., & Veysey, S. (2020). *Faculty engagement, learning, and implementation: 2018–2019 nationwide findings*. Association of College and University Educators. https://acue.org/wp-content/uploads/2020/09/Faculty-outcomes-paper-draft-9.28.20_Final.pdf
- MacCormack, P., Reilly, K. P., & Brailow, D. G. (2019). Creating value. *Change: The Magazine of Higher Learning*, 51(4), 40–47. <https://doi.org/10.1080/00091383.2019.1618144>
- MacCormack, P., Snow, M., Gyurko, J., & Sekel, J. C. (2018). *Connecting the dots: A proposed accountability method for evaluating the efficacy of faculty development and its impact on student outcomes*. Association of College and University Educators. https://acue.org/wp-content/uploads/2018/07/WP3_Connecting-the-Dots.pdf
- McAdams, C. (2018, September 13). *Here's a novel way to keep students in college: Good teaching*. The Hechinger Report. <https://hechingerreport.org/opinion-heres-a-novel-way-keep-students-in-college-good-teaching/>
- Morrison, J. R., Ross, S. M., Morrison, G. R., & Reid, A. J. (2017, December). *Evaluation study of ACUE's collaboration with Miami Dade College: Cohort Two findings*. Johns Hopkins University. <https://acue.org/wp-content/uploads/2018/07/ACUE-Cohort-Two-Evaluation-Report2.pdf>
- Morrison, J. R., Wilson, C. T., Ross, S. M., Wolf, B., & Latham, G. C. (2017, October). *Study of ACUE's collaboration with Miami Dade College: Cohort One findings*. Johns Hopkins University. <https://acue.org/wp-content/uploads/2018/07/ACUE-Cohort-One-Evaluation-Report2.pdf>
- Pallas, A., & Neumann, A. (2019). *Convergent teaching: Tools to spark deeper learning in college*. Johns Hopkins University Press.
- Rossman, D., Alamuddin, R., Kurzweil, M. (2019, January). *Estimating the return on investment (ROI) for instructional improvement efforts*. American Council on Education. <https://acue.org/wp-content/uploads/2019/03/Estimating-ROI-Instructional-Improvement-Ithaka.pdf>

REFERENCES (CONT'D)

- Rutgers Today, R. (2012). *Rutgers–Newark ranked no. 1 in ethnic diversity by U.S. News and World Report*. Rutgers University. <https://www.rutgers.edu/news/rutgers-newark-ranked-no-1-ethnic-diversity-us-news-and-world-report>
- Sekel, J. C. (2018, July). *The essentials of college instruction: ACUE's course in effective teaching practices*. Association of College and University Educators. https://acue.org/wp-content/uploads/2018/07/ACUE_Bibliography_v3f-noMarks.pdf
- Shulman, L. S. (1986). Those who understand: Knowledge growth in teaching. *Educational Researcher*, 15(2), 4–14. <https://doi.org/10.3102/0013189X015002004>
- Tinto, V. (1993). *Leaving college: Rethinking the causes and cures of student attrition*. (2nd ed.). University of Chicago Press.
- Wieman, C., & Gilbert, S. (2014). The teaching practices inventory: A new tool for characterizing college and university teaching in mathematics and science. *CBE—Life Sciences Education*, 13(3), 552–569. <https://doi.org/10.1187/cbe.14-02-0023>