Equity-Based Teaching in Higher Education:

The Levers That Institutions Can Use for Scaling Improvement

EQUITY BASED
TEACHING COLLECTIVE

Executive Summary

Persistence in higher education is critical for student success and long-term academic achievement. However, an alarmingly high percentage of students are unable to persist in their educational pursuits due to educational environments that do not support their learning, and they receive grades of D, F, or Withdrawal (DFW) from a course. High DFW rates can also signal difficulties with student engagement, course design, or instructional methods, all of which can impede student persistence. The data overwhelmingly show that higher education institutions struggle to retain students from specific backgrounds: Black, Latine, Indigenous, and Low-Income (BLILI) students represent disproportionate percentages of students who are not retained broadly in higher education and, more specifically, within STEM disciplines.

In this new report from the Equity-Based Teaching Collective, we describe what we mean by EBT (Equity-Based Teaching) —an approach that can support the academic success of BLILI students across disciplines—and articulate a framework (an ecosystem approach) of how different stakeholders can interact to support EBT and outcomes for BLILI students. The report identifies policies, programs, and practices for EBT improvement for different actors in the ecosystem, highlighting 15 recommendations across five stakeholders: **Institutional Leaders**, **Centers for Teaching and Learning** (CTLs), **Deans and Department Chairs**, **Faculty**, and **Students**.

Recommendations for Institutional Leaders:

1. Cultivate a Teaching Innovation Culture for Faculty

2. Systemize Institutional Processes to Improve Teaching and Build Capacity

3. Galvanize Efforts for Broad-Scale EBT

Recommendations for Centers for Teaching and Learning:

4. Invest in and Sustain Longitudinal Teaching Training and Development

5. Build Capacity for EBT Through a Multi-Pronged Teaching Development Approach

6. Create a Culture of EBT Development in Community

Recommendations for Deans and Department Chairs:

7. Structure Hiring and Promotion Policies to Support EBT

8. Develop Asset-based Professional Development Culture of EBT

9. Garner Buy-in for EBT Improvements with Internal and External Stakeholders

Recommendations for Faculty:

10. Develop Collective Agency to Put Grass Roots Pressure on Other Institutional Actors

11. Improve Your Own EBT Teaching

12. Invest in and Uplift Your EBT Successes

Recommendations for Students:

13. Serve as a Role Model for Equity

14. Contribute to Curricular Improvement Efforts and Teaching Training

15. Engage as Drivers of EBT-Based Change Through Community and Other Stakeholder Collaboration

Also included are recommendations for communities, the state and federal landscape, disciplines, higher education associations and related businesses, and funders. This report focuses on policies, programs, and practices to improve EBT, yet equitable student outcomes are the ultimate goal.

The Equity-Based Teaching Collective (EBTC) is a group of scholars committed to advancing equitable teaching in higher education. We are composed of principal investigators and team members across three institutions: American University, Florida International University, and the University of Connecticut. We collectively study the social context of teaching and learning, faculty development of inclusive practices, and programming in the cultivation of equity in education; college student and faculty experiences, racial equity, and retention, particularly for Black and underrepresented groups; equity-based teaching and learning in racially and ethnically diverse college classrooms; and the organizational contexts that support equity-based teaching improvement. We draw from our own lived experiences with a range of identities that include the populations that we study. We cultivate this work based on our scholarship as well as our practice as educators and education developers in higher education. The EBTC recognizes that to improve the equitable outcomes of higher education and realize the full potential for our democracy, our systems must improve to honor students' humanity. Higher education has not evolved in a historical context to value and reward equity-based teaching or BLILI students. We come together as a collective to highlight the possibility of transformation on a scalable level to honor these students, their success, and their humanity.

EQUITY BASED
TEACHING COLLECTIVE

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I. Forward

In her book *Teaching to Transgress*, bell hooks refers to the classroom as the "most radical space of possibility within the academy." This hopeful vision imagines a teaching mindset where professors are not simply experts in the disciplinary content they teach but are individuals who can articulate the critical role of the classroom in maintaining peaceful democracies. This means helping students to not only master subject matter but to also understand how to apply it in their lives, to learn about themselves and others, and to learn how to contribute to society in meaningful and productive ways. This possibility reflects the spirit of Langston Hughes' "I Dream a World,'" in that teachers and students construct imaginaries of a society free of darkness and engage in the collective problem-solving that can lead us to that vision. This paradigm of teaching requires a push beyond the over-focus on subject matter expertise that has dominated the last half-century of higher education. This is not to say higher education instructors should minimize the importance of content, but rather acknowledge that simply developing technocrats is not sufficient for fostering a society that will address and critically examine future social issues.

This space of possibility, however, is umbilically tethered to several elements external to college courses. To draw on the biological framing first used by Bronfrenbrenner and others (1979), college courses exist in an ecosystem with students, departments, institutions, and disciplines. The complexities of this ecosystem need to be understood, considered, and reshaped to ensure that both instructors and students can thrive within it. In this report, we discuss our understanding of this ecosystem while keeping in mind our charge from the Bill & Melinda Gates Foundation. As a part of the Gates Foundation's work to implement equitable courseware, with the understanding of the broader policy and organizational context to improve college courses, they tasked our Collective to "(1) describe a framework for understanding the complex roles of different stakeholders in the improvement of college teaching to address systemic barriers that prevent equitable student outcomes" and "(2) articulate in detail how different stakeholders can interact to produce equity-based teaching and outcomes for BLILI students."

In this report, we cover levers for policy and practice actions to improve equity-based teaching (EBT), broadly construed, across multiple levels in the ecosystem as well as to pay particular attention to how different policies and practices would support faculty with varying roles.

As we address those levers across the ecosystem, we also tend to the evolving role of technology. Although we did not study courseware developers or other technology providers directly, we note that they play a critical role in the higher education landscape. The EBT policies and practices described in this report will not be successful unless the technology itself and the providers of this technology are also steeped in equitable practices. Likewise, equitable technology will be insufficient if the organizational policies, programs, and practices do not support EBT in the implementation of the courses. In these aims, we should strike a healthy balance between embracing the ways technology is a value added, and the ways technological incorporation surfaces challenges pertaining to power and control.

In the context of the higher education classroom, it is possible to both maximize the possibilities that technologies provide for scaling and also ensure that we center the roles of instructors and students in making radical possibilities happen. Technologies like courseware are powerful resources that present new physical worlds of opportunities for even more possibilities in college courses. In order for these possibilities to be realized, we must first ask ourselves, (a) What does a college course with limitless possibilities for equitable student success look like? (b) What is needed for that course to thrive and be sustained? Institutions play a critical role in supporting thriving and sustainable courses with equitable student success. This report will address the institutional levers that can be enacted to support EBT at scale, and it will provide important scaffolding to equitable technology solutions.

II. Introduction

Persistence in higher education is critical for student success and long-term academic achievement. However, an alarmingly high percentage of students are unable to persist in their educational pursuits due to educational environments that do not sufficiently support their learning. In turn, many students may receive grades of D, F, or W (indicating a withdrawal) (DFW) from a course. In most narratives, DFW rates only describe content-related unproductive outcomes from a course. High DFW rates, however, can also signal difficulties with student engagement, course design, or instructional methods, all of which can impede student persistence. According to reports such as "Talking About Leaving" and "Talking About Leaving Revisited," a slew of social factors can, in turn, cause this non-persistence, the confluence of which makes social identity unfortunately predictive of academic outcomes.

The data overwhelmingly show that higher education institutions struggle to retain students from specific backgrounds: Black, Latine, Indigenous, and Low-Income (BLILI) students represent disproportionate percentages of students who are not retained broadly in higher education and, more specifically, within STEM disciplines. The National Center for Education Statistics has shown that a high percentage of BLILI students who begin a STEM major at the undergraduate level either leave for a different major or leave the institution entirely. Research shows that their departures from STEM are not primarily driven by poor performance but rather by deep feelings of not belonging or perceptions of poor teaching.

Several studies, however, have shown that a suite of engaging teaching practices, collectively referred to as "active learning," lead to a highly reduced failure rate in STEM courses. Dewsbury and colleagues in 2022 showed that equity-based strategies—including active learning, but also specific culturally responsive approaches—not only reduced the failure rate but positioned those students for success in future STEM courses.

It is noteworthy that these changes were made in class sizes of 150+ students, which is a reality for many of the nation's larger institutions of higher education. Local successes like these are great candidates for proof-of-principle faculty learning communities (FLCs), where (as Quan and others have shown) faculty-led movements with support from administration have been shown to bring about meaningful change. A particularly noteworthy feature of the Dewsbury study was that, in those classrooms, 35% of the content was cut (compared to other sections) to allow for more focused problem-solving activities and opportunities for students to engage in dialogue with each other. The latter is critically important because students learn in those moments to meaningfully engage with differences (ideologies, backgrounds, viewpoints). Collectively, the education research community has unequivocally demonstrated that, if we as a society truly care for all students to be successful in higher education, this success can happen through the use of EBT. Thus, continuing with status quo approaches becomes tantamount to a willful refusal of opportunities for BLILI students to be successful in STEM careers, as well as across other academic disciplines.

In this report, we describe what we mean by EBT—an approach that can support the academic success of BLILI students across disciplines—and articulate a framework (an ecosystem approach) of how different stakeholders can interact to produce EBT and outcomes for BLILI students. We identify policies, programs, and practices for EBT improvement for different actors in the ecosystem. We highlight 15 recommendations across five stakeholders: Institutions, Centers for Teaching and Learning (CTLs), Deans and Department Chairs, Faculty, and Students. We recommend policies, programs, and practices for institutional and departmental hiring, reward structures, fostering culture/norms, professional development, and mission/vision/values. We will also give recommendations for communities, the state and federal landscape, disciplines, higher education associations and related businesses, and funders. We identify actions for the stakeholders, and for some recommendations, we offer *call outs*—cautions to consider—and *call ins*—opportunities to reflect.

This report focuses on policies, programs, and practices to improve EBT, yet equitable student outcomes must be the ultimate goal. To ensure that we identified policies, programs, and practices that focus on equitable student success, we used a robust sampling methodology with a focus on these outcomes (Appendix D).

Yet, we couch our findings within specific recommendations that emerge from the reports from the institutions we examined and the gaps to overcome for EBT to be sustainable and successful. We did not evaluate institutional policies, programs, or practices ourselves in terms of their impact on equitable student outcomes, and few institutions provided data linking their actions with outcomes. For the few that did, we report on those impacts. While we make the most out of the data we obtained, we make a direct call to action for all institutional leaders.

CALL IN

Identify the impact of your EBT-related policies, programs, and practices *on equitable student success outcomes*, and share them in ways that advance the possibility for EBT to scale at a national level.

III. What Is Equity-Based Teaching?

Equity-based teaching is a commitment to designing learning experiences that address the root causes of inequity in education to effect long-term institutional change and to improve outcomes for BLILI students in particular, and all students in general. Equity-minded college classrooms have instructors who understand that students show up bearing the weights and props of their history, and the ratio between the two can impact their ability to attain successful outcomes. Instructors who understand that classrooms have not historically supported the success of BILLI students combat this by incorporating elements into their teaching that allow students to (a) engage in academic learning where they are represented in the curriculum and grasp how they can meaningfully apply their learning to their lives outside the classroom, (b) cultivate a critical consciousness of the world, including race-consciousness, and (c) productively dialogue across differences. Yet, cultivating equity-minded classrooms, especially on a broad scale, cannot be the work of faculty alone. This is a shared responsibility that requires an ecosystem approach. In what follows, we lay out more specifically what we mean by EBT and recommendations for the ecosystem to support such teaching.

Equity-based teaching (EBT) is a commitment to achieve equitable learning experiences and outcomes for all students, and BLILI students in particular. Achieving an equitable learning environment for all students can only come from change within an entire educational ecosystem. An **ecosystem approach** to equity-based teaching begins from the understanding that teaching and learning are shaped by and take place within multiple nested and interrelated contexts. Enacting EBT thus requires changing not only what happens in classrooms but also the structural and institutional contexts in which education is embedded.

An ecosystem approach also recognizes that everyone in the ecosystem is responsible in one way or another for either advancing or preventing EBT. This includes those who teach students directly as well as academic administrators, institutional leaders, policymakers, disciplinary associations, external stakeholders such as funders, and local communities, as well as students in the educational ecosystem. With this expansive understanding of educational stakeholders and participants, combined with attention to the multiple contexts where education takes place, an ecosystem approach to EBT aims both to address the root causes of inequity in education and to effect long-term institutional change.

In what follows, we outline four tenets of this ecosystem approach. These tenets speak, respectively, to **what** education is, **where** it takes place, **whose** knowledge and experiences should be centered, and **how** to reconfigure teaching and learning to achieve this.

WHAT:	EBT first **expands our conceptions and expectations of education and teaching** so that education includes and goes beyond subject-matter teaching and learning, centering equitable policies, practices, experiences, and outcomes.
WHERE:	EBT recognizes that education takes place in nested and interrelated contexts; thus, **educational transformations must go beyond classrooms** to include the structural and institutional contexts in which they are embedded.
WHO:	EBT seeks to **center and benefit all students, especially those who have been historically marginalized**, by representing, recognizing, and advancing students' own forms of knowledge and lived experiences, as well as their diverse identities, communities, and histories.
HOW:	EBT **facilitates relational and reciprocal learning environments** that cultivate caring and authentic relationships, redistribute power in both the classroom and the curriculum, and recognize students, teachers, and communities as education co-constructors.

The ecosystem approach holds all four tenets to be equally important and understands them as necessarily holistic; in other words, they cannot be considered in isolation. We are not suggesting that these are fully discrete questions or categories—indeed, there is much overlap across the tenets. However, we are framing them as mutually reinforcing components of a whole—hence, the ecosystem analogy.

IV. An Ecosystem Approach to Equity-Based Teaching

If EBT is critical for improving course outcomes, particularly in introductory courses, then how could **all students experience EBT in their coursework?** In many higher education institutions, teaching improvement initiatives start with working one-on-one with faculty. However, this assumes that faculty and their courses are the problem that must be improved. Yet, decades of literature and our research on EBT improvement show that **the problem lies in an ecosystem** that does not center the nurture of EBT as its goal; therefore, faculty rarely have the time, motivation, knowledge, skills, support, or resources to enact EBT in their courses. The full higher education ecosystem is highly complex and includes many actors. Communities, the state and federal landscape, disciplines, higher education associations and related businesses, and funders all play significant roles in EBT improvement in higher education (Figure 1).
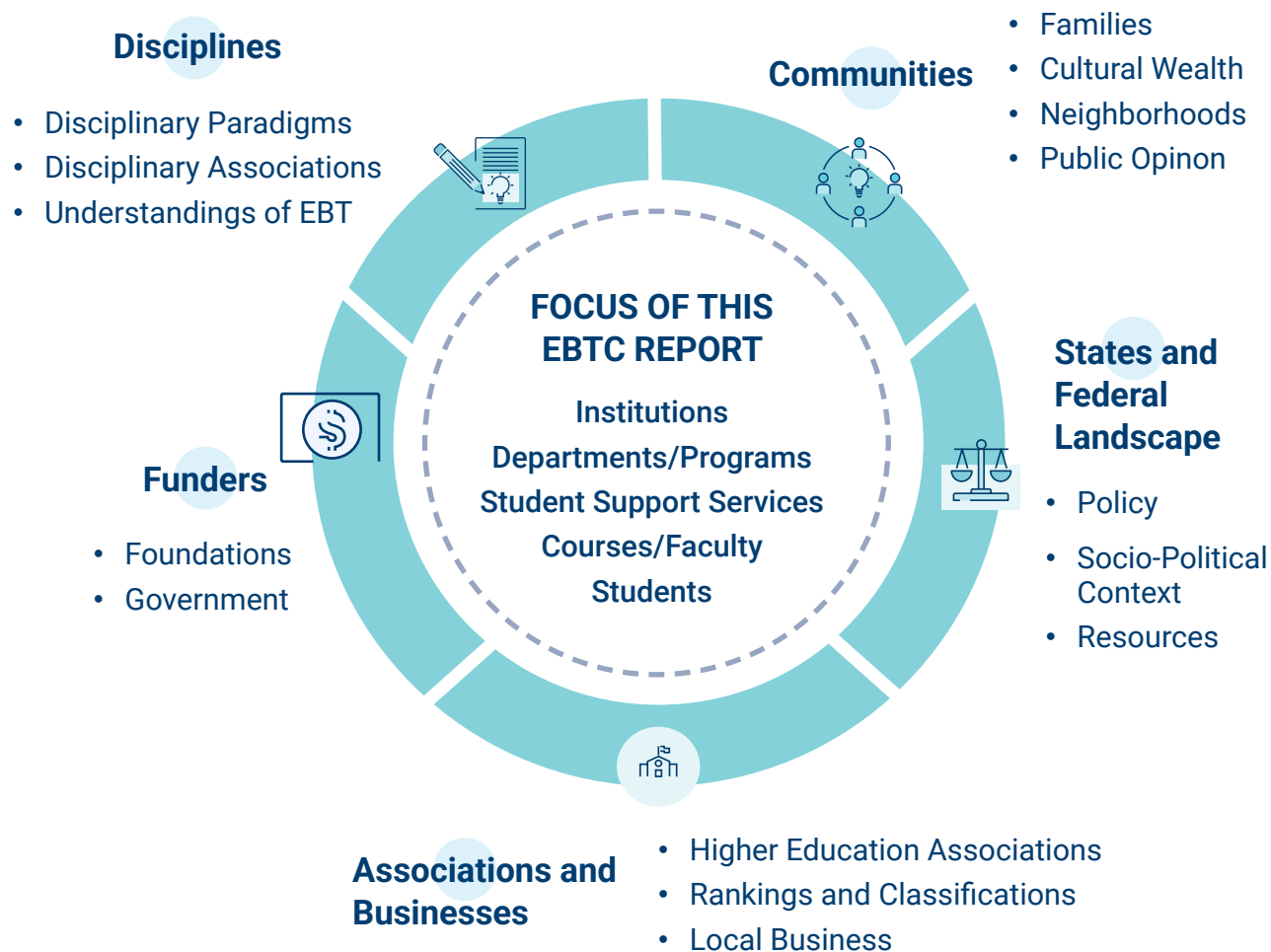
Disciplines

- Disciplinary Paradigms
- Disciplinary Associations
- Understandings of EBT

Communities

- Families
- Cultural Wealth
- Neighborhoods
- Public Opinon

FOCUS OF THIS EBTC REPORT

Institutions
Departments/Programs
Student Support Services
Courses/Faculty
Students

Funders

- Foundations
- Government

States and Federal Landscape

- Policy
- Socio-Political Context
- Resources

Associations and Businesses

- Higher Education Associations
- Rankings and Classifications
- Local Business

Broad Ecosystem of Equity-Based Teaching Improvement in Higher Education

Communities, including neighborhoods, local organizations and resources, and families, that surround universities bring valuable knowledge and understanding of higher education that impact how EBT is enacted. Many Tribal Colleges are strong examples that directly connect to communities and K–12 schools in ways that support EBT in college courses. For example, the missions of many Tribal Colleges are often place-based and centered on community, which leads to active and reciprocal outreach with local school systems to create greater access.

States have sociopolitical contexts, policy, and resources that can either nurture or thwart EBT. For example, policies that remove people doing equity work will make EBT improvement more challenging. More specifically, during one of our focus groups, a senior institutional leader in a state passing legislation that impedes EBT shared,

> *"The dynamics shift when discussing diversity, equity, and inclusion. However, we emphasize that our focus is on our students. There is tension, and we acknowledge it, but we take a strong stance and make it clear that this is what we're doing—enacting equity-based teaching."*

Disciplines and disciplinary associations that reward EBT and provide teaching development opportunities can help foster EBT in introductory courses at scale across institutions. The American Historical Association and the National Association of Biology Teachers have made significant efforts in this domain. In contrast, certain disciplines or disciplinary societies may hold cultures or paradigms that thwart EBT improvement.
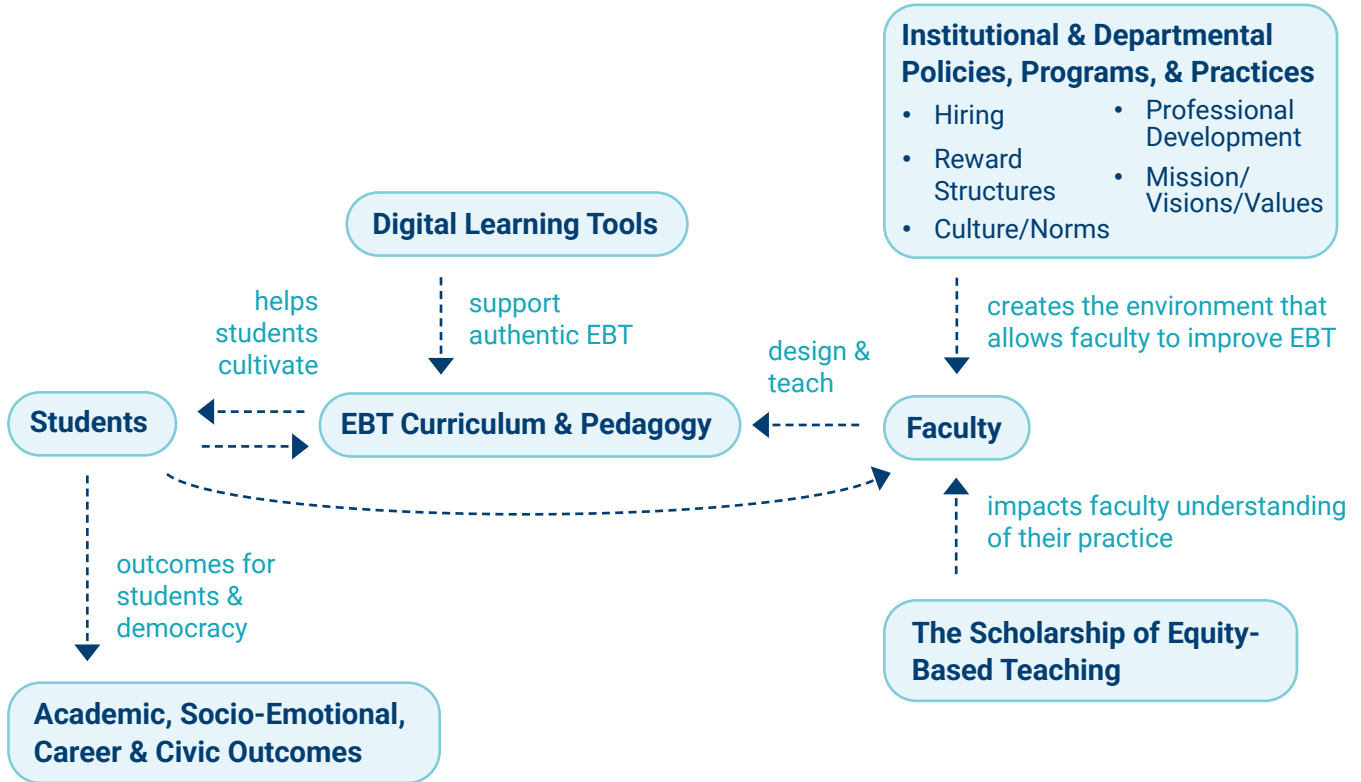
Associations like the Hispanic Association of Colleges and Universities and the American Association of Colleges and Universities play a role in training leaders to better understand equitable practices and help deepen the knowledge of leaders regarding equity support EBT policies in institutions. Organizations, like the Professional Organizational Development (POD) Network, provide support for teaching improvement in higher education.

Businesses are also a part of the ecosystem that is not often discussed; however, they play a significant role in motivating institutional priorities. Yet, some businesses do not focus on equity and/or teaching. For example, publishers that produce material for courses, including courseware, do not always have equity at the center, so prices can have inequitable impacts, whereas certain courseware developers take equity seriously in their design. This is a key decision point for department and institution leaders procuring technology. Also, the US News Rankings of colleges and universities currently do not emphasize EBT (or teaching in general for that matter), so institutions that focus on improving EBT will not necessarily see a consequential increase in their rank. Conversely, other businesses, like the Association for College and University Educators (ACUE), provide teaching development opportunities that support EBT practices. Many colleges, particularly in the community college sector, have workforce development programs with local businesses, some of which are committed to equitable experience and outcomes and some that focus more on workforce needs than on the participants in these programs.

Efforts among individual actors, such as those above, are incomplete because they often operate within their domain of influence but do not cut across to impact the full ecosystem necessary for systematic change. Individual efforts that do not consider the broader ecosystem will not create large-scale and sustained change. Each aspect of the ecosystem and the aforementioned example actors provide a different lever for possible change. Yet alone they are insufficient.

The Ecosystem of EBT

Knowing that institutions act within a broader ecosystem, we now turn to **the institutional levers for EBT improvement in higher education** that result in student success and challenge systemic practices that contribute to DFW rates (Figure 2).

Institutional & Departmental Policies, Programs, & Practices
- Hiring
- Reward Structures
- Culture/Norms
- Professional Development
- Mission/ Visions/Values

Digital Learning Tools

helps students cultivate

support authentic EBT

design & teach

creates the environment that allows faculty to improve EBT

Students

EBT Curriculum & Pedagogy

Faculty

impacts faculty understanding of their practice

outcomes for students & democracy

The Scholarship of Equity-Based Teaching

Academic, Socio-Emotional, Career & Civic Outcomes

Note: "Faculty" refers to all college teachers regardless of faculty category including TAs.

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FIGURE 2

Institutional Model of Equity-Based Teaching Improvement in Higher Education

We start our model with **students**. Students gain academic, socio-emotional, career, and civic outcomes through their higher education courses. We focus on both the individual and societal benefits of higher education. EBT (including both curriculum and pedagogy) influences students and supports these outcomes. Students also support the EBT process and influence the way **faculty** teach based on their own cultures and experiences. **Digital products**, such as courseware, can provide an important scaffold for EBT and student learning. However, faculty must have the time, knowledge, motivation, professional development, and resources to engage in EBT. This requires a robust understanding of EBT as well as **institutional and departmental policies, programs, and practices** to scaffold faculty in engaging in EBT in their courses.

V. Landscape Analysis

We conducted a landscape analysis to document the state of the EBT discussion within the research community, understand the lived experiences of those who implement gateway introductory courses, and identify promising policies, programs, and practices (Figure 3). We analyzed 112 journal articles and organizational reports to determine what prior research has learned about the organizational policies, programs, and practices that support EBT improvement. We also examined the current context of gateway STEM courses by conducting descriptive analyses on the categories of faculty, disciplines, and institutions and the associated DFW rates at 103 institutions. We examined gateway courses from institutions across four geographic regions, ensuring that there was adequate representation from different institutional types including MSI or non-MSI status. We also sought to identify current policies, programs, and practices at institutions and other ecosystem organizations that have been working to improve EBT, including analyzing 133 documents and conducting 10 focus groups and 4 interviews with stakeholders. More on the methodology can be found in the Appendices.
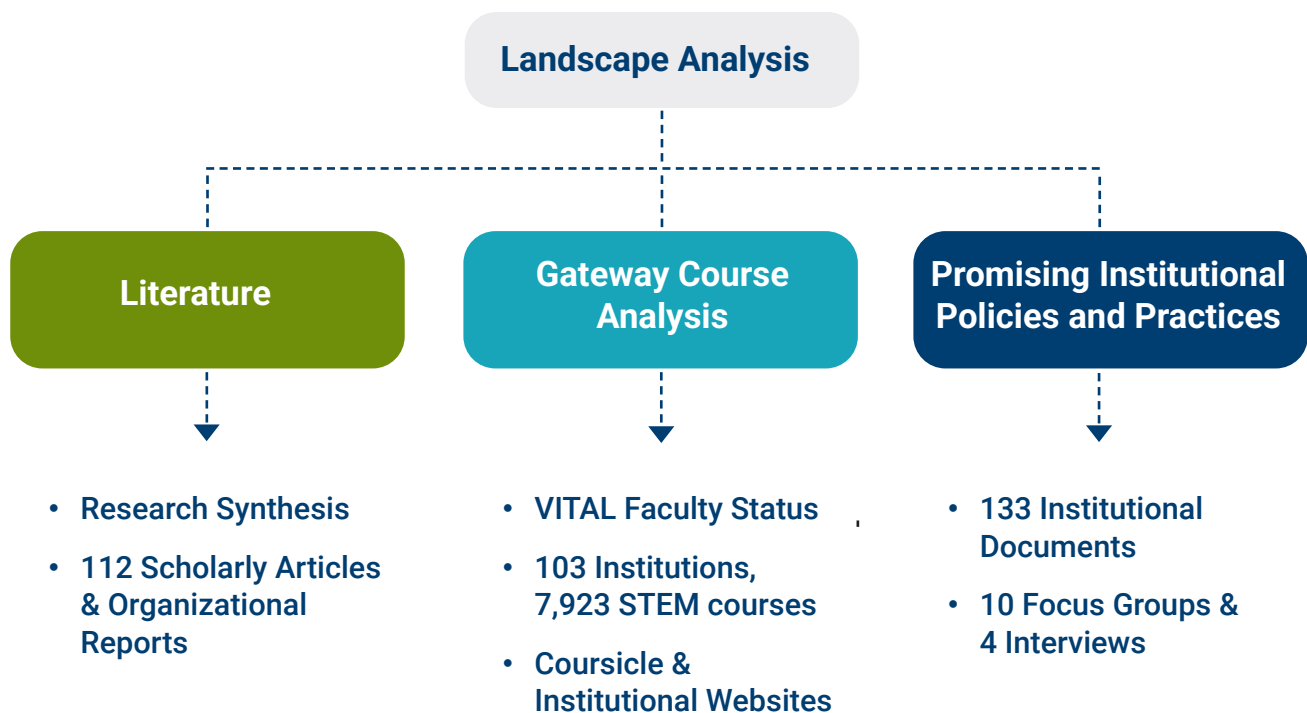

FIGURE 3

Landscape Analysis

VI. Recommendations

As a result of our landscape analysis, we highlight the following 15 recommendations across five stakeholders: **Institutional Leaders**, **Centers for Teaching and Learning**, **Deans and Department Chairs**, **Faculty**, and **Students**. The center of the ecosystem model is students. However, we begin with leaders and other institutional actors to showcase the significant responsibility of each stakeholder in equitable student success. In this section, you will find specific recommendations for each stakeholder. We summarize the recommendations up front for quick reference. Then, in the pages that follow, you will find specifics for implementation, including institutional examples.

Who Teaches Introductory Courses?

Our recommendations are based in part on our analysis of the personnel who teach gateway courses. About 44% of the practitioners who teach gateway courses in our sample are referred to as 'VITAL' (Visiting, Instructor, Teaching Assistant, Adjunct, Lecturer; Culver et al., 2023) and represent a compilation of practitioner descriptions that typically have the least job security of the faculty corps. The amount of job security varies by institution and context, and the articulation of job roles for each of these varied widely among the institutions we examined. This inconsistency is part of the problem in that practitioners whose appointments are chiefly focused on teaching are the ones whose stability within the institution is most unpredictable. Our analysis also showed that VITAL faculty are much more likely to be paid several thousands of dollars less than faculty whose appointments involve research. In a market-based economy, few things communicate the degree to which institutions value a commodity like its incentive structures. Our recommendations work to improve EBT across all faculty, and as such some recommendations will apply to VITAL faculty and others to tenure-track faculty and TAs.

> **CALL OUT**
>
> **Stakeholders who act alone or those who rely on any single recommendation will not produce the desired equitable student-success results. These stakeholders must act comprehensively within their spheres and also work in concert with other stakeholders for broad-scale, sustained change.**

15 Recommendations

Below is a list of our 15 recommendations organized by stakeholder.

Institutional Leaders

1. **Cultivate a Teaching Innovation Culture for Faculty**
2. **Systemize Institutional Processes to Improve Teaching and Build Capacity**
3. **Galvanize Efforts for Broad-Scale EBT**

Centers for Teaching and Learning

4. **Invest in and Sustain Longitudinal Teaching Training and Development**
5. **Build Capacity for EBT Through a Multi-Pronged Teaching Development Approach**
6. **Create a Culture of EBT Development in Community**

Deans and Department Chairs

7. **Structure Hiring and Promotion Policies to Support EBT**
8. **Develop an Asset-Based Professional Development Culture of EBT**
9. **Garner Buy-In for EBT Improvements with Internal and External Stakeholders**

Faculty

10. **Develop Collective Agency to Put Grassroots Pressure on Other Institutional Actors**
11. **Improve Your Own EBT**
12. **Invest In and Uplift Your EBT Successes**

Students

13. **Serve as a Role Model for Equity**
14. **Contribute to Curricular Improvement Efforts and Teaching Training**
15. **Engage as Drivers of EBT-Based Change Through Community and Other Stakeholder Collaboration**

Stakeholder: Institutional Leaders

1. Cultivate a Teaching Innovation Culture for Faculty

For faculty to engage in the improvement of EBT, institutional leaders must cultivate a teaching innovation culture where engaging in continuous improvement of teaching, and EBT specifically, is prioritized, resourced, and rewarded. Leaders play a role in defining institutional culture. They can operationalize change through a complex interplay of social forces, where routines and practices are legitimized, ultimately altering institutional values.

Prioritize.

Make teaching improvement an institutional priority by connecting mission, vision, values, and strategic planning to EBT (e.g., Iturbe-LaGrave et al., 2021). Institutions that center their mission on teaching excellence and implement strategic plans to improve inclusive excellence will experience ripple effects that foster innovation in EBT throughout the institution. There are several examples of institutions that prioritize EBT through their mission, values, strategic priorities, or inclusive excellence plans.

CALL OUT

Creating priorities without sufficient resources and power to enact those priorities can create an undue burden on the communities, individual faculty, and students that these priorities intend to serve.

Norfolk State University lists priorities that elevate EBT in its strategic plan, including Strategic Theme 1: Reimagine the academic enterprise to strengthen student success, teaching excellence, and prominence; and Strategic Theme 3: Strengthen institutional impact by reaffirming commitments to affordable access, diversity, and external partnerships.

The White Earth Tribal and Community College provides a strong example of a mission and purpose that centers on place-based education. Mission: "White Earth Tribal and Community College is an institution of higher learning dedicated to academic excellence grounded in Anishinaabe culture, values, and traditions."

Purposes:

- The College will present learning as a lifelong process of discovery of knowledge embedded in the intellectual disciplines and traditions of the Anishinaabe people.

- The College will support the self-determination of the Anishinaabe people through the preservation and promotion of our history, culture, and language.

- The College will seek to address the social, political, and economic needs of the White Earth Reservation through programs that encourage service to the community.

- The College will promote a philosophy based on the Seven Teachings of the Anishinaabe.

Resource.

Provide resources (e.g., time, funding, course releases) for teaching development and rewards for teaching excellence, such as offering grants and stipends (e.g., Hudson, 2020; Iturbe-LaGrave et al., 2021) or books, meals, and support for professional development (e.g., Taylor et al., 2013). Other creative ways to provide resources include offering seed funds for course innovation (Kezar, 2012) or paying community members a comparable wage to co-teach with faculty (Orellana & Chaitanya, 2020).

The Bingham Fund for Teaching Excellence exists to develop, identify, promote, and reward excellent classroom teaching at Transylvania University. The foundation funds faculty awards and provides financial support to develop teaching initiatives. It has also supported the creation of a digital learning program to provide encouragement and professional assistance to faculty in the use of digital technologies in classroom teaching. The foundation supports ongoing faculty development as well as faculty and student research through the David and Betty Jones Faculty Development Fund. Most recently, the Bingham Fund announced a $25 million, 15-year grant to fund up to 12 Bingham Endowed Chairs for Teaching Excellence and funded the Bingham Center for Teaching Excellence at Transylvania University. The Bingham Fund provides a unique scaffold for teaching excellence at Transylvania University.

Reward.

Work with faculty governance structures to improve tenure, promotion, and reappointment centered on EBT. In many universities, for faculty to be tenured, promoted, or reappointed, they do not need to prove excellence in teaching. However, teaching excellence, including EBT, can be uplifted in these reward processes. In a focus group interview, a director of a teaching and learning center spoke to the value of rewards:

> *"I'll share one more challenge that we have really been working on to improve. I heard this in a webinar last fall. If we're serious about improving…student learning and gateway courses, then the first place we need to start is at the faculty reward system."*

The College of New Jersey's promotion and tenure guidelines provide a promising institutional practice related to rewards. Their guidelines state, "Evidence of high-quality teaching…is essential for reappointment, tenure, and promotion. Excellence in scholarly… activity and/or service cannot compensate for a lack of excellence in teaching." The guidelines also state that faculty should demonstrate a positive influence on students in ways that align with EBT: "Faculty should aspire to be teachers of the first order. A high caliber, effective teacher shows subject mastery…, prepares organized lessons…, demonstrates enthusiasm, models intellectual curiosity…, **creates a caring learning environment, safe for students wishing to express contrary or unpopular views and respectful of diverse perspectives…, attends to student learning outcomes in a multicultural, highly technological, and increasingly global world…, innovates…with pedagogy in ways that foster engaging educational environments.**"

2. Systemize Institutional Processes to Improve Teaching and Build Capacity

Institutional leaders can connect and streamline resources and units to develop robust continuous improvement processes for effective EBT and for hiring faculty who can contribute to institutional EBT excellence.

Analyze data for policy improvement.

Collect, analyze, and monitor data on equity gaps and engage in inquiry in collaboration with Institutional Research to identify the policies that can most influence EBT at the classroom level. Hong (2013) provides an example of Biola University's Faculty Assessment Fellows initiative for faculty to serve as advocates for student equity, which built faculty capacity for data assessment and self-reflexivity. This program met two needs, as Biola found. "[T] he majority of faculty lacked assessment training yet were expected to regularly engage in learning assessment," and the institution was preparing for re-accreditation and needed faculty participation (p. 106). Institutional leaders in accreditation, assessment, and faculty development formed the two-year stipend-supported Fellows program. In the first year, they trained faculty on assessment, and in the second year, the faculty applied their skills to create a program curriculum with equitable opportunities for student learning and assessment. The program increased faculty competence in assessment and fostered a sense of community and collaboration among fellows.

Assess EBT for effectiveness.

Streamline and connect units to systematically assess effectiveness and refocus efforts and resources on EBT. Oregon State provides an example of this effort. The President and Provost's Leadership Council on Equity, Inclusion, and Social Justice is a cross-institutional leadership committee that has a continuous improvement cycle focused on equity, using data to develop goals, invest in initiatives to track progress toward the goals, and then assess whether the goals are met. Senior Leadership, including the university President and Provost, ensure the committee can determine what initiatives to invest in related to diversity and track the progress of the initiatives toward the goals. This committee has one example report focused on best practices in recruiting and retaining diverse faculty, supporting pedagogy for international students, implementing a stop out survey for underrepresented students, and developing more inclusive gender language in IT. This committee and the annual report create accountability and develop formative, data-driven processes for improvement that are focused squarely on equity.

Build institutional capacity.

Develop hiring procedures that authorize positions and recruit candidates with excellent EBT. Hiring can be a powerful tool to gain expertise, bring lived experiences and identities that resonate with students' communities, and galvanize a collegial culture that supports EBT.

> **CALL OUT**
>
> **Some well-intentioned hiring practices may not yield new faculty who support equitable student success. For example,**
>
> - **Recruiting diverse faculty without focusing on their EBT expertise**
>
> - **Hiring faculty who have expertise in teaching without a deep understanding of equity**
>
> **For equitable student success, hiring processes must recruit faculty who understand the lived experiences of BILLI students, are equity-minded, and hold EBT expertise.**

Search authorization, recruitment, review, and hiring are all important aspects of the search process that can support EBT.

American University's hiring guidance describes the rationale for these hiring procedures that link to the systemic ideals of higher education: "AU's commitment to inclusive faculty hiring and career development signals our willingness to challenge prevailing disciplinary conventions that have tended to undervalue or stigmatize areas of expertise in which people from minoritized groups are disproportionately found. Such conventions create arbitrary barriers to entry and advancement that deserve to be challenged not only on fairness

grounds but also on grounds of academic freedom and flourishing. Those who want 'the free search for truth and its free exposition' to advance unimpeded must work to ensure that the principle is applied equally to all faculty members at every stage of hiring and career development. Only then will the disciplines realize their full potential for path-breaking creativity, scholarship, teaching, and public impact."

In terms of the recruitment process, several institutions provide examples of integrating diversity, equity, and inclusion (DEI) into the hiring process, but few focus on EBT skills. In one example, Winston Salem State hiring guidance gives specific requirements for all faculty recruitments that connect explicitly to EBT: "The ideal candidate must provide evidence that demonstrates [their] commitment to teaching students from diverse backgrounds…. The department seeks candidates who illustrate an ability to leverage technology to actively engage students in the learning process."

Pierce College describes the rationale for a cluster hiring approach, or hiring multiple faculty with a commitment to EBT at once: "This cluster hire is an opportunity for the college community to continue to act upon our values but more importantly for the empowering of our students' self-efficacy, for cultivating sense of belonging, and for the diversity of our entire student body, especially Black and Brown students, being reflected in a position of power in the classroom."

3. Galvanize Efforts for Broad-Scale EBT

Institutional leaders can lead and galvanize efforts for broad-scale EBT by working across multiple stakeholders at the institution, communicating their efforts to external constituents, and developing networks with other institutions committed to EBT.

Work across multiple stakeholders at the institution.

Identify key stakeholders at the institution committed to EBT and provide the structure, resources, and rewards to work across efforts to synergize and elevate EBT across the institution. This work includes:

(a) involving students in EBT efforts, such as serving on committees to develop/assess courses/programs, joining panels for faculty training, and developing community partnerships;

(b) developing authentic partnerships with community members and groups to reframe how we view community knowledge, support community-driven issues, and transform the university;

(c) developing more pathways for community members and faculty to exchange knowledge opportunities, such as through a community/engaged scholarship office.

Lone Star College (LSC) is an example of an institution leveraging stakeholders for comprehensive improvement across the multi-campus institution. LSC developed the LSC Quality Enhancement Program (QEP), which includes an ongoing comprehensive process with a DEI task force and a strategic plan. It was developed with broad-based support from communities across the university to improve equity-minded course success rates and persistence (student success) across race/ethnicity and modality. The LSC QEP focuses on equity in the online environment. It was built through a strategic stakeholder analysis with 1,494 participants (including 484 students), a large cross-institutional committee, open forums,

and online surveys. The LSC QEP asks stakeholders, "What is the major issue Lone Star College needs to address to improve student learning and experiences?"

Communicate efforts to external audiences.

Showcase EBT work to external constituents (e.g., Jaeger et al., 2012) to demonstrate the improvements resulting from resources and efforts. This includes the communication of teaching excellence to prospective students.

Fond du Lac Tribal & Community College exemplifies this strategy. The commitment to teaching excellence is prominent on its website, including student feedback about the teaching experience. The website states that "students wrote comments about the outstanding instructors. 'I like the teachers' commitment to students,' said one student. 'The teachers really make the difference.'"

Additionally, Kingsborough Community College has a website for prospective students, including a Q&A with faculty about their teaching.

In another example, the strategic plan at Tallahassee Community College includes communicating the university's efforts to external stakeholders, including K–12 districts, local businesses, and community partners.

Develop networks with other institutions.

Create intentional networking opportunities across institutions committed to this work—for themselves and members of their institutional communities to share best practices and experiences with building capacity for EBT and institutional change related to EBT (e.g., Ellington et al., 2021; Ginsberg & Bernstein, 2011).

California State University, Los Angeles is an institution that has developed a cross-institutional network to improve equity-based online courses through the Online Course Development Program (OCDP) which connects online course design standards with inclusive teaching practices. Collaborators include Cal State LA's Center for Effective Teaching and Learning and the CSU Chancellor's Office. Cal State LA also collaborates with SUNY Online and members from the California Community College to create the nation's first detailed guidance on EBT and online course design (Equity Annotations Project). Faculty can also have their online course reviewed for inclusive excellence through the CSU's Online Course Services by experts within the CSU system or reviewed nationally through the Quality Matters program.

The National Academies of Science, Engineering, and Mathematics (NASEM, 2023) also notes the importance of PWIs collaborating with MSIs in cross-institutional collaborations—to learn how best to support racially minoritized students in STEM.

CALL OUT

Institutions should work to be reciprocal in these collaborations with MSIs rather than a one-way relationship.

Stakeholder: Centers for Teaching and Learning

4. Invest in and Sustain Longitudinal Teaching Training and Development

Centers for Teaching and Learning (CTLs) can enhance a pipeline of teaching training and development. Investing in training at the graduate level and through certificate programs can help sustain and exponentially advance EBT improvement over time.

Provide teaching assistant training.

CTLs can create EBT-focused teaching assistant (TA) trainings to provide early exposure to EBT training and development. Teaching improvement programs often do not emphasize TAs, but they are a critical part of the higher education teaching ecosystem and future faculty preparation.

Brandeis University's Center for Teaching and Learning provides training for TAs focused on inclusive classrooms, including "structuring classroom environments wherein all students have opportunities to verbally participate, can see their personal connections to the course material, have the time to think, can pose ideas and construct their knowledge of the course material, are explicitly welcomed into the intellectual discussion of the course material." In addition, they provide a pedagogy seminar on being a reflective, anti-racist educator for graduate students who are interested in pursuing a teaching certificate.

TAs can profoundly impact student outcomes. Ortiz-Rodríguez et al. (2022) studied the impact of co-classes in General Chemistry for first-generation, low-income students at the University of California Davis during COVID-19. TAs taught these co-classes, and they

provided students with social-emotional support, skill development through workshops and individual meetings, and "exam wrapper" support strategies to increase metacognitive skills. The TAs also received support and training, and they met weekly to share and brainstorm strategies for student engagement. Results showed that students in the co-class received higher grades on average in general chemistry than the comparison group. Students also indicated the co-class increased their sense of belonging and mindset about learning. Ortiz-Rodríguez et al. (2022) suggest programs that include co-classes taught by TAs can potentially reduce equity gaps.

Offer EBT certification.

CTLs can offer professional development opportunities that lead to a certificate in EBT. These programs are especially beneficial if they are open to graduate students and current faculty (both VITAL—Visiting, Instructor, Teaching Assistant, Adjunct, Lecturer—and tenure-track).

At the Kingsborough Community College Center for eLearning (KCeL), faculty who want to teach an online or hybrid course go through a certification process that begins with the support of the departmental chair. Then, faculty engage in a CUNY online course, "Preparation for Teaching Online: A Foundational Workshop for CUNY Faculty." After that, faculty develop and teach an online course, documenting the process in an e-portfolio including a reflective statement and samples of student work among other evidence. Finally, faculty revise their online course based on KCeL feedback in the e-portfolio. For this work, they receive a certification and release time.

5. Build Capacity for EBT Through a Multi-Pronged Teaching Development Approach

CTLs can offer a multi-pronged approach to change by supporting individual faculty members' capacities to engage in EBT conceptions (e.g., beliefs, attitudes, understanding, knowledge) in conjunction with skill or product development. Capacity building includes the training and development of particular skills, as well as support for shifts in roles, responsibilities, and identities.

Facilitate EBT conceptions through faculty self-reflection.

CTLs can develop individual faculty members' EBT conceptions (e.g., beliefs, attitudes, understanding, knowledge) through self-reflection. For example, the Gonzaga University Center for Teaching and Advising uses a DEI checklist that centers on self-reflection about equitable teaching practices, stating, "Every faculty member in every discipline can take intentional steps to recognize their students' diverse life experiences and make our classrooms more inclusive and equitable." Self-reflection is a crucial part of this improvement process: "The DEI checklist provides a starting point for *self-evaluating* our teaching in the areas of diversity, equity, and inclusion." The self-reflection asks faculty questions about course curriculum/content; instruction, assignments, and assessment; teacher/student interactions; and personal and professional development.

Support EBT skill or product development.

CTLs can support EBT capacity by helping faculty develop specific teaching skills and using online tools. For example, CTLs can develop and support professional development opportunities that ask faculty to make various end products (e.g., syllabus, redesign, lesson plan) or enact broader change in their respective communities (e.g., leading local workshops, community scholarship). CTLs can also offer programming that trains faculty on using disaggregated data to equitably assess student learning.

CTLs at many institutions provide strong examples of EBT training, including Brandeis University's Center for Teaching & Learning Equitable and Inclusive Teaching Workshop. The center featured a case study, strategies, and reflection for faculty. The workshop included strategies such as giving students opportunities to think and talk about course material, building an inclusive and fair classroom community for all students, cultivating divergent thinking, helping students develop a growth mindset, and being a role model for students. In addition, they have a year-long DEI Faculty Fellowship with a cohort of 14 faculty who are working on improving DEI in their courses.

In another example, the University of Pittsburgh Center for Teaching and Learning offers workshops on equitable and inclusive teaching throughout the academic year, which focus on antiracist, trauma-informed, multicultural, and gender-inclusive pedagogies. In addition, the CTL hosts the Provost's Diversity Institute for Faculty Development which provides faculty with opportunities to deepen their understanding of equity and inclusion. This institute offers immersive sessions focused on promoting equitable teaching practices. Over the years, thematic areas have included topics such as anti-ableist pedagogies and queering the curriculum, among others.

Additionally, several institutions offer training for integrating new technologies, such as Cal State LA's Center for Effective Teaching and Learning, which gives specific example strategies for integrating DEI into online courses. Kingsborough Community College Center for E-learning offers robust Blackboard tutorials that support integration in HyFlex teaching, managing content, sharing multimedia, and synchronous web meetings, among other teaching-with-technology approaches.

6. Create a Culture of EBT Development in Community

CTLs can support a culture of EBT by fostering communities for different stakeholders. CTLs can become involved in faculty orientation programming, help departments build FLCs, and provide training for middle academic leaders across departments.

Lead faculty orientation with a focus on EBT.

CTLs can foster a culture of EBT from day 1 by becoming involved with faculty orientation. These orientations can demonstrate the importance of EBT to the faculty and student experience, build skills related to EBT, and connect faculty to EBT resources.

The Faculty Orientation at The College of New Jersey integrates several presentations about EBT, connects new faculty to resources and leaders across campus doing this work (e.g., VP Inclusive Excellence), describes EBT links to the inclusive excellence plan, and links the importance of EBT to students' stories. The orientation connects faculty with several important EBT resources, including the Minority Executive Council, Women's professional network, TCNJ parenting network, TCNJ pride, campus diversity council, multicultural Greek life, disability resources, and tutoring. It also centers resources for online teaching development, such as instructional design, a canvas resource site, and an asynchronous, self-paced resource for best practices in digital pedagogy.

Facilitate faculty learning communities (FLCs).

Faculty learning communities are low-risk settings in which faculty can innovate and experiment with teaching, share their teaching experiences, and provide and receive feedback. The communities, also known as communities of practice or professional learning communities, can be departmental or cross-discipline.

There are many examples of FLCs run by CTLs, including Gonzaga University's Center for Teaching and Advising, which facilitated a year-long FLC called the "Equity-Minded Teaching Co-Lab." Its 8–12 participants began with a 2.5-day intensive workshop to build community before receiving initial training and participating in planned interventions implemented over the course of the year. The FLCs met 4 times per semester plus pre-work and readings. At the end of the year, they wrote a reflection, presented it at a campus-wide symposium, and added materials to the digital repository.

Tomkin et al. (2019) found that faculty communities of practice effectively enhance student learning and retention. They used classroom observation methods to compare 25 large STEM lecture courses taught by faculty in a community of practice to 35 STEM courses taught by instructors who were not members of the community of practice. Tomkin et al. (2019) found that the instructors in the community of practice used more student-centric and active learning practices, which correlated with student class attendance and participation.

Provide training for middle academic leaders.

CTLs can provide training for middle academic leaders, such as department chairs, to support the culture of EBT. Department chairs are key EBT bridge-builders between senior administration and the faculty who are close to practice.

The Center for Teaching, Research, and Learning at American University facilitates an ongoing learning community for department chairs to learn about and improve EBT, develop self-reflection skills, and foster cultures of EBT in their departments.

Stakeholder: Deans and Department Chairs

The role of deans and department chairs in different institutions can vary. Thus, we make similar recommendations for both stakeholders below, and depending on the different size and scale of the school/college or department, we recommend that deans and department chairs enact only the recommendations that are within their authority and responsibility.

We note here that deans and department chairs play a critical role in involving faculty in course-related technology decisions. A recent poll by Western Governor's University labs indicated that 87% of the instructors they surveyed reported that they played no role in their institution's edtech decisions. Incorporating technical solutions for equity-mindedness should include the principles of shared governance and active listening so that faculty have agency over the technology that is used. Deans and department chairs can support faculty involvement in technology decisions, which would also create stronger buy-in and roll-out of the technology in courses. We offer several recommendations for the role of Deans and Department chairs in improving EBT.

7. Structure Hiring and Promotion Policies to Support EBT

A key role of middle academic leaders and other leaders is scaffolding faculty hiring and reward structure processes. These processes ensure that a critical mass of EBT experts join the faculty through hiring processes and that these faculty can progress in the academic career ladder through reward structures.

Ensure EBT is centered in the hiring process and structure new contracts to allow for adequate compensation, preparation, and time for EBT.

Review compensation policies to reduce discrepancy between teaching and research faculty. Authorize hiring for disciplinary-based education researchers (DBERs) within schools/ departments. Organizations will improve normative cultures of EBT when EBT experts are able to produce scholarship of teaching and learning (SoTL) in their departments.

For example, Kezar (2012) described how a group of women leaders at a community college came together to collectively advance a "diversity agenda" to hire more women and racially minoritized faculty (p. 739). This grassroots effort took a strategic approach to college-wide change by ensuring that their members were represented on hiring committees, and one member ran for president of the academic senate. They also partnered with the new director of the Office of Diversity and presented data to share with other hiring committee members. After six years they were "successful in dramatically changing the profile of their faculty and in altering the curriculum"; still, some members remain hesitant to trust top-down efforts from leadership (p. 742). This is a valuable lesson for deans and department chairs who can support grassroots efforts and recognize the importance of trust and collaboration.

Develop reliable multifaceted mechanisms that have an iterative and developmental approach for the evaluation of teaching for promotion.

Evaluation of teaching should go beyond student evaluations and include robust approaches with formative feedback. The TEval process, from the University of Massachusetts, Amherst, University of Kansas, University of Colorado, Boulder, and Michigan State University, is a comprehensive and equity-focused teaching evaluation process. The process is as follows: (1) The department faculty discusses and decides which dimensions of teaching they would like to evaluate; 2) they agree on criteria for proficiency; 3) they carry out small pilots and engage the department with findings from the pilot; 4) they implement faculty evaluation on a schedule. They must include seven dimensions that focus on EBT-related ideas, such as classroom culture and reflective and iterative growth. Then, the faculty member provides (and the department reviews) evidence from three different "lenses" on each dimension: evidence from students, a faculty self-reflection, and evidence from a third party (e.g., the CTL, faculty peer from another unit, national expert in teaching in the discipline).

Deans and department chairs can work with CTLs to support more developmental teaching evaluation processes for reward structures. During a focus group interview, a director of a teaching and learner center mentioned:

> "We're in the early implementation stages of creating a multidimensional framework for the assessment of teaching…how can that particularly be…more of use to faculty…? We have a class of instructional tracks. So, faculty are not research-based faculty. We know that oftentimes the system is inequitable towards those groups of faculty, but they teach more…. The whole system, then, is working against promoting improvements to teaching. So, addressing the teaching evaluation and reward system has been a huge lift. But I think we're making really good progress in part…, connecting with peers and learning from [other peer institutions]."

Revamp contingent faculty models to allow for greater job security, opportunities for professional development, and clarity of expectations.

VITAL faculty provide a majority of the course experiences for first-year students, and they must be similarly qualified, prepared, and supported to enact EBT in courses. The American Mathematical Association of Two-Year Colleges recommends for institutional leaders, like deans and department chairs, to provide VITAL faculty with office support, teaching development opportunities, and mentoring—including observation of their teaching—and to recognize outstanding VITAL teaching faculty. They also encourage VITAL faculty to be integrated into mathematics department activities.

In another example, the Dean's Office in the School of Education at American University has established EBT-related hiring criteria for adjunct faculty. The school requires all adjunct faculty candidates across programs to write about their understandings and experiences with equity-based and antiracist pedagogies to ensure that all adjunct faculty carry the responsibility for EBT in the classroom. Program directors and the dean's office will vet this prior to hiring.

8. Develop an Asset-Based Professional Development Culture of EBT

Deans and department chairs can support the faculty's iterative learning about EBT by fostering peer collaboration, scaffolding faculty SoTL, supporting faculty engagement in workshops and FLCs, and ensuring that graduate education includes a focus on EBT.

Develop a peer-based model of professional development that builds a culture of constant dialogue about EBT.

This model for professional development should be properly incentivized and rewarded with time and resources. The Salem State University Faculty Fellows for Diversity and Inclusion Program developed the Justice, Equity, Diversity, and Inclusion (JEDI) Teaching to Transform Initiative: "The purpose of the seminar is to transform curriculum in various courses to include JEDI values and resources. Faculty join the seminar to change their syllabi and

assignments to center anti-racism, -patriarchy, -oppression, imperialism, and decolonization. Faculty who complete the program are 'honored' as JEDI resources in their departments, and departments with significant JEDI faculty are also 'honored.'"

Support faculty attendance at conferences and workshops pertaining to teaching praxis and SoTL.

Deans and department chairs can help incentivize faculty to engage in EBT learning and publishing SoTL. They can offer release time, provide compensation, and create normative standards for faculty to engage in EBT learning through PD/SoTL, which will support iterative improvement in faculty EBT.

Gonzaga University's Center for Teaching and Advising offered a year-long FLC called the "Equity-Minded Teaching Co-Lab." The intensive workshop took place in the summer, and faculty were paid $500. Year-long FLC participants received $1,000 for PD, and deans provided the funds.

Create credible opportunities for graduate students interested in academic careers.

Schools and departments play a critical role in creating a pipeline of faculty during graduate studies in which EBT can be fostered. In 2009, as part of the national movement Preparing Future Faculty (PFF) Program, Temple University's Teaching and Learning Center (TLC) implemented a university-wide program to prepare graduate students to become more effective instructors (Barnett & Gunersel, 2014). Later, the program evolved into a Teaching in Higher Education Certificate Program. The experience of the TLC staff speaks to the importance of a middle-ground approach in program implementation—fostering relationships and trust from the ground up to effectively implement a top-down program. The structure required college and departmental leadership to buy in to the program and commit resources to establish a pedagogical training course in the department. Deans and department chairs can help advance graduate student teaching training and pipelines by partnering with CTLs.

9. Garner Buy-In for EBT Improvements with Internal and External Stakeholders

Although the student success movement has often focused outside of courses on aspects of the student experience such as advising, EBT has a direct connection to student success. Thus, when entities advocate for EBT improvements as part of these larger agendas, they can garner resources and momentum. They can also leverage external organizations (e.g., accreditors, disciplinary bodies) and other internal units (e.g., student affairs, chief diversity officer) to create buy-in within departments.

Align departmental EBT change efforts with institutional commitments to gain leadership buy-in.

Connect pedagogical and curricular change efforts to inclusive excellence and strategic plans. Deans and department heads should align EBT teaching evaluation with student success initiatives and regularly communicate the alignment of EBT change efforts and institutional strategic plans/mission, vision, and values to senior leaders.

An example of this type of effort was well described by The College of New Jersey (TCNJ) during one of our focus groups. The TCNJ Department of one STEM discipline transformed their department to align with institutional priorities around inclusive excellence. In a focus group, the chair mentioned the greatest outcomes of their implementation were

> *"getting the entire department to transform how they think about teaching and how we create equity in all of our courses, not just the gateway courses. It's all through the curriculum from the first year to…our junior level courses. But it's really thinking about all the different entry ways for our students from first year students to transfer students, [who] will transfer in at any point from first year to junior year. It was critical for everybody to be on board with that."* In addition to aligning with the institution, the chair shared, *"A lot of the change happens with a lot of the work that we've been doing at TCNJ. We collect a tremendous amount of data about our most vulnerable students."*

Leverage accreditation standards and professional/disciplinary associations that elevate EBT and focus on equity in student success.

These external bodies can be good motivators for EBT improvement because disciplines are well respected and accreditors must be addressed. Deans and/or department chairs who wish to improve EBT but lack the faculty consensus to do so may capitalize on accreditor or disciplinary agendas to motivate faculty.

Red Lake Nation College exerted agency over its regional accreditation process with the Higher Learning Commission. The faculty identified areas for action including culturally responsive and decolonizing pedagogies. For example, "a component incorporating racial disparities was added to improve cultural relevance and engagement." They developed an assignment during which "students write about creating their own local advocacy group to address a need on the Red Lake Nation Reservation. They identify community needs, reflect on their own interests and strengths, and identify challenges they might face." Red Lake Nation also identified technological improvements for equity in coursework, such as offering Chromebooks for remote attendance and distributing a technology suitcase to students. With these EBT improvements, "Program Learning Outcomes improved [and] all students complet[ed] the projects by the given deadline compared to about a 75% completion rate the previous semester."

The American Mathematical Association of Two-Year Colleges (AMATYC) can partner with mathematics departments to improve EBT. The AMATYC has taken equity-oriented positions with recommendations for institutional leaders and faculty to improve conditions for adjunct faculty teaching math, oppose anti-Asian racism, support distance education, and improve student success in developmental math courses. In these ways, AMATYC can be an important resource for math departments.

Collaborate with non-academic units for department-wide training, support for students, and improved EBT data collection.

Connect with instructional technologies, libraries, global programs, disability centers, CTLs, and leverage institutional research data. At Brandeis University, the writing center supports improvement in tutors' feedback processes when tutoring multilingual writers through a language justice perspective and the AAA theoretical framework (access, asset, agency). The writing center hires a mix of native speaker writing tutors and multilingual writing tutors from diverse backgrounds to increase awareness that writing expertise is not limited to any one group. Departments can connect to writing centers with an asset-based, justice-oriented approach to improve EBT.

Keweenaw Bay Ojibwa Community College offers a free program for aspiring eagles for recent high school graduates and adult students who have not completed college level English or math. The program provides wrap-around support, a free meal stipend per day, a free laptop and supplies, a scholarship to attend KBOCC in the summer, and a gift card after completion of the program. This program runs online via Zoom and is administered by the Michigan Community College Association.

Stakeholder: Faculty

Faculty serve as important catalysts when they act collectively in a grassroots manner to pressure broader ecosystem actors to develop structural support for EBT. Additionally, faculty can shift their own practices and share about how they enact EBT, which creates cultural and normative pressure for other faculty. Individual faculty-student interactions and the communities created in courses are potent grounds for an equitable, inclusive, and compelling place for students to thrive—where we can ask ourselves as individual educators, in what ways can we expand our teaching?

10. Develop Collective Agency to Put Grassroots Pressure on Other Institutional Actors

The shared experience of faculty has a powerful influence on individual faculty motivation and behavior. It is critical for entities to create norms around EBT experiences through discussion and governance processes to help shift broader narratives about what teaching should be at scale. It can also put pressure on other stakeholders to prioritize and resource EBT.

Capitalize on the power of faculty governance.

Faculty can instigate change across the university through governing bodies. Academic decision-making relies on faculty governance. Thus, faculty can make significant improvements in curricula and faculty review processes through EBT consensus-building in academic decisions.

At Kingsborough Community College, the College Council is the main governing body for the university. They have three standing committees for discussing and prioritizing EBT: the Students Committee, the Instructional Committee, and the Curriculum Committee.

Develop collegial norms around EBT.

Faculty who prioritize EBT can galvanize support and develop norms within departments. Faculty hold great respect for their peers' practices and understandings. Whether one faculty member is a model for a department or groups of faculty improve together through continuous discussions, faculty can galvanize widespread change by practicing together.

Gonzaga University faculty in the College of Arts and Sciences galvanized change in faculty by initiating teams that examined curriculum and course design for DEI, resulting in altering learning outcomes and highlighting student experiences. Several institutions have faculty fellows who serve as role models for change in their units or lead FLCs. Another example is The College of New Jersey, which has SoTL Fellows that support other faculty in doing research about inclusive pedagogies.

Collaboratively redesign courses.

Faculty who gain an understanding of EBT can work together to improve courses with a focus on equitable student success. University of Missouri faculty colleagues collectively implemented EBT practices by shifting from lectures to group work and having students fill out course entrance surveys as a proxy to assign groups. During a focus group interview, a participant shared,

> *"We had a very high DFW rate amongst some students from certain backgrounds, minority groups that are commonly recognized, transfer students, and the like, so we really wanted to try to support all of our students. And in doing this, we did see that we had decreased that DFW rate and also increased our retention for our majors and some transition into our majors from groups that otherwise typically had migrated to other programs. And so that's…by the numbers, very, very exciting. But what I really liked the most is just the change in myself—the cognitive awareness of the people in my classroom and the way it has allowed me to focus more on relationships with my students (Teaching Faculty member)."*

Another example of a collaborative effort to redesign courses is from Winstead et al. (2022), in which five General Chemistry faculty collectively made their laboratories more responsive to local community needs at an HBCU. They developed three experiments applying chemistry laboratory skills to diabetes to help students connect chemistry knowledge with health disparities in their community. The instructors met weekly to discuss connections between social justice and chemistry, work through challenges they were experiencing in teaching, and monitor student progress. The impact of the collaboratively redesigned lab was that 62% of students felt more engaged in the activities, and 89% wanted science classes to focus more on real-life scenarios that affect their communities. Students' learning also impacted their community. The final project was a public service announcement on diabetes in the Black community, and 82% of students indicated they would likely share the information with friends.

11. Improve Your Own EBT

Beyond galvanizing collective faculty energy to move institutional agendas, faculty are arbiters of a powerful tool: their own courses. By improving EBT in their own courses, faculty improve student outcomes and model these practices for other faculty to adopt. Faculty can improve their EBT practices by approaching student understandings as assets, doing self-reflective work, and acknowledging and addressing the aspects of the teaching and learning experience for students that are not transparent or known, particularly for BILLI students.

Expand conceptions of knowledge holders.

All students house their own deep knowledge that faculty can honor and elevate. Flip the idea that the teacher is the beholder of knowledge. Students have their own forms of knowledge and lived experiences as well as their diverse identities, communities, and histories that inform what and how they learn. At Whatcom Community College, The Equity Project "encourage[s] our individual and collective hearts by recognizing the experiential knowledge of systematically minoritized communities as legitimate and acknowledging the harms caused by systemic oppression. We aim to create a sense of belonging that starts with a language of ongoing regard that is sincere, authentic, and communicates appreciation for personal experiences."

Understand your own personal history.

Who and how you are matters to students. Examine your own personal biases, privileges, and lenses, and reflect on how you learned to teach and how that shapes your understanding about teaching.

How can you share yourself with your students more expansively? How did you become an educator? In what ways could you learn from others about the science and art of teaching and learning that can help expand your classroom practices? Several teaching and learning centers provide good self-reflection guides, such as Gonzaga University's DEI Checklist.

12. Invest In and Uplift Your EBT Successes

Faculty require support to do EBT work, and they need to advocate for themselves in ecosystems that are less supportive, especially for significant lifts around EBT improvement. Faculty also need to engage in iterative EBT development in their local arenas where opportunities exist. Finally, faculty should assess their EBT work and student outcomes and then communicate these results to other ecosystem actors.

Garner support when you need to invest significantly in professional development related to EBT.

Advocate for receiving release time and compensation for EBT improvement.

At many institutions, the resources exist to improve EBT, but faculty (for many reasons discussed in this document) often are not able to prioritize these opportunities.

Advocate for yourself with your dean or department chair. Connect your EBT improvement to student success and retention agendas. Describe concrete needs and explicit outcomes. Here is some example language that you could tailor to your faculty context: "I would like a course release to re-develop this online course according to the Online Teaching Essentials program with CUNY. Courses that use best practices for equitable online teaching typically lead to a decrease in DFW rates, which would make a big difference for our students and retention in the department."

Work within the system to create opportunities for resources and funding, faculty development, and community collaboration.

Institutions are built to support faculty grants and research efforts, which can also nurture EBT efforts. Faculty can take advantage of research infrastructure by submitting grants to support SoTL initiatives and research on the student outcomes of faculty development programs. An example of this is with NC State University's Community Engaged Scholarship Faculty Development Program, run by three faculty and one administrator (Jaeger et al., 2012). Through their collaborative efforts with the Faculty for the Engaged Campus Initiative, they obtained grant funds to run and study the program's impacts. The program provided stipends for a learning community that was

(1) multi-generational, including faculty, community members, and graduate students who were

(2) framed as co-learners and co-generators of knowledge and

(3) taught to become advocates and opinion leaders in their individual departments.

CALL OUT

Grant efforts can lead to a slippery slope of short-term, one-off initiatives that end when the data is collected and the grant funds run out. These funds can and should be used to garner initial support for EBT efforts, but there also must be a plan for the sustainability of the efforts.

Take advantage of institutional and disciplinary EBT development opportunities.

Once you have received the necessary support for substantial EBT investment, continuously and iteratively seek to improve your EBT with local efforts. In your own immediate networks, attend free trainings, participate in FLCs, connect with other local EBT experts, observe each other's classrooms, or participate in an online EBT development network. These opportunities are often not far from your immediate sphere—within your department/school, in the CTL or other unit at your institution, or with your disciplinary association.

For example, at The College of New Jersey, faculty have several local opportunities to engage in EBT development. The Vice President of Inclusive Excellence and Provost jointly support faculty development through a program called the Academic Diversity Officer. Each officer works to support faculty locally in their departments on various equity-based PD projects. For instance, in one of the Academic Diversity Officer projects, the officer "will work with individual faculty members and departments who are interested in exploring and addressing equity gaps at the course level."

Provide evidence of and celebrate your EBT successes.

For EBT to be valued and rewarded, faculty should provide evidence of EBT improvement. This goes beyond showing the attendance of a workshop was attended by providing evidence that EBT was used (e.g., via observation), that coursework was changed to be more equitable (e.g., examples of student work), and that student outcomes improved and are more equitable. Use academia's data-driven environment to your advantage by collecting qualitative and/or quantitative information about your students to reflect the impacts of your EBT course changes and improvements.

Fisher and Koretsky (2021) described how individual STEM faculty became socially enabled actors (SEAs) at their institutions by scaffolding all three major efforts mentioned above: through individual teaching improvement, collaborations with others to create institutional pressure for change, and supporting their efforts by investing in education research on their EBT improvements. Specifically, they discussed one faculty member who brought technology-based changes throughout his institution over time. First, he attended educational improvement events and invested in his teaching improvement by implementing the use of personal web pages and software into his STEM courses. He then collaborated with other faculty to host workshops, sharing knowledge learned from personal experience with improving courses. He also collaborated with other faculty and as well as faculty at the nearby community college who were passionate about teaching improvement and EBT to implement change on a wider scale in multiple classrooms. As he built his own technology resources to improve his teaching over time, he shared his resources across campus and with the local community, providing open-access resources. He implemented education research initiatives to document the impact of changes made in class. He also mentored and trained students to learn how to conduct education research with him. Over time, this work gained momentum, and other departments on campus used his technology improvements, eventually creating cultural change institutionally.

Stakeholder: Students

Students serve as important catalytic change agents for EBT. Students can drive change to support EBT beyond the experience of being enrolled in an EBT-taught course by: (1) serving as models for equity, (2) being involved in the development and assessment of program redesign and faculty teaching training, and (3) expanding their learning outside of the classroom to impact the larger community. All of these efforts give students a voice as legitimate stakeholders and the power to shape their own learning experiences.

13. Serve as a Role Model for Equity

The peer effect is strong in higher education. Students model their behavior after their peers, become involved with activities based on their proximal peers, and respond to feedback from peers. In this way, students can support equitable practices in college courses, improve the classroom climate, train other students to engage in equitable ways, support students who experience bias, and block and redirect students who are harmful.

Serve as models for equitable classroom behavior.

Students serve as an important peer influence in the classroom and can model equitable behavior. Whatcom Community College offers resources for students to ensure equity online; for example, students can check in with a classmate to ask how they are feeling if they sense that bias or harm has occurred in the classroom.

Receive training on EBT to support peer learning.

Students often serve in valuable roles that influence peer learning, such as Teaching Assistants, peer tutors, peer mentors, and peer-assisted learners. Therefore, they also need training, support, and development in implementing EBT. For example, The College of Engineering at the University of Texas at San Antonio implemented an embedded expert model, which paired educational experts with engineering faculty to redesign and transform engineering courses. There were multiple course interventions, one of which was peer-assisted learning. The embedded educational experts provided training for the peer-assisted learners on project-based learning, culturally relevant pedagogy, and questioning techniques. Student grades and survey responses showed promise for peer-assisted learning intervention (Nelson et al., 2021).

Disrupt bias and harm.

By calling out oppressive or biased behavior directly, and also by creating important peer nudges to redirect and provide asset-based approaches, students can help disrupt bias and harm. To ensure equity online, Whatcom Community College offers resources for students to report instances of suspected bias or hate to instructors or the equity office.

14. Contribute to Curricular Improvement Efforts and Teaching Training

Students can engage with alumni surveys and other opportunities to share feedback. Beyond sharing their voices as data for improvement, students can actively engage with their departments, advocate for needed changes, and ensure that faculty and departmental leaders hear other student voices.

Contribute to data collection about student perceptions, experiences, and outcomes.

Student voice is a valuable input for institutional EBT efforts. Students can provide valuable input in program assessment and development efforts. Their perspectives can be gathered through institutional surveys, focus groups, student panels, and workshop-based discussions with faculty, staff, and students combined. Faculty often find student input impactful in faculty development programs.

Lone Star College (LSC) used student survey data from almost 500 students to develop the aims for the Quality Enhancement Program (QEP). Data were collected in both open forums and online surveys with a focus: "What is the major issue Lone Star College needs to address to improve student learning and experiences?" The college integrated the feedback into an EBT improvement initiative. Programs that are built with students often yield stronger outcomes. For example, outcomes in the LSC QEP showed a positive influence on the students' sense of belonging. Initially 70% of students surveyed didn't feel they belonged in college. At end of the program, 54% surveyed said, "I wasn't sure initially, but now I feel I belong in college."

Become involved in departmental/program redesign efforts and teaching training.

The more that students can be centrally integrated into EBT and curricular improvement efforts, the more likely these efforts are to succeed. For example, Texas A&M's Center for Teaching Excellence Program (Re)Design (PRD) Model is a faculty-led, data-informed process aimed to assist programs in creating a more learner-centered curriculum. During the process, faculty conceptualize, design, and implement curriculum at both the program and course levels, with student engagement being an essential step. Students in the final year of the program and graduate students who have recently graduated from the program serve on the (re)design team. "Student input is important to developing plans for implementation and teaching strategies. Faculty were impressed by students' level of engagement and found their input very valuable" (Fowler et al., 2016, p. 22). The outcome of the PRD model is an increased sense of ownership and empowerment to create real change, with students as a key stakeholder to support faculty change efforts.

Advocate for EBT to senior stakeholders.

Hearing directly from the experiences and perceptions of their own students will be more convincing to senior academic leaders and university boards than hundreds of research studies connecting EBT to student outcomes. Students can be key voices to presidents, provosts, and boards about the importance of investing in EBT. They can also convince prospective students about the value of EBT in their experiences. The websites of Fond du Lac Tribal & Community College and Kingsborough Community College include quotes from students about their experiences with EBT in their courses to help demonstrate the educational quality of the college to external audiences, including prospective families.

15. Engage as Drivers of EBT-Based Change Through Community and Other Stakeholder Collaboration

As students engage with the community surrounding the university, this form of place-based education supports an acknowledgment of cultural and lived knowledge. Likewise, students can connect other units on campus to EBT in their classrooms. Universities are often siloed places, but students can draw upon experiences across units to support EBT in their courses.

Can be drivers of EBT-based change through community collaboration.

Scholarship suggests that student-driven teaching practices and content on building relationships with local communities are valuable because they allow students to interact with people who exist in social spaces that challenge traditional perceptions, instead of just learning about relations of power through text (Swords & Kiely, 2010). Students need the support and background material from instructors to enter into community-based spaces with the right background knowledge, but the physical interactions create lasting effects. Swords and Kiely (2010) propose a vision of a "movement-driven university," one that

"suggests that the institutions dedicated to knowledge construction should be centered on the needs of people most directly affected by the oppressive systems in our society" (p. 163). Community-based learning as an EBT practice places these voices at the center of student learning.

Can draw on EBT advocates in units across campus to support their EBT understandings.

Whether student affairs, multicultural affairs, the chief diversity officer, the Black studies program, or other related units, students can cross functional areas in higher education to achieve a depth of learning about EBT. At Dillard University, students have the unique opportunity to deepen their understanding of historical equity and oppression by actively engaging with the university's research centers. For instance, the Center for Racial Justice offers a platform for exploring systemic racism and contemporary issues of justice, giving students a chance to participate in research, discussions, and community outreach focused on dismantling racial inequities. Through these centers at Dillard University, students can deepen their academic knowledge while also gaining practical insights into the ongoing struggles for justice and equity. They can then bring this knowledge into their coursework experiences.

The Results: Student Success Outcomes

Thus far, we have given examples of ecosystem stakeholders and made recommendations about the policies, programs, and practices that each stakeholder could implement to improve EBT at scale. Most of these efforts documented the effectiveness of changing faculty perspectives or behaviors, but very few documented changes in student outcomes. Here, we share two examples of institutions that worked across ecosystem actors and implemented several strategies from this report. We share the outcomes of the equitable success of students in these spaces.

CALL IN & CALL OUT

Knowing the effect on faculty is not sufficient—EBT improvement efforts must be studied at the level of student success. We call in the leaders and faculty working on EBT improvement efforts to demonstrate their effectiveness on equitable student outcomes.

Based on strategic planning efforts to improve student success, Lone Star College developed the Commitment to Online Resources and Equity program (CORE). The strategic planning efforts involved a comprehensive stakeholder analysis, including 4,516 student responses across five regional campuses. The LSC CORE has a certification program for both part-time and full-time faculty and advisors that focuses on equitable digital learning. The college pairs this with the LSC Equity Institute (one year) for professional development, which focuses on equitable digital learning in gateway courses. The program culminates in a departmental or course-level plan for improvement that it then implements in "TAP" teams (Tutor, Advisor, Professor). Faculty who are willing to serve as leaders in their department ("Equity Exemplars") after the one-year Equity Institute receive a course release.

Prioritize: At Lone Star College, strategic planning documents in both 2015 and 2020 show sustained prioritization, which serves to "foster equitable student success outcomes by promoting excellence in student-centered teaching, learning, and support services."

Resource: For these efforts, LSC allocated $250,000 to hire a director to facilitate efforts as well as course releases. The college had lower faculty participation in the program (about one-third participated), but those who participated completed it at a high rate.

Reward: Receive a certification that participants can include on CVs and dossiers for reappointment and promotion.

Connect: Lone Star College connected dedicated EBT actors across campus to execute the LSC CORE. This program also connected different stakeholders across the five regional institutions.

Create Buy-In: LSC used data from multiple stakeholders, including students, faculty, and staff, to develop and implement this program.

The initial results showed that more than 80% of faculty and advisors who participated were confident in their abilities after the program. Among students surveyed, 13 out of 17 students who initially reported they were not sure about belonging in college reported after the class that they felt they belonged in college. Although the sample was small because it was a pilot study, there was also a decrease in DFW rates in English and Education TAP classes for Black students (53–68% in Education; 45–48% English); overall and also for both Hispanic (58–60% in Education; 49–57% English) and white students (58–62% in Education) in certain TAP classes. This pilot did not show equitable improvement in success in the math TAP classes. Although the improvement in course success rates was not consistent across subjects, and future study is warranted, these early results demonstrate promise, and the improvement in the sense of belonging is critical to student retention.

Institution 2: **California State University, Los Angeles**

At California State University, Los Angeles (Cal State LA), students had strong demand for an increase in high-quality online courses. Cal State LA developed a program to decrease DFW rates in online and hybrid courses by improving EBT. In this process, faculty participates in a robust application and online training process (with certification and badges). Then the faculty engages with a design team for 16 weeks to improve both the content and pedagogy for the course. Finally, faculty submit the course for peer review by colleagues. When the review process deems that the course meets quality standards, the faculty member receives a $3,000 stipend.

Prioritize: The program responded to student feedback and increased demand for high-quality online offerings—simultaneously hearing that faculty were not feeling prepared.

Resource: Cal State LA allocated a $3,000 stipend per faculty member who passed a quality review of their course at the end of the process.

Develop: Faculty participated in a robust application and online training process. Then, they engaged with a design team across 16 weeks to improve both the content and pedagogy for the course.

Assess: Faculty participated in a comprehensive peer review using the framework for quality.

Reward: Faculty received a certification and badges they can include in their CVs and dossiers for reappointment and promotion. Any course that was deemed high quality by faculty peers, was posted on a public-facing website, including the faculty names and course titles.

Results showed about a 23% decrease in the rate of DFW for courses that fully completed this process (pre-post), and these promising results were true both for VITAL and full-time TT faculty. It was also promising that 234 courses and 15% of Cal State LA faculty participated in the program all the way through the review process, demonstrating scalability and sufficient incentives for engagement.

Recommendations for Additional Ecosystem Actors

Additional ecosystem actors beyond the institution provide critical scaffolding and reinforcement of EBT that motivates institutional and faculty behaviors. Although these ecosystem actors are not the focus of this report, we highlight some example roles of these actors based on the landscape analysis in the figure below.

Additional Ecosystem Actors

Disciplines	States	Community	Funders	Associations/Businessess
Define, highlight and value EBT in discipline (AMATYC). Convene experts and iterate the state of the knowledge-base (NASEM).	Connect institutions across the state with PD. Certify online courses (California State System).	Provide cultural context (the Anishinaabe people and White Earth Tribal and Community College). Businesses provide applied learning settings (Tallahassee).	Fund, prioritize, innovate SoTL (NSF, BMGF) and reward excellent teaching (Bingham Trust-Transylvania University).	Develop and convene (HACU, POD, UERU). Train and certify (ACUE). Provide accountability (Accreditation).

FIGURE 4

Additional Ecosystem Actors

CALL IN

We call technology providers into this conversation. Technology providers with equitable practices and products can interact with the complex ecosystem in ways that can potentially scale EBT.

VII. Conclusion

Equity-based teaching (EBT) is the vehicle through which higher education can realize its democratic goals. Our analysis has revealed that many higher education institutions are deeply engaged in components of EBT, but they are doing so in disparate aspects of their system. There is strong evidence of engagement with EBT policies that will give all students opportunities to be successful. However, consistent with the challenges of teaching in complex ecosystems, the development and enactment of policies that activate enough elements of the ecosystem to allow for sustainable EBT are still slightly out of reach. In this document, we synthesized the literature discussion on EBT to clearly identify the areas that still need to be unpacked. As technological innovation continues, research on teaching needs to better reflect the ways it can support EBT practices. Also, institutions of higher learning need to pay close attention to the environment where this technology will be incorporated.

One key point of reformation is the professional structure provided to the faculty expected to enact EBT, cultivate success, and, in some cases, right the ship for BLILI students. If organizations do not make VITAL faculty and other tenure track faculty who enact EBT institutional priorities, it would be difficult, if not unethical, to expect them to be the flag bearers of our EBT initiatives. This structure includes all the features of their professional responsibility, including the expectations made at hiring regarding EBT, the continuous professional development support provided for excellence to be sustained, the financial incentives that position teaching as a critical institutional good, and the ways that hiring expectations and support chart a pathway for the professional growth of employees. There is strong evidence in the research literature that lays out possible paths, and we intend for the key stakeholders within institutions who are best-positioned to act on those levers to use the recommendations in this report, becoming intentional about bringing EBT to bear in the design of their practices.

The reconceptualization of introductory STEM courses also provides an opportunity for higher education to change the narrative that EBT practices and approaches are not an end in themselves. They exist because of a collective belief that a functioning democracy requires opportunities for all its participants to partake and thrive within it. The higher education outcomes of BLILI students, particularly in STEM, are emblematic of a nation still endeavoring to live up to its promise of equality for all. Therefore, as we leverage more sophisticated tools to improve the educational experience, we must do so with approaches that ensure that participation and thriving are universal. In this way, EBT and higher education can be fully seen as significant contributors to the nation's broader aims of civic engagement and participatory democracy.

Finally, our analysis has identified a lack of robust assessment systems that can fully capture the impacts of the policies, programs, and practices of EBT toward improving student outcomes. While the impact of EBT has been evidenced in controlled studies, institutions that implement structural changes supporting EBT either report the mere existence of their policies as evidence of equity-based practices or only document the impacts of those policies on one segment of their operations. In other words, the core of the EBT model situates student success and thriving as the ultimate outcome, and as a central goal of higher education. If EBT is posited as a vehicle for that goal, then assessment approaches need to demonstrate that students are the ultimate beneficiary.

An authentically hopeful takeaway from our work is that several institutions are engaging in high-quality best practices and are positioning themselves to adopt and enact more policies that make EBT pervasive, evident, and impactful on their campuses. This document is a composition of some of the most thoughtful ideas we have gleaned from the landscape, and we hope that institutional readers can learn from the successful examples as well as the structural gaps that we still need to critically address.

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About Our Organizations

The Equity-Based Teaching Collective (EBTC) is a group of scholars committed to advancing equitable teaching in higher education. We are composed of principal investigators and team members across three institutions: American University, Florida International University, and the University of Connecticut. We collectively study the social context of teaching and learning, faculty development of inclusive practices, and programming in the cultivation of equity in education; college student and faculty experiences, racial equity, and retention, particularly for Black and underrepresented groups; equity-based teaching and learning in racially and ethnically diverse college classrooms; and the organizational contexts that support equity-based teaching improvement. We draw from our own lived experiences with a range of identities that include the populations that we study. We cultivate this work based on our scholarship as well as our practice as educators and education developers in higher education. The EBTC recognizes that to improve the equitable outcomes of higher education and realize the full potential for our democracy, our systems must improve to honor students' humanity. Higher education has not evolved in a historical context to value and reward equity-based teaching or BLILI students. We come together as a collective to highlight the possibility of transformation on a scalable level to honor these students, their success, and their humanity.

Every Learner Everywhere is a network of partner organizations with expertise in evaluating, implementing, scaling, and measuring the efficacy of education technologies, curriculum and course design strategies, teaching practices, and support services that personalize instruction for students in blended and online learning environments. Our mission is to help institutions use new technology to innovate teaching and learning, with the ultimate goal of improving learning outcomes for Black, Latino, and Indigenous students, poverty-affected students, and first-generation students. Our collaborative work aims to advance equity in higher education centered on the transformation of postsecondary teaching and learning. We build capacity in colleges and universities to improve student outcomes with digital learning through direct technical assistance, timely resources and toolkits, and ongoing analysis of institutional practices and market trends. For more information about Every Learner Everywhere and its collaborative approach to equitizing higher education through digital learning, visit everylearnereverywhere.org.

Appendix A: References for Equity-Based Teaching

In what follows, we offer a list of key references that guided our conceptualization of equity-based teaching. We have organized these references by the tenets of equity-based teaching, but they are neither exhaustive nor exclusive to particular tenets, as many of these references cut across the tenets. However, we organized the references to offer them as a suggested reading list of resources that are particularly helpful within each tenet. We recognize that we stand on the shoulders of the many scholars and educational practitioners who have been clearing the way for "education as a practice of freedom" (hooks, 1994), and it would be impossible to list them all. We hope this list is a helpful starting point.

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HOW: Equity-based teaching builds relational and reciprocal learning environments that cultivate caring and authentic relationships, redistribute power in both the classroom and the curriculum, and recognize students, teachers, and communities as co-constructing education.

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Appendix B: Organizational Literature Synthesis Methodology

The purpose of the research synthesis was to critically examine the literature on higher education organizations and postsecondary teaching and to learn to identify and describe frameworks, organizational practices, and policies that can be leveraged to improve equity-based teaching within gateway courses. Using an emergent research design process, we conducted an online database search for literature using screening criteria on abstracts and then by full text (Hawker et al., 2002). Additionally, we drew on our advisory board and performed Internet searches for organizational reports that may have been missed in the library databases. We included only results based in a U.S. higher education context specific to undergraduate higher education, with relevance for organizational policies and practices related to teaching and pedagogy, and relevance or applicability to equity-based teaching for BLILI students. We narrowed our results to 112 sources.

Our first round of analysis focused on extracting data from the sources into a matrix that identified characteristics of each included article, including the type of article (e.g., empirical, conceptual), methodology, methods, research design, and frameworks, and on extracting data from the texts in the form of direct quotes and paraphrasing relevant to our four research questions. In our second round of analysis, we developed a codebook that drew on deductive and inductive insights to help us evaluate and offer recommendations about the frameworks, organizational practices, organizational policies, and uses of technology that might have the capacity to improve equity-based teaching on a broad scale. We developed the deductive codes from the literature and our equity-based teaching framework. To develop the inductive codes (Figure 5), we met with our Advisory Board, shared some emerging insights from the data analysis, and requested their feedback. Several members of the research team discussed and synthesized this feedback, and we then revised the codebook to incorporate those practitioner insights. Next, three members of the research team tested the updated codebook using excerpts from the articles in the data extraction matrix. Each team member memoed on their coding process, and the team met together several times to discuss revisions to the codebook, aiming to group codes thematically, agree upon clear definitions for each code, and identify examples of the code from the data. The sub-team of three researchers then coded full-text sources in Dedoose. The team members each memoed on the coding process again, and the team met twice to refine the codes and strengthen the internal validity of the codebook. The team then conducted a thematic analysis of the coding to identify patterns across codes.
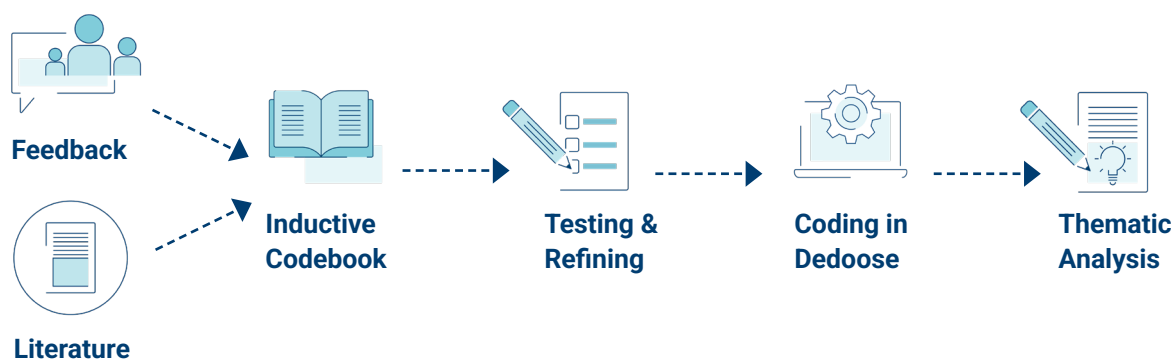

FIGURE 5

Literature Synthesis Inductive Analytic Process

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Appendix C: Gateway Course Analysis Methodology

Using the Carnegie regional classifications, we identified four different geographic regions of the United States and chose organizations within them that represented different institutional types. We were interested in finding out who taught introductory STEM courses, and what their professional appointment was. Institutional types were chosen based on type, and sampling intended to have relatively equal representation in all of the geographic regions. In total, we looked at 103 institutions from four geographic regions. For each institution, we used their website to determine the introductory STEM courses they taught. We then used the website coursicle. com to identify the instructor on record. Sometimes, Coursicle's information was not updated, so we used the institutional website as a backup to ensure that the instructor information was correct. We also used the institution's website to determine the instructor on record's rank and whether they taught one or multiple sections. Many institutions described their practitioners using the commonly used labels of instructor and lecturer, or other monikers from the VITAL demographic. However, it was apparent that different institutions meant different things when they used a term. For example, at one institution, a lecturer could be someone with a 4-year contract with a path to a bigger salary and a higher ranking, and at another institution, the title grants an individual with a maximum of a one-year appointment. For this reason, while we report that VITAL faculty are responsible for about half of the gateway course teaching, how they are supported varies depending on institution type. Therefore, we should be cautious about making wholesale assumptions of how introductory practitioner positions are supported. Agnostic of title, our recommendations focus on the incentives and support needed for the position to engage in authentic EBT, versus how institutions and departments choose to title the job.
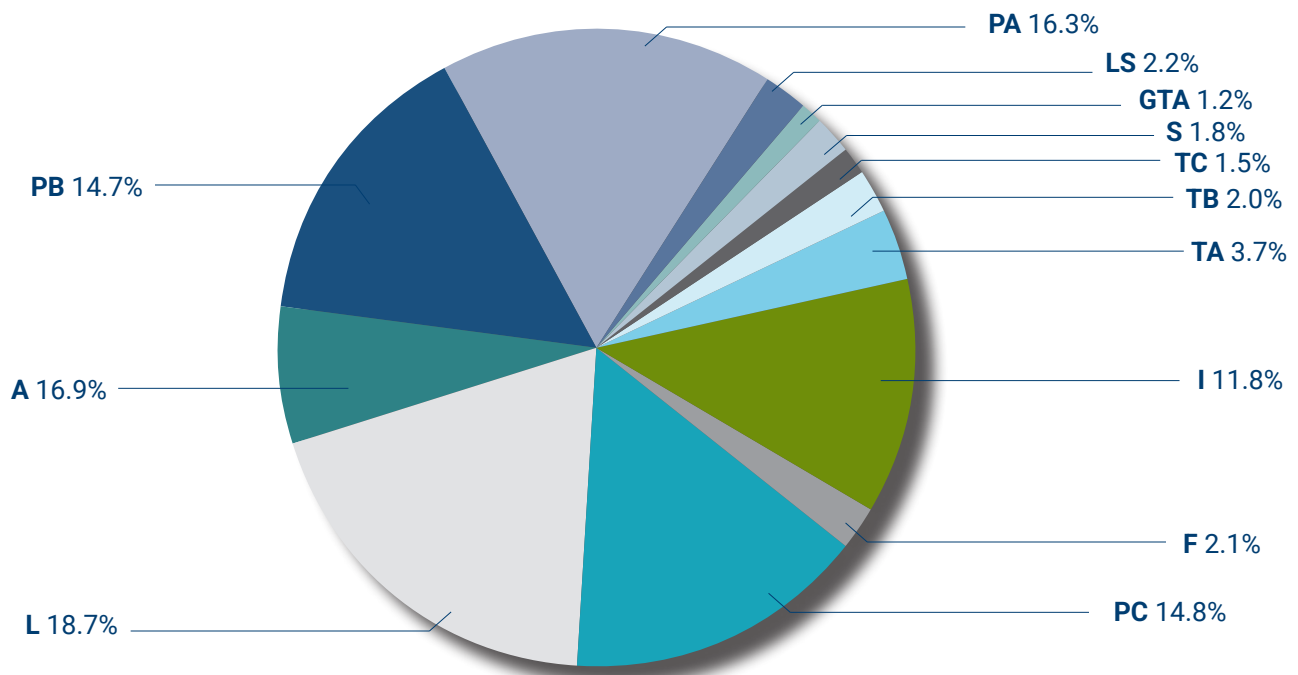

Pie chart with the following labels and values:
- PA 16.3%
- LS 2.2%
- GTA 1.2%
- S 1.8%
- TC 1.5%
- TB 2.0%
- TA 3.7%
- I 11.8%
- F 2.1%
- PC 14.8%
- L 18.7%
- A 16.9%
- PB 14.7%

FIGURE 6

Instructors: STEM Discipline (Math/Computer Science and Natural and Physical Science)

Code	Meaning			
V	Visiting Faculty			
V (A)(B)(C)		Assistant	Assoc	Full
I	Instructor			
T (A)(B)(C)	Teaching Professor	Assistant	Assoc	Full
A	Adjunct	Temporary Faculty- Teaching		
L	Lecturer	Academic Associate		
P (A)(B)(C)	Professor	Assistant	Assoc	Full
PD	Postdoc			
G	GTA	GRA	Doctoral Student	
S	Staff	Courtesy Affiliate		
C (A)(B)(C)	Clinical	Assistant	Assoc	Full
F	Faculty Associate			

Labels of teaching faculty for introductory STEM courses as indicated by the institution. All titles were retrieved from institutional websites. F (Faculty Associate) was used where no discernable title was found.

Appendix D: Organizational Examples Methodology

Beyond literature, existing policies, programs, and practices within the current educational ecosystem could serve as potential models for supporting EBT. To identify example organizations, an advisory board and other national experts were consulted to pinpoint institutions that exemplify effective policies, programs, or practices related to EBT. This process also included selecting institutions from the Gateway Scholars Consortium (GSC) that have demonstrated strong and equitable outcomes in gateway courses, as well as those that have received federal grant funding for EBT initiatives.

Specifically, the initial pool of institutions/organizations was selected through 3 processes:

1. **Review of grant abstracts and relevant reports.** This process yielded 71 institutions. Institutions were included if:

- They held NSF INCLUDES and/or IUSE grants.

- HHMI designated the university engaging in inclusive excellence works.

- The institution was a part of the Partnership for Undergraduate Life Sciences network.

- The institution was identified in the Boyer Report. AND

- The institution received a 4–5 rating based on these five metrics based on a review by the EBTC team: Student Belonging, Instructional Practices, Inclusive learning Environments, Faculty Development, Departmental Changes to Curriculum and/or Culture.

2. **Selection based on data from the College and University Teaching Environments Survey.** This process yielded four institutions for the sample. These institutions scored highest on measures related to equity-based teaching development processes and organizational support for EBT.

3. **Purposive sampling**. This process yielded 78 institutions. Institutions were included by:

- Surveying the advisory board members based on their expansive knowledge of the field about which institutions had a strong focus on EBT

- Consulting experts on HBCUs, Tribal Colleges, and Community Colleges to inform the sample

In all, we originally invited 153 institutions and other related organizations to participate. Of these, 37 institutions consented to the study, resulting in a robust sample across various geographic regions and institution types, including Predominantly White Institutions (PWIs) and Hispanic-Serving Institutions (HSIs). However, the sample was less comprehensive for Historically Black Colleges and Universities (HBCUs), Tribal Colleges, and Community Colleges. To improve this representation, we also combed the public websites of 21 additional institutions to inform the sample. **The final sample included 58 organizations (50 institutions).**

For data collection, two methods were employed: (1) focus groups, involving administrators, faculty, and students (Appendix E); (2) document analysis of 133 documents (Appendix F).
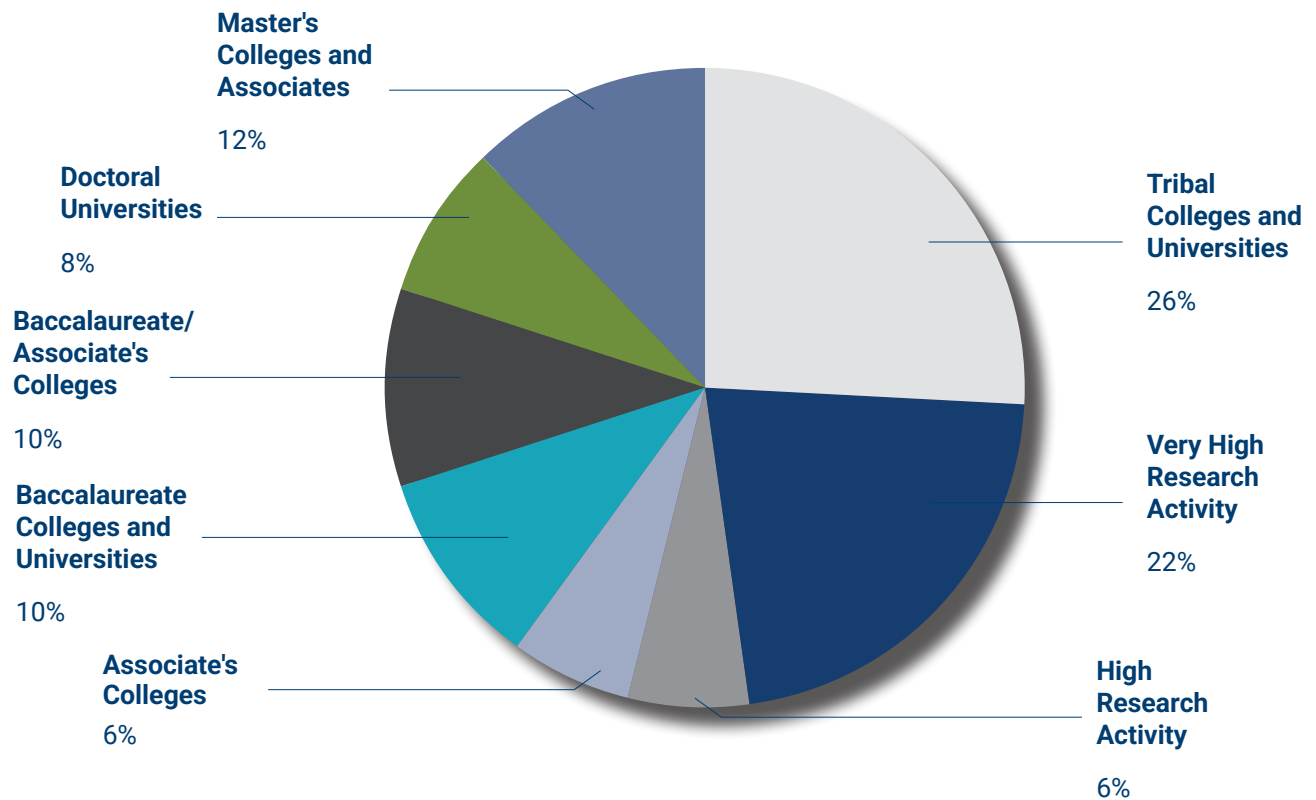

Master's Colleges and Associates 12%

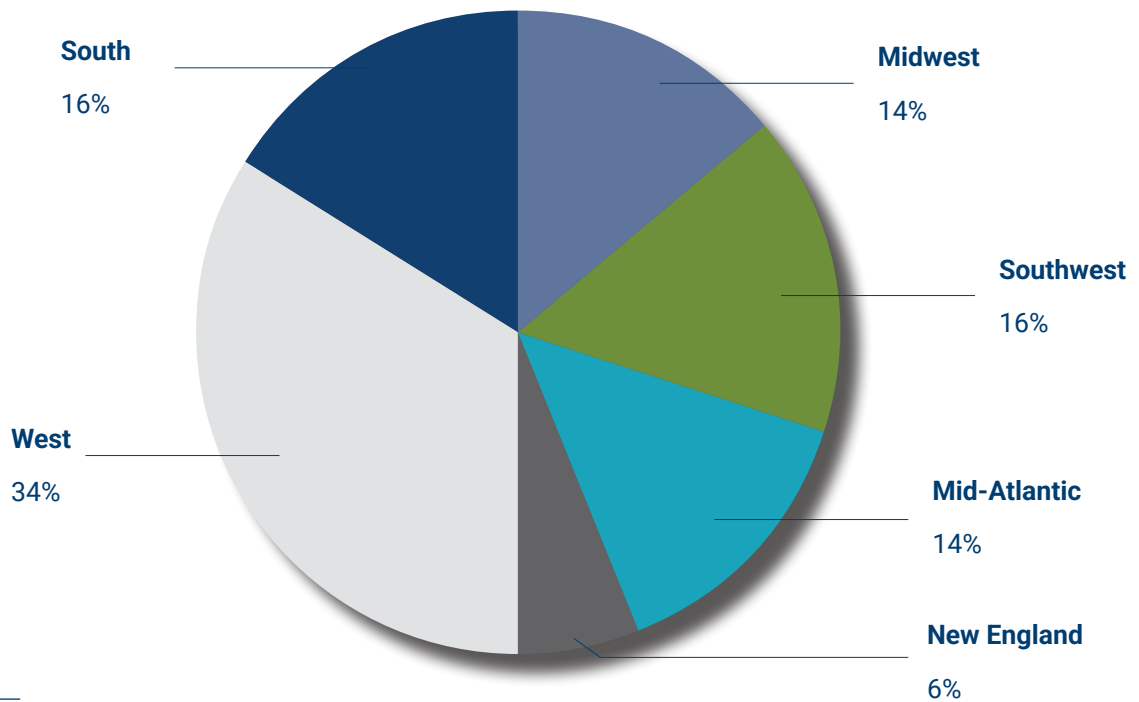Doctoral Universities 8%

Baccalaureate/ Associate's Colleges 10%

Baccalaureate Colleges and Universities 10%

Associate's Colleges 6%

Tribal Colleges and Universities 26%

Very High Research Activity 22%

High Research Activity 6%

FIGURE 7

Count of Carnegie Classification

FIGURE 8

Count of U.S. Region

South 16%

Midwest 14%

Southwest 16%

West 34%

Mid-Atlantic 14%

New England 6%

FIGURE 9

Count of MSI

AANAPISI 26%

HSI 16%

TCU 26%

PBI 2%

PWI 42%

HBCU 12%
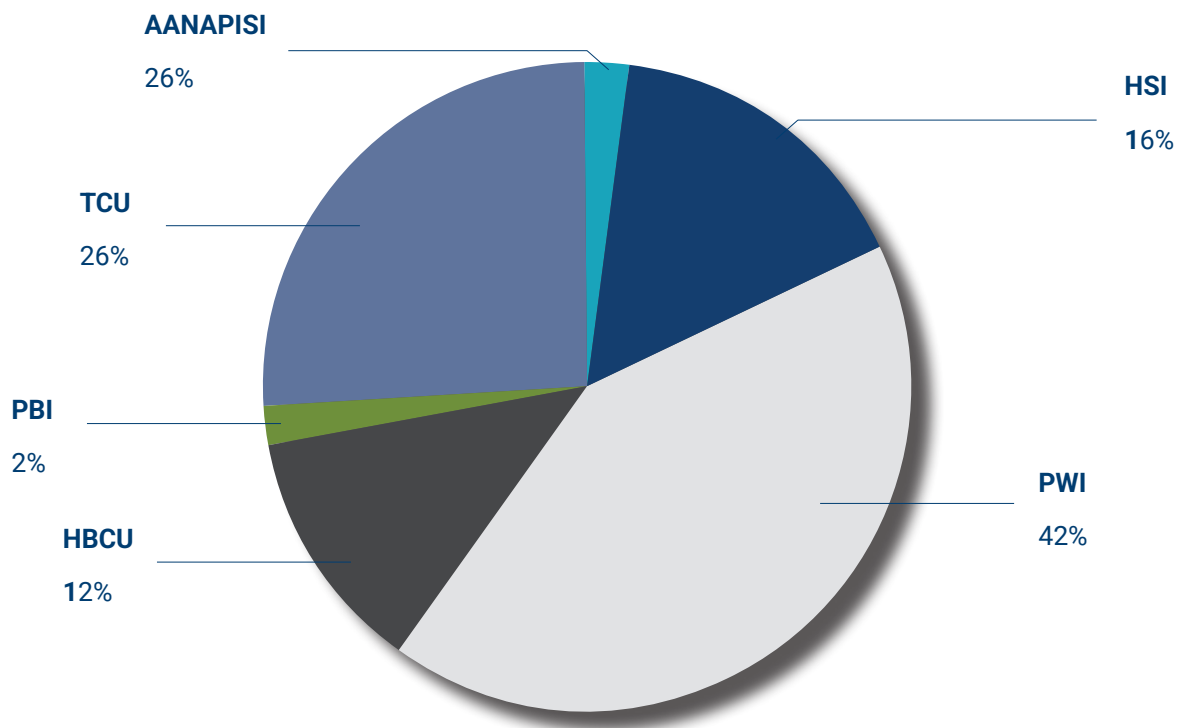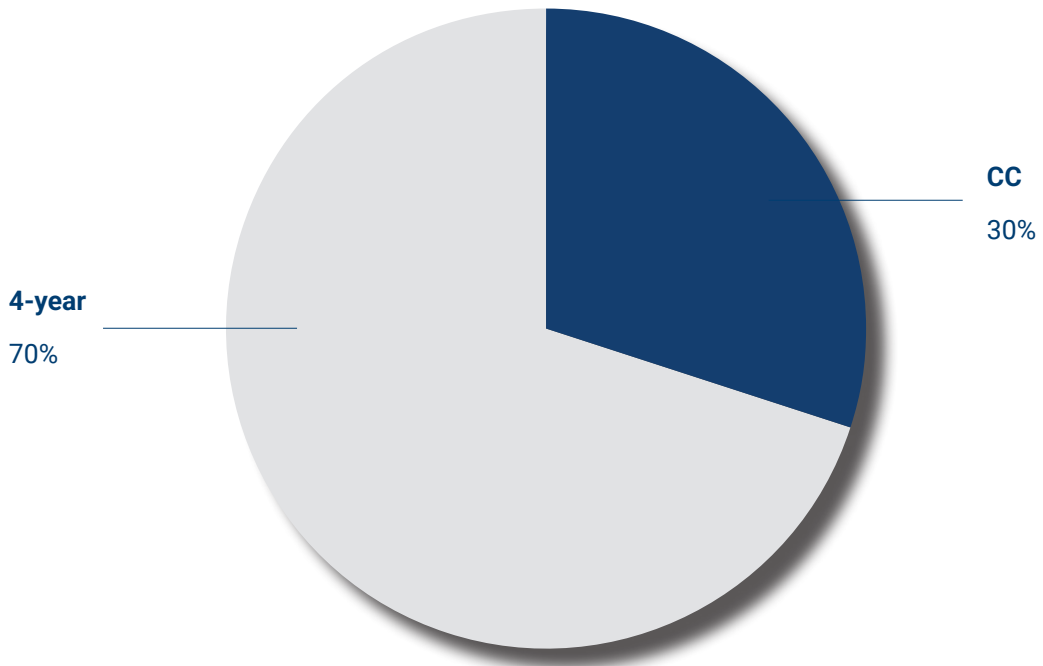
FIGURE 10

Count of Community College

CC
30%

4-year
70%

FIGURE 11

Count of Public

Private
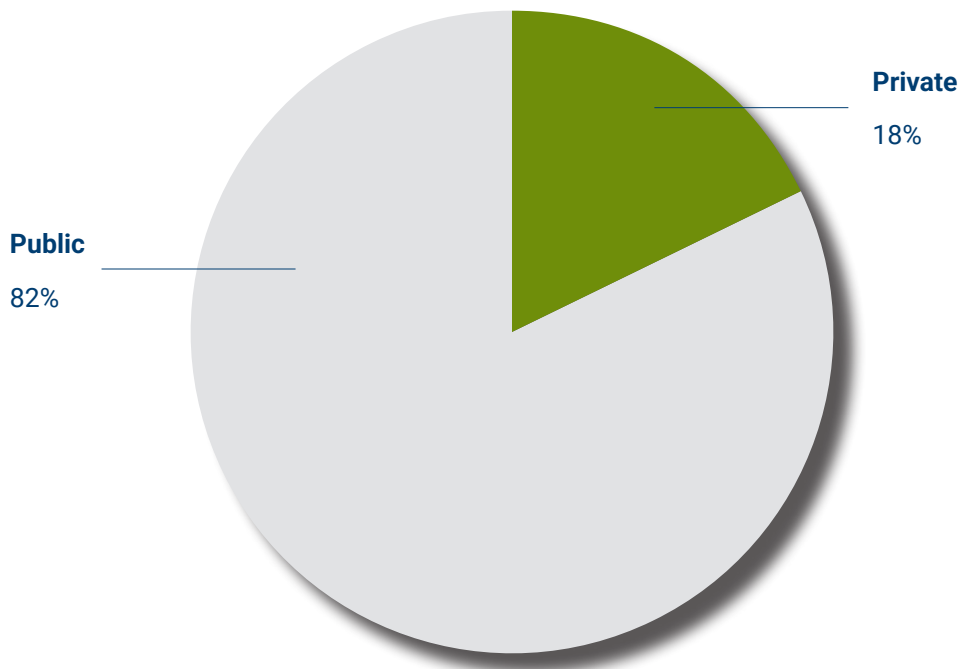18%

Public
82%

Appendix E: Focus Group Methodology

The aim of the **focus group**s was to gather insights from institutional leaders and faculty who practice equity-based teaching, as well as students who have successfully participated in gateway courses featuring such teaching methods. The questions for the institutional leader and faculty focus groups centered on their experiences implementing equity-based teaching, including the organizational challenges and opportunities they faced. For the student focus groups, questions focused on their classroom experiences with equity-based teaching and their perspectives on the related challenges and opportunities.

Using purposeful sampling, institutional contacts were asked to provide contact information for 3–5 faculty leaders of gateway courses (including faculty contingent, tenured/tenure track, graduate students), 3–5 students who completed gateway courses with equity-based teaching, and individuals knowledgeable about equity-based teaching efforts at their institutions.

After obtaining the contact information, we emailed all the recommended individuals with follow-up reminders. This resulted in participation from 22 faculty and staff members and 3 students.

Institutional Leader and Faculty Focus Group Protocol

1. What would you say are the greatest outcomes of your implementation?

2. What do you identify as the greatest institutional challenges of implementing equity-based teaching in your courses or work? (What policies, programs, or practices could address these challenges?)

3. How are you supporting faculty members who are not on a tenure track regarding equity-based teaching?

4. What role does technology play in supporting equity-based teaching on your campus?

5. What improvements would you like to see related to equity-based teaching?

6. What do you believe has been most influential in your ability to implement equity-based teaching in your courses or work?

Student Focus Group Protocol

7. You have been identified as a student who has taken a course where one or more of your instructors implemented what we call equity-based teaching: What course was it? How would you describe your experience?

8. What types of things were professors doing in your course that were helpful to you?

9. Thinking about how that course impacted you. What would you say were the 2-3 most impactful aspects of the course on you as a student?

10. How did technology play a role in the success of this course?

11. What would your experience be like if every class you took incorporated equity-based teaching practices? Possible probe: If you could imagine your classes, curriculum, department, university, what would it look like?

Appendix F: Document Analysis Methodology

The aim of the document analysis was to gather insights from policies, programs, and practices of example organizations. A total of 134 documents were reviewed. EBTC team members initially coded the documents in pairs to check inter-coding processes. Then, an initial round of coding collected descriptives about the types of documents and their purposes. In a final round of deep reading and memoing, EBTC team members memoed according to the following questions:

1. What is the reason for the document being produced, and what was the process for producing the document (if known)?

2. Who will enact the policy/program/practice? i.e., Who makes the policy or facilitates the program, etc.? [speak to position and identity if given]

3. Who benefits from or engages in the policy/program/practice? i.e., Who will use the policy or who participates in the program? [speak to position and identity if given]

4. How does the document speak to equity-based teaching improvement? (What aspect of the document might we want to add to the policy report?)

5. Review the categorizations from phase 1 coding in the Excel document—are they correct? Are any changes needed?

6. What questions arise during close reading that could be asked in focus groups/interviews?

Appendix G: Other References

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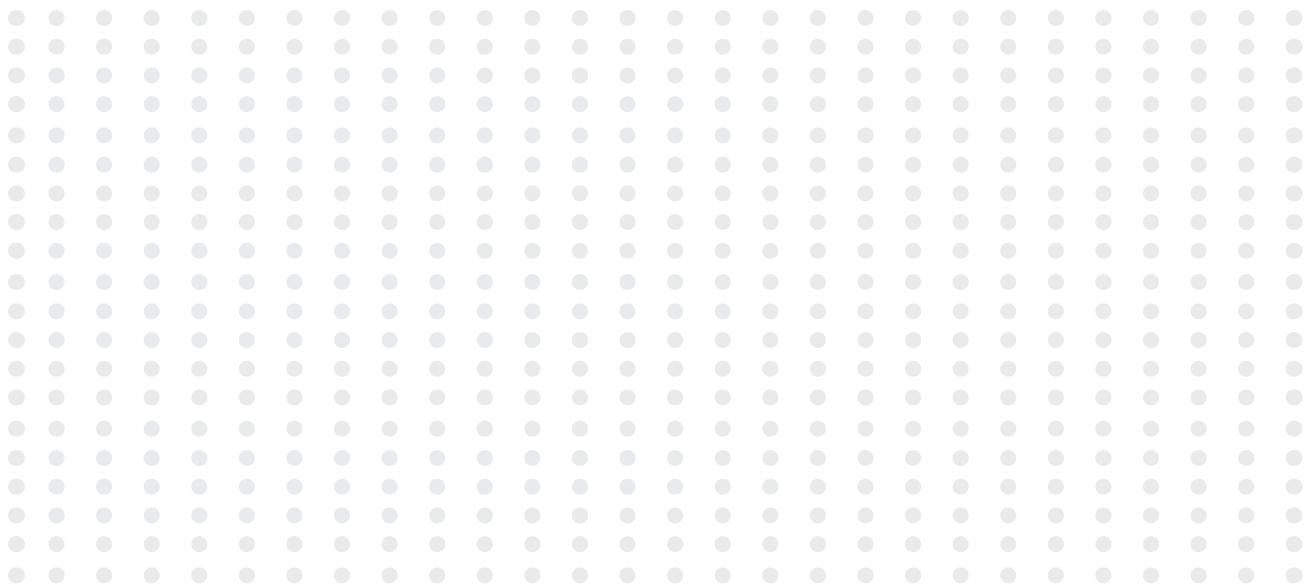
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Limitations

Although this document offers valuable insights, several limitations should be acknowledged. We want to be transparent about the constraints and challenges encountered during this research. First, there were methodological limitations due to the study design. The methodology relied on national experts to identify organizations and institutions exemplifying equity-based teaching (EBT) policies, programs, or practices. Consequently, we depended on institutional contacts with varying levels of engagement with our project and the broader EBT work. Additionally, the relatively small sample size of institutions participating in the focus groups and document analysis may limit the generalizability of the findings. Second, data limitations were present because there were very few individuals represented across different categories in the focus groups. Despite these limitations, the study included a diverse array of institutional types from various geographic regions, and participants provided rich information that significantly contributed to the document's content. A final limitation was that few studies and example policies/programs/practices reported on the resulting student success outcomes—more reported on proximal outcomes such as faculty engagement, perceptions, or teaching behaviors.

Suggested Citation

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Equity Based TEACHING COLLECTIVE