

# An Equity-First Approach to Evidence-Based Teaching Practices

*Every Learner Everywhere  
Teaching Strategy Guide Series*



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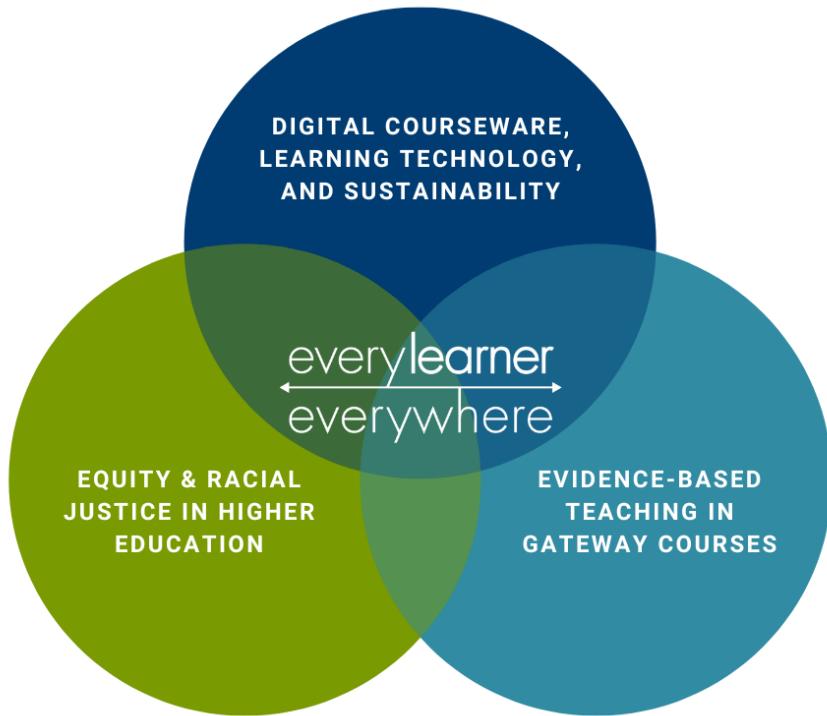
**Every Learner Everywhere** is a network of twelve partner organizations with expertise in evaluating, implementing, scaling, and measuring the efficacy of education technologies, curriculum and course design strategies, teaching practices, and support services that personalize instruction for students 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, Latinx, Indigenous, poverty-affected, and first-generation students. Our collaborative work aims to advance equity in higher education and centers 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 and its collaborative approach to making higher education more equitable through digital learning, visit [everylearnereverywhere.org](http://everylearnereverywhere.org).



# *Introduction to the Teaching Strategy Guide Series*

An Equity-First Approach to Evidence-Based Teaching Practices is one of a series of teaching strategy guides published by Every Learner Everywhere for the purpose of highlighting how the three facets of our mission, equity in higher education, digital learning, and evidence-based teaching practices, can be applied in higher educational courses. Our target audience is faculty, course directors, course administrators, and faculty support staff. An Equity-First Approach to Evidence-Based Teaching Practices reviews six teaching practices proven to benefit Black, Latinx, Indigenous, poverty-affected, and first-generation students in gateway courses. An Equity-First Approach to Postsecondary Digital Learning outlines seven necessary components to adopting and utilizing digital learning tools equitably. This strategy guide also includes a framework for centering equity in the course design, underlying principles, and pedagogical practice of digital courseware. Equity Principles for Teaching and Learning in Higher Education details our network's eight equity principles and their application to equitable teaching with the goal of redesigning postsecondary digital learning opportunities to more intentionally center the needs, outcomes, and experiences of Black, Latinx, and Indigenous students, as well as students experiencing poverty.

# Every Learner Everywhere Mission



We support institutions in the adoption, implementation, and scale of high-quality digital learning tools. Grounded in principles of effective teaching and a commitment to equity and racial justice, our approach to digital learning enables institutions to increase [gateway course](#)<sup>1</sup> and degree completion, lower the cost of instruction, and facilitate more equitable learning outcomes for Black, Latinx, Indigenous, poverty-affected, and first-generation students. Digital learning can engage faculty as innovators and educators focused on using evidence-based teaching practices, data, courseware, and technology tools to improve learning outcomes and better serve students.

<sup>1</sup> Kwak, J. (2020). What are Gateway Courses and Why Do They Matter to Equity in Higher Ed? Every Learner Everywhere. [www.everylearnereverywhere.org/blog/what-are-gateway-courses-and-why-do-they-matter-to-equity-in-higher-ed/](http://www.everylearnereverywhere.org/blog/what-are-gateway-courses-and-why-do-they-matter-to-equity-in-higher-ed/)

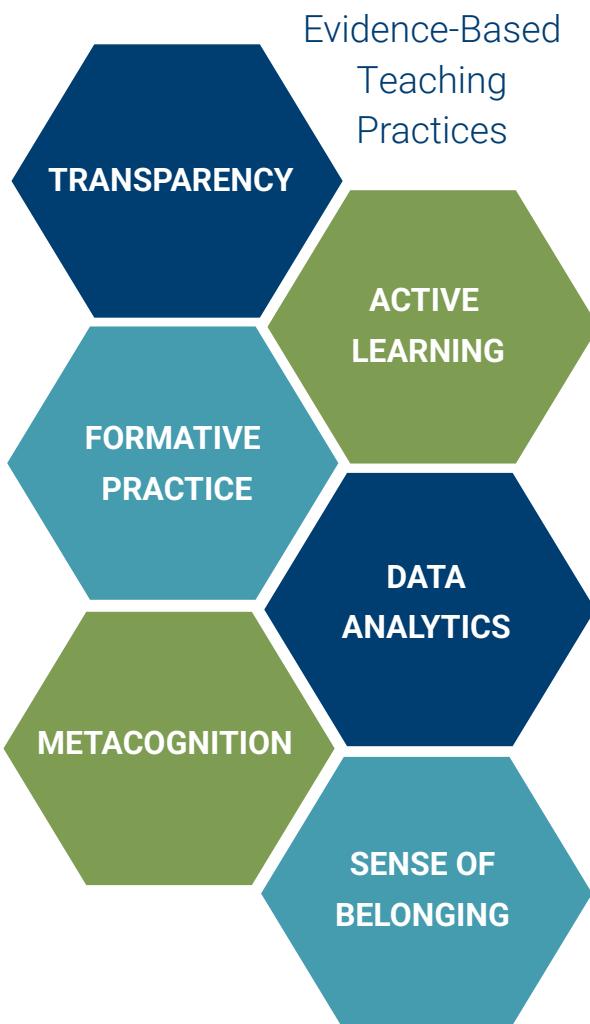
# Evidence-Based Teaching Practices

There are several useful frameworks for effective teaching practices based on research in the field of human cognition and empirical studies of classroom practices. The six evidence-based teaching (EBT) practices highlighted in our tenets are grounded in lessons from literature and practice regarding approaches and pedagogies that are shown to support postsecondary student learning. Reviews of the research supporting these practices can be found in "Evidence-Based Teaching Practices in Higher Education: A Systematic Review."<sup>2</sup>

Although there is evidence pointing to the efficacy of each of these practices, the samples used in most studies were largely homogeneous and not representative of the target populations we seek to serve.<sup>3</sup> As we partner with institutions that adopt digital learning with the explicit goal of improving learning experiences and outcomes for Black, Latinx, Indigenous, low-income, and first-generation students in gateway courses, we recognize the need to reframe how we understand and enact EBT practices in ways that foreground racial and economic equity.

## 1. TRANSPARENCY

Transparency in teaching involves sharing with students how your course is designed (overviews of learning outcomes, instructional approaches, and rationale for each assignment) and your expectations for mastery of learning outcomes (assessment criteria, grading rubrics, model assignments, and resources for help).



<sup>2</sup> Peters, V., and Means, B. (2022). Evidence-Based Teaching Practices in Higher Education: A Systematic Review. Submitted for publication.

<sup>3</sup> Davis, T., & Rodgers, A. J. (2022, May 16). Can Evidence-Based Teaching Techniques Address the Education Debt that Students of Color Are Owed? <https://doi.org/10.18665/sr.316700>

## Why transparency is important for equity:

For historically nondominant students who may be navigating the hidden curriculum of higher education, transparency is known to be critical for their well-being and retention. Faculty should be clear about what constitutes legitimate forms of knowledge and expressions of mastery in courses and how they came to be.

## How to enact transparency in your pedagogy:

- **Be intentional in your syllabus design:** The course syllabus is available online and ideally before the class begins. The syllabus states the learning outcomes and should map course content to them. Grading schema and key policies regarding due dates, attendance, exams, etc., are clearly stated on the syllabus.
- **Make course content accessible:** Course content is easily accessible online, for example, as recorded lectures or lecture notes and/or transcripts. Course content is tied to learning outcomes, and this connection is explained to students. Core concepts are summarized or identified in practice assessments or class activities.
- **Demystify grading & assessment:** Students are made aware of how course assessments are tied to stated learning objectives. There are practice assessments available online so that students can become familiar with the assessment format and the types of questions they will be asked in exams and other formative assessments. These practice assessments explain not only why responses are correct, but also why responses are incorrect. Lastly, instructors should continuously clarify how they evaluate the assignments and exams and provide insight to students, as needed.



## 2. ACTIVE LEARNING

Active learning is a way of engaging students in “learning by doing.” The activity can be individual or small-group based or involve the entire class. Best practices call for a mix of active learning strategies so students have multiple opportunities and methods for learning and practicing course skills.

### Why active learning is important for equity:

Active learning opens opportunities for students to be active co-constructors in the knowledge production process. Rather than being the sole “knower,” instructors can use active learning techniques to intentionally leverage students’ prior knowledge as a tool in their learning. Empowering racially minoritized students to leverage their cultures as cognitive resources in subject matter learning is good pedagogy, and active learning strategies can be used to scaffold this type of engagement.

### How to apply active learning in your pedagogy:

- **Individual active learning strategies:** Classroom polling, students texting questions during a lecture, breaking up a lecture every 10 minutes to have students write a summary/ask questions/catch up on notes, and reflective writing, and case study analysis
- **Small-group active learning strategies:** Pair practice, small group activities, pair or small group presentations or projects, students’ collective problem-solving, peer review, and case study discussion
- **Classroom-wide active learning strategies:** Socratic questioning, randomly-generated questioning and brainstorming, whole-group discussion, engagement with learning stations, class field trips, class simulations or skits, and encouraging students to leverage their social world and neighboring communities as learning environments

**Rather than being the sole “knower,” instructors can use active learning techniques to intentionally leverage students’ prior knowledge as a tool in their learning.**

### Practices that support active learning:

- **A flipped classroom** reduces the need for content coverage in class by assigning content coverage outside of class.
- **Data-informed content coverage** reduces the need for content coverage in class by giving students a pre-lecture comprehension check that allows instructors to streamline content or remove content for which students already demonstrate mastery. This makes it possible to be more responsive to student needs and concerns.

### 3. FORMATIVE PRACTICE

Formative practice may be defined as opportunities for students to practice skills in ways that provide timely and targeted feedback, in order to nudge them toward mastery. Yet, formative practice is much more than merely a tool for student mastery. The results emerging from students' engagement with formative practice can provide instructors with important insights into whether/how students are (mis)understanding course content and where pedagogical interventions might be made.

#### Why formative practice is important for equity:

Formative practice provides multiple benefits for students and faculty. First, it gives them information about student mastery of learning objectives. This information can then be used by faculty to assist students with objectives they have not yet mastered, and it can also be used by students to target particular objectives for additional study. Frequent and low-/no-stakes formative assessment allows students who don't feel comfortable asking questions in class or who cannot attend office hours for extra help to identify gaps in their learning and to skill-build through practice. Formative practice<sup>4</sup> also provides a clear structure to the learning process when used at each stage of a scaffolded lesson<sup>5</sup> and can be used to build community when students are activated "as instructional resources for one another."<sup>6</sup>

#### How to enact formative practice in your pedagogy:

- **Give opportunities for practice:** Offer multiple low- or no-stakes quizzes or practice problems that provide students with in-depth feedback. Additionally, you can provide opportunities for students to self-check or debrief assignments and assessments.
- **Provide timely & targeted feedback:** As students engage with opportunities to practice, instructors should provide specific and actionable feedback toward improvement. More specifically, instructors should provide feedback in a timely manner.
- **Leverage adaptive learning:** Use courseware features that are adaptive and responsive to student performance. Then follow up with students, providing affirmation and redirection where appropriate.
- **Be flexible with what counts as "demonstrating mastery":** Allow students a variety of ways to demonstrate their mastery of course objectives. For example, you might consider varying assessment formats (e.g., not all essays or high-stakes exams) so as to not privilege one modality over another.

<sup>4</sup> Muteti, C., Kerr, T., Mwavita, M., & Mutambuki, J. (2022) Blending muddiest point activities with the common formative assessments bolsters the performance of marginalized student populations in general chemistry. Chemistry Education Research and Practice, Vol. 23, 452-463. <https://doi.org/10.1039/D1RP00314C>

<sup>5</sup> Tanner, K. D. (2013) Structure matters: Twenty-one teaching strategies to promote student engagement and cultivate classroom equity. CBE Life Sciences Education. 12(3), 322-331. doi: 10.1187/cbe.13-06-0115. PMID: 24006379; PMCID: PMC3762997.

<sup>6</sup> Johnson, C. C., Sondergeld, T. A., & Walton, J. B. (2019). A Study of the Implementation of Formative Assessment in Three Large Urban Districts. American Educational Research Journal, 56(6), 2408–2438. <https://doi.org/10.3102/0002831219842347>

## 4. DATA ANALYTICS

Data from courseware and LMS dashboards can inform teaching and ongoing course improvements to optimize student success. Moreover, keeping updated about course data can uncover patterns in how students are engaging with the content and where barriers to student mastery might exist.

### Why data analytics is important for equity:

Scholars have highlighted that a core part of equity-minded practice lies in developing practitioners' capacity to engage in inquiry and take responsibility for their students' classroom experiences. Expanding instructors' capacity to be curious about whether and how students engage with the course and its materials provides significant inroads for pedagogical change. A primary mechanism for achieving this change is via the disaggregation of data by race and ethnicity. While the overall data might tell one story (i.e., the class average on an exam is 80%), we might uncover racialized disparities in experiences and outcomes if we disaggregate the data<sup>7</sup> (i.e., one group scored higher on the exam than another). This discovery should prompt instructors to reflect on why that gap exists and how to mitigate it. Overall, data analytics, when applied in race- and power-conscious ways, has critical implications for educational equity.

### How to enact inquiry around data analytics in your pedagogy:

- ***In assessments:*** An item analysis can reveal which test questions are most often answered correctly or most often answered incorrectly by students. A readability analysis can tell you which test questions contain problematic wording.
- ***In content:*** A readability analysis can tell you which sections of content might need to be written with more clarity. You can also engage students in this kind of data collection, which is especially critical for multilingual students whose first language is not English or who are new to academic and formal writing.
- ***In course milestones assessed through formative practice:*** Dashboard data from digital courseware or the LMS can reveal which learning objectives require less classroom exposition and/or practice and which ones require more. Dashboards may also provide information on students who are falling behind in terms of attendance, engagement, and missed assignments.

**Equity-centered uses of data identify how the course isn't ready for the student, not how the student isn't ready for the course. It illuminates barriers to learning, so they can be confronted.**

Remember, student data should not be used for the purposes of surveillance or weeding out "underperforming" students. Instead, a central aim of data analytics and disaggregating data by social identity groups (e.g., race, ethnicity, gender) is to take stock of how **your teaching** may (dis)advantage some groups over others and to adjust your pedagogy accordingly.

<sup>7</sup> For a comprehensive discussion of disaggregating data, please see McGuire, R. (2022, September, 1) Toward Ending the Monolithic View of "Underrepresented Students": Why Higher Education Must Account for Racial, Ethnic, and Economic Variations in Barriers to Equity. Every Learner Everywhere. <https://www.everylearnereverywhere.org/resources/toward-ending-the-monolithic-view-of-underrepresented-students>

## 5. METACOGNITION

Along with self-regulation and agency, metacognition incorporates practices that help students learn to be better learners and take control of their learning process.

### Why metacognition is important for equity:

In short, not all learning environments feel safe to all students. Alignment or dissonance in what students value and how they make sense of the world matters for students' learning experiences – especially for nondominant students who are generally taught that their prior knowledge is inappropriate and cannot easily be leveraged as resources for learning in traditional classroom environments. Given that motivation is an essential component of learning, instructors must reflect on how their personal belief systems and teaching practices interact with those of the students, families, and communities they serve. Adopting teaching practices that provide students with a sense of purpose, relevance, and self-efficacy is an important part of enhancing learning and educational equity for nondominant students.

### How to enact formative practice in your pedagogy:

- **Affirm student agency:** Students should be in the driver's seat of their learning. Consider encouraging students to track their progress toward skill mastery using the courseware or LMS dashboard. Additionally, you can involve students in the development or analysis of assessments to get them thinking about how a learner would demonstrate mastery of course learning objectives.
- **Encourage reflection:** Using rubrics or guided practice, support students to self-assess their study skills, learning, and/or progress toward skill mastery. You should make time for activities like these during class sessions. You can also facilitate discussions and think-aloud activities that encourage students to reflect on their learning processes
- **Help students refine their study habits:** Supporting students to personalize their study plans, practice, and self-regulation toward learning objectives goes a long way. For example, you might make notes on the syllabus about expectations concerning student learning habits (e.g., 20 minutes to complete an assignment; read a chapter every night before class) and tailor these expectations and notes to each assessment.
- **Encourage identity work:** Encourage students to think like a scientist/writer/historian/economist by asking them to weigh in on real-world problems for the discipline being studied including how to train the next generation of practitioners. Be sure to be expansive about what it means for students to take on these identities in ways that aren't grounded in rigid ways of thinking/being/acting. Identity work should not discipline students into one or dominant ways of thinking/being/acting. Instead, we should give students a chance to take up and take on these disciplinary identities as their own.

## 6. SENSE OF BELONGING

Creating a sense of belonging and an inclusive learning environment requires intentionally using practices that enable all students to feel that they, with their unique backgrounds, have a place in the classroom and in the discipline.

### Why sense of belonging is important for equity:

A robust body of literature highlights that sense of belonging (or a lack thereof) is empirically linked to learning outcomes.<sup>8, 9, 10, 11</sup> For example, a sense of belonging promotes academic achievement, motivation, persistence, and self-advocacy<sup>12</sup>, while a sense of alienation threatens retention and academic success.<sup>13</sup> Ensuring that students who have historically been excluded from academia find pathways to full participation in higher education is deeply significant. Yet, we must also question who holds the responsibility for belonging. Phuong et al. powerfully argue that postsecondary "students are expected to learn not only the course material but also how to think, feel, and behave in a new context."<sup>14</sup> For historically nondominant students whose cultures and beliefs are often undervalued and delegitimated in formal schooling settings, it is important to cultivate spaces that do not require nondominant students to assimilate into whitestreamed academic norms. Instead, faculty should create opportunities for nondominant students to leverage prior knowledge and lived experience in ways that support their meaningful engagement in the course curriculum.

### How to enact sense of belonging in your pedagogy:

- **Historicize the curriculum:** Be attentive to the histories and truth claims you make to students through the curricula you use. Are the foundations of the curricula, or even your approach to teaching, race-neutral? Does your course deal adequately with histories of racial capitalism, colonialism, and the fallacy of white supremacy and their legacy in what counts as disciplinary learning today?
- **Representation matters:** Ensure that the curriculum provides students with a diverse array of examples (in terms of race, ethnicity, gender, dis/ability, etc.) of those in the discipline/field, and incorporate students' histories and their cultures into the curriculum.

<sup>8</sup> d'Erizans, R., Jung, L. A., & Bibbo, T. (2019). Don't Forget about Me!. *Educational Leadership*, 77(2), 60-66.

<sup>9</sup> Hussain, M., & Jones, J. M. (2021). Discrimination, diversity, and sense of belonging: Experiences of students of color. *Journal of Diversity in Higher Education*, 14(1), 63.

<sup>10</sup> Museus, S. D., Yi, V., & Saelua, N. (2018). How culturally engaging campus environments influence sense of belonging in college: An examination of differences between white students and students of color. *Journal of Diversity in Higher Education*, 11(4), 467.

<sup>11</sup> Vaccaro, A., Daly-Cano, M., & Newman, B. M. (2015). A sense of belonging among college students with disabilities: An emergent theoretical model. *Journal of College Student Development*, 56(7), 670-686.

<sup>12</sup> Strayhorn, T. L. (2018). College students' sense of belonging: A key to educational success for all students. Routledge.

<sup>13</sup> Walton, G. M., & Cohen, G. L. (2007). A question of belonging: race, social fit, and achievement. *Journal of Personality and Social Psychology*, 92(1), 82.

<sup>14</sup> Phuong, A. E., Nguyen, J., & Marie, D. (2017). Evaluating an adaptive equity-oriented pedagogy: A study of its impacts in higher education. *Journal of Effective Teaching*, 17(2), 5-44.

- **Normalize adversity:** Create a learning community that both normalizes and embraces taking risks, encountering challenges, and working through adversities. You can allow students time and space in class to express the individual and collective adversities they face and how those challenges might be mitigated over time.
- **Facilitate connections and community:** Implement community-building activities where students have the chance to bring their whole selves to class. For instance, instructors should build relationships with students through learning and saying the name they wish to be called, asking students their gender pronouns, personalizing messages and outreach to them, and acknowledging when they've done good work.
- **Ensure accessibility & full participation:** Ensure your course materials and assessments are accessible (per ADA requirements and also easy to obtain and use for all students), affordable (OER or low-cost), and reusable (available to students even after the term ends). You can partner with others at your institutions (e.g., instructional designers and librarians) to source wraparound support.



# Additional Resources from the Every Learner Everywhere Resource Library

Below is a selection of resources on equity-centered digital learning produced by Every Learner Everywhere in collaboration with its network partners.

- [What Our Best College Instructors Do: Reflections by students about meaningful learning experiences](#) outlines best practices for inclusive and effective teaching from the students' perspective.
- [Adaptive Courseware Implementation Guide](#) shares lessons from course instructors with experience centering around racial and socioeconomic equity and student voice in the adoption and implementation of adaptive courseware.
- [Caring for Students Playbook: Six Recommendations](#) suggests equity-focused strategies that put student care into practice by acknowledging student challenges while identifying student assets.
- [Equity Review Tool: A Process Guide for Equity-centered Educational Materials](#) poses critical questions that illuminate privilege, bias, exclusion, and misrepresentation and that promote equity-minded language.
- [Getting Started with Equity: A Guide for Academic Department Leaders](#) is a resource for deans and other institutional leaders to start conversations in academic departments about advancing equity and justice in curricula and teaching.
- [Improving Departmental Equity Using the IMPACT Framework](#) includes worksheets for anticipating, acknowledging, and redressing racism perpetuated by academic departmental policies and practices.
- [Learning Analytics Strategy Toolkit](#) helps the reader assess campus readiness to use learning analytics and provides the tools to start.
- [Strategies for Implementing Digital Learning Infrastructure to Support Equitable Outcomes: A Case-based Guidebook for Instructional Leaders](#) focuses on building infrastructure for high-quality digital learning and outlines specific recommendations and examples.
- The [Every Learner Everywhere YouTube channel](#) includes a growing archive of conference and webinar presentations featuring experts in equity-centered, evidence-based digital learning.