Trends and Issues
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Design for equity in higher education

KC Culver,
USC Rossier School of Education

Jordan Harper,
USC Rossier School of Education

Adrianna Kezar,
University of Southern California,
TIAA Institute Fellow

Executive summary

Liberatory design thinking is a promising approach for helping campus leaders rethink policy and practices related to non-tenure-track faculty. It includes the following phases: notice, empathize, define, ideate, prototype, test, and reflect.

However, liberatory design thinking processes may be challenging in policymaking environments. In the context of higher education specifically, liberatory design thinking may be more easily adapted than in hierarchical policymaking contexts, as the use of collaborative design teams that have representation from different networks of stakeholders is more closely aligned with participatory governance models.

We contribute to the conceptualization of liberatory design thinking in organizational contexts such as higher education by integrating policymaking explicitly into the model and locating equity-minded practice as underlying the entire process. Our revised model for postsecondary settings modifies it as such: organize, empathize, redefine, ideate, choose, prototype, buy-in, and test. It also includes equity mindsets, notice, and reflect throughout.

See our larger report for two case studies (one community college and one four-year regional institution) that present the way campuses navigate the liberatory design process at each of these phases. These case studies provide real life examples of how this process can unfold on campuses.

Introduction

Colleges and universities have a major design challenge. They have been designed to support tenure-track faculty, but policies and practices do not support 70% of the faculty that are not on the tenure track. The Delphi Project on the Changing Faculty and Student Success has been working for the last decade to address this design challenge. We have developed guides for campus leaders to begin the design process and to rethink their policies and practices and align them better to support non-tenure-track faculty (NTTF). Yet, we often hear that campuses need more guidance about how to undergo the design process. The research study presented here aims to address this gap by providing a study of campuses that used design thinking to transform their policies and practices, documenting the modifications that they made to adequately conduct this work within higher education settings. What we offer is a customized guide about liberatory design thinking processes that have been tested within college settings to support changes that enhance equity in policies and practices within institutions. This research is based on case studies of several institutions, including focus group interviews with the campus design teams and an analysis of artifacts. We profiled two campuses that represent the trends of the data across a larger set of campuses.

While this study is focused on improving conditions for NTTF, we imagine that the model we present can also be useful for other design opportunities in higher education.

Design for equity in higher education

Figure 1 presents the Design for Equity in Higher Education (DEHE) model, which extends and refines design thinking and liberatory design in a number of ways. In this section, we describe the constituent parts of the DEHE model, such as integrating scholarship on design thinking, liberatory design, and policymaking, which highlights our contributions based on our research study. We begin with some comments on the overall conceptualization and visualization of the model, then describing the equity-mindedness that underlies the process before describing each phase of the process. In the narrative below, where our research added in a new perspective on a phase of the liberatory design thinking, we apply the DEHE label to make this contribution clear.

Figure 1. Design for equity in higher education (DEHE) model

Organize (1)
Form design team.

Define objectives.

Assess participation for representation and political will.

+ Empathize (2)
Gain well-rounded understanding of the experiences and perspectives of those you are designing.

Multi-pronged approach to data gathering.

+ (Re)Define (3)
Synthesize and connect findings.

Identify most relevant context(s), stakeholders.

Develop a narrative that captures complexities.

+ Ideate (4)
Brainstorm a wide variety of potential solutions and encourage creativity.

Look for models of innovation as sources of inspiration.

+ Choose (5)
Assess feasibility and context of ideas.

Decide which ideas to expand and draft.

+ Prototype (6)
Draft solutions and learn by building.

Share with key stakeholders.

Develop a solution narrative.

+ Get Buy In (7)
Share problem-and-solution story.

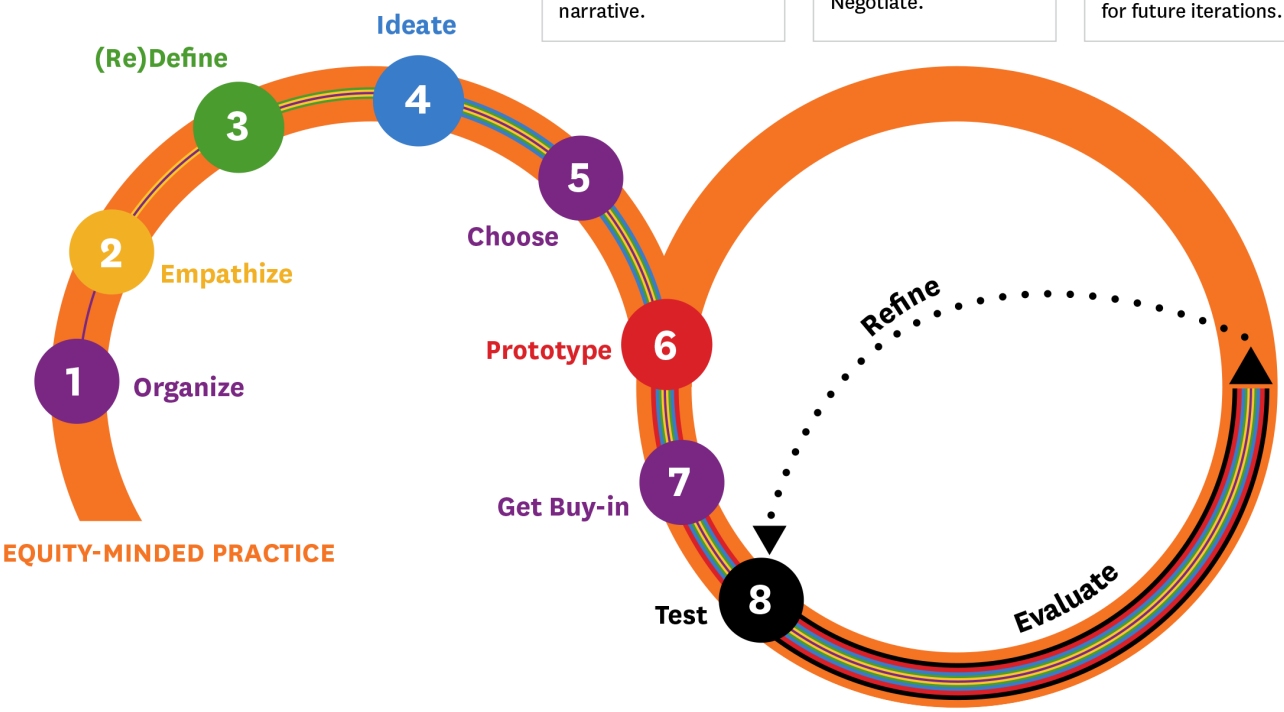
Build support among coalitions.

Negotiate.

+ Test (8)
Facilitate implementation at scale.

Evaluate and get feedback.

Refine and revise for future iterations.



Underlying mechanisms

EQUITY-MINDED PRACTICE

- Address issues of identity, power, and values.
- Attend internally to team process and externally to design solutions.

Notice bias and power. Ensure intent increases equity. Be authentic.
Reflect on insights, actions, emotions, and impact. Improve the process as you're working.
Collaborate and build relational trust. Share, don't sell.

ORGANIZATIONAL CONTEXT

- Understand political and bureaucratic landscape.
- Consider constraints and opportunities.

Navigate competing interests internally and externally.
Leverage institutional priorities and political will.
Negotiate with key stakeholders and decision-makers.

Overall conceptualization and visualization

We contribute to the conceptualization of liberatory design thinking in organizational contexts, such as higher education, by integrating policymaking explicitly into the model and by locating equity-minded practice to underly the entire process. The DEHE model describes the opportunities and challenges of implementing equity-minded design thinking in environments where hierarchies, politics, and constraints are ever-present. To be successful, designers in higher education must navigate, collaborate, and negotiate with stakeholders and coalitions in ways that are not usually present in the private sector. At the same time, these constraints are at odds with the philosophy of innovation that guides design thinking. Thus, based on our case studies, we identify several moments where this work is particularly visible/prominent in order to define how the organizational context shapes the process in higher education. Our research also suggests that successful higher education designers infuse equity-mindedness, both inward- and outward-looking, into every phase of design thinking. We emphasize this finding by positioning equity-minded practice as underlying the entire process, rather than locating equity work in phases that are discrete from design thinking.

The DEHE model also reflects more nuanced aspects of our thinking on designing for equity in higher education. While the visualizations of design thinking and liberatory design present the process as linear, certain proponents stress the iterative nature of the process, conceptualizing the phases as "a system of overlapping spaces rather than a sequence of orderly steps" (Brown & Wyatt, 2010). As such, we use circles as our primary design shape to indicate the recursive nature of the process. At the same time, our model emphasizes the additive nature of each phase of design thinking, such that the empathy work conducted early in the process is carried through and shapes later phases. Additionally, the process represented on the left side of our graphic is internally focused work within the design team, while process represented on the right side is primarily focused externally. Our visualization also accentuates the human-centered nature of DEHE by visually connecting people through the design process.

Equity-minded practice

In the liberatory design model, designers are encouraged to engage in activities that promote self-awareness of identity, values, emotion, assumptions, and positionality before beginning with the design process so that the team can engage authentically in the process. This phase also includes identifying issues of power, both within the design team and relative to institutional power, and interrogating the intent of the process to ensure that the design product increases equity (Anaissie et al., 2020; Clifford, 2017). Conducting these activities first, before engaging in other phases of design thinking, helps to build relational trust among the team. During the process, designers consider how to improve future iterations of the process by reflecting on their insight, actions, emotions, and impact (Anaissie et al.; Clifford).

Equity-mindedness in the DEHE model

Rather than locating, noticing, and reflecting as discrete phases of the process, the DEHE model situates equity-minded practices as underlying the entire design process in order to emphasize the ever-changing nature of power, oppression, and emotions. Our research suggests that designers must maintain self-awareness, check assumptions, and reserve judgment throughout. Additionally, we emphasize the continuous nature of reflection based on the potential for designers to refine the design process in the present, rather than informing other efforts in the future. In other words, making equity-mindedness an ongoing practice allows designers to notice and address shifts in team dynamics and in the political environment in order to re-center intentions and actions around equity, which can further strengthen relational trust among the team.

Organize: *A new phase*

In policymaking contexts, design teams are often limited to policy experts who understand the contexts, constraints, and political will that shape opportunities and constraints to change (Howlett, 2020). The same is true in traditional design models, where the functional organization of teams generally privilege expert designers (Anaissie et al., 2020). As an alternative to these siloed approaches, design thinking applied in business contexts encourages the useof cross-functional teams (Nakata

& Hwang, 2020); for instance, the design team might include one representative from several departments, including human resources, sales, customer service, and marketing.

While the cross-functional approach allows for multiple perspectives on solving design problems, designers are often distant from the end users they are designing for, limiting their understanding of the actual problem. In contrast, the liberatory design thinking model emphasizes participatory design, including end users as members of the design team in order to benefit from their first-hand knowledge of the problem. However, in policymaking contexts, participatory design can result in vast information asymmetry, as non-experts often do not have mastery of the wide variety of policy tools that are available (Howlett, 2020) and may not have a full understanding of the institutional environment. Furthermore, the legitimacy of the outcome may be more easily challenged in policymaking contexts when the design team is comprised of non-experts (Mintrom & Lutjens, 2016).

We add organization as a discrete phase of the DEHE model to address two aspects of the design thinking process that are particularly influenced by the organizational context of higher education: design team formation and the widespread role of political will in organization.

Team formation reflects why and how design teams are created. For instance, individuals in similar work roles may come together informally around a common problem and subsequently organize when a political opportunity presents itself. Alternatively, an administrative leader may identify an issue that needs attention and appoint individuals to a task force. Given the culture of shared governance in higher education, the design teams we studied reflected intentional consideration of representation and inclusion when identifying designers, not only by including colleagues on the design team, but also by incorporating delegates from key stakeholder groups who would need to be consulted or reported to during the design process.

Considerations of political will that may vary based on design team organization include authority, objectives, and commitment (Post et al., 2010). For instance, a task force may carry great authority as a result of being established by an administrative leader, while a grassroots effort may have to intentionally foster legitimacy through collaboration. Additionally, the stated and unstated objectives of designers often vary and may not always be compatible. In higher education, designers may have motivations tangentially related to the stated problem, such as fulfilling service expectations, achieving promotion, increasing the visibility or value of a specific program, creating organizational change, increasing equity, and/or fulfilling the goals of key stakeholders. Based on their motivations, designers may thus have varying levels of commitment and investment in ensuring the success of the chosen solution.

Our research suggests that effective design teams in higher education are best comprised of designers with varying types of expertise, with some who understand the institutional landscape, some who can leverage political opportunities, and others who understand the problem firsthand. At the same time, the siloed nature of higher education and historically rooted tensions that often exist between stakeholders can create challenges for the process and outcomes, both internally within the team and in external interactions. Equity-minded practice can help to address these issues. Among the mindsets defined by Anaissie and colleagues (2020), practicing self-awareness and seeking liberatory collaboration can be particularly beneficial when organizing the team.

Empathize

In the empathize stage, the design team must gain a well-rounded understanding of the motivations, experiences, and emotions of the end users in order to design to meet their needs and preferences (Anaissie et al., 2020). Thus, designers often use a multi-pronged approach to learning. Design thinking encourages primary data collection through ethnographic methods, including observations and interviews that allow designers to gain a better understanding of the end users, especially by understanding their experiences as a journey (Micheli et al., 2019). The use of observation may be particularly

important in design thinking, as end users are not always able to accurately identify their needs, so their behaviors are especially useful to provide clues (Brown & Wyatt, 2010).

Scholars have also increasingly articulated the importance of collecting and considering data in the empathy phase that accurately captures the diversity of end users, in order to accurately define the problem and foster creativity in the ideation stage (Mintrom & Lutjens, 2016). In business contexts, designers often create a "persona" to represent the "typical end user" and develop a "journey map" to describe that user's experiences (Micheli et al., 2019). Some design thinking experts also suggest that benefits accrue from hearing the stories of "extreme users" (Brown & Katz, 2011) or others who do not fit the profile of the typical user in order to better understand the problem.

In addition to embracing the diversity of people and their experiences, liberatory design thinking requires designers to practice self-awareness and focus on human values when hearing users' stories. These mindsets require recognizing privilege, setting aside judgments, challenging assumptions, listening from a place of love, and honoring the stories people share (Anaissie et al., 2020). Practicing these skills may be more difficult in institutional cultures where hierarchies and marginalization are the norm.

Empathizing in higher education

As a result of our research, we found that designers in the empathize stage went beyond the use of observation and interviews to get a holistic understanding of their colleagues. Teams used existing institutional data and/or collected survey data to give them a wider view of the institutional population. Additionally, the designers we studied also consulted scholarly literature to understand what was known about the topic more broadly and to learn about different perspectives; an approach which also gave them the ideas and language that supported later phases of the process. This emphasis on a "wide net" approach to learning is not always considered in traditional policymaking processes, suggesting that the DEHE model can offer improvements to traditional processes. In addition, designers often took time to learn more about the institutional landscape, including structure, priorities, and funding, to better understand the experiences of colleagues holistically. In our cases, designers demonstrated clear use of equity mindsets and were particularly attuned to variation in the positionality and power of the colleagues they learned from; they also demonstrated openness to challenging the preconceived ideas that they had formed through previous experiences in the higher education community.

*(Re)*Define

Once data collection has finished, the design team synthesizes findings to define end users' needs and articulate insights about the situation. In this phase, designers judge what data is relevant, prioritize what seems to be most important, and forge connections across data to create a story about users and their experiences (Kolko, 2010). While this phase begins with the synthesis of what is known, it becomes generative in that designers perceive likely factors that contribute to the problem, even though these factors are not explicitly present in the data.

Brown and Katz (2011) suggest that this phase creates the greatest distinction between the types of thinking scholars usually practice and design thinking, as the goal is to engage in sensemaking and storytelling, rather than testing a hypothesis. This emphasis on intuition, inferences, and best guesses distinguishes design thinking not only from scholarship, but also from traditional policymaking processes. Furthermore, the inclusion of user perspectives in the redefining of the problem also allows for more nuanced solutions to be developed in the next stage (Chambers, 2003; Fung, 2006).

Liberatory mindsets that are particularly important in the redefining phase include embracing complexity and ambiguity, as well as recognizing and naming oppression that may contribute to the problem (Anaissie et al., 2020). One liberatory design thinking tool frequently used in this stage is empathy mapping, where designers outline what end users say, do, think, and feel in order to define the problem in the context of user needs,

preferences, and expectations (Clifford, 2017). The team can also work to better understand the contexts users experience by identifying organizational challenges and opportunities. Another liberatory activity frequently used in this stage is to have designers pose "How might we…" questions that use an asset-minded approach in order to focus on emotions, challenge assumptions, take it to the extreme, and focus in on particular elements. For instance, designers might ask "How might we design a program that makes our colleagues feel valued in addition to fulfilling requirements?" or "How might we offer forms of compensation other than money?" These questions reframe problems as opportunities that help designers to better understand what is really at issue, creating a bridge to the ideate phase (Project Fellows, 2020).

(Re)Defining in higher education

While this phase is called "define" in design thinking, our case studies reveal the importance of identifying this phase as "redefining" the problem. In higher education, organization of the design team often occurs because some problem has been identified. However, the sensemaking that occurs in the define phase often reveals connections between multiple issues that initially appeared unrelated (Mintrom & Lutjens, 2016). Thus, designers must address the "wicked" (Buchanan, 1992) nature of human problems. The design teams we studied demonstrated that the learning conducted in the empathize phase helped them understand that the real problem was much more complex than initially defined.

Ideate

The ideate phase is at the heart of the innovation that occurs in the design thinking process. Here, designers brainstorm a wide variety of possible solutions, withholding judgment of the feasibility of any idea. By refusing to be bound by constraints, the design team also challenges assumptions about the nature of the problem and potential solutions. Playfulness and imagination in this step really distinguish design thinking from traditional, rational, and participatory policymaking and design models, as imagination is valued more than technical expertise and evidence of previous efforts (Lewis et al., 2020). In this phase, designers can answer the "how might we" questions with multiple answers.

In response to cultural norms that privilege judgment and competition, the liberatory design thinking model emphasizes the importance of creating an environment where designers feel comfortable sharing ideas and where all team members must maintain an awareness of their biases (Anaissie et al., 2020). Such an environment not only requires a good deal of relational trust, but also an awareness of who is talking and who is being quiet. To support equitable participation that promotes innovation, designers can intersperse time ideating in teams with opportunities for individual reflection and ideation that can be brought back to the team (Bernstein et al., 2018). Furthermore, Anaissie and coauthors suggest that designers should practice affirming the creative moves of collaborators in order to reinforce a supportive environment.

Ideating in higher education

Our case studies suggest that the imaginative thinking that design teams engaged in was limited by the context, so much so that the constraints of the higher education environment shaped their ideation process. Teams researched potential solutions by reading scholarship and looking at models from other institutions, sources of ideation that are not usually part of the design thinking approach. Designers also relied on experiential knowledge gained through their careers, including models from other institutions where they had previously worked. The use of models may be one way that designers in higher education account for their lack of expertise in the breadth of policy tools available to them while also leveraging strengths in research and scholarship common among designers in academic. While these approaches can be inspirational, they are also relatively conservative, as replication limits the potential for innovation.

Choose: *A new phase*

Design thinking and liberatory design thinking models move from the ideate phase to the prototype phase without much attention to the task of choosing which ideas to sketch out in the prototype phase. The lack

of emphasis on how choices are made may reflect an inherent low-stakes approach to iteration in the private sector. If a prototype is developed and becomes clear it is unworkable, teams can then quickly choose another idea to pursue. In policymaking, decisions are guided by a clear set of principles to identify the superiority of a particular choice, including the degree of consistency, coherence, and congruence of new policies with existing ones (Howlett, 2020). This reveals the large gap between the mindset of design thinking and that of policymaking. This disconnect may explain why critics of design thinking have suggested that successful implementation of truly innovative solutions in policymaking is rare (Considine, 2012).

Using an equity lens, it is critical for designers to notice who participates in the process of narrowing choices and how the "best" solution is defined. At the same time, the practice of considering radical ideas in the ideate phase may lead a design team to choose more creative solutions than would have been considered otherwise. Thus, it is important for designers to recognize and name oppression especially while choosing solutions to prototype to ensure an inclusive team process and to consider the unintended consequences that may result from different solutions (Anaissie et al., 2020).

Our study suggests that iterating between ideation and prototyping is far more constrained in higher education than in the private sector. Designers were aware that they would need to get a buy-in for their solutions, and so they considered the feasibility and the likely responses of colleagues and key stakeholders when choosing which ideas to prototype. As a result, we found that designers sometimes found it difficult to be decisive within the team, instead moving several potential solutions forward into prototyping. Designers also revealed nuances in the equity-mindedness required in this phase. They emphasized the importance of addressing the emotional aspects of choosing as well as practicing self-awareness to let go of ego and attachment. Additionally, the design teams we studied were keenly aware that the solutions they chose would have far-reaching impact beyond their colleagues, especially considering how chosen solutions may affect equity and inclusion more broadly among the institutional community.

Prototype

During the prototype phase, the design team developed outlines and/or mockups, developing the solution as they build it. In design thinking, because of the expectation of iteration, rapid prototyping is key; rather than spending a lot of time and energy to fully develop a solution before testing it, designers quickly sketch out the solution in order to experiment with it. Prototyping is thus a form of thinking and learning by creating; as designers build out the specifics of a solution, they can recognize new challenges and opportunities revealed by the process. Forward momentum is the priority in the prototype stage, so mistakes are similarly used for learning in this trial-and-error approach (Nakata & Hwang, 2020). The agency inherent in the prototyping process can also help designers develop ownership of the solution, increasing their self-confidence and satisfaction with the process (Gerber & Carroll 2012).

The liberatory mindset that is most beneficial to this phase is being biased toward experimentation. Rather than engaging in risk-averse behavior, designers who embrace experimentation can celebrate quick failures, especially as each wrong turn provides a chance to reflect and to create a better prototype in the next iteration. Teams also benefit from having the mindset that liberatory collaboration will benefit the final product, as co-creation allows for further improvement.

Prototyping in higher education

In general, higher education is a risk-averse environment, and our empirical data suggests that maintaining a prototyping mindset was challenging for designers. This challenge resulted, in part, from the notion that key stakeholders often expect to be presented with a complete, polished solution that is ready to be implemented, rather than engaging in an iterative process with many "rough drafts." As a result, designers tended to build multiple prototypes simultaneously, rather than iteratively, providing options to increase their likelihood of success. Furthermore, when teams began sharing prototypes, they realized the importance of including key stakeholders in conversations before sharing out solutions more widely. In order to achieve liberatory collaboration, designers focused on

transparency and storytelling to inform others about the redefined problem and their proposed solution. Especially because of the information asymmetry that is inherent in loosely-coupled organization, designers crafted narratives of the redefined problem and solution as well as the design process to share alongside their prototypes, drawing especially from information gathered about colleagues in the empathy phase, in order to justify the proposed solution and to make their process transparent.

Get buy-in: *A new phase*

Scholars have noted that design thinking doesn't acknowledge the practical need to navigate contentious policymaking activities (Clarke & Craft, 2018; Lewis et al., 2020). We have added getting buy-in as a discrete phase of the process of designing for equity in higher education. In policy contexts, a great deal of negotiation occurs between the proposal and implementation of a solution, work that is steeped in political considerations. While corporate design teams may have the autonomy to scale a prototype for testing, environments like higher education often require approval from multiple key stakeholders, including administrative leaders, members of shared governance, unions, and/or even institutional trustees.

As a result, the design teams we studied engaged in complex work to move solutions into implementation and testing. Two liberatory mindsets defined by Anassie and colleagues (2020) were critical in the buy-in phase: share, don't sell; and embrace complexity. As designers shared their problem-and-solution narrative, they connected their story to institutional objectives related to accreditation, strategic planning, and student success to inform and persuade various key stakeholders. Designers also acknowledged emotional challenges related to the liberatory practice of non-attachment, as they had to let go of some solutions and compromise on others to get buy-in. They did so, in part, because they were willing to trust that better solutions would emerge from the complicated, and sometimes messy, work of negotiating for buy-in.

Scale and test (evaluate and refine)

After buy-in has occurred, the solution can be implemented. In traditional design processes, designers iteratively refine prototypes internally, developing a "perfect" solution before taking it to scale. Design thinking contrasts that model by encouraging designers to pilot solutions that meet minimum standards, knowing that user testing will reveal further issues that need to be resolved. User testing also improves users' satisfaction, as they feel like they've been included in the design process. Thus, designers often observe usage and collect user experiences through interviews and talk-alouds to garner feedback on the process. Additionally, the testing and evaluation process may help designers identify new challenges that need to be addressed.

Scaling and testing in higher education

While some design solutions in higher education may result in pilot testing, implementation of the negotiated solution at scale is far more common. At the same time, the policy context creates expectations aligned with design thinking that evaluation and refinement would be ongoing. Indeed, our case studies indicated that implementation of new policies and practices relied on multiple key stakeholders, so solutions were often further shaped and developed while they were being implemented at scale. To promote fidelity, designers continued to share their problem-and-solution narrative, especially to shape the validity of their recommendations for implementation. Such flexibility in implementation allows for improvement, but may also reflect slippage. Furthermore, given the turnover of individuals in varying positions, implementation and evaluation requires engaging in ongoing negotiation for buy-in. In our case studies where evaluation was ongoing, assessments were often conducted by key stakeholders rather than by the design team.

Conclusion

In this report, we provide a resource for higher education leaders to help campuses move in a new direction by making policies and practices more equitable for non-tenure-track faculty members. The same design process

can also be used to design more equitable practices more broadly for higher education. Hiring diverse faculty, making learning more relevant and engaging for all learners, and creating more inclusive admissions policies are all important equity design issues that could benefit from the application of this process. Given the inequities that continue to plague campuses, leaders need tools to help guide campus decision processes. Too often, ideas are borrowed from other sectors without the appropriate vetting and reconfiguring to appropriately work within higher education settings. We offer this guide as a tool and approach that has been tested and modified and can be successfully embraced by campus leaders and their teams. We look forward to seeing the changes that result from using this guide as it supports an enterprise with integrity and equity, and the mission of diverse student success.

About the authors

Adrianna Kezar, Director and Principal Investigator
Adrianna Kezar is the Dean's Professor for Higher Education Leadership at the University of Southern California and director of the Pullias Center for Higher Education at the USC Rossier School of Education. She is a national expert on student success, equity and diversity, change, governance and leadership in higher education.

KC Culver, Senior Postdoctoral Research Associate
KC Culver is a senior postdoctoral research associate in the Pullias Center for Higher Education at the USC Rossier School of Education. She employs quantitative, qualitative, and mixed methods to study the impact of educational policy and practice on the development and success of diverse students. Her research focuses on policies and practices related to faculty, curriculum, and learning environments.

Jordan Harper, Research Assistant
Jordan Harper is a second-year Ph.D. student in the Urban Education Policy program at Rossier. His research interests include non-tenure-track faculty, student leadership development, and graduate admissions and transition. Jordan approaches all of his research with an equity and inclusion lens.

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