International Journal of Teaching and Learning in Higher Education
http://www.isetl.org/ijtlhe/

2022, Volume 34, Number 1, 60-80
ISSN 1812-9129

Success for All? The Education Equity Mindset of University Faculty Members

Louis Nadelson, Stacey Loyless, Michael Mills, Odunola Oyeniyi, Shelly Albritton, Valerie Couture, Thomas Bruick, and Charlotte Rainey Parham
University of Central Arkansas

The desire to broaden participation and increase campus diversity requires more than simply recruiting students of color. Faculty members' education equity mindset may be useful for determining their motivation to provide students with opportunities to achieve at their highest capacity. The extent to which faculty members think about inclusion and equity and act on those thoughts reflects the strength of their education equity mindset. To begin filling a gap in the literature, we engaged in a cross-section methodology, collecting quantitative and qualitative survey data from 180 faculty members working at four-year institutions to document their education equity mindset and associated teaching practices. We found the faculty members held a moderate education equity mindset, with differences by gender, discipline, years in higher education, number of students taught, age, and level of instruction. Our findings have implications for preparing faculty members and the focus of professional development provided to faculty members.

Our society's long-term success in the age of synthesis requires a diversity of perspectives (Cai, 2011; Hall, 1996; Hong & Page, 2004; Nadelson & Seifert, 2019) requiring educators to broaden participation in postsecondary institutions to influence the future (Dasgupta & Stout, 2014; Starobin et al., 2010). Increasing diversity and broadening participation involves creating equitable environments in which issues of inclusion and diversity are systematically addressed. We argue that to broaden participation and increase diversity, there is a need to facilitate educational opportunities with an equity mindset, yet the extant literature does not seem to contain any empirical studies documenting the education equity mindset of postsecondary faculty members.

Given the importance of broadening participation and addressing the gap in the literature, we conducted a study of postsecondary faculty members' education equity mindset, intending to determine their perspective of education equity issues. These issues include valuing diversity, facilitating student-centered learning, advocating for diversity and inclusion, taking responsibility for student success, and lowering institutional barriers to educational success. Our research is critical to providing the structure needed to support postsecondary faculty members' creation of environments that support the success of students from different levels of prior preparation, cultures, social-economic status, and identities.

Review of Literature

Education Equity Mindset

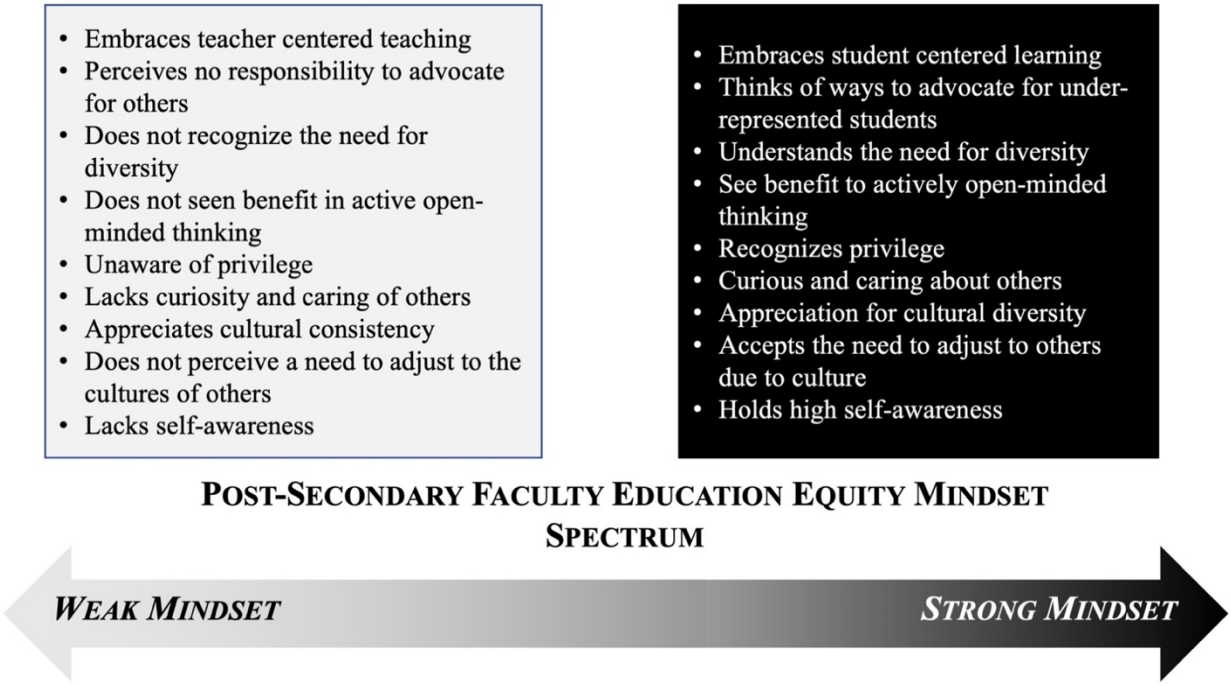
Building upon prior work on developing a framework for education equity (Nadelson et al., 2019a, 2019b), we continue to refine the definition of education equity and the associated mindset. We consider a mindset to be the perceptions and thoughts of an individual about a phenomenon, idea, or condition that guides their corresponding actions (Nadelson et al., 2019b). We also maintain that mindsets are influenced and determined by both the state (i.e., working and living conditions) and traits (i.e., perceptions and actions) of individuals.

Taking into consideration the work of scholars focused on equity mindedness such as Bensimon (2007, 2012); Harper et al. (2009); Milner (2010); Museus (2014); and Malcom-Piqueux and Bensimon (2017), we have worked to consider education equity broadly and holistically. Thus, we define an education equity mindset as a set of perceptions and motivations that lead to actions aligned with how individuals perceive equity situations in education. We argue an education equity mindset aligns with the extent to which faculty members think they are responsible for broadening the diversity of students in higher education and increasing opportunities for those historically denied or marginalized from access or full participation in learning.

Consistent with the perspective of French (2016), we maintain that mindsets should be considered on a spectrum and recognize that individuals may change their mindsets due to shifts in contexts, knowledge, and feelings. Thus, similar to the education equity mindset model for K-12 teachers (Nadelson et al., 2019b) and K-12 school principals (Nadelson et al., 2019a), we consider the thoughts or perceptions of individuals holding a weak equity mindset and those holding a strong equity mindset to be at two ends of the education equity mindset spectrum. Using the same approach, we have developed an education equity mindset model for postsecondary education faculty members.

In defining an education equity mindset for postsecondary faculty members, we considered the potential conditions, interactions, and institutional structures that may influence perceptions of supporting

Figure 1
The Education Equity Mindset Spectrum



or ignoring opportunities to increase student equity, access, and inclusion in postsecondary education. The elements included student-centered teaching, advocacy, the embracing of diversity, open-minded thinking, the lowering of institutional barriers, awareness of privilege, empathetic curiosity, cultural responsiveness, and self-awareness. Thus, faculty members with a strong education equity mindset embrace and act on ideas of equity. In contrast, those with a weak education equity mindset seem to be unaware, ignore, or even disavow elements of an education equity mindset (see Figure 1).

Again, we maintain faculty members may shift their position on the mindset spectrum based on the context, relationships, and responsibilities. For example, a faculty member with a strong education equity mindset may change institutions, and the shift in the professional role or location may temporarily result in faculty members considering more immediate and personal needs such as developing new relationships, learning a new system, and establishing a presence on campus. Increases in personal, immediate needs may diminish a faculty member's focus on issues of equity, which may result in actions and perceptions that align with a weak education equity mindset. Thus, we recognize that an education equity mindset is subject to alignment to conditions, relationships, and resources related to the individual's personal state. However, we maintain that faculty members possessing a strong equity mindset and who experience such shifts are likely to (re)gain a strong education equity mindset much more rapidly than faculty members who have never embraced a strong education equity mindset.

Student-Centered Teaching

A pervasive gap in academic achievement continues to plague our nation (Hung et al., 2020), reflecting a lack of equity-driven instruction. Applying an equity-minded instructional approach, educators resist the lure of focusing solely on reading textbooks, relying on lecture/notes, and assigning objective testing activities, which commonly result in low levels of engagement (Conley, 2011). We contend that educators are more effective when they reposition the constructs of knowledge, curriculum, teacher, and student from teacher-focused to student-focused. Student-focused or student-centered teaching involves orienting students in meaningful learning experiences that appeal to each student's values, interests, and needs (Barth, 2001), which is key to an equity-minded approach to teaching. Institutions should provide development opportunities that build faculty efficacy for delivering student-centered teaching and designing experiences that consider the layering of the learning experience, individual student differentiation, and the personal relevance of learning application (Ehren, 2009). Faculty members who possess a strong educational equity mindset promote student-centered instructional

practices, providing experiences in which students can grow, learn, and succeed regardless of their race, ethnicity, gender, socio-economic status, language acquisition, sexual orientation, religion, or disabilities (Dweck, 2007; Farrington et al., 2012).

We maintain that faculty should take into account students' proactive involvement with the learning and content. University-age students possess the ability to add to the experience, transforming the learning process by collaborating with a team or partner, personalizing with options and communication preferences, or by requesting an individualized learning opportunity rather than just reacting and complying to the assigned task (Bandura, 2006; Reeve & Tseng, 2011). Student-centered instruction positions learners to seek personal possession of the content, creating opportunities for making connections, thinking analytically, solving problems, and perhaps, making contributions due to new understandings. Student-centered teaching establishes a learning environment that increases opportunities for student personal expression resulting in more equitable and inclusive education. Thus, we consider student-centered teaching to be a critical element of a strong education equity mindset.

Advocating and Taking Responsibility for Student Learning

According to Theoharis (2005), advocacy for educational equity is an aspect of social justice leadership. Education leaders who implement social justice leadership address inequity issues due to race, class, gender, disability, sexual orientation, and other historically and currently marginalizing conditions through their leadership practices and vision (Theoharis, 2005). School leaders who understand the importance of advocacy and social justice intentionally analyze student data with the lens of addressing inequities. These leaders promote and cultivate collaborative partnerships with the larger community to ensure the values central to the institution reflect the values of the community. Educational leaders who believe in advocacy strategically implement practices that support belongingness and community for all stakeholders.

We perceive faculty members to be instructional leaders. Thus, there is an expectation that faculty members advocate and take responsibility for student learning. One instructional approach of faculty members with an equity mindset involves creating transformative learning experiences for students. According to Mezirow (2003), transformative learning experiences are effective because they generate beliefs and opinions that guide one to action. Faculty members can use transformational learning opportunities to create and sustain a learning culture that directly influences student achievement and inclusive learning (Kasworm & Bowles, 2012).

Accepting the role of advocacy and taking responsibility for student success is an element of the educational equity mindset. Faculty members who advocate for all students and design their instruction to be inclusive are taking responsibility for creating more equitable and inclusive learning environments.

Value and Embrace Diversity

While more universities voice interest in recruiting diverse student bodies onto their campuses, the institutions may not foster supportive environments for these diverse student bodies. Recently, students have protested against discrimination and structural inequality across a variety of higher educational institutions (Cook-Sather et al., 2018; Spade, 2017). Discrimination and structural inequality impact students' sense of belonging on campuses, and students have expressed, quite strongly in some cases, that campus climates have felt unwelcoming, and maintain the opinion faculty members do not value student voices (Jaschik, 2015). The concerns shared by students include feeling undervalued due to their identities, beliefs, race, ethnicity, gender, sexual orientation, immigration status, and religion (Cook-Sather et al., 2018). Part of making campuses welcoming to all students is to create a culture that values and embraces diversity at the institutions. Faculty members must value and embrace diversity, as they have direct contact with students. Due to the importance of creating inclusive learning environments, we have included embracing and valuing diversity as an element of the faculty education equity mindset.

There is an expectation at educational institutions for faculty and staff to value and embrace students from multicultural backgrounds and to adjust their instruction and services to meet the needs of students. The first step for faculty embracing diversity is self-evaluating their thoughts, beliefs, and biases about others (Ratts et al., 2016). The faculty members' self-evaluation of their identity enhances awareness of holding multiple identities (i.e., race, gender, sexual orientation, ethnicity, gender expression, religion, SES, ability level) and different lenses through which they view the world (Ratts et al., 2016). Awareness of the diversity within may be useful for increasing faculty members' appreciation for the diversity of their students.

Faculty need to create supportive learning environments where students feel safe to be themselves and share their identities. When faculty established respectful and authentic relationships with students, the students will feel recognized and more included (Ratts et al., 2016). Additionally, Trolian et al. (2016) found that the quality of faculty-to-student interactions

influenced student motivation. When faculty members value and embrace diversity, they are creating conditions of equity. Therefore, valuing and embracing diversity is an element of a strong education equity mindset model.

Open-Minded Thinking

One of the foremost goals in higher education is to increase students' reasoning ability (de Sousa, 2007). Actively open-minded thinking (AOT) is a critical aspect of human thinking and reasoning (Baron, 1991, 1993, 1995; Stanovich & West, 1997, 2000, 2008). Actively open-minded thinking includes two approaches to rationality: (a) epistemic, based on an individual's belief system, also referred to as evidential rationality; and (b) instrumental, based on an individual getting what s/he wants, also known as optimization of a person's goal fulfillment (Stanovich, 2011).

Actively open-minded thinking is analogous to learning dispositions and reflective thinking, which is a highly intellectual type of thinking, especially when grappling with new inquiries, ideas, and concepts (Svedholm-Hikkinen & Lindeman, 2017). When higher education faculty members engage in teaching practices and methods that create a culture of inquiry in the learning space, opportunities abound for students to develop open-minded thinking. As Haran et al. (2013) argued, students benefit when they "weigh new evidence against a favored belief, to spend sufficient time on a problem… and to consider carefully the opinions of others in forming one's own" (p. 189). To foster student development of open-minded thinking, faculty members must also embrace and engage in open-minded thinking, which includes pondering issues of equity and inclusion. Actively open-minded thinking is needed to learn about the challenges and barriers diverse student populations may encounter when attending college. Therefore, we consider open-minded thinking to be an essential element of a strong education equity mindset.

There is a potential for obstructed reasoning in the absence of AOT, leading to "myside bias thinking" (Toplak & Stanovich, 2003, p. 852). Myside bias is present when a person has an affinity to limit considering facts, information, or evidence biased toward their beliefs. Furthermore, Toplak and Stanovich (2003) found, "it is not people who are characterized by more or less myside bias, but their beliefs that differ in the degree of belief bias … [and] how strongly they are structured to repel contradictory ideas" (p. 859). Active open-minded thinking has the potential to diminish myside biases (Sa et al., 1999; Stanovich & West, 1997; Svedholm-Hikkinen & Lindeman, 2017), which is needed to envision and take actions to achieve education equity. Moreover, Haron et al. (2013), declared the role of AOT is to reduce belief biases, which faculty members may have toward the potential learning success of certain groups of students. To create equitable learning environments, faculty members need to intentionally develop their actively open-minded thinking skills, a process that is an essential element of a strong education equity mindset.

Privilege

McIntosh (1988) defined "white privilege" as a collection of unearned advantages that people of color do not have as by default. These generally unacknowledged advantages are commonly associated with obliviousness to issues and policies involving culture and race, automatic inclusion into campus social and academic programs, fewer assumptions regarding educational and career goals, and assumed normality of one's language, traditions, and mores. Fundamentally, white privilege is the centering of the White ethnic identity as the benchmark for measuring diversity and differences.

It is important to note that white privilege is more than a collection of conveniences that whites enjoy in society. White privilege also denotes a structural system built on a legacy of oppression and exclusion targeting people of color. Racial privilege is entrenched in multiple functions of higher education institutions, such as the admission process, which may convey different perceptions for accepting the privileged and non-privileged students. For instance, at some institutions, admitted white students are referred to using innocuous terms such as "legacy admissions," while the policy of accepting non-White students is referred to in phrases such as "affirmative action." The differential admission of students by race is illuminated in the report of Arcidiacono and colleagues (2019), who detailed the significant racial disparity in admissions at Harvard University, noting that over three-quarters of White students admitted as legacy candidates would have been rejected if they were held to the same academic standards of non-White students.

Intrinsic racial privilege contradicts the philosophy of a meritocratic education system in the United States - providing equitable educational opportunities based solely on merit (Alvarado, 2010; Liu, 2011). Much of a student's higher education academic success is controlled by gatekeepers, notably admissions officers and faculty members. Within the classroom, the transference of an equity-focused approach begins with the faculty member, which is why the study of faculty members' education equity mindset is critical to establishing and supporting equity-focused educational opportunities. We consider privilege to be an element of a weak education equity mindset.

Deficit Thinking

According to Valencia (2017), deficit thinking refers to the notion that individual students fail in school because such students and their families experience deficiencies that obstruct the learning process. Such items as limited intelligence, lack of motivation, and inadequate home socialization contribute to the failure of student achievement (Garcia & Guerra, 2004). Educators who possess a deficit thinking mindset focus on the qualities in a student's life that hinder learning, blaming the student for conditions they encounter that impede their learning (Davis & Museus, 2019; McKay & Devlin, 2016). Research on practitioner beliefs and expectations highlights significant patterns of how personal beliefs about certain groups of students intersect with the academic performance of students (Ford et al., 2013; Sharma, 2018). Deficit thinking contributes to low teacher expectations of students and can contribute to achievement gaps among various students' demographics (McKenzie & Phillips, 2016).

The prevailing thinking in higher education explains the learning and retention of certain groups of students by framing students and their families as lacking the academic and cultural resources necessary to succeed in what is presumed to be a fair and open educational system and society (Smith, 2012; Solorzano, 1997). Educators' focus on the inadequacies of students and the need to "fix" the students reflects deficit thinking (McKenzie & Scheurich, 2008). With an emphasis on strengthening students' deficits, educators ignore the impact of systemic and structural issues that hinder achievement and blame the students for lack of growth (Aleman et al., 2017). Employing a deficit mindset to frame student difficulties perpetuates stereotypes and disregards higher education's role in perpetuating the barriers to student success (Smith, 2012). We consider deficit thinking to be an element of a weak education equity mindset.

Empathetic Curiosity - Willingness to Learn About Others

Empathetic curiosity can simply be defined as being interested in others because you care about them (Phillips, 2016). Being curious about another person's emotional experience can lead to the formation of productive relationships (Espelage et al., 2004), suggesting curiosity is a primary motivator of empathic concern for others. Empathetic curiosity is essential to the work of counselors and physicians due to the importance of client-professional relationships. We argue the empathetic curiosity of faculty members is a critical component of an education equity mindset. Students who are marginalized on college campuses may be more likely to succeed when they know someone is interested in who they are and cares about them (McEvoy et al., 2013). For instance, Rogers (1961) described an ideal, empathic relationship as being fostered by a "continuing desire to understand" the other person's unique point of view (p. 34).

Halpern (2007) similarly described empathic curiosity as a motivational process that promotes distinguishing one's own experience from another's and seeking to understand the other individual's unique perspective. These lines of reasoning suggest that curiosity may facilitate empathic concern in any relationship, particularly if the empathizer is able to help meet the needs of others (Kashdan et al., 2011). Expressing empathetic curiosity involves efforts to understand others' points of view and working to provide meaningful and helpful support (Hartung & Renner, 2011).

The potential importance of empathetic curiosity to forming relationships and understanding the perceptions of others motivated us to include the construct as an element of a strong education equity mindset. Those holding a strong education equity mindset are more likely to put forth the effort to get to know their students' education needs. Responding to the education needs of students may result in culturally responsive teaching and a more equitable education system.

Cultural Responsiveness

Ladson-Billings (1995) introduced the concept of "culturally-focused pedagogy" (p. 466) as a theoretical shift within teacher education. Ladson-Billings' grounded theory study produced three core underpinnings of culturally responsive pedagogy: (a) concepts of self and others, (b) social relations, and (c) conceptions of knowledge. Building on the work of Ladson-Billings, Gay (2002) presented five core aspects of culturally responsive teaching that addressed (a) cultural knowledge, (b) curriculum choices, (c) community development in the classroom, (d) cross-cultural communication, and (e) delivery of instruction. At its core, culturally responsive teaching involves filtering curriculum and content and "teaching strategies through their [marginalized students'] frames of reference" (Gay, 2010, p. 26). A goal of culturally responsive teaching is to move marginalized students to the position of "subjects in the instructional process, not mere objects" (Ladson-Billings, 2014, p. 76).

Early work on cultural responsiveness was situated primarily within K-12 education and K-12 teacher preparation (Heitner, & Jennings, 2016). However, more recently, the concept has emerged within the broader higher education environment (Museus, 2014), including first-year instruction (Englert et al., 2019) and online instruction (Heitner & Jennings, 2016). Heitner and Jennings (2016) argued specifically for the need to

prepare and provide professional development focused on culturally responsive teaching for higher education faculty members. We have included culturally responsive teaching as an element of a strong education equity mindset because of the importance of increasing the success of those historically underrepresented in postsecondary education.

Self-Awareness

We embrace the perspective of Baumeister (2005), who claims self-awareness manifests as "anticipating how others perceive you, evaluating yourself and your actions according to collective beliefs and values, and caring about how others evaluate you" (p. 7). Baumeister also maintained self-awareness is essential for establishing and maintaining a sense of belongingness in organizations, groups, and cultures. Given Baumeister's definition, we argue self-awareness is a critical element of an education equity mindset. When considering education equity, it is fundamental that faculty members anticipate how others perceive them and evaluate themselves and their actions to determine alignment with supporting access, inclusion, and retention of those historically underrepresented in postsecondary education.

Self-awareness is critical to becoming cognizant of personal biases and perceptions of others (Nieto, 2006). If faculty members lack deep self-awareness, they are less likely to recognize holding implicit bias, the impact on others when sharing microaggressions, or recognizing differences in students' learning needs. As Chao (2006) shared, higher self-awareness is needed to develop a cultural identity which is critical to understanding how identities can differ based on culture. Understanding variations in culture is vital to an education equity mindset and the ability to respond to students differently based on their culture. Similarly, Reynolds (2011) reported that increasing self-awareness around issues of multiculturalism can lead to discomfort due to the increased understanding of how personal choices and perceptions may impact others. Self-awareness is critical to developing a personal and cultural identity which has been found to enhance positive and more culturally aware interactions with people from other cultural perspectives (Goren & Plaut, 2012).

Given the importance of self-awareness to understanding oneself and relating to others, there is justification for considering self-awareness as an essential component of a strong education equity mindset. Being aware of one's identity and how identity may differ due to culture is critical to understanding and supporting the inclusion of others from cultures that have been historically underrepresented in postsecondary education.

Actions Representative of an Education Equity Mindset

As we shared previously, an education equity mindset, or way of thinking about situations, structures, or processes related to conditions of equity in education, resides in an individual's mind. We maintain that actions taken in relation to structures and situations within the context of equity processes are manifestations of an education equity mindset. Thus, the actions taken to increase equity, inclusion, and access reflect the relative strength of an education equity mindset. Further, actions guided by an education equity mindset can result in observable and measurable influence on the inclusion and engagement of students in education. Therefore, we have considered the facets of a strong education equity mindset and developed a set of associated representative actions that a faculty member may engage in to support inclusion, equity, and access (see Figure 2). In our development of equity actions, we considered the possibility that some actions may be associated with multiple components of an education equity mindset. Thus, actions such as lowering institutional barriers to increase inclusion, representation, and retention may be attributed to a combination of multiple mindset components, so there is not a one-to-one alignment between the education equity mindset elements and the mindset actions.

Method

The goal of our research was to answer our primary research question: "What is the education equity mindset of postsecondary faculty members?" To achieve our research goal, we decomposed our primary research question into the following guiding research questions:

- How strongly do faculty members express equity mindset attributes and engage in associated actions?
- How does the faculty members' education equity mindset vary with their personal and professional variables?

Participants

Our participants were faculty members working at four-year universities in the central-southern region of the United States. We invited 1,764 faculty members to participate in our research, 208 responded to our invitation and linked to our survey, of those 180 completed at least 90% of our survey items. The faculty members were on average 50.27 years old (SD = 11.75), of which 106 were female, and 72 were male (2 declined to provide a gender). The majority of the participants were White (166), with 4 each of Asian, Hispanic, and

Figure 2
Actions Aligned with an Education Equity Mindset

other, and 2 identifying as Black. We present the distribution of the participants by discipline in Figure 3.

The majority of the participants (58%) taught primarily in a face-to-face format, followed by "other" which was described as a combination of the three instructional formats (18%), online instruction (14%), and hybrid instruction (10%). In Figure 4, we present the level of students the participants primarily teach. A nearly equal percentage of participants taught at master's degree-granting institutions (33%) and professional doctorate (34%), with 25% teaching at primarily undergraduate institutions and 8% teaching at a research-intensive university.

Survey Development

In our search of the literature, we could not locate any extant instruments designed to assess postsecondary faculty members' education equity mindset. Therefore, we determined it would be necessary to create a survey instrument to gather the data we desired for our exploratory study. We began our instrument development by identifying the critical attributes of a postsecondary faculty member's education equity mindset. Once we had the attributes identified and defined, we began our survey development by creating several open and free-response items for each attribute. The number of items we created for each attribute exceeded our targeted goal for our survey.

Once generated, we compiled our initial pool of items by attribute. We then examined each item for attribute alignment, potential redundancy, applicability to teaching in postsecondary education. As a result, we narrowed our survey to five items per attribute and prepared our survey for validation.

To validate our survey, we requested eight researchers working on equity issues in postsecondary education to review the items and determine if each aligned with the associated attribute. Based on the feedback from the experts, we restructured and refined a handful of our items and made minor edits to several others. Our final survey contained standard demographic items, 27 selected-response items, and four free-response items.

Figure 3
Distribution of Participants by Discipline

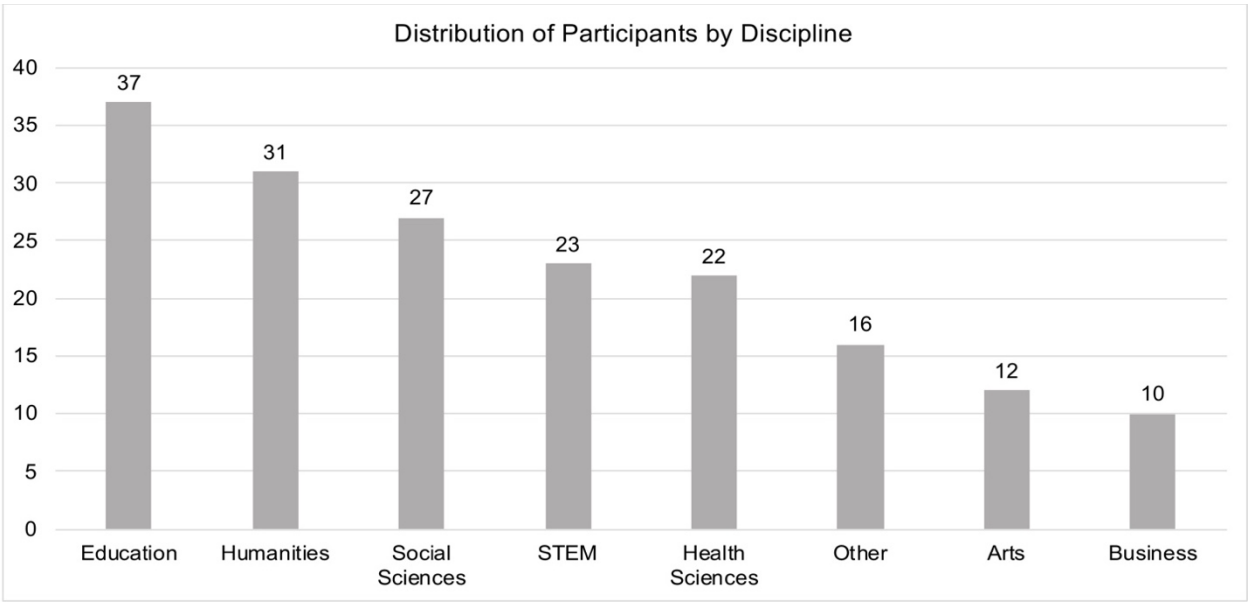
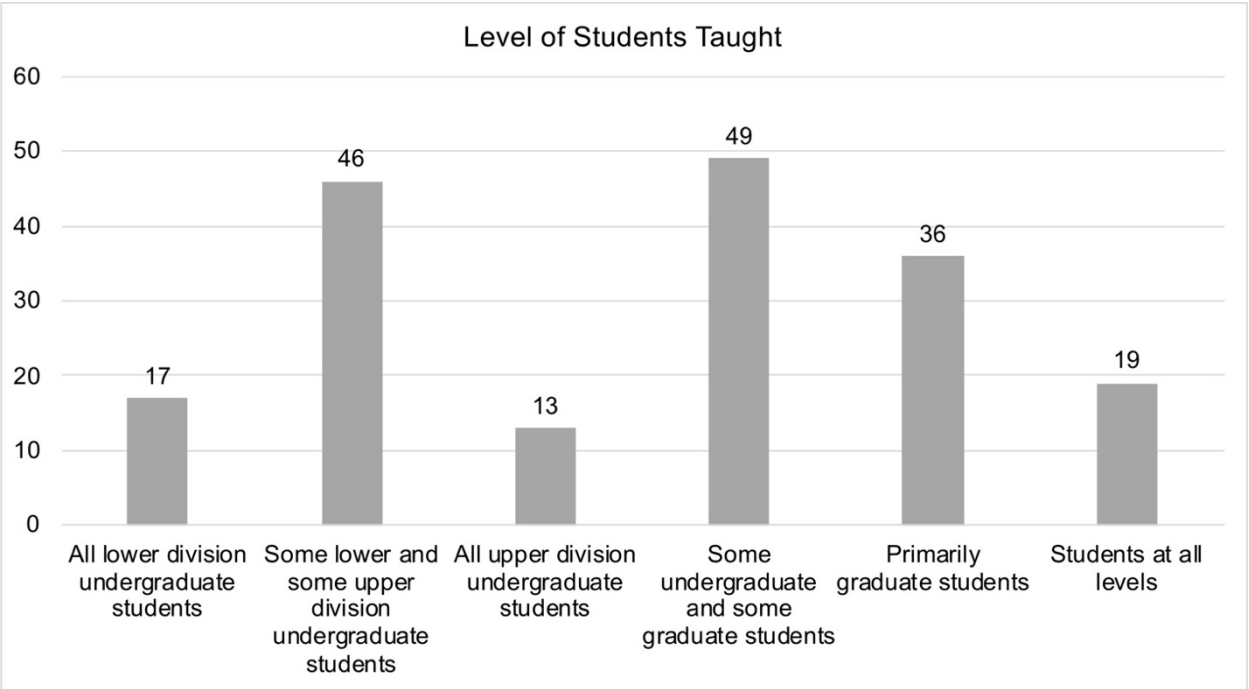


Figure 4
Level of Students Taught in Primary Teaching Responsibilities



The selected-response items included statements such as "I explore how my students prefer to learn" and "I design assignments to give my students choices" which we asked the participants to respond to using a five-point Likert scale. The free-response items included stems such as, "How have your students influenced your teaching?" and "How do you support struggling learners?" The participants responded by typing in text boxes of unlimited length. The calculated reliability of our survey was a Cronbach's alpha of .86 which indicates an acceptable level of internal consistency.

Data Collection

Following the authorization to conduct our research by the university IRB, we activated our online survey. We gathered the publicly accessible email addresses of faculty members working in universities located in the south-central region of the United States from the institutions' websites. We emailed the faculty members an invitation to participate in our research which included a link to our survey. We gathered data over a four-week time span. We invited a total of 1,746 university faculty members to complete our survey.

Analysis

Quantitative Data

Following data collection, we downloaded our dataset to a spreadsheet. We began conditioning the data by removing the responses of those participants who did not complete at least 90% of the selected-response items of the survey. We also assured the free-response quantitative items did not contain qualitative data (e.g., "35 years" entered for age changes to "35"). We then imported the data into a statistical processing application for further conditioning. We used the software to replace the missing values of the occasional skipped response with the series mean. Following data conditioned, we calculated the descriptive statistics for all free-response items, reversed code the negatively stated items, and calculated the composite scores for our education equity mindset attributes. We completed our analysis by calculating multiple descriptive and inferential statistics using the personal and professional variables as either factors or independent variables.

Qualitative Data

Before analyzing the qualitative data, we developed a set of codes aligned to each of our primary postsecondary faculty education equity mindset attributes (see Table 1). In developing the codes, we relied on our knowledge from our prior research in education equity, our experience as postsecondary faculty members formally engaging in work to make the institution more inclusive, and the knowledge we gained through our literature review. We then applied the codes by collectively coding the first 20 qualitative items for each of the four free-response items. Following our initial round of coding, we collectively reviewed our codes and the alignment with the corresponding education equity attribute. We discussed our thought processes for the responses in which our codings were misaligned until we agreed on the most representative coding. Our coding process allowed us to establish initial levels of interrater reliability and increase the trustworthiness of our analysis. We then coded the remaining responses by dividing the data into sections. Working in pairs, we independently coded a subset of the items and then came back together as pairs to resolve any variations in the codes for the data, further enhancing our interrater reliability. It is important to note that many of the responses were found to convey more than one code. Thus, our results reflect response frequencies greater than our sample size.

Results

Mindset Attributes and Actions

Our first guiding research question asked, how strongly do faculty members express equity mindset attributes and engage in associated actions? To answer this question, we began by calculating the means, medians, and standard deviations of the participants' scores to our subscale composite variables (see Table 2). We found that the faculty members tended to lean toward disagreeing with working to lower institutional barriers for students (M = 2.67, SD = .5, $Med.$ = 2.6). The participants tended to be neutral toward valuing and embracing diversity (M = 3.36, SD = .55, $Med.$ = 3.25) and were between neutral and agree with thinking in terms of life-long learning and growth-mindset (M = 3.57, SD = .57, $Med.$ = 3.5). The faculty members trended toward agreeing to being caring and compassionate for their students (M = 3.78, SD = .56, $Med.$ = 3.75). The participants tended to agree that they advocate and take responsibility for student learning (M = 4.08, SD = .61, $Med.$ = 4.25), work to create collective and connected learning environments (M = 4.19, SD = .61, $Med.$ = 4.25), and engage in student-centered teaching (M = 4.23, SD = .5, $Med.$ = 4.25). Our results indicate a fragmented and varied education equity mindset.

We continued our analysis by examining the relationship among the equity mindset attributes by calculating the correlations between the composite scores for our attribute subscales (see Table 3). We

Table 1
Education Equity Mindset Attribute and Associated Codes

Education Equity Mindset Attribute	Codes
Student-centered Teaching	Adjust content and pace, focus on the syllabus, build relationships with students, group work, flexible assignments, responding to each student as an individual
Advocacy	Change in policy, system changes, seeks workarounds, flexibility, move beyond just teaching
Embrace Diversity	Inclusive of different perspectives, recognition of capacity and ability, recognition of the needs of diverse groups
Actively Open-Minded Thinking	Inclusive of different perspectives, open to new ideas, engage in change, seeks to locate barriers to the status quo
Empathetic Curiosity	Sensitive to others, wanting to get to know students as individuals, adjust to needs of individuals because of who they are, considers learning and teaching to be a partnership, getting to know them as a person outside of a learning activity
Cultural Responsiveness (awareness & action)	Recognize the challenges of groups of students, knows different students have different needs, adjusting to students based on their culture
Self-Awareness	Recognize influence on others, aware of potential bias, multiple views and perspectives
Deficit Thinking	A mindset of low expectations, students lack the capacity to achieve, students are unwilling to do the work, lazy, fixed mindset, students don't come prepared, some students cannot succeed, lacks motivation, some people are just not going to succeed in college
Privilege	Treat all the same, I am the authority, in a position of power to make change, students cannot adjust, students need to adapt to the system (or faculty expectations), norming, others adjust to me, understanding of bias, it worked for me, just takes hard work, I told them to get help

wanted to determine if there was consistency in the responses to the subscales. We found all pairs of variables were correlated at the $p < .01$ level of significance. Our results indicate that our subscales are related, which indicates that there is consistency in the actions and perceptions of the participants. The significant correlations also suggest that our conceptions and expressions of the attributes of an education equity mindset reflect the construct.

We examined the frequency and representative responses to the qualitative items we coded in alignment with our education equity mindset actions (see Figure 2). In Table 4, we present the mindset action, frequency of the code, and representative participant responses. We calculated the frequency by combining the coded responses to all four of our free-response items. We found that the participants tended to focus on student-centered teaching (n = 452) but also conveyed high levels of privilege (n = 290). Similarly, the participants shared perspectives reflective of open-minded thinking (n = 274), but at almost the same level were responses reflective of deficit thinking (n = 204). We coded a moderate number of responses advocating and taking responsibility for student success (n = 168), empathetic

Table 2
Means and Standard Deviations for Education Equity Subscales Composite Variable

Attribute (Subscale)	Min	Max	Mean	SD	Median
Works to Lower Barriers	1.2	3.8	2.67	0.5	2.6
Values & Embraces Diversity	1.5	4.5	3.36	0.55	3.25
Life-Long Learning & Growth-Mindset	2.00	4.75	3.57	0.57	3.50
Caring & Compassionate	2.00	5.00	3.78	0.56	3.75
Advocacy & Responsibility for Student Success	2.25	5.00	4.08	0.61	4.25
Collectivist & Connectivist	1.25	5.00	4.19	0.61	4.25
Student-Centered Teaching	2.25	5.00	4.23	0.5	4.25

Table 3
Correlations between Composite Scores of Attribute Subscales

	Values & Embraces Diversity	Life-Long Learning & Growth-Mindset	Caring & Compassionate	Advocacy & Responsibility for Student Success	Collectivist & Connectivist	Student-centered Teaching
Works to lower barriers	.40**	.37**	.32**	.45**	.31**	.33**
Values & Embraces Diversity		.49**	.62**	.52**	.57**	.52**
Life-Long Learning & Growth-Mindset			.36**	.49**	.41**	.30**
Caring & Compassionate				.53**	.54**	.48**
Advocacy & Responsibility for Student Success					.50**	.39**
Collectivist Connectivist						.42**

Table 4
Education Equity Mindset Actions Frequency of Coding in Participants Responses and Representative Responses

Mindset Action	Frequency	Representative Participant Response
Student-centered Teaching (SCT)	452	I meet with each student to develop goals and support structures. Work with them individually. For some assignments, I allow students to turn them in early for feedback and to make corrections before the assignment is due. I find a strategy that has worked for them in the past and we work with it or if they don't have one then we begin to meet one on one until we find the strategy that works for them. Being bothered by the personal nature of my teaching or the creative way I teach.
Privilege (P)	290	In recent years, students have failed to take advantage of the many sources of assistance I offer. I learn from my students every semester. Their contributions to discussion help me see different perspectives on the literature we study.
Actively Open-Minded Thinking (OMT)	274	Through multiple forms of feedback, including course evaluations, I constantly experiment with and adjust my courses to improve student success without sacrificing rigor. I am receptive to their feedback when they are struggling with learning the content. If needed I try to find additional learning tools, change time allotted for coverage of different topics, change how students are assessed to meet the principles. Some lower division classes have students who are under-prepared or unmotivated.
Deficit Thinking (DT)	204	They would be prevented only by their lack of preparation from prerequisite courses or their failure to want to work. Provide extra time or additional support when necessary or needed.
Advocacy & Responsibility for Student Success (ARSS)	168	I no longer care if a young mother misses too many classes. Women are disproportionately affected by childcare issues. The first three modules of my course focus on learning about my students. I learn about their backgrounds, their families, their biases, and their goals. Based on the input they give me and the comments I share with them, we establish a good sense of community and honesty.
Empathetic Curiosity (EC)	162	When my students share the challenges, they have balancing work, family, education, it provides a different lens through which I view them. There really should be nothing that prevents them from learning other than my own failure to find the techniques to share the information in ways that are helpful to students in finding connection and meaning in the information.

Self-Awareness (SA)	152	I consider much more carefully how I communicate, showing respect and being clear with my content I make an effort to use examples in class that students can relate to and make attempts to avoid triggering should a student disclose a history of a specific trauma.
Cultural Responsiveness (awareness+action) (CR)	94	I shape my writing prompts and my face-to-face responses to student drafts according to what I've learned and continue to learn about the lives of my students and the culture in which they live. Each student comes with a different story and perspective that can shape their leadership skills.
Values & Embraces Diversity (VED)	68	That said, the needs of each student can be so different from one to another, one must be willing, and able to address each student's learning differently.

curiosity (n = 162), and self-awareness (n = 152). Cultural awareness (n = 94) and valuing and embracing diversity (n = 68) were the least frequently communicated mindset actions. Our results align with the prediction that university faculty members are likely to hold a fragmented education equity mindset. Reviewing the data holistically, we interpreted the participants' education equity mindset to be in the middle of the spectrum, representing a moderate mindset.

Following our collective examination of responses, we considered the frequencies by each free-response prompt. In Figure 5, we present the results of our coding for each item. We found that when the item focused on student learning, the responses tended to focus on deficit thinking and privilege. However, when the focus on the prompt was on the faculty member, there was a shift in the responses that reflected more student-centered teaching, self-awareness, and open-minded thinking. These results indicate a potential disconnect between the education equity needs of students and the mindset of faculty members. Further supporting our perspective is the consistently low frequency for valuing and embracing diversity and cultural responsiveness, which indicates that the actions are likely not part of faculty members' mindset.

Education Equity Mindset and Personal and Professional Variables

Our second research question asked, how does the faculty members' education equity mindset vary with their personal and professional variables? We began answering this question by calculating the correlations between our continuous personal and professional variables and the composite scores for our measure of education equity mindset attributes (see Table 5). We found multiple significant negative correlations between the number of students taught and mindset attributes. We also found a significant negative correlation between age and working to lower barriers (r = -.23, p < .01) and between years the faculty member had worked in higher education and valuing and embracing diversity (r = -.22, p < .01). Our data indicate that as age, years of experience in higher education, and the number of students a faculty member teaches increases, there is a decrease in the level of commitment to the attributes of an education equity mindset.

We continued our analysis by conducting either independent sample t-tests or ANOVA to determine if our categorical variables were indicators of an education equity mindset. We found gender to be a significant indicator for multiple variables (see Table 6). Our analysis revealed females held a higher level of education equity mindset attributes than males.

Continuing our analysis, we conducted an ANOVA to examine the expressions of the education equity mindset attributes by discipline. We found significant differences (see Table 7) with pairwise analyses revealing STEM faculty members consistently expressed significantly lower levels of education equity mindset attributes than faculty members in art, humanities, and education.

Continuing our analysis, we found a significant difference for education equity mindset attribute of working to lower barriers by levels of students taught (F[5, 174] = 2.77, p = .02). Our pairwise analysis revealed faculty members who teach lower-division undergraduates had significantly higher levels of the mindset attribute than faculty members who teach all upper-division undergraduates. We found no difference by the format of the teaching or classification of the

Figure 5
Frequency of Codes for the Mindset Actions by Question Prompt

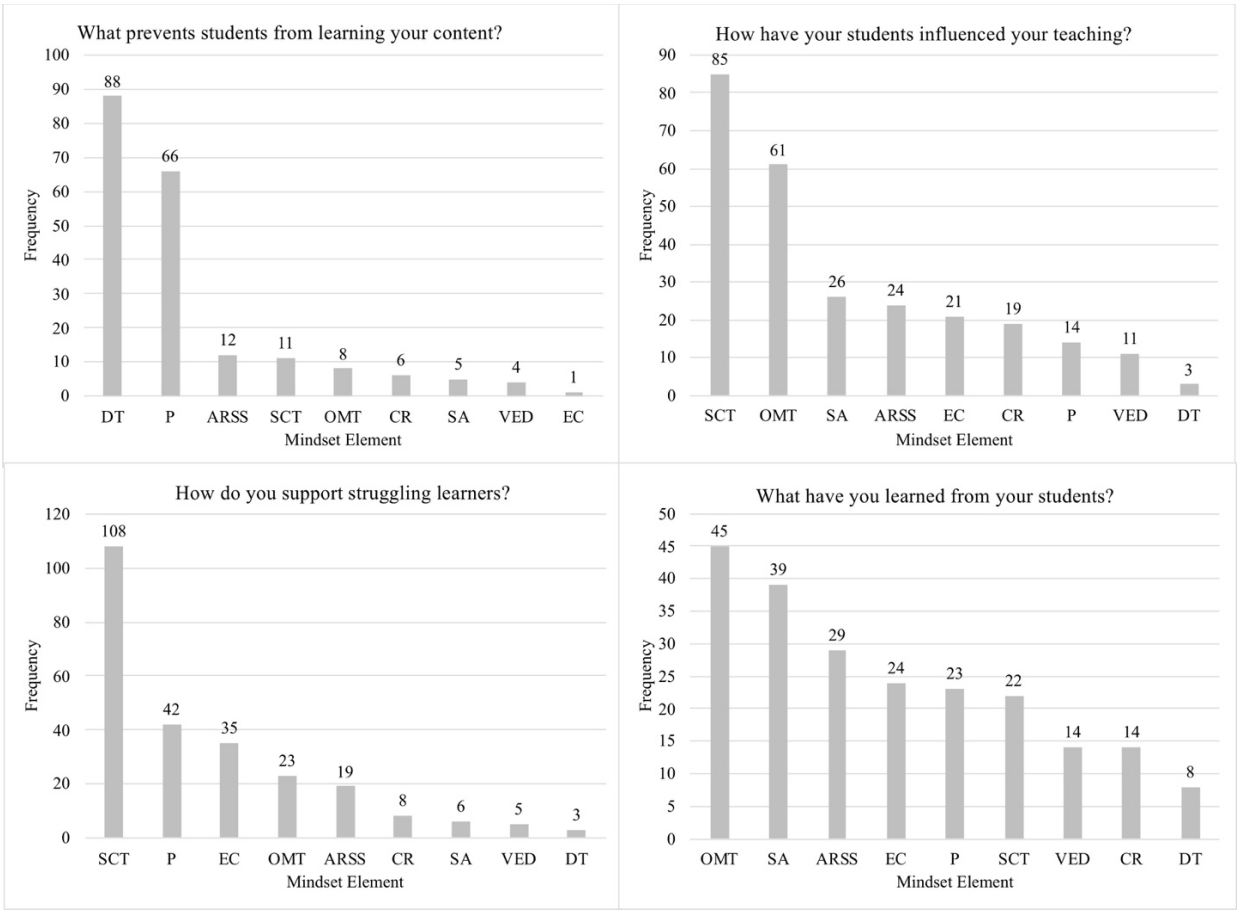


Table 6
Significant Differences for Mindset Attributes by Gender

Mindset Attribute	*t*	*p* (significance)	Female - *Mean (SD)*	Male - *Mean (SD)*
Values & Embraces Diversity	3.36	.001	4.20 (.56)	3.89 (.63)
Life-Long Learning & Growth Mindset	2.87	.005	3.88 (.54)	3.63 (.57)
Caring & Compassionate	2.18	.031	4.30 (.49)	4.13 (.49)
Advocates & Takes Responsibility for Student Success	3.96	<.001	3.48 (.54)	3.16 (.50)
Collectivist & Connectivist	2.38	.018	4.28 (.52)	4.06 (.70)

Table 7
Analysis of Educational Equity Mindset Attributes by Discipline

Mindset Attribute	*F*	*p*	Pairwise Analysis
Values & Embraces Diversity	5.06	<.001	STEM < Arts, Humanities, Social Sciences, Education
Student-centered Teaching	5.07	<.001	STEM<Arts, Humanities, Education; Health Science < Education; Social Science < Education
Caring & Compassionate	4.91	<.001	STEM<Arts, Humanities, Education; Other < Arts, Humanities; Health Science < Humanities
Collectivist & Connectivist	4.18	<.001	STEM<Arts, Humanities, Education, Health Sciences

institution. We did not have sufficient sample sizes to test for differences by ethnicity or by public or private institution.

Discussion and Implications

The goal of our research was to document the education equity mindset of postsecondary faculty members. We maintain that a strong education equity mindset is critical to broadening participation and creating inclusive learning environments where students who have been historically marginalized can feel they belong in college and deserve a college education. Our findings raise some interesting discussions and have multiple implications for policy and practice.

Mindset Attributes and Actions

Through our analysis, we found that the participants expressed the attributes of an education equity mindset at different levels. The participants expressed about half of the attributes at levels reflective of a moderate education equity mindset. The results suggest that the participants did not hold a strong education equity mindset. It is possible that postsecondary faculty members do not consider equity as they concentrate on their role as the instructor instead of focusing on effective instruction for their students. The lack of a strong education equity mindset has the potential to keep marginalizing certain student populations, which perpetuates conditions of inequity and exclusion. Faculty members may need explicit, focused, and long-term professional development to help them understand issues of equity and inclusion and their role in increasing opportunities for all.

Our finding of the significant correlations between all of our education equity mindset attributes suggests that the attributes are related, which is a premise of our mindset model. The correlations provide validation for the relationship of the attributes to the mindset. The correlations also support the assumption that the attributes of an education equity mindset should be considered as a whole, particularly when trying to shift faculty members' mindsets. Thus, an implication for our finding is the need to design professional development opportunities intended to strengthen faculty members' education equity mindset in ways that address the mindset as a whole.

The coding of the faculty members' qualitative responses revealed a wide range of frequencies, which indicates the participants are not necessarily thinking about their interactions with students in terms of a strong education equity mindset. The range of frequencies reflects a fragmented education equity mindset or the potential for perceptions that are parallel to those of an education equity mindset but align with a different frame of mind, such as an instructional leader mindset. A potential fruitful line of future research is deeply exploring the frame of mind with which faculty member consider their teaching and how much of their mindset aligns with an education equity mindset.

We found that the participants' emphasis on education equity mindset actions shifted with the focus on students and faculty members. When considering students' challenges with learning, the participants communicated issues of shortcomings with students, sharing perceptions of student deficits, and conveyed positions of personal privilege. However, when the focus was on what the faculty members were doing to increase student learning, the emphasis shifted to student-centered learning. Thus, our data suggest that faculty members struggle with taking responsibility for students not doing well in their courses. We conjecture faculty members are not approaching their teaching and student learning from the same perspective. However, we speculate that faculty members who hold an education equity mindset are likely to be more consistent in considering their role independent of the focus on students or faculty member engagement for learning. Exploring the mindset of faculty members who are

consistent in taking responsibility for student learning regardless of the framing of the situation is a needed line for future research.

Education Equity Mindset and Personal and Professional Variables

The inverse relationship between the mindset attribute expression and faculty member age, years in higher education, and by the number of students suggests that the mindset is associated with both the traits and the state of faculty members. It was rather concerning to find the consistent inverse relationships based on the number of students taught, given the faculty members influence a greater number of students are less likely to hold a strong education equity mindset. We speculate that the more students a faculty member teaches, the weaker the bond and connection is with the students, which disassociates the faculty members from considering the personal needs of their students. The disassociation may be accompanied by an intense workload stressing faculty members, which may be a barrier to forming an education equity mindset. Exploring why the number of students a faculty member teaches is inversely related to their education equity mindset requires additional research.

We found significant differences for gender, with females expressing the mindset attributes at significantly higher levels than males. We speculate that the female participants expressed higher equity mindsets due to experiencing gender inequity within higher education. In addition, the male participants, who were nearly all white, may have expressed lower equity mindsets due to the likelihood of being less personally affected by equity issues in higher education. Further, we speculate that females tend to be more socially oriented in their teaching while males tend to be more focused on content delivery. The social orientation in teaching manifests in developing relationships with students, which may then lead to working to be more inclusive and equitable to assure the success of all students. In contrast, the focus on content delivery limits connecting with the students and puts the responsibility for learning on the students, resulting in activities and perceptions aligned with a weak education equity mindset. The implications for students are they may achieve more success with female faculty members. Our results also indicate a need for professional development to increase awareness and action for those least likely to be affected by situations of inequity. There is a need to further research gender differences in education equity mindset and the ramifications for student success.

Our analysis of education equity mindset attribute expression by discipline revealed consistently in significantly lower levels for STEM faculty members compared to art, humanities, and education. A potential explanation for the finding is STEM tends to be male dominated, and males score lower on education equity mindset. Similarly, arts, humanities, and education tend to be female dominated, and females score higher on education equity mindset. The implication for our finding is the potential that marginalized students in STEM education do not receive the support they need to feel a sense of belongingness and inclusion. The weaker levels of an education equity mindset among STEM faculty members may explain the lack of diversity in many STEM fields. The lack of diversity may be exacerbated by the weaker education equity mindsets of faculty members who teach upper-division undergraduate students (compared to those teaching lower-division undergraduate students). To increase diversity and broader participation in STEM fields, there is a need to strengthen the education equity mindset of STEM faculty members.

Overall, our results indicate a need to explicitly address members' education equity mindset to strengthen their mindset to position them to support inclusion, diversity, equity, and belonging. Leadership at universities may need to develop long-term initiatives that start with an education equity mindset inventory to raise faculty members' awareness of the current level of their mindset. Based on their mindset strength, university leaders can develop interventions to increase faculty members' education equity mindset based on their current mindset levels. We also recommend university leaders continue to monitor the strength of the education equity mindset of the faculty members in conjunction with student diversity, retention, and completion. Again, the premise of our research is faculty members holding strong education equity mindsets will manifest in increased diversity of students attending the institution, higher retention of students, and more students completing their degree programs.

Limitations

The first limitation of our research is the participation of faculty members from the same region of the United States. We recruited participants from multiple institutions from a south-central region of the United States. While we did gather responses from faculty members working at a diversity of institutions, there is a possibility that faculty members in other regions and different institutions may hold different perspectives. Future research should expand on our work gathering data from faculty members in different locations and different cultures.

The second limitation of our research is the potential for a participation bias. It is possible the faculty members who participated in our study did so because of interest in the topic or the desire to learn more about support student success, and those who declined to participate

may not be as focused on student diversity and inclusion. Again, we seem to have a diversity of responses suggesting we had a range of views represented in our sample. Future research may need to focus on gathering a greater variety of responses.

A third limitation of our study is the potential for desirability bias. The participants may have answered the items on the survey in ways that are perceived to be socially desirable but not necessarily representative of the participants' actual perceptions. Future research may need to include observations of practice and interviews of students to determine if the mindset we documented is observed and experienced by students.

A fourth limitation was the nature of our data collection, which is survey research. We did validate our survey and found it to have an acceptable level of reliability, and included qualitative items for triangulation and trustworthiness, which allowed us to gather meaningful data and report accurate results. However, we were not able to follow up with the participants to determine why they answered as they did. Future research may include additional interviews of faculty members to determine why they answer education equity mindset questions the way they do.

Conclusion

Our goal was to provide a foundation for assessing the strength of faculty members' education equity mindset. The strength of faculty members' education equity mindset is likely reflective of their ability to meet the educational needs of marginalized and underrepresented students. Faculty members play a critical role in achieving goals for increased inclusion and diversity on college campuses. However, if faculty members hold a weak education equity mindset, they are not likely to engage in actions necessary to broaden participation in postsecondary education. We hope others will find our research useful and build upon our findings by exploring other facets of faculty members' education equity mindset.

References

Alemán, E., Freire, J. A., McKinney, A., & Bernal, D. D. (2017). School–university–community pathways to higher education: Teacher perceptions, school culture and partnership building. *The Urban Review*, *49*(5), 852-873. https://doi.org/10.1007/s11256-017-0424-y

Alvarado, L. A. (2010). Dispelling the meritocracy myth: Lessons for higher education and student affairs educators. *The Vermont Connection*, *31*(1), 10-20.

Arcidiacono, P., Kinsler, J., & Ransom, T. (2019). *Legacy and athlete preferences at Harvard* (Working Paper No. w26316). National Bureau of Economic Research. https://doi.org/10.3386/w26316

Bandura, A. (2006). Toward a psychology of human agency. *Perspectives on Psychological Science*, *1*, 164-180. https://doi.org/10.1111/j.1745-6916.2006.00011.x

Baron, J. (1991). *Beliefs about thinking*. In J. Voss, D. Perkins, & J. Segal (Eds.), *Informal reasoning and education* (pp. 169-186). Erlbaum.

Baron, J. (1993). Why teach thinking?–An essay. *Applied Psychology, 42*, 191–237. https://doi.org/10.1111/j.1464-0597.1993.tb00731.x

Baron, J. (1995). Myside bias in thinking about abortion. *Thinking and Reasoning, 1*, 221-235. https://doi.org/10.1080/13546789508256909

Barth, R. S. (2001). *Learning by heart*. Jossey-Bass.

Baumeister, R. F. (2005). *The cultural animal: Human nature, meaning, and social life*. Oxford University Press. https://doi.org/10.1093/acprof:oso/9780195167030.001.0001

Bensimon, E. M. (2007). The underestimated significance of practitioner knowledge in the scholarship on student success. *The Review of Higher Education, 30*(4), 441-469. https://doi.org/10.1353/rhe.2007.0032

Bensimon, E. M. (2012). The equity scorecard: Theory of change. In E. M. Bensimon & L. Malcom (Eds.), *Confronting equity issues on campus: Implementing the equity scorecard in theory and practice* (pp. 17-44). Stylus Publishing.

Cai, S. (2011). The age of synthesis: From cognitive science to converging technologies and hereafter. *Chinese Science Bulletin*, *56*, 465–475. https://doi.org/10.1007/s11434-010-4005-7

Chao, R. (2006). Counselors' multicultural competencies: Race, training, ethnic identity, and color-blind racial attitudes. In G. R. Walz, J. C. Bleuer, & R. K. Yep (Eds.), *Vistas: Compelling perspectives on counseling 2006* (pp. 73–76). American Counseling Association.

Conley, D. T. (2011). Building on the common core. *Educational Leadership, 68*(6), 16-20.

Cook-Sather, A., Des-Ogugua, C., & Bahti, M. (2018). Articulating identities and analyzing belonging: A multistep intervention that affirms and informs a diversity of students. *Teaching in Higher Education*, *23*(3), 374-389. https://doi.org/10.1080/13562517.2017.1391201

Dasgupta, N., & Stout, J. G. (2014). Girls and women in science, technology, engineering, and mathematics: STEMing the tide and broadening participation in STEM careers. *Policy Insights from the Behavioral and Brain Sciences*, *1*(1), 21-29. https://doi.org/10.1177/2372732214549471

Davis, L., & Museus, S. (2019). What is deficit thinking?

An analysis of conceptualizations of deficit thinking and implications for scholarly research. *NCID Currents, 1*(1), 117-130. https://doi.org/10.3998/currents.17387731.0001.110

de Sousa, R. (2007). *Why think? Evolution and the rational mind.* Oxford University Press.

Dweck, C. (2007). *Mindset: The new psychology of success*. Ballantine Books.

Ehren, B.J. (2009). *Response to intervention in secondary school: Is it on your radar screen*. RtI Action Network. http://www.rtinetwork.org/Learn/Why/ar/RadarScreen

Englert, P., Begin, N., Bucalos, A., Wallitsch, K., Ellis, G., & Stawser, M. G. (2019). Digging into difficult topics: Cultivating community within the classroom. *Journal of Faculty Development, 33*(2), 25-30.

Espelage, D. L., Mebane, S. E., & Adams, R. S. (2004). Empathy, caring, and bullying: Toward an understanding of complex associations. In D. L. Espelage & S. M. Swearer (Eds.), *Bullying in American schools: A social-ecological perspective on prevention and intervention* (pp. 37– 61). Erlbaum.

Farrington, C. A., Roderick, M., Allensworth, E., Nagaoka, J., Keyes, T. S., Johnson, D. W., & Beechum, N. O. (2012). *Teaching adolescents to become learners: The role of noncognitive factors in shaping school performance: A critical literature review.* University of Chicago Consortium on Chicago School Research.

Ford, D. Y., Scott, M. T., Moore III, J. L., & Amos, S. O. (2013). Gifted education and culturally different students: Examining prejudice and discrimination via microaggressions. *Gifted Child Today*, *36*(3), 205–208. https://doi.org/10.1177/1076217513487069

French, R. P. (2016). The fuzziness of mindsets: Divergent conceptualizations and characterizations of mindset theory and praxis. *International Journal of Organizational Analysis, 24*(4), 673-691. https://doi.org/10.1108/IJOA-09-2014-0797

Garcia, S. B., & Guerra, P. L. (2004). Deconstructing deficit thinking: Working with educators to create more equitable learning environments. *Education and Urban Society*, *36*(2), 150-168. https://doi.org/10.1177/0013124503261322

Gay, G. (2002). Preparing for culturally responsive teaching. *Journal of Teacher Education, 53*(2), 106-116. https://doi.org/10.1177/0022487102053002003

Gay, G. (2010). *Culturally responsive teaching: theory, research, and practice* (2nd ed.). Teachers College Press.

Goren, M. J., & Plaut, V. C. (2012). Identity form matters: White racial identity and attitudes toward diversity. *Self and Identity, 11*(2), 237-254. https://doi.org/10.1080/15298868.2011.556804

Hall, C. W. (1996). *The age of synthesis*. Peter Lang.

Halpern, J. (2007). Empathy and patient–physician conflicts. *Journal of General Internal Medicine*, *22*(5), 696-700. https://doi.org/10.1007/s11606-006-0102-3

Haran, U., Ritov, I., & Mellers, B. A. (2013). The role of actively open-minded thinking in information acquisition, accuracy, and calibration. *Judgment and Decision Making, 8*(3), 188-201. https://doi.org/10.1037/t41728-000

Harper, S. R., Patton, L. D., & Wooden, O. S. (2009). Access and equity for African American students in higher education: A critical race historical analysis of policy efforts. *The Journal of Higher Education*, *80*(4), 389-414. https://doi.org/10.1080/00221546.2009.11779022

Hartung, F. M., & Renner, B. (2011). Social curiosity and interpersonal perception: A judge × trait interaction. *Personality and Social Psychology Bulletin*, *37*(6), 796-814. https://doi.org/10.1177/0146167211400618

Heitner, K. L., & Jennings, M. (2016). Culturally responsive teaching knowledge and practices of online faculty. *Online Learning, 20*(4), 54-78. https://doi.org/10.24059/olj.v20i4.1043

Hong, L., & Page, S. E. (2004). Groups of diverse problem solvers can outperform groups of high-ability problem solvers. *Proceedings of the National Academy of Sciences*, *101*(46), 16385-16389. https://doi.org/10.1073/pnas.0403723101

Hung, M., Smith, W. A., Voss, M. W., Franklin, J. D., Gu, Y., & Bounsanga, J. (2020). Exploring student achievement gaps in school districts across the United States. *Education and Urban Society*, *52*(2), 175-193. https://doi.org/10.1177/0013124519833442

Jaschik, S. (2015). What the protests mean. *Inside Higher Ed*, *16*.

Kashdan, T. B., McKnight, P. E., Fincham, F. D., & Rose, P. (2011). When curiosity breeds intimacy: Taking advantage of intimacy opportunities and transforming boring conversations. *Journal of Personality*, *79*(6), 1369-1402. https://doi.org/10.1111/j.1467-6494.2010.00697.

Kasworm, C. E., & Bowles, T. A. (2012). Fostering transformative learning in higher education settings. In E. W. Taylor & P. Cranton (Eds.), *The handbook of transformative learning: Theory, research, and practice* (pp. 388-407). Jossey-Bass.

Ladson-Billings, G. (1995). Toward a theory of culturally relevant pedagogy. *American Educational Research Journal, 32*(3), 465-491. https://doi.org/10.3102/00028312032003465

Ladson-Billings, G. (2014). Culturally relevant

pedagogy 2.0: A.K.A. the remix. *Harvard Educational Review, 84*(1), 74-84. https://doi.org/10.17763/haer.84.1.p2rj131485484751

Liu, A. (2011). Unraveling the myth of meritocracy within the context of US higher education. *Higher Education*, *62*, 383–397. https://doi.org/10.1007/s10734-010-9394-7

Malcom-Piqueux, L., & Bensimon, E. M. (2017). Taking equity-minded action to close equity gaps. *Peer Review, 19*(2), 5-8.

McEvoy, P., Baker, D., Plant, R., Hylton, K., & Mansell, W. (2013). Empathic curiosity: Resolving goal conflicts that generate emotional distress. *Journal of Psychiatric and Mental Health Nursing*, *20*(3), 273-278. https://doi.org/10.1111/j.1365-2850.2012.01926.x

McIntosh, P. (1988). White privilege: Unpacking the invisible knapsack. *Peace and Freedom*. https://psychology.umbc.edu/files/2016/10/White-Privilege_McIntosh-1989.pdf

McKay, J., & Devlin, M. (2016). 'Low income doesn't mean stupid and destined for failure': Challenging the deficit discourse around students from low SES backgrounds in higher education. *International Journal of Inclusive Education*, *20*(4), 347-363. https://doi.org/10.1080/13603116.2015.1079273

McKenzie, K. B., & Phillips, G. A. (2016). Equity traps then and now: Deficit thinking, racial erasure and naïve acceptance of meritocracy. *Whiteness and Education*, *1*(1), 26-38. https://doi.org/10.1080/23793406.2016.1159600

McKenzie, K. B., & Scheurich, J. J. (2008). Teacher resistance to improvement of schools with diverse students. *International Journal of Leadership in Education, 11*(2), 117–133. https://doi.org/10.1080/13603120801950122

Milner, H. R. (2010). *Start where you are, but don't stay there*. Harvard Education Press.

Mezirow, J. (2003). Transformative learning as discourse. *Journal of Transformative Education*, *1*(1), 58-63. https://doi.org/10.1177/1541344603252172

Museus, S. D. (2014). The culturally engaging campus environments (CECE) model: A new theory of success among racially diverse college student populations. In M. B. Paulsen (Ed.). *Higher education: Handbook of theory and research: Vol. 29*. (pp. 189–227). Springer. https://doi.org/10.1007/978-94-017-8005-6_5

Nadelson, L. S., Albritton, S., Couture, V. G., Green, C., Loyless, S. D., & Shaw, E. O. (2019a). Principals' perceptions of education equity: A mindset for practice. *Journal of Education and Learning, 9* (1), 1-15. https://doi.org/10.5539/jel.v9n1p1

Nadelson, L. S., Miller, R., Bang, N. M., Hu, H., & Walthall, B. (2019b). Is equity on the mind? Documenting teachers' education equity mindset. *World Journal of Education, 9*(5), 26-40. https://doi.org/10.5430/wje.v9n5p26

Nadelson, L. S., & Seifert, A. L. (2019). Teaching and learning integrated STEM: Using andragogy to foster an entrepreneurial mindset in the age of synthesis. In A. Sahin & M. J. Mohr-Schroeder (Eds.) *STEM education 2.0 myths and truths – What has K-12 STEM education research taught us?* (pp. 53-71). Boston, MA: Brill Sense. https://doi.org/10.1163/9789004405400_004

Nieto, J. (2006). The cultural plunge: Cultural immersion as a means of promoting self-awareness and cultural sensitivity among student teachers. *Teacher Education Quarterly, 33*(1), 75-84.

Phillips, R. (2016). Curious about others: Relational and empathetic curiosity for diverse societies. *New Formations: A Journal of Culture/Theory/Politics*, *88*(88), 123-142. https://doi.org/10.3898/NEWF.88.02.2016

Ratts, M. J., Singh, A. A., Nassar-McMillan, S., Butler, S. K., & McCullough, J. R. (2016). Multicultural and social justice counseling competencies: Guidelines for the counseling profession. *Journal of Multicultural Counseling and Development*, *44*(1), 28-48. https://doi.org/10.1002/jmcd.12035

Reeve, J., & Tseng, C. (2011). Agency as a fourth aspect of student's engagement during learning activities. *Contemporary Educational Psychology*, *36*, 257-267. https://doi.org/10.1016/j.cedpsych.2011.05.002

Reynolds, A. L. (2011). Understanding the perceptions and experiences of faculty who teach multicultural counseling courses: An exploratory study. *Training and Education in Professional Psychology, 5*(3), 167-174. https://doi.org/10.1037/a0024613

Rogers, C. R. (1961). *On becoming a person*. Houghton Mifflin.

Sa, W. C., West, R. F., & Stanovich, K. E. (1999). The domain specificity and generality of belief bias: Searching for a generalizable critical thinking skill. *Journal of Educational Psychology, 91*, 497–510. https://doi.org/10.1037/0022-0663.91.3.497

Sharma, M. (2018). Seeping deficit thinking assumptions maintain the neoliberal education agenda: Exploring three conceptual frameworks of deficit thinking in inner-city schools. *Education and Urban Society*, *50*(2), 136-154. https://doi.org/10.1177/0013124516682301

Smith, P. (2012). *The trouble with higher education: A critical examination of our universities*. Routledge. https://doi.org/10.4324/9780203866344

Solorzano, D. G. (1997). Images and words that wound: Critical race theory, racial stereotyping and teacher education. *Teacher Education Quarterly, 24*(3), 5–

20.
Spade, D. (2017). What's wrong with rights? In S. Goldberg (Ed). *Sexuality and equality law* (pp. 383-404). Routledge. https://doi.org/10.4324/9781315088051-13
Stanovich, K. (2011). *Rationality and the reflective mind.* Oxford University. https://doi.org/10.1093/acprof:oso/9780195341140.001.0001
Stanovich, K. E., & West, R. F. (1997). Reasoning independently of prior belief and individual differences in actively open-minded thinking. *Journal of Educational Psychology, 89*, 342–357. https://doi.org/10.1037/0022-0663.89.2.342
Stanovich, K. E., & West, R. F. (2000). Individual differences in reasoning: Implications for the rationality debate? *Behavioral and Brain Sciences, 23,* 645–665. https://doi.org/10.1017/S0140525X00003435
Stanovich, K. E., & West, R. F. (2008). On the failure of cognitive ability to predict myside and one-sided thinking biases. *Thinking & Reasoning, 14,* 129–167. https://doi.org/10.1080/13546780701679764
Starobin, S., Laanan, F. S., & Burger, C. J. (2010). Role of community colleges: Broadening participation among women and minorities in STEM. *Journal of Women and Minorities in Science and Engineering*, *16*(1), 1-5. https://doi.org/10.1615/JWomenMinorScienEng.v16.i1.10
Svedholm-Hakinen, A.M., & Lindeman, M. (2017). Actively open-minded thinking: Development of a shortened scale and disentangling attitudes towards knowledge and people. *Thinking & Reasoning*, *24*(1), 21-40. https://doi.org/10.1080/13546783.2017.1378723
Theoharis, G. (2005). *Arrogant humility: The identity, calling, and leadership of urban social justice principals*. Paper presented at the University Council for Educational Administration Annual Convention, Nashville, TN.
Toplak, M. E., & Stanovich. K. E. (2003). Associations between myside bias on an informal reasoning task and amount of postsecondary education. *Applied Cognitive Psychology 17,* 851-860. https://doi.org/10.1002/acp.915
Trolian, T. L., Jach, E. A., Hanson, J. M., & Pascarella, E. T. (2016). Influencing academic motivation: The effects of student-faculty interaction. *Journal of College Student Development, 57*(7), 810-826. https://doi.org/10.1353/csd.2016.0080
Valencia, R. (2017). *The evolution of deficit thinking: educational thought and practice.* Routledge Publishing.

LOUIS S. NADELSON, Ph.D. (2007, University of Nevada, Las Vegas) is a Professor and Department Chair in the Department of Leadership Studies, College of Education, University of Central Arkansas. Informed by many years of teaching and leadership activities his research interests included issues of equity and inclusion, STEM teaching and learning, identity, mindsets, and teacher leadership. He is currently the STEM executive editor of the Journal of Educational Research.

STACEY D. LOYLESS, Ed.D. is an Assistant Professor in the Department of Leadership Studies at the University of Central Arkansas. Dr. Loyless teaches within the School Leadership, Management, and Administration program; he primarily centers research efforts within these areas: educational equity, instructional design, school leadership mindsets, and process systems integration.

MICHALE S. MILLS, Ed.D. (2000, University of Arkansas at Little Rock) is an Associate Professor in the Department of Teaching and Learning at the University of Central Arkansas. He researches assessment accountability and the practical uses of mobile technology, with a particular focus on ensuring educational equity. He serves on the SXSWedu Advisory Board and teaches a broad range of undergraduate and graduate courses in teacher education.

ODUNOLA OYENIYI, Ph.D. is an Assistant Professor of School Counseling in the Department of Leadership Studies at the University of Central Arkansas. She teaches school counseling courses in the counseling graduate program. She has worked in school, career, marriage and family, rehabilitation, and mental health counseling settings. Her research interests include faculty and student engagement, college students' challenges and adjustment, suicide prevention, and drug abuse and prevention. She has published articles on college students' stress and adjustment, grief counseling among couples, COVID 19 and school counselors' experience, substance abuse among adolescents, and social justice advocacy in counseling.

SHELLY ALBRITTON, Ph.D. (University of Southern Mississippi) retied in December 2021 from being a Professor of Leadership programs at the University of Central Arkansas. She was a language arts and tech prep and career discovery teacher, K-12 parent liaison, and a principal. Her scholarship examined projects-based learning in pre-service programs, principals as social

justice leaders, and the rural principal and the struggle to advocate for LGBTQ students.

VALERIE G. COUTURE, Ph.D. is an Assistant Professor in the Leadership Studies department at the University of Central Arkansas in Conway, Arkansas. She graduated with a Ph.D. in Counselor Education and Supervision from the University of Arkansas. Her research includes educational equity in K-20 environments, multicultural counseling competence, and counseling skill development. She teaches graduate courses in School Counseling and Leadership Studies.

THOMAS BRUICK, Ph.D. (2019, Colorado State University) is an Assistant Professor at the University of Central Arkansas. He currently teaches and serves as program coordinator for the College Student Personnel Administration program. His research explores the role of environmental, experiential, and dispositional factors in college student success with a specific focus on conditionally admitted students.

CHARLOTTE RAINEY PARHAM, Ed.D. is an Assistant Professor at the University of Central Arkansas. Dr. Parham's research interest includes education equity, school readiness, education leadership, opportunity gaps, and disruptive innovation.